

Fire Safety in Licensed Care Facilities



Instructor's Guide and Lesson Plans

**PREVENT FIRES
IT'S YOUR JOB!**

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ORGANIZATION

Suggestions to the Instructor

Review the lesson plan thoroughly and consult the references listed. These lessons are designed to be taught in 30 minutes blocks. Each lesson can be taught independently.

Contact Facility Administrator:

Make Class arrangements

Will need a TV and VCR

Make arrangements to use one combination fire extinguisher.

Let administrator know that fire extinguisher will need to be serviced.

Have administrator provide facility policies on smoking, disaster plans, alarm initiation, evacuation and fire drills.

Materials needed:

- Lap top computer
- LCD projector,
- Screen or surface to show slides
- Fire extinguisher and traffic cone

Recommended time – 2½ -3 hours

- Lecture and discussion
- Student Activities
- Questions and Evaluation

Methods of Instruction

Lecture, discussion, and group activities

References:

International Fire Code

NFPA Life Safety Code

IFSTA Essentials of Firefighting

WSP— Fire Protection Bureau, Fire Code Rulings 01-01 through 01-04

Aberdeen World, 1951 Fire Shocked Nation, January 31, 1991

WAC 388-97-162b Nursing Homes, Immediate reporting of fires or smoke required

WAC 388-78 Boarding Homes, Reporting of fires required

WAC 246-326 Alcohol Treatment Facility, Portable heaters prohibited

RCW 71.12, Private Establishments (includes ATF), Annual Fire Inspection Required

Opening: (Slide #1)

Overview: (Slide #2)

Nearly 2 million Americans reside in about 18,000 nursing homes.

Reference (Jones A. The National Nursing Home Survey: 1999 summary (National Center for Health Statistics). Vital Health Stat. 2002;13(152):1-116.

The goal of this class is to: increase fire and life safety in health care facilities (**and in your home**), help staff to understand fire code requirements and to reduce re-inspection of fire code violations.

Fire Safety is a team effort consisting of the staff, the maintenance director and the inspector. It is important to recognize deficiencies and report them to your supervisor or maintenance staff immediately.

Overview of Today's class: In today's class we'll be discussing:

Lesson 1 – Fire Protection

Understanding Fire and Smoke Spread

Understanding Features of Fire Protection

Fire Extinguishers

Lesson 2 – Fire Prevention

Fire Prevention Practices

Common Fire Safety Deficiencies

Activity - What's wrong with this picture?

Lesson 3 –Emergency Management

Disaster Planning

Evacuation and Fire Drill Planning

Lesson 4 – Emergency Preparedness

Fire drills

Emergency Incidents

Student Break – 10 minutes

Video - 10 minutes

Group Activity – Fire Drill simulations 10 minutes

Post Test

Class Evaluation - **Handout class evaluation.**

Please take a few minutes to complete the pretest. This will show the classes' baseline knowledge

LESSON 1 – FIRE PROTECTION

Enabling Objectives: (Slide #3) (Allow 20 minutes for Fire Protection lecture)

Upon completion of this lesson, students will be able to:

1. Understand Fire and Smoke spread
 - Realize speed of fire and smoke spread in a building.
 - Recognize danger to occupants from smoke and fire.
 - Identify components to extinguishing a fire

2. Understand features of Fire Protection
 - Understand Code Requirements for:
 - building materials and construction design
 - doors in facilities
 - exiting components
 - emergency lighting
 - corridors
 - smoke compartments.
 - sprinkler systems
 - fire alarm system and smoke detection devices
 - trouble signals
 - system tests
 -
 - Recognize maintenance needs of fire protection features
 - Understand trouble signals
3. Demonstrate the operation of a fire extinguisher using the PASS acronym.
 - Identify types of fire extinguishers
 - Understand when to use a fire extinguisher.
 - Understand how to operate a fire extinguisher

Motivation: 1951 Fire Shocked the Nation (Slide #4)

On January 30, 1951 a fire at the McClary Convalescent Home in Hoquiam took 21 lives, shocked the nation and led to building and fire code restriction for rest homes and other centers for the aged. The fire started in the laundry room of the two-story L-shaped structure at noon, and swept through the hall, cutting off the patients means of escape. Most of the victims died of smoke inhalation. Smoke and flames were channeled to other parts of the building through the laundry chute and also up a stairway. The flames burned through a partition into the furnace room and then the smoke also went through the building through the heating ducts.

The World reported:

A flash fire swept through the McClary Convalescent Home at 2224 Sumner Ave. Hoquiam, shortly before noon today, turning the large rambling frame structure into a holocaust and burning to death at least 15 of the 29 patients confined to the home. Mostly elderly persons who were unable to help themselves – only a few were even able to walk—the majority were trapped in their beds.

The first alarm of the tragedy came as Lucille Edwards, a cook at the rest home, was dishing up lunch. A man ran in to say there was a fire in the washroom. Mrs. Edwards investigated and found the washroom “all afire” smoke pouring into the storeroom. ***She grabbed a fire extinguisher but couldn’t get it to operate because a pin was stuck in it.***

The firefighter’s efforts were hampered by the cold weather which froze the water on the streets. Police were on duty to aid with the rescue work. All available ambulances were in service. In addition, hearses from the Elerding, Whiteside and Pinnick-Coleman mortuaries, laundry trucks, police paddy wagons and every kind of vehicle that could be converted to the purpose were employed to carry the dead and injured to mortuaries or hospitals. It woke up a nation.

The highly regarded attorney, State Rep. Gladys Phillips, helped push through legislation that called for more frequent inspections and tougher fire and building codes at such facilities. (*Aberdeen World, 1951 Fire Shocked Nation, January 31, 1991*)

The Greenwood Health Care Center Fire (Slide #5)

AND 52 YEARS LATER...

The building is a one (1) story, Type II (111), protected non-combustible structure with a partial basement built in 1970. A thirty (30)-bed addition of similar construction type was constructed in 1974. The building has a wood frame ornamental mansard roof. The facility is connected to city water. A new Acute Care Unit with twenty-one (21) beds, was added in July 1994 to the facility by renovating the existing “800” Wing. The 800 Wing has a piped-in medical gas and vacuum system.

Post-fire NOTE: The building is under new ownership and the wings have been totally renovated and a complete automatic sprinkler system and fire alarm / smoke detection system installed.

The Greenwood Health Care Center Fire (Slide #6)

The fire was discovered at approximately 2:40 a.m. It was started by a resident who piled clothing on her bed and ignited it with a match or lighter.

The staff on duty delayed notifying the fire department while they tried to extinguish the fire, but it had grown beyond their capabilities. In fact they were driven from the area by the rapid build-up of fire and smoke before they could even close the door of the room.

They left the area and called the fire department.

The fire department arrived in only four minutes!

The Greenwood Health Care Center Fire (Slide #7)

The room of origin is at the end of the corridor.

The Greenwood Health Care Center Fire (Slide #8)

Looking from the Nurse’s Station, down the corridor to the room of origin (arrow).

The Greenwood Health Care Center Fire (Slide #9)

This is the bed where the fire was started.

The Greenwood Health Care Center Fire (Slide #10)

This is the metal decking above the bed. The suspended ceiling has burned away.

Note the high heat damage, warping and buckling of the metal.

The Greenwood Health Care Center Fire (Slide #11)

Room of origin.

The Greenwood Health Care Center Fire (Slide #12)

The resident directly across the corridor from the room of origin was awakened by all the commotion.

The Greenwood Health Care Center Fire (Slide #13)

She was annoyed by all the noise, so she got up and closed her door.

The Greenwood Health Care Center Fire (Slide #14)

This is her room. There is very little heat and smoke damage.

THE CLOSED DOOR SAVED HER LIFE!

The Greenwood Health Care Center Fire (Slide #15)

You can see that the door held back the heat and smoke, even though the door had started to burn through at the top.

The Greenwood Health Care Center Fire (Slide #16)

Here is another resident room where the door was closed at the time of the fire.

The Greenwood Health Care Center Fire (Slide #17)

As you can see, there is little damage.

The Greenwood Health Care Center Fire (Slide #18)

The occupants of this room did not survive. You can see that there is much heat and smoke damage.

THE DOOR TO THIS ROOM WAS OPEN!

The Greenwood Health Care Center Fire (Slide #19)

Was this door open or closed?

The Greenwood Health Care Center Fire (Slide #20)

MORE FATALITIES! Open or closed?

The Greenwood Health Care Center Fire (Slide #21)

Open or closed?

The Greenwood Health Care Center Fire (Slide #22)

Open or closed?

The Greenwood Health Care Center Fire (Slide #23)

The next slide shows the view down the corridor from the nurses' station.

The Greenwood Health Care Center Fire (Slide #24)

Notice wheelchairs and patient lifts, *etc.* stored in the corridor.

The Greenwood Health Care Center Fire (Slide #25)

This is the Nurse's Station, approximately 150 feet from the room of origin. Note the smoke and heat damage, even at this remote distance from where the fire originated.

The Greenwood Health Care Center Fire (Slide #26)

Take note of how far down the walls the smoke layer descended.

The Greenwood Health Care Center Fire (Slide #27)

Luckily, the fire did not reach these liquid oxygen containers.

The Greenwood Health Care Center Fire (Slide #28)

The next slide shows the other end of this corridor beyond the ****smoke doors.****

******The slide labels them as fire doors, but they are actually smoke doors.

The Greenwood Health Care Center Fire (Slide #29)

Note the almost total lack of smoke damage compared to the Nurse's Station which just on the fire side of the smoke doors.

Clean, white walls and ceilings!

CLOSED DOORS SAVE LIVES!

The Greenwood Health Care Center Fire (Slide #30)

The facility is of Type II construction, which is virtually fire proof: metal deck roofing resting on concrete walls.

A CMS survey was conducted approximately four weeks prior to the fire and the facility was found to be in compliance with all applicable life safety standards.

The Greenwood Health Care Center Fire (Slide #31)

The building performed just as it was designed to do. The deficiency was with the staff actions.

Fire Behavior - Fire Growth (Slide #32)

It is critical to understand how fast a fire can grow.

- The fire department takes approximately 6 to 10 minutes to arrive and put water on the fire.
- 500 Sq ft room may be fully involved by the time the fire dept. arrives.

- Do not delay in calling 911 – time is critical due to this rapid fire growth.
- Smoke volume usually increases faster than fire. More people are hurt and killed by smoke than by fire. Close doors to stop the spread of smoke and fire.
- Do not re-open the door to the room of the fire. Let the fire department re-enter the room when they arrive. The fire and smoke may have completely engulfed the room creating a dangerous situation.

Smoke Spread (Slide #33) - Recognize danger to occupants from smoke and fire.

Products of Combustion: Deadly gasses are produced by the contents of the building such as furniture, carpet and plastics as they burn. Toxic products of combustion include the following:

1. Hydrogen Chloride
2. Hydrogen Cyanide
3. Hydrogen Fluoride
4. Hydrogen Sulfide

It is this toxic smoke that kills most fire victims. This is why automatic fire protection, such as some alarms and fire sprinklers, are so important in care facilities.

Reference: IFSTA Essentials of Firefighting Fourth Edition, page 51

Smoke Spread: Heat, smoke and fire gases travel upward. As these heated smoke and fire gasses accumulate, they bank down and begin to spread across a room or area. Stopping the spread of smoke is critical in saving lives during a fire. This is why it is so important to close doors and windows to stop the spread of smoke and fire.

Features of Fire Protection (Slide #34)

Fire protection features of a building protect life and property from fire should one occur.

Building Construction (Slide #35)

Opportunities to stop a fire:

- The first opportunity to stop a fire is by the **choice of materials** the building is constructed of, such as wood or cement, the flammability of **products** added to the building, such as furnishings and their **environments**, smoking area, cooking area, etc.
- Active Fire Protection – Automatic detection systems will tend to activate first, followed by automatic sprinklers, or
- Passive Fire Protection – Passive fire protection is designed to confine fire and smoke in zones, a concept called compartmentalization. Special attention is given to protection of the building's structural integrity and the spaces through which occupants will move to safety.

Special attention is given to protection of the building's structural integrity and the spaces through which occupants will move to safety.

Instructor: Identify facility construction features for students.

Doors (Slide #36)

Fire and smoke must be confined as much as possible until extinguishment can occur.

- Keep all doors closed during a fire. *Do not lock them.*
- Keep doors clear of any obstruction.
- Never use wedges, chairs, or any manual devices to hold self-closing doors open.

Doors and walls are an important construction feature designed to limit the spread of smoke.

- Holes in the walls made by cable, plumbing and/or electrical contractors must be filled with a rated compound to maintain the integrity of the wall as a fire stop.

Doors (Slide #37)

Facility doors are subject to a great deal of use and abuse. To maintain doors look for:

1. Proper alignment, damage to glazing, latching hardware, closing hardware and door integrity.
2. Ensure that doors function properly and close and latch with no excessive gaps.
3. Ensure that specialty doors like laundry chutes, dumbwaiters, *etc.* function properly.
4. Chute doors along rated corridors shall be fire-rated with self closing and latching hardware.
5. Chute discharge doors shall, at a minimum, be equipped with a fusible link to ensure that the chute way will close and latch during fire conditions.

Doors (Slide #38)

Delayed Egress Door –

1. Only a single delayed egress device may be employed in an exit path. After a 2 second activation of the door hardware, an irreversible countdown **MUST** begin resulting in release of the door within 15 seconds (may be extended to 30 seconds with DOH and local AHJ approval).
2. Proper signage must be posted within 12" of the door release device.
3. Doors must release under general alarm conditions or a loss of primary power.

Means of Egress Components (Slide #39)

1. Exit Access – Corridors how you get to the exit from inside the building.
2. Exit itself – doors or stairs
3. Exit Discharge – stairs or sidewalk that continues to a public way.

All exits shall be free of obstruction at all times.

- Never chain, locks, or fasten any fire exit so that it cannot be opened from the inside.
- Maintain exit ramps, outside stairs, and walkways in good repair and free from snow and ice.
- Make sure illuminated exit signs are maintained.

Furnishings and Decorations – shall not impede or delay exiting.

- Exit discharges shall be free of all obstruction (furniture, decorations, ice, snow) preventing or obstructing its use.

Exits must be readily identifiable:

- Inside the building, no furnishings, decorations or other objects shall be placed to obstruct exits, access thereto, egress there from, or visibility thereof.
- Hangings or draperies shall not be placed over exit doors or otherwise be located to conceal or obscure any exit.
- Mirrors shall not be placed on exit doors.
- Mirrors shall not be placed in or adjacent to any exit in such a manner as to confuse the direction of exit.

Emergency Lighting (Slide #40)

Licensed Care Facilities are required to provide exit lighting at all times.

Your facility may have either battery or generator power for the emergency lights and systems.

Battery-operated lights must have:

- 90 minute duration
- Regular testing
- Records of testing

Emergency generators are required to:

- Be tested monthly for 30 minutes under a load
- Have records maintained and available for review
- Be engine driven
- Automatically start within ten seconds of losing power
- Have an annual certification test to be conducted with records kept

Generators (Slide #41)

Generator Maintenance:

1. A detailed log of generator operations shall be maintained on the premises.
2. The system is required to run UNDER LOAD for a minimum of 30 minutes per month.
3. A simple exercise run that DOES NOT activate the transfer switch does NOT meet the CMS requirement.
4. Records will provide adequate detail to differentiate when the system was run under load.

Corridors (Slide #42)

Keep corridors clear and have a plan to quickly remove obstructions in use, such as a laundry cart or patient lift, etc.

Rapid movement of personnel and equipment may be necessary in the event of a fire.

In Use: Being used intermittently by staff. If it is in the corridor for more than 30 minutes without being used, **it is not in use but is storage.**

Reference: Certification and Survey letter from Center for Medicare/Medicaid Services (CMS).

- See Certification and Survey Letter 441, dated 8/12/04, from Center for Medicare/Medicaid Services (CMS).
- In a Boarding Home the minimum clearance is 44 inches.

Smoke Compartments (Slide #43)

Smoke and fire barriers are there to divide a building if smoke grows beyond the room of origin.

Smoke compartments are designed to limit the spread of smoke and contain it to just one compartment of the building.

This provides a smoke free area or wing to evacuate residents to.

Smoke and Fire Barriers (Slide #44)

Expect that surveyors will spot-check above suspended ceilings for smoke and fire barrier continuity.

Attics (Slide #45)

Facilities shall conduct regular inspections of attic areas to ensure that fire and smoke partitions are in good repair.

Attics generally should not be used as storage areas.

Boilers, Incinerators, and Heater Rooms (Slide #46)

Facilities shall ensure that boilers, incinerators, heaters, furnaces, *etc.*, draw and discharge their combustion and ventilation air from the outside. Facilities will ensure that rooms containing such devices (to include gas fired water heaters) do not draw their combustion air from inside the building. Doors to such rooms should not be equipped with louvers or transfer grilles.

Sprinkler Systems (Slide #47)

Fire sprinkler systems are made up of a system of strategically placed sprinkler heads. These sprinkler heads have links made of special metal or liquid-filled bulbs. Both are sensitive to heat and break when a pre-set temperature is reached at the head. When the link breaks, the water is automatically sprayed on the fire. Sprinkler heads are fast-acting and effective in containing and extinguishing a fire before it gets out of control.

- Only sprinklers in the immediate vicinity of a fire will discharge. There is no deluge of water from all sprinkler heads, as may be portrayed in some movies.
- When the sprinkler system activates, the fire alarm system will automatically activate to warn that there is a fire.

Never store any material in a way that obstructs the flow of a sprinkler head. An 18 inches minimum vertical clearance from the sprinkler head deflector is required by code.

Sprinklers must be inspected and tested per NFPA 25:

- Weekly and monthly inspection by facility maintenance staff checking gauges and valves to ensure the system is turned on and has pressure.
- Quarterly and annual testing by state certified inspection and testing technician.

Fire Alarm Systems (Slide #48)

- An automatic fire alarm system is required for the early warning of fire. These systems can be comprised of smoke detectors, heat rate of rise detectors and/or manual pull stations.
- Single station smoke alarms also provide early warning of a fire.
- The manual part of the fire alarm system includes the fire alarm pull stations normally located in the corridors. Follow the simple instructions to activate the fire alarm system if you discover a fire.
- Learn the location of all fire alarm equipment.

Fire Alarm Systems (Slide #49)

Ensure that all fire alarm system components are maintained in good working order.

Smoke detector sensitivity testing

- Sensitivity shall be checked within one year after installation
- And every alternate year thereafter, unless...
- After the second test, if within its listed sensitivity range for two tests in a row, the test is extended to five years.

- Records of nuisance alarms shall be maintained.
- Check NFPA 72-99 Edition Section 7-3.2.1 for allowable testing methods.

Signage (Slide #50)

Facilities shall supply and maintain all required signage, throughout.

Each facility must have a written policy that addresses an 'out of service' fire protection system that is four or more hours in duration during any 24 hour period.

Fire Protection System: Inspection, Testing & Maintenance (Slide #51)

Inspection, testing and maintenance of fire protection systems are to be conducted on a regular basis.

Fire Drills shall be conducted quarterly during each shift.

- A **planned** fire drill is part of the fire protection system
- Record date, time, person in charge, remarks and list of personnel participating in each drill.

Conducted by facility staff:

- Test all battery-powered lights, *etc.*
- Test generator and document.
- Inspect fire extinguishers monthly, date and initial tag. (Instructor: show students the tag on the demonstration fire extinguisher.)
- Ongoing cleaning of Kitchen hoods with a record of each cleaning

Conducted annually by qualified companies:

- Inspection, Testing and maintenance of all sprinkler systems with proper documentation
- Inspection, Testing and maintenance of all fire alarm systems with proper documentation
- Inspection, Testing and maintenance of all fire extinguishers with proper documentation
- Inspection, Testing and maintenance of all kitchen hood systems. Hood systems are to be cleaned as necessary and serviced two times a year. Records are to be maintained of each cleaning and servicing.

Provide Facility Record Book – Give to facility maintenance staff at this time.

Questions and Answers – Ask for questions before continuing on to fire extinguishers.

Fire Extinguishers (Slide #52)

Fire extinguishers are a valuable tool for extinguishing small fires that are discovered at an early stage.

Each facility is required to have on hand fire extinguishers of a type and variety that will handle any small fire, such as a multipurpose ABC Fire Extinguisher.

There are several types of fire extinguishers designed to extinguish different fires, as shown here.

A multipurpose fire extinguisher is a good selection for most applications.

Class K extinguishers are intended for use on cooking oil fires, such as deep fat fryers.

Fire Extinguishers (Slide #53)

Document monthly self inspections.

Monthly Self Inspection includes:

1. Ensuring the extinguisher is not obstructed.
2. The safety pin is in place.
3. The extinguisher is pressurized in the “green” zone.
4. You mark the date and initials of the person inspecting.

Fighting the Fire (#54)

Sound the alarm, call 911, or assign someone else to, and evacuate the area. Every fire must be reported to a 911 dispatcher.

Know when to fight the fire – When the fire is small and easily extinguished.

For example a contained fire, such as in a trash can.

Know when not to fight the fire – When a fire is spreading, such as a trash can fire that has spread to the wall or curtains. Do not attempt to fight the fire if it does not go out immediately, after the fire extinguisher has been emptied or if there is a serious threat.

To Use a fire extinguisher:

P – Pull the pin. (You can also roll the pin to break the plastic holder).

A – Aim the nozzle at the base of the fire, stand back 8 to 10 feet, if possible.

S – Squeeze the handle and lever on valve.

S – Sweep the nozzle from side to side until fire extinguisher is out, fire is out, or both. For floor fires, spray from the edge in, for wall fires, spray from the bottom up.

Demonstrate with fire extinguisher.

Use facility fire extinguisher and traffic cone as the fire.

After the fire extinguisher is completely discharged **close the door**, call 911 and give an update. *i.e.* “The fire extinguisher has been completely discharged; the fire did not go out. I closed the door and am evacuating the area.” OR “The fire extinguisher has put out the fire.”

Fire protection features of buildings is your first defense against fire.

Fire prevention is a team effort consisting of the staff, the maintenance director and the inspector.

Staff must report any fire safety deficiencies to the maintenance director or their supervisor right away so that it can be taken care of immediately.

End of Lesson 1

LESSON 2 – FIRE PREVENTION

Enabling Objectives (Slide #55) (Allow 15-20 minutes for lecture)

Fire Prevention - a Team Effort

Fire Prevention is a team effort consisting of the staff, the maintenance director and the inspector. Staff must report any fire safety deficiencies to the maintenance director or their supervisor right away so that it can be taken care of immediately.

A delay in restoring fire safety could cause a deadly fire, building damage, temporary closing of the facility and relocation of residents. Do not delay in reporting.

Enabling Objectives: The student will be able to recognize common fire safety deficiencies found in residential care facilities.

The student will be knowledgeable of:

Top 5 Citations found during fire code inspections.

- K018 - 94 - Corridor doors - Doors fail to close and latch properly, doors are wedged open, doors are obstructed.
- K062 -74 - Automatic Sprinklers where required.
- K147 – 53 – Electrical wiring - Extension cords used in place of permanent wiring, piggy-backed, used instead of approved power strip, not adequate for power demand.
- K012 – 48 – Exit and Directional Signs - EXIT signs not properly illuminated, faulty or non-existent emergency egress lighting.
- K072 – 48 – Egress - Items stored in exit corridors, such as trash containers, decorations, wheel chairs, patient lifts.

Fires in Licensed Care Facilities

There were 50 fires in Licensed Care Facilities in 2010. The leading causes were:

Electrical, Cooking, Dryer, Smoking and Intentional

“As we go through this lesson, ask yourself “Do I practice these fire safety measures at home.”

Decorations and Finishes (Slide #56)

Decorations commonly displayed during holiday season or for wall decorations, etc., may not be suitable for use in a nursing home.

- Make sure all decorations are non combustible or flame retardant.
- Never hang decorations from fire sprinkler heads or pipes.
- Ensure that all decorative lighting is approved by a testing laboratory such as UL and used only in supervised areas and turned off when not in use.
- Burning candles are prohibited.
- The use of fresh evergreen boughs for decoration is prohibited.
- Natural cut Christmas trees are prohibited.
- Artificial Christmas trees must comply with the International Fire Code.
- Paper tree ornaments are prohibited.
- Trees, plants, displays, hangings, and other decorations must not block exits, visibility of exits, or fire protection appliances.
- Curtains and draperies in the nursing home shall be made of flame resistant material.
- Furniture shall have flame resistant covering.

- Decorations made of wood ¼ inch and less in thickness shall be treated with a fire retardant.
- Decorations such as doors with paper wrap, bows, and paper cut-outs shall be flame resistant.

Resident Rooms (Slide #57)

- Rooms should be neat and orderly.
- No accumulation of combustible materials, *i.e.* newspapers, laundry, or clothing.
- Extension cords are prohibited.
- All items 36" from heaters.
- In nursing homes portable heaters are prohibited.

Smoking

Smoking continues to be the leading cause of fire deaths in Washington State. People falling asleep while smoking often cause fires when upholstered furniture, mattresses or bedding ignited. In licensed care facilities, often residents start their clothing on fire. The person most often killed, is the person that was smoking.

- Know your facility's smoking policy
 - The policy should include an evaluation plan.
 - The policy should include disciplinary action that will be taken.
 - The policy should be included in the lease contract.
- Most facilities do not allow smoking
- Safe smoking practices include:
 - Having a designated smoking area. **NO TENTS OR FABRIC COVERED STRUCTURES**
 - Supervision of residents while smoking.
 - Providing proper receptacles.

You must take action against person violating the facility smoking policy. The worst mistake is to think it was an isolated incident and won't happen again

Smoking Policy (Slide #58)

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Flammable Liquids and Compressed Gasses (Slide #59)

Flammable liquids and compressed gasses can be extremely hazardous in the event of a fire.

- Store paint solvents, thinners, and other flammable liquids in a metal cabinet approved for flammable liquid storage, away from all sources of heat.
- Use safety cans approved for flammable liquids in quantities of one gallon or more.
- Fuel burning space heaters or portable electric heaters are prohibited.
- Fueled equipment (lawn care, mopeds, snow removal and portable cooking equipment) shall not be stored, operated or repaired within a licensed care facility.

Oxygen and Liquid Oxygen (Slide #60)

Oxygen and Liquid Oxygen

No smoking when oxygen is in use or stored. **SIGNAGE REQUIRED**

Why: Clothing and bedding become oxygen enriched. When provided a heat source, such as a cigarette, fabric can catch fire very quickly and burn very fast.

- Large quantities of oxygen cannot be stored in resident rooms.
- Oxygen needs to be stored in an approved storage area.
- Oxygen cylinders must be secured and capped.
- Be aware of facility safety procedures in handling small portable oxygen tanks.

4006.3.3 Locating containers.

Containers shall not be located in areas where:

1. They can be overturned due to operation of a door;
2. They are in the direct path of egress;
3. They are subject to falling objects;
4. They can become part of an electrical circuit; or
5. Open flames and high-temperature devices can cause a hazard.

Restraining Containers (Slide #61)

Medical gas and other inert gas (*e.g.* helium) in compressed gas cylinders are stored under extremely high pressure.

Cylinders must be properly secured to protect them from damage and potential 'rocketing.' Cylinders must be chained, in carts, or in racks specifically designed for that purpose.

4006.3.4 Restraining containers.

Home care containers shall be restrained while in storage or use to prevent falling caused by contact, vibration or seismic activity. Containers shall be restrained by one of the following methods:

1. Restraining containers to a fixed object with one or more restraints.
2. Restraining containers within a framework, stand, or assembly designed to secure the container.
3. Restraining containers by locating a container against two points of contact such as the walls of a corner of a room or a wall and a secure furnishing or object such as a desk.

Liquid Oxygen (Slide #62)

The seller of liquid oxygen shall provide the user with information in written form that includes, but is not limited to, the following:

1. Manufacturer's instructions and labeling for safe storage and use of the containers.
2. Locating containers away from ignition sources, exits, electrical hazards and high temperature devices in accordance with Section 4006.3.3.
3. Restraint of containers to prevent falling in accordance with Section 4006.3.4.
4. Requirements for handling containers in accordance with Section 4006.3.5.
5. Safeguards for refilling containers in accordance with Section 4006.3.
6. Signage requirements in accordance with Section 4006.6.

4006.3.3 Locating containers.

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1. They can be overturned due to operation of a door;
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4. They can become part of an electrical circuit; or
5. Open flames and high-temperature devices can cause a hazard.

Liquid Oxygen Transfilling (Slide #63)

Transferring of liquid oxygen from one container to another involves hazards associated with the strong oxidizing properties of oxygen, the cryogenic temperature of the liquid and vapor, and the pressure producing potential of the vaporization and liquid expansion process. Liquid oxygen retains all of the properties of gaseous oxygen, but in addition, when allowed to warm to room temperature at atmospheric pressure, will expand to fill a volume 860 times its liquid volume. The single greatest hazard during transfer of liquid oxygen is the potential for a spill allowing the oxygen to vaporize in an enclosed, unventilated space. An ignition source such as a pilot light, an open flame such as a candle, lighted smoking material, static electricity, or electric spark may create a fire that can burn with explosive force.

4006.3.6.1 Filling location.

Liquid oxygen home care containers and ambulatory containers shall be filled outdoors.

Exception: Liquid oxygen ambulatory containers are allowed to be filled indoors where the supply container is specifically designed for filling such containers and written instructions are provided by the container manufacturer.

4006.3.6.2 Incompatible surfaces.

A drip pan compatible with liquid oxygen shall be provided under home care container fill and vent connections during the filling process in order to protect against liquid oxygen spillage from coming into contact with combustible surfaces, including asphalt.

4006.6 Signs.

Warning signs for occupancies using home health care liquid oxygen shall be in accordance with Sections 4006.6.1 and 4006.6.2.

4006.6.1 No smoking sign.

A sign stating “OXYGEN—NO SMOKING” shall be posted in each room or area where liquid oxygen containers are stored, used or filled.

4006.6.2 Premises signage.

Where required by the fire code official, each dwelling unit or sleeping unit shall have an approved sign indicating that the unit contains liquid oxygen home care containers.

Storage of Combustible Materials (Slide #64)

- Never store combustibles, such as laundry, papers, blankets, bedding or trash, in boiler rooms, electrical rooms, or near any type of heating device. Use designated storage areas. This is a common fire hazard.
- Always keep doors closed on any room used for storage when not in use, and store materials in a neat and orderly manner.
- Store combustible waste materials in proper containers with tight fitting lids which are emptied often.
- Watch for blankets and other cloth material too close to heaters.

Electrical Wiring and Equipment (Slide #65)

Improper use of electrical wiring and equipment will create fire safety hazards that have caused fires.

- Make sure all electrical appliances and equipment are in good repair.
- Do not use extension cords, circuit breaker cords, or multiple plug devices in place of permanent wiring and outlets.
- Always use a properly grounded outlet for equipment with three-wire grounded plugs.
- Surge protectors and power strips that are approved and have overload protection can be used for a specific purpose, such as in an office for computers.
- Electrical junction boxes must have a non-combustible cover plate.

Multi-Plug Devices (Slide #66)

Multi-plug devices should have a UL listing displayed, and shall be equipped with an over-current device. This can usually be identified by an exterior 're-set' switch/button or the on/off rocker may also have the word "re-set" embossed upon it.

- Care must be taken that they are only serving an electrical load below their maximum rated capacity.
- Do not use unlisted devices or those that lack an over-current protection circuit.

NOTE: Do not confuse "Over-Current" protection with "Surge" protection. "Surge Protection" is generally downstream, thus protecting your end appliance (computer, plasma TV, etc.) whereas "Over-Current Protection" is upstream, protecting wiring hidden behind the walls.

Kitchen Hoods (Slide #67)

- The ventilation system in connection hoods shall be operated at the required rate of air movement and classified grease filters shall be in place when equipment under a kitchen grease hood is used.
- If grease extractors are installed, they shall be operated when commercial-type cooking equipment is used.
- Hoods, grease-removal devices, fans, ducts, and other appurtenances shall be cleaned at intervals necessary to prevent the accumulation of grease.
- Cleaning shall be recorded, and records shall state the extent, time and date of cleaning. Such records shall be maintained on the premises.
- Crushable mesh filters are no longer approved.
- Use of a deep fat fryer requires a UL 300 fire suppression system.

Microwave Ovens

- Residents must be aware of safe use of microwave ovens and cooking appliances.

Clothes Dryers (Slide #68)

Clothes dryers shall be frequently cleaned to maintain the lint trap and mechanical and heating components free from excessive accumulations of lint in and around the appliance.

Causes of fires in clothes dryers:

- Clothes dryer lint traps that are not emptied
- Dryer vents that become clogged
- Lint around mechanical or heating components
- Drying greasy rags or linens with lotion on them

Dryer Exhaust Ducts (Slide #69)

Check exhaust ducts for damage and remove switchbacks or excessive long runs.

One of the most common causes for dryer fires is inefficient or obstructed lint exhausting. Facilities shall conduct regular preventive maintenance to ensure that exhaust ducts remain clean, clear, and free-flowing.

Common Fire Safety Deficiencies (Slide #70)

Fire/Smoke Doors: Doors fail to close and latch properly, doors are wedged open, doors are obstructed

Testing of Systems: Certification tests not up-to-date, monthly check of fire extinguishers, some fire extinguishers missed during annual inspection/service, generators not tested regularly, records not up to date, records not available, records disorganized

Fire Drill Records: Fire drills not being conducted as required.

Extension Cords: Used in place of permanent wiring, piggy-backed, used instead of approved power strip, not adequate for power demand.

Exit Lighting: EXIT signs not properly illuminated, faulty or non-existent emergency egress lighting

Exit Obstructions: Items stored in exit corridors, such as trash containers, decorations, wheel chairs, patient lifts

Top 5 Citations Found During Fire Code Inspections

K-Tag #Citations – Citation Description

- K018-94 – Corridor Doors – Doors fail to close and latch properly, doors are wedged open, doors are obstructed.
- K062-74 – Automatic sprinklers where required.
- K147-53 – Electrical wiring – Extension cords used in place of permanent wiring, piggy-backed, used instead of approved power strip, not adequate for power demand.
- K012-48 – Exit and directional signs – Exit signs not properly illuminated, faulty or non-existent emergency egress lighting.
- K072-48 – Egress – Items stored in exit corridors, such as trash containers, decorations, wheel chairs, patient lifts.

Data from 01/01/10 through 12/31/10

Review (Slides #71-74)

Questions and Answers

Student ACTIVITY

“What’s wrong with this picture?”

1. Access to fire extinguisher obstructed.
2. Fire/smoke door wedged open.
3. Multi plug adaptors prohibited, light weight extension cords.
4. Exit door obstructed by desk.

Handout: Follow up – Fire Safety Where You Work.

Now that you know what you know, how can you increase fire safety where your work?

End of Lesson 2

Student Break – 10 minutes

LESSON 3 – EMERGENCY MANAGEMENT

Enabling Objectives (Slide #75) (Allow 20-30 minutes for lecture)

Students will be able to:

- Understand possible disasters that could occur within the facility.
- Understand the disaster planning process. (Reference: NFPA 101.31-4.1)
- Understand the evacuation and fire drill planning process.

Motivation: What does your resident contract say about providing care during emergencies?

Hurricane Katrina Disaster Victims:

- The confirmed death toll is 1,836. (Louisiana Dept. of Health and Hospitals)
- 135 are still unaccounted for. (Louisiana Dept. of Health and Hospitals)
- Of the 1,577 deaths in Louisiana, 64% were 65 or older. (Louisiana Dept. of Health and Hospitals)
- 70 nursing home residents died in 13 nursing homes during the immediate aftermath of Katrina. (American Journal of Public Health, 7/2008)
- 2,900 people were evacuated from hospitals and nursing homes by the Federal government's National Disaster Medical Systems. (American Journal of Public Health, 7/2008)
- The Veterans Affairs (VA) Medical Center and the nearby Tulane University Hospital were relative success stories because they shared a common factor—access to an effective external source of help (Mobile Register, 9/26/2005)

Disaster Planning Process (Slide #76)

1. Develop a Hazard Inventory –and a response to each hazard.
2. Develop a Written Plan – Managing a facility during a disaster.
3. Annual Exercise and Update

1. Hazard Inventory (Slide #77)

A. A list of disaster hazards should be developed for each health care facility. The location of the health care facility may be effected by hazardous facilities in the area. These possible hazards need to be identified and evaluated.

This is important because planning must be based on realistic conceptual events.

Consult with the local fire dept., Office of Emergency Management, police dept., and/or sheriff's office, in developing the hazard inventory for your area.

<p>Geological Earthquake Tsunami Lahar</p>	<p>Terrorism Bomb Threat Explosion Biological exposure</p>
<p>Weather Windstorms Heavy rains Flooding Mudslides Snowstorm Wildfires</p>	<p>Hazardous Facilities Chemical Storage Dams Airports Railways Gas stations Nuclear power sites</p>

B. Developing a response to identified hazards. (Slide #78)

Following the hazard inventory, a written plan for responding to the identified hazards shall be developed.

Bomb Threat

1. The bomb threat procedure should be discussed with the local police agency. The procedures should be predetermined and outlined in the facility disaster plan. If a bomb threat is received by telephone, get as much information as you can. If possible, the information should include: location, size, type when it will explode and who is calling.
2. It is also possible that you may locate an unidentifiable object that you suspect is a bomb. In either situation, immediately initiate the emergency call list. Ask for instructions on how to proceed.
3. Total evacuation of the facility may be necessary.

Explosion

An explosion can occur from a leaking gas line, gas stove, leaking propane tank, or an explosive device. It may be necessary to partially or fully evacuate the building. Move patients to a safe area and provide patient care.

1. Call the fire department immediately and initiate the emergency call list.
2. If the explosion occurs from an explosive device, establish security of the area until law enforcement arrives.
3. Most explosions will cause substantial damage to utilities, which will then need to be turned off at the main controls. All utilities, gas, electricity, water, and fuel systems should be checked for damage before returning patients to the facility.

Extreme Weather

Windstorms, heavy rains and/or snowstorms can cause flooding, mudslides, road and bridge closures, power outages, and other inconveniences.

1. Have a plan for alternative transportation routes. Notify companies delivering important services and supplies to the facility.
2. Have a plan for prolonged power outages. This should include how to keep patients warm. **(Handout Electrical and Fuel Outages)**

Earthquake

1. Usually there is no warning when an earthquake will occur. The tremors may last from a few seconds to several minutes. During the earthquake, keep patients inside and away from windows and falling objects, if possible.
2. After the earthquake, check all patients for injury while reassuring and calming them. Establish a triage area. If necessary, initiate the emergency call list. Check all utilities to see if they are functioning properly.
3. Check the building for structural damage.

Tsunami

There may be some warning of an impending tsunami. If the facility is located in a coastal community, the facility may need a tsunami plan that coordinates with the community's tsunami plan. Be familiar with the facility's tsunami plan, transportation plan and evacuation routes.

Lahar

The greatest volcanic hazard is a lahar. A lahar is a rapidly-moving mudflow or debris flow composed of pyroclastic material, rocky debris, and water. The material flows down from a volcano, typically along a river valley. If the facility is located in a community where there is a lahar threat, the facility may need to coordinate with the community's lahar plan.

2. Written Plan (Slide #79)

Managing a facility during a disaster. (Handout)

Your services are important in the community. Residents and their family members are dependent on you to continue providing services during disaster events.

Invite your local Emergency Management Department to participate while you develop your disaster plan. Submit the plan to the local fire department, police department and/or Sheriff's office for review.

1. Designate lines of authority in writing. The plan must contain a list of names indicating who is in charge. The person in charge must be present in the health care facility.
2. List persons to be notified, their current phone numbers, and an alternate method of communication, if appropriate. Record who contacted the persons in what order they were contacted, and at what time there were contacted. **Handout – Emergency Call List**
3. Assign specific responsibilities to specific positions, with alternates assigned.
4. Develop and maintain a signed written agreement for both a designated and an alternate emergency **evacuation site**. Review and update agreements annually. Agreements must be signed by the parties who are presently responsible and be consistent with the current disaster plan.
 - Nursing Home – Shelter must provide current level of care. Another Nursing home is recommended.
 - Boarding Home – A place where the current level of care is provided.
5. Develop and maintain a signed written agreement for a primary and secondary transportation agency. Review and update agreements annually.
 - It may be necessary to provide staff to travel with and attend to residents at the sheltering location.

6. Designate specific evacuation routes in writing and post throughout the building.
7. Develop a plan for medications, health records, and patient care supplies in the event of evacuation.
8. Develop a plan for providing food for 3 days, such as a menu plan and basic food storage.
9. Provide orientation for all new employees to the facility's disaster preparedness plan.
10. Provide regular ongoing education, training, and drills to maintain staff familiarity with disaster procedures.
11. Give consideration to the use of the facility as an emergency care center in the event of a disaster.

Disaster Planning –Annual Update (Slide #80)

3. Annual Update

Disaster plans should be updated at least annually, with key agencies having dated, current copies of the plan on file. Key agencies would include the local fire and police and/or sheriff departments

Annual Exercise – Contact your county Emergency Management agency and discuss conducting an annual exercise of your plan.

Evacuation Planning (Slide #81) NFPA 101 18.7.1 & 19.7.1

Responsibilities of Administration

- Develop Emergency Evacuation Plan
- Develop Fire Evacuation Plan
- Schedule and hold Fire Drill Practice
- Maintain a Record of Fire Drill Practice

Emergency Evacuation Plan - Nursing home administration shall provide a written plan for the protection of all patients and for their evacuation in the event of an emergency. A simple floor plan showing the evacuation routes is to be posted in prominent locations of all floors. (NFPA 101 Sec 18.7.1)

Fire Evacuation Plan shall include the following: (IFC Section 404.3.1; NFPA 101 19.7.2.2)

1. Emergency egress or escape routes and if evacuation is complete or partial.
2. Procedures for employees who must remain to operate critical equipment before evacuating.
3. Procedures for accounting for employees and occupants after evacuation.
4. Identification and assignment of staff responsible for rescue or emergency medical aid.
5. How to notify occupants of a fire or emergency.
6. How to report fires and other emergencies to the fire department or designated emergency response organization.
7. Identification and assignment of personnel who can be contacted for further information regarding duties.
8. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.

LESSON 4 – EMERGENCY PREPAREDNESS

Enabling Objectives (Slide #82) (Allow 10 minutes for lecture)

Students will be able to:

- Understand actions to take in an emergency.
- Take the proper actions in a fire drill scenario.

Group Activity: Fire Drill Scenarios – 10 minutes just after the video

Fire Drills

Fire Drills (Slide #83)

Fire Drills should require the staff to: *NFPA 101 18.7.2.1.2*

- Search for the fire.
- Shut doors and windows of room or area involved.
- Announce the fire location and activate the fire alarm system (9 p.m. to 6 a.m. shifts simulate activating the fire alarm system).
- Techniques for removing patients, using a staff member as the patient – Hip Carry, Pack Strap Carry, and Blanket Drag.
- Carrying fire extinguishers to fire location and reviewing proper use.
- Critique of the drill is to be made by drill leaders and any corrections in the procedures or techniques are instituted, discussed with personnel and facility administration
- Record date, time, person in charge, remarks that include a critique and corrections, and list of personnel attending for each drill.

Maintain a Record of Fire Drill Practice (Direct Students to Handout) (Covered in the video) *IFC Section 405.5, NFPA 101 4.7.6*

- Licensed Care Facilities shall hold at least twelve planned fire drills each year. The drills shall be conducted quarterly on each shift. Fire drills familiarize personnel with signals and emergency action required under various conditions.
- A detailed written record of all fire drills shall be maintained and available for inspection at all times. **Refer to facility record book.**
- When drills are conducted between 9 p.m. and 6 a.m., a coded announcement may be used instead of audible alarms.
- Fire drills shall include the transmission of a fire alarm signal and simulation of emergency conditions.
- The local fire department shall be notified prior to the activation of the alarm system for drill purposes and again at the conclusion of the transmission and restoration of the fire alarm system to normal mode.
- Note: After activation, the alarm can be silenced only with the approval of the fire chief. Do not reset.

Fire Drill Procedures (Slide #84)

A card will be given to the head nurse on duty denoting the location selected for the simulated fire.

When the Simulated Fire is discovered, the person who discovers it will:

1. **Rescue** patients from the area of the fire. The first step may also include assessing the fire, calling out for help, as well as moving patients from danger.
2. **Alarm** initiation. This may be done by calling out or by pulling down on an automatic manual alarm (except during 9 p.m. to 6 a.m. shift). In addition, someone must indicate that they would call 911 to report the fire. Be sure to know the policy for your facility.
3. **Confine** the fire by closing the door to the room of the fire. Corridors must also be cleared and all doors closed to confine the fire.
4. **Evacuate and Extinguish** – Relocate patients in the fire area and Extinguish the Fire – Assess the fire to determine if it is small enough for you to extinguish.
5. Staff are to follow the fire plan for their facility.

Other Personnel in the area will:

- Clear the corridors!
- Call the head nurse or supervisor on duty and give the exact location of the fire.
- Carry out necessary steps to confine the total area by shutting all doors and windows. Do not lock them. Turn off all unnecessary equipment. Fire doors in the main corridors must be latched.
- Stand by to assist. If necessary, patients and visitors can be told “We are having a fire drill.”
- All offices and departments outside the “Fire Area” shall secure the area by shutting windows and doors – do not lock.
- The nurse’s aides are to standby their assigned patients until the “all clear” signal sounds. *No patients will be moved during drills.*
- Do not use the telephone or electrical equipment during the drill, except for a patient emergency.

Fire Drills -- Review (Slide #85)

What we practice in a drill we are most likely to repeat in a live incident. Make your drills as realistic as possible. Say what you would do. Go to the fire alarm station. Get the fire extinguisher. Call out for help. Go through each step.

The Emergency Incident -- Responsibility of Personnel (Slide #86)

Be Prepared

There is always some potential for any fire to generate a disaster situation.

- Know the disaster plan and procedures for your facility.
- Be alert for events that can lead to a disaster situation
- Be prepared to assume the role you have been assigned in the disaster plan of the facility.

If assigned to check the fire alarm panel:

- A red light indicates emergency alarm activation.
- **Do not silence this alarm until the fire department gives approval!**
A silenced alarm can give the impression that the fire is out and everything is ok.

When the Fire Alarm Sounds (Slide #87) NFPA 18.7.2.1.2

Rescue patients from the area of the fire. The first step may also include assessing the fire, and calling out for help, as well as moving patients from danger.

Alarm initiation - This may be by calling out, by pulling down on an automatic manual alarm, and/or by calling 911 to report the fire. Be sure to know the policy for your facility.

Confine the Fire. Normally this is accomplished by closing the door to the room of the fire. Corridors must also be cleared and all doors closed.

Extinguish the fire. Assess the fire to determine if it is small enough for you to extinguish.

Evacuation Procedures (Slide #88)

An authorization order will normally be given by the individual in charge of the nursing home at the time of the fire. This can be the Fire Chief, Administrator, Director of Nursing Services, or their designated representatives.

Evacuation should be limited to those areas affected by the fire and be internal unless total evacuation is ordered.

If an evacuation is ordered, the head nurse or supervisor on duty will be responsible for their respective units.

Order of Patient Removal

- Patients in the immediate fire area.
- Ambulatory or patients who can be carried.
- Patients who can be removed by wheel
- Bed patients

Methods of Patient Removal (covered thoroughly in the video)

- Blanket drag
- Under arm drag
- Hip roll carry
- Wheel chair
- Bed or stretcher

Two Kinds of Evacuation (Slide #89)

Partial Evacuation – Procedure of removing patients in the immediate area to places of temporary safety. (Defend in Place)

Total Evacuation –Evacuation of the premises by all patients and personnel.

- During evacuation procedure, all doors must remain closed until you enter and they must be closed when you go out.
- Never leave a patient in a room unless you close the door.
- Do not leave doors of empty rooms open. This permits fire to spread.

Show Video (if available) “Evacuation of Health Care Facilities” (Allow 12 minutes)

Group Activity

Fire Drill Scenarios – Pass out scenario cards (Allow 10 minutes – 3 minutes to prepare and a couple of minutes for each group to tell what they would do.)

Closing (Slide #90)

Remember: Fire Prevention is a team effort, it is important to recognize deficiencies and report them to your supervisor or maintenance staff right away.

Are there any questions?

We'd like to thank the facility manager for allowing us to share this information with you today. Please help us maintain this class by offering your comments or recommendations in the class evaluation.

Thank you for your time.

Bibliography:

IFSTA Essentials of Firefighting, page 51, Fire Behavior,

Evacuation of Health Care Facilities, 12 minute video, National Fire Protection Association (NFPA) One Batterymarch Park, Quincy MA 02269

NFPA 25 Water Based Fire Protection Systems, 1998 edition

NFPA 99 Health Care Facilities, 1999 Edition, Chapter 2 Definitions – Disaster Defined, Chapter 11 Health Care Emergency Preparedness, Annex A, A.11.1 through A.11.5.3.10

NFPA 101 Life Safety Code, 2000 Edition, Evacuation and Relocation Plan and Fire Drills 18.7.1, 19.7.1, 20.7.1 and 21.7.1

NFPA 1600 Disaster/Emergency Management and Business Continuity Programs, 2004 Edition

International Fire Code, 2003 Edition, Section 405.1, 405.2, 405.4, 405.5, 408.6.1

Washington Administrative Code 212.12-040 Fire Emergency Plans and WAC 212.12-044 Fire Drills

Oregon Office of the State Fire Marshal, Policies, Practices and Procedures for Licensed Health Care Facilities Manual, on line at http://www.oregon.gov/OSP/SFM/FLS_New2007.shtml#Licensed_Care_Facilities

WELCOME

**Fire Safety in
Licensed Care
Facilities**



**PREVENT FIRES
IT'S YOUR JOB!**

Opening Slide: Introduce self and position in State Fire Marshal's Office.

**PREVENT FIRES
IT'S YOUR JOB!**

Fire Safety in Licensed Care Facilities



**Today's Licensed Care Facilities offer many amenities.
Fire safety remains paramount.**

Nearly 2 million Americans reside in about 18,000 nursing homes.

Nearly 2 million Americans reside in about 18,000 nursing homes.

Reference (Jones A. The National Nursing Home Survey: 1999 summary (National Center for Health Statistics). Vital Health Stat. 2002;13(152):1-116.

The goal of this class is to: increase fire and life safety in health care facilities (**and in your home**), help staff to understand fire code requirements and to reduce re-inspection of fire code violations.

Fire Safety is a team effort consisting of the staff, the maintenance director and the inspector. It is important to recognize deficiencies and report them to your supervisor or maintenance staff immediately.

Overview of Today's class: In today's class we'll be discussing:

<p>Lesson 1 – Fire Protection Understanding Fire and Smoke Spread Understanding Features of Fire Protection Fire Extinguishers</p>	<p>Lesson 2 – Fire Prevention Fire Prevention Practices Common Fire Safety Deficiencies Activity - What's wrong with this picture?</p>
<p>Lesson 3 –Emergency Management Disaster Planning Evacuation and Fire Drill Planning</p>	<p>Lesson 4 – Emergency Preparedness Fire drills Emergency Incidents</p>

Student Break – 10 minutes

Video - 10 minutes

Group Activity – Fire Drill simulations 10 minutes

Post Test

Class Evaluation - **Handout class evaluation.**

Please take a few minutes to complete the pretest. This will show the classes' baseline knowledge.

Lesson 1 Fire Protection



Objectives:

- Understanding Fire and Smoke Spread
- Understanding features of Fire Protection in the Care Facility
- Fire Extinguishers 101

It is important to recognize deficiencies and report them to your supervisor or maintenance staff.



Enabling Objectives: Upon completion of this lesson, students will be able to:

1. Understand Fire and Smoke Spread

- Realize speed of fire and smoke spread in a building.
- Recognize danger to occupants from smoke and fire.
- Identify components to extinguishing a fire

2. Understand Features of Fire Protection

- Understand fire code requirements for:
 - building materials and construction designs
 - doors in facilities
 - exiting components
 - emergency lighting
 - corridors.
 - smoke compartments
 - sprinkler system
 - fire alarm and smoke detection
 - trouble signals
 - system tests to be conducted
- Recognize maintenance needs of fire protection features.
- Understand trouble signals.

3. Demonstrate the operation of a fire extinguisher using the PASS acronym.

- Identify types of fire extinguishers
- Understand when to use a fire extinguisher

PREVENT FIRES
IT'S YOUR JOB!

Fire Safety in Licensed Care Facilities

Nursing Homes have a tragic history of multiple fire deaths.



A 1951 fire at the McClary rest home in Hoquiam where 21 elderly people died, caused a national outcry and prompted sweeping legal changes in senior citizen care.

1901 legislation created the State Fire Marshal's Office. In 1951 the inspection of Nursing Homes became one of its core missions.

Motivation: 1951 Fire Shocked the Nation

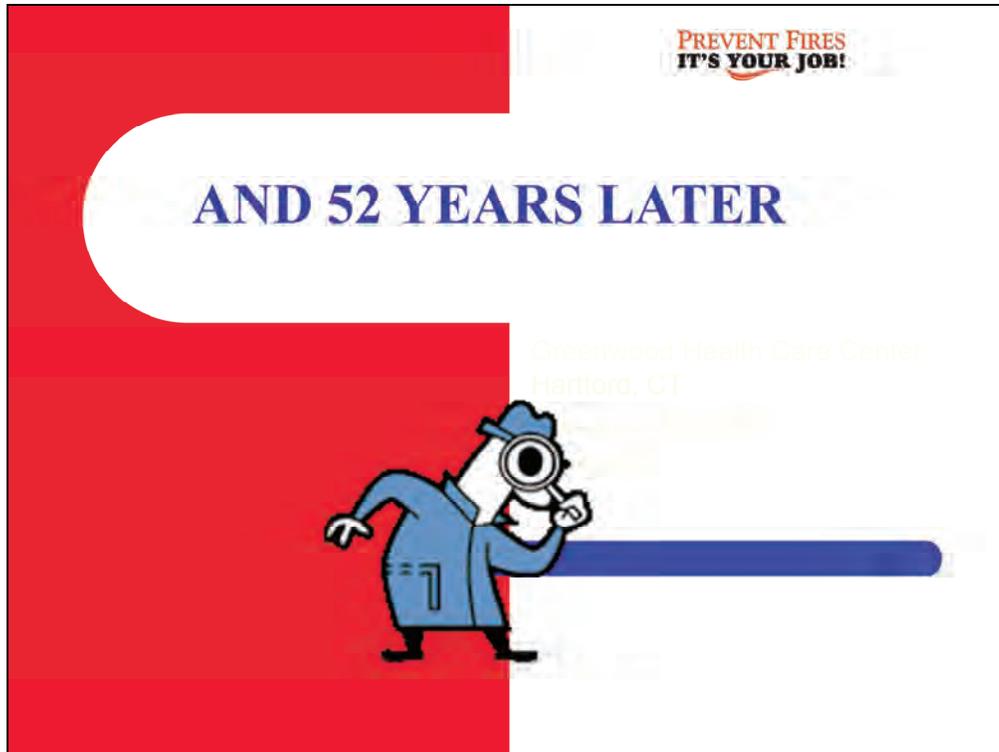
On January 30, 1951 a fire at the McClary Convalescent Home in Hoquiam took 21 lives, shocked the nation and led to building and fire code restrictions for rest homes and other centers for the aged. The fire started in the laundry room of the two-story L-shaped structure at noon, and swept through the hall, cutting off the patients means of escape. Most of the victims died of smoke inhalation. Smoke and flames were channeled to other parts of the building through the laundry chute and also up a stairway. The flames burned through a partition into the furnace room and then the smoke also went through the building through the heating ducts.

The World reported: A flash fire swept through the McClary Convalescent Home at 2224 Sumner Ave. Hoquiam, shortly before noon today, turning the large rambling frame structure into a holocaust and burning to death at least 15 of the 29 patients confined to the home. Mostly elderly persons who were unable to help themselves—only a few were even able to walk – the majority were trapped in their beds.

The first alarm of the tragedy came as Lucille Edwards, a cook at the rest home, was dishing up lunch. A man ran in to say there was a fire in the wash room. Mrs. Edwards investigated and found the washroom "all afire" smoke pouring into the storeroom. **She grabbed a fire extinguisher but couldn't get it to operate because a pin was stuck in it. What does this say about the need for staff training???**

The firefighter's efforts were hampered by the cold weather which froze the water on the streets. Police were on duty to aid with the rescue work. All available ambulances were in service. In addition, hearses from the Elerding, Whiteside and Pinnick-Coleman mortuaries, laundry trucks, police paddy wagons and every kind of vehicle that could be converted to the purpose were employed to carry the dead and injured to mortuaries or hospitals. The highly regarded attorney, State Rep. Gladys Phillips, helped push through legislation that called for more frequent inspections and tougher fire and building codes at such facilities.

Reference: Aberdeen World, 1951 Fire Shocked Nation, January 31, 1991

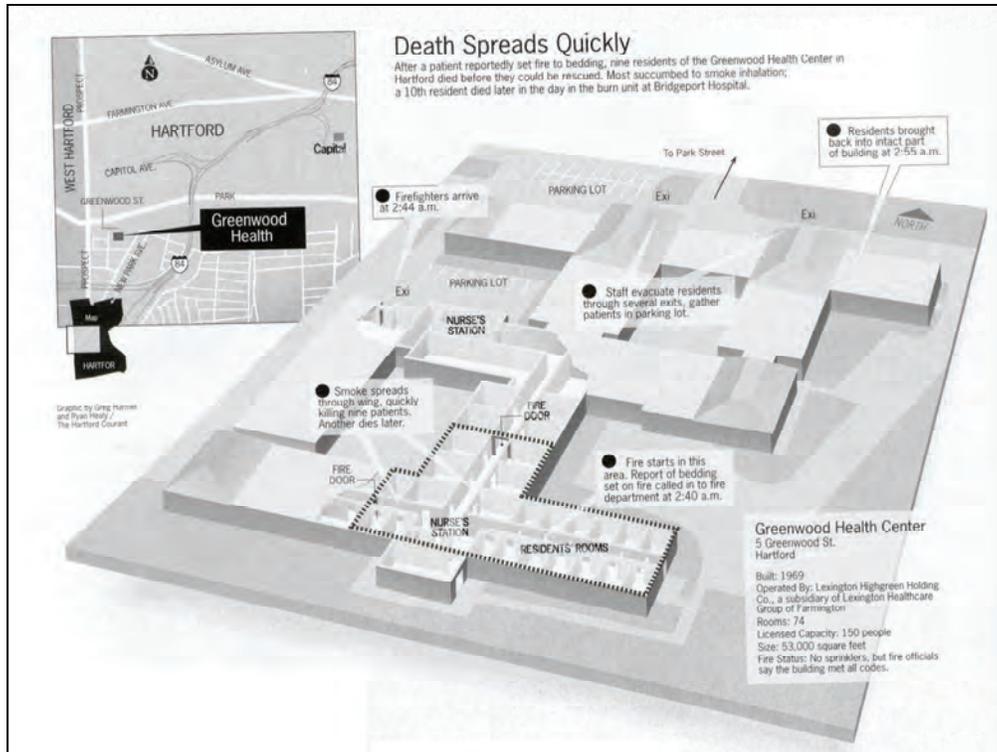


52 Years Later

The building is a one (1) story, Type II (111), protected non-combustible structure with a partial basement built in 1970. A thirty (30)-bed addition of similar construction type was constructed in 1974. The building has a wood frame ornamental mansard roof. The facility is connected to city water. A new Acute Care Unit with twenty-one (21) beds, was added in July 1994 to the facility by renovating the existing "800" Wing. The 800 Wing has a piped in medical gas and vacuum system.

A CMS survey was conducted approximately 4 weeks prior to the fire and the facility was found to be in full compliance with all applicable life safety standards.

Post-fire NOTE: The building is under new ownership and the wings have been totally renovated and a complete automatic sprinkler system and fire alarm / smoke detection system installed.

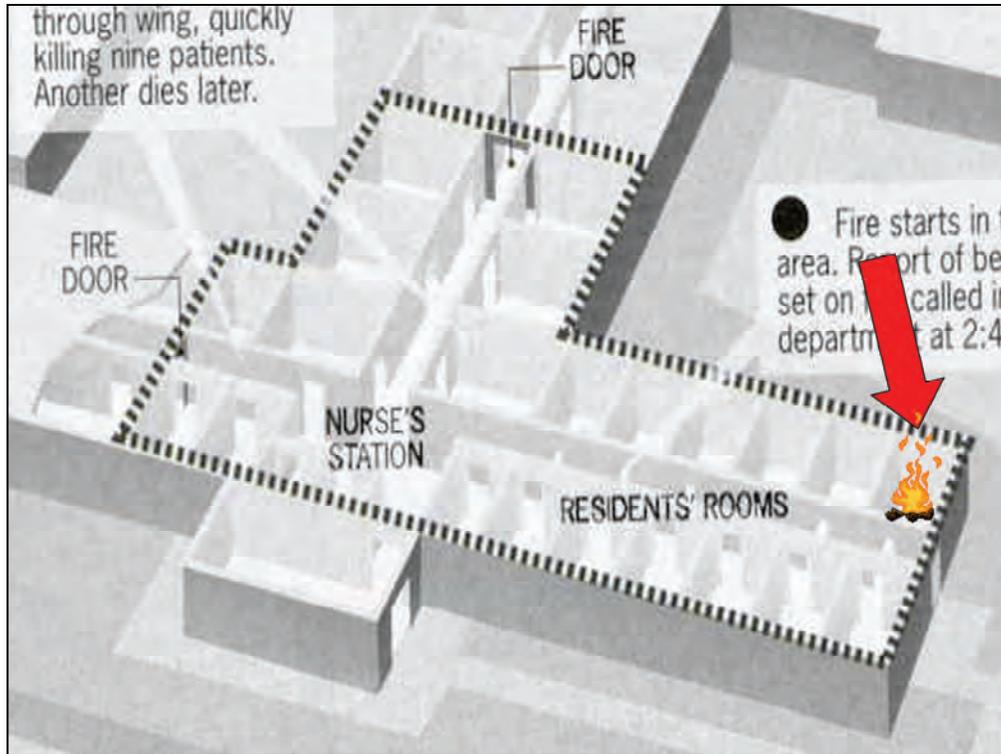


The fire was discovered at approximately 2:40AM. It was started by a resident who piled clothing on her bed and ignited it with a match or lighter.

The fire department was called right away.

There was also a bariatric patient in the room. The staff worked hard to remove that patient but were driven from the area by the rapid build up of fire and smoke before they could even close the door of the room.

The fire department arrived in only four minutes!



Room of Origin

The room of origin is at the end of the corridor.

The next photo is looking down the corridor from the nurse's station.



Looking from the Nurse's Station, down the corridor to the room of origin (arrow).



This is the bed where the fire was started.

It was a staff judgment call to try to rescue a bariatric patient in the room of origin.

Someone should have been closing doors and clearing the corridor.

This caused a deadly delay in preventing fire spread.

They were unable to rescue the bariatric patient.



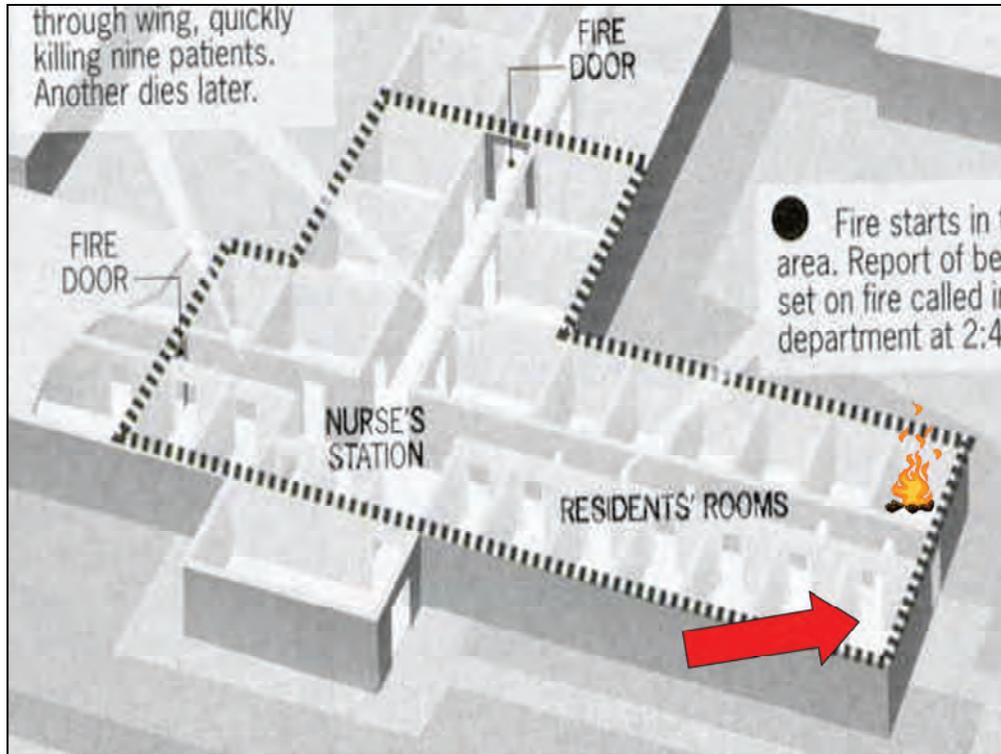
This is the metal decking above the bed.

The suspended ceiling has burned away.

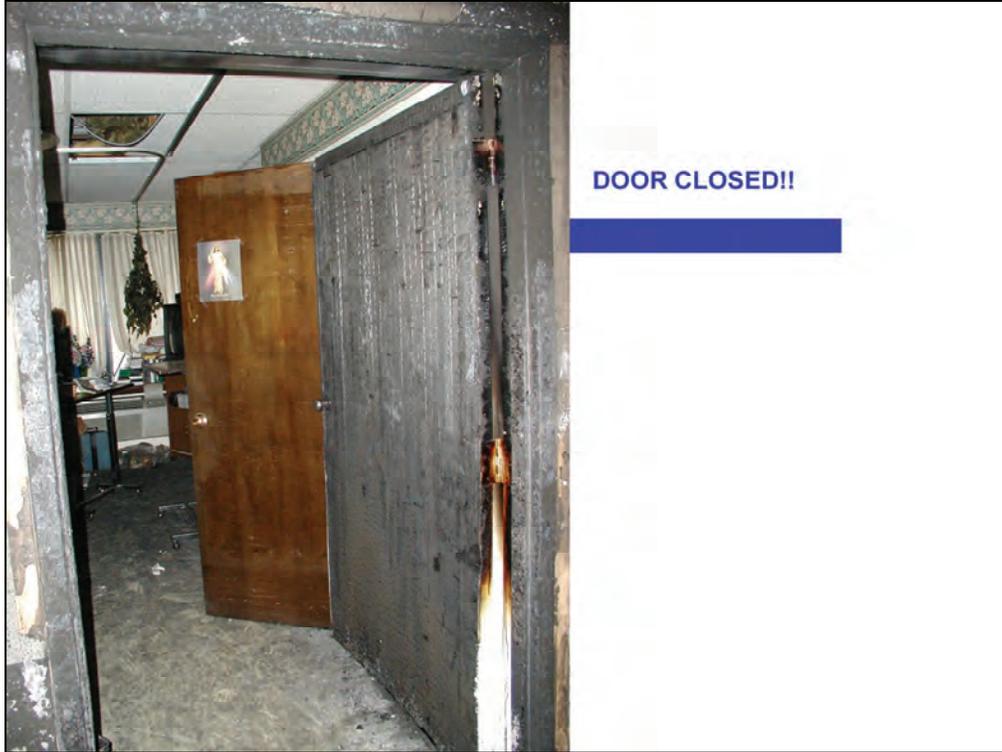
Note the high heat damage, warping and buckling of the metal.



Room of Origin



The resident directly across the corridor from the room of origin was awakened by all the commotion.



She was annoyed by all the noise, so she got up and **closed her door.**



This is her room.

The closed door saved her life!

There is very little heat and smoke damage.



You can see that the door held back the heat and smoke, even though the door had started to burn through at the top.



Here is another resident room where the door was closed at the time of the fire.



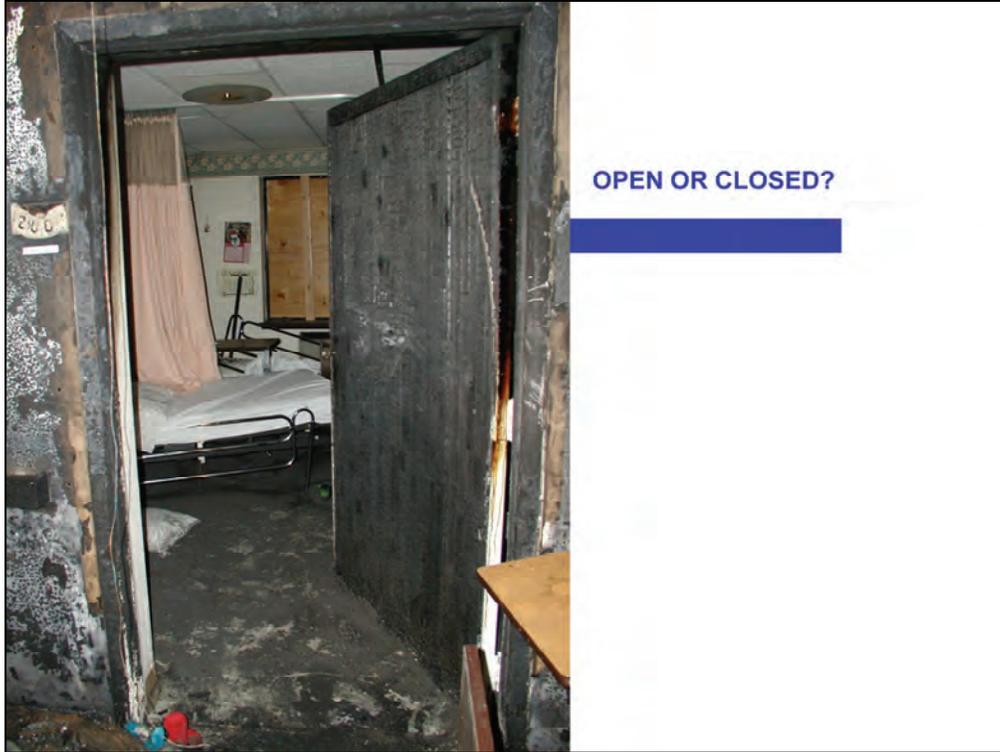
As you can see, there is little damage.



The occupants of this room did not survive.

You can see that there is much heat and smoke damage.

The door to this room was open.



Do you think this door was open or closed?



Open or closed?

More fatalities!

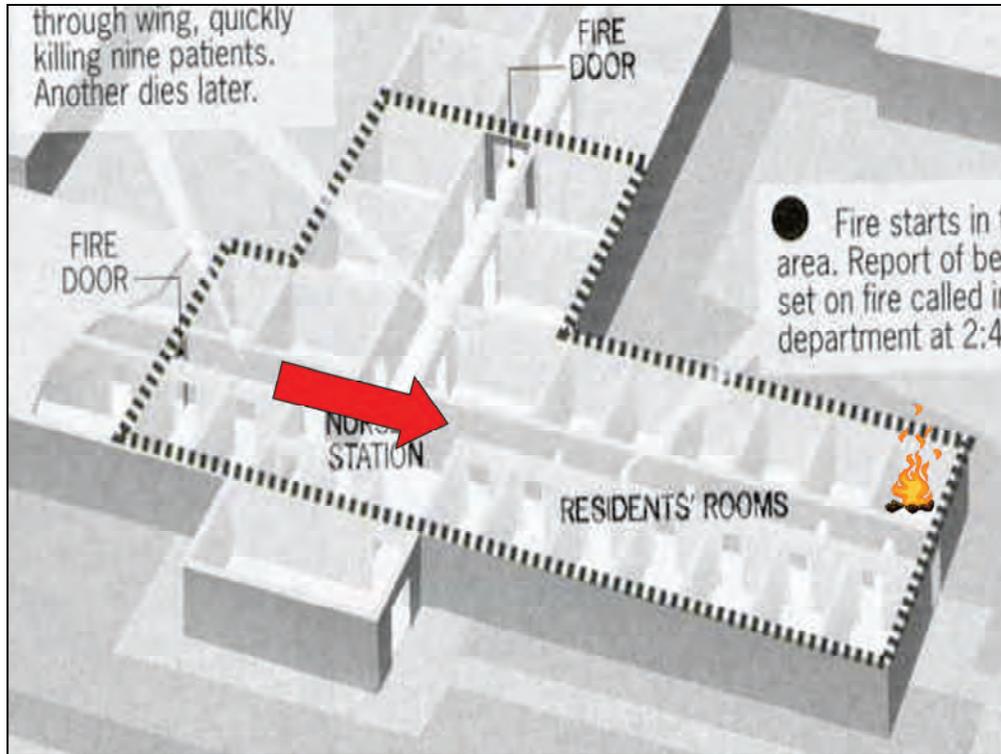


Open or closed?

More fatalities!



Was this room's door open or closed at the time of the fire?

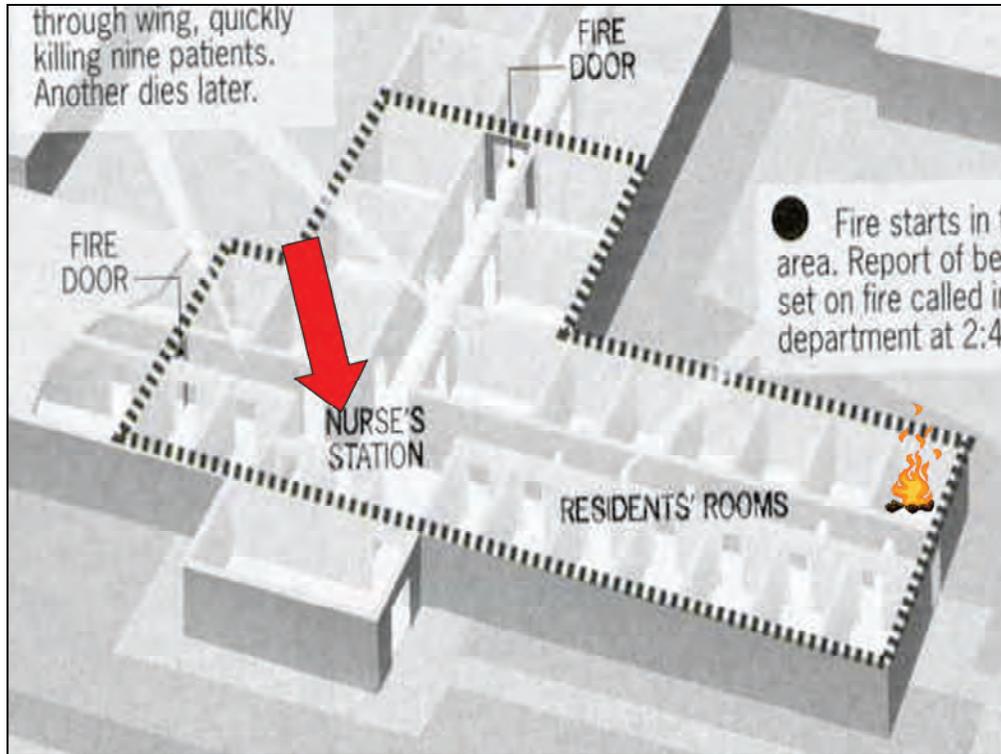


The next slide shows the view down the corridor from the Nurse's Station.



Notice wheelchairs and patient lifts stored in the corridor.

Clearing of corridors should be assigned as part of the Fire Plan.



This is the Nurse's Station, approximately 150 feet from the room of origin.



Note the smoke and heat damage at the nurses station, even at this remote distance from where the fire originated.

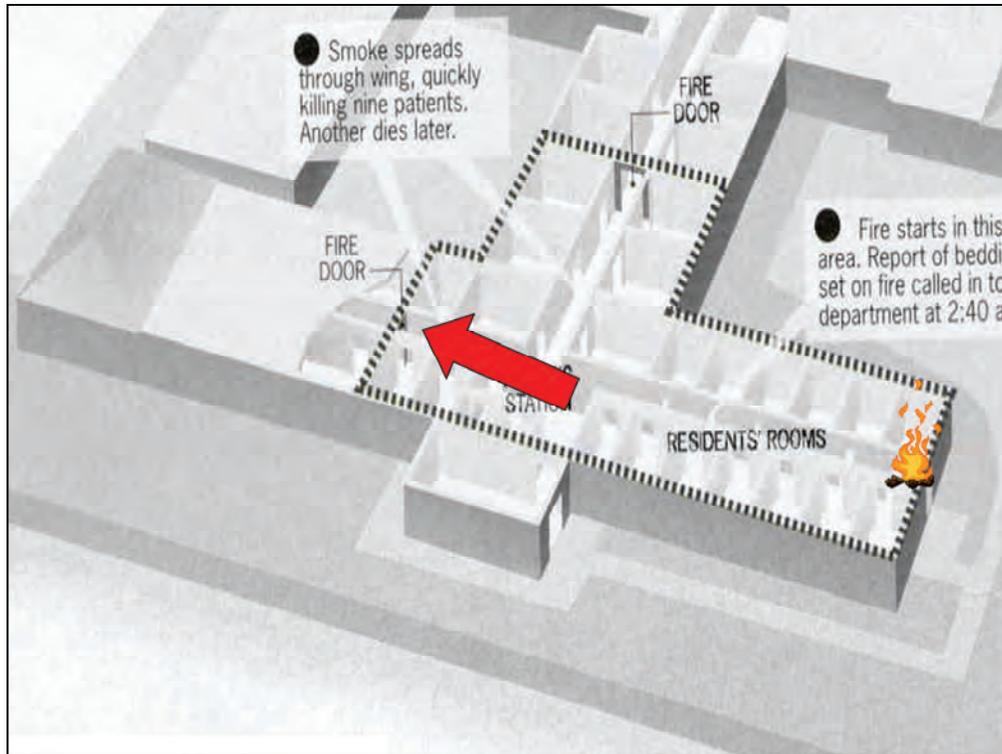
Notice how far down the walls the smoke layer descended.

This heat and smoke contains deadly gasses.



Luckily, the fire did not reach these liquid oxygen containers in a room behind the nurses station.

Note the melted light fixture showing the high temperature at that level in the room.



The next slide shows the other end of this corridor beyond the “smoke doors.”*

**The slide labels them as fire doors, but they are actually smoke doors.*



Note the almost total lack of smoke damage compared to the Nurse's Station which was located on the fire side of the smoke doors.

Clean, white walls and ceilings!

Closed doors save lives!



The facility is of Type II construction, which is virtually fireproof; metal roofing resting on concrete walls.



The first opportunity to stop a fire is when the building is being designed.

The building performed exactly as it was designed to do.

The deficiency lies with the staff actions.

Lesson 1 - Fire Protection Fire Behavior

It is critical to understand how fast a fire can grow.



Identify Fire Development

- Ignition
- Fire Growth
- Smoke Spread

Size of Fire – Diameter	Time Elapse
1 foot	Beginning
6 foot	2 minutes
12 feet	4 minutes
48 feet	6 minutes
568 feet	10 minutes

Fire Growth -- It is critical to understand how fast a fire can grow.

- The fire department usually takes approximately 6 to 10 minutes to arrive and put water on the fire.
- **A 500 sq ft room may be fully involved by the time the fire dept arrives.**
- **Do not delay in calling 911 –time is critical due to this rapid fire growth.**
- Smoke volume usually increases faster than fire. More people are hurt and killed by smoke than by fire. Close doors to stop the spread of smoke and fire
- Do not re-open the door to the room of the fire. Let the fire dept re-enter the room when they arrive. The fire and smoke may have completely engulfed the room creating a dangerous situation.

Smoke is what kills most fire victims



This resident woke, escaped the fire and died in the yard from breathing heated smoke and poisonous gasses.

Smoke Spread - Recognize danger to occupants from smoke and fire.

Products of Combustion: Deadly gasses are produced by the contents of the building such as furniture, carpet and plastics as they burn.

Toxic products of combustion include the following:

- Hydrogen Chloride
- Hydrogen Cyanide
- Hydrogen Fluoride
- Hydrogen Sulfide

It is this toxic smoke that kills most fire victims. This is why automatic fire protection is so important in care facilities.

Smoke Spread: Heat, smoke and fire gases travel upward. As these heated smoke and fire gasses accumulate, they bank down and begin to spread across a room or area. Stopping the spread of smoke is critical in saving lives during a fire. This is why it is so important to close doors and windows to stop the spread of smoke and fire.

Features of Fire Protection



Care facilities have among the most vulnerable populations that are not capable of escaping a fire.

This is why there are fire and life safety codes that provide automatic protection.

Report any noted deficiencies. Fire prevention is a team effort consisting of the staff, the maintenance director and the inspector.

Understanding the Features of Fire Protection:

Fire protection features of a building protect life and property from fire should one occur.

Fire protection features of buildings is your first defense against fire.

Fire prevention is a team effort consisting of the staff, the maintenance director and the inspector.

Staff must report any fire safety deficiencies to the maintenance director or their supervisor right away so that it can be taken care of immediately.

Building Construction



Building materials and construction design can slow the spread of fire and smoke.



Buildings are designed to provide construction separation.

Opportunities to stop a fire:

- The choice of materials and products and their environments.
- **Active Fire Protection** -- Automatic detection systems will tend to activate first, followed by automatic sprinklers, or
- **Passive Fire Protection** – Passive fire protection is designed to confine fire and smoke in specific areas.
- Special attention is given to protection of the building's structural integrity and the spaces through which occupants will move to safety.

Instructor: Identify facility construction features for students.

Doors



3 hour door



20 minute door



Closed doors stop the spread of smoke and provide a fire stop.

Doors

Fire and smoke must be confined as much as possible until extinguishment can occur.

- Keep all doors closed during a fire. **Do not lock them.**
- Keep doors clear of any obstruction.
- Never use wedges, chairs, or any manual devices to hold self-closing doors open

Doors and walls are an important construction feature designed to limit the spread of smoke.

- Holes in the walls made by cable, plumbing and/or electrical contractors must be filled with a rated compound to maintain the integrity of the wall.

**Lesson 1 - Fire Protection
Features of Fire Protection**

Doors - Ensure that fire-rated doors are maintained in good repair.



Crack in Glass



Damage to door integrity



Excessive Gap



Must close and latch in fire conditions

Facility doors are subject to a great deal of use and abuse. To maintain doors look for:

1. Proper alignment, damage to glazing, latching hardware, closing hardware and door integrity.
2. Ensure that doors function properly and close and latch with no excessive gaps.
3. Ensure that specialty doors like laundry chutes, dumbwaiters, etc. function properly.
4. Chute doors along rated corridors shall be fire-rated with self closing and latching hardware.
5. Chute discharge doors shall, at a minimum, be equipped with a fusible link to ensure that the chute way will close and latch during fire conditions.

Lesson 1 - Fire Protection
Features of Fire Protection

Doors - Regularly test delayed egress door devices to ensure proper function and release.



Delayed Egress Door

1. Only a single delayed egress device may be employed in an exit path. After a 2 second activation of the door hardware, an irreversible countdown MUST begin resulting in release of the door within 15 seconds (may be extended to 30 seconds with DOH and local AHJ approval).
2. Proper signage must be posted within 12" of the door release device.
3. Doors must release under general alarm conditions or a loss of primary power.

Means of Egress Components



Provide a safe exit route in the event of an emergency.

1. Exit Access

2. Exit

3. Exit Discharge



Means of Egress Components

1. Exit Access – Corridors how you get to the exit from inside the building.
2. Exit itself – doors or stairs.
3. Exit Discharge – stairs or sidewalk that continues to a public way.

All exits shall be free of obstruction at all times.

- Never chain, lock, or fasten any fire exit so that it cannot be opened from the inside.
- Maintain exit discharge ramps, such as, outside stairs, and walkways in good repair and free from snow and ice.
- Make sure illuminated exit signs are maintained.

Furnishings and Decorations – shall not impede or delay exiting.

- Exits discharges shall be free of all obstruction (furniture, decorations, ice, snow) preventing or obstructing its use.

Exits must be readily identifiable:

- Inside the building, no furnishings, decorations or other objects shall be placed to obstruct exits, access thereto, egress there from, or visibility there of.
- Hangings or draperies shall not be placed over exit doors or otherwise be located to conceal or obscure any exit.
- Mirrors shall not be placed on exit doors.
- Mirrors shall not be placed in or adjacent to any exit in such a manner as to confuse the direction of exit.
- Exits must be identifiable by cognitive persons.

Emergency Lighting



Provides illumination of egress and exiting.

Burned out exit lights should be reported to maintenance or supervisory staff.

Emergency Lighting

Licensed Care Facilities are required to provide exit lighting at all times.

Your facility may have either battery or generator power for the emergency lights and systems.

Battery-operated lights must have:

- 90 minute duration
- Regular testing
- Records of testing

Emergency generators are required to:

- Be tested monthly for 30 minutes under a load
- Have records maintained and available for review
- Be engine driven
- Automatically start within ten seconds of losing power
- Have an annual certification test to be conducted with records kept

Lesson 1 - Fire Protection
Features of Fire Protection

Maintain a written log of monthly 30 minute generator runs, under load.



Generator Maintenance

1. A detailed log of generator operations shall be maintained on the premises.
2. The system is required to run UNDER LOAD for a minimum of 30 minutes per month.
3. A simple exercise run that DOES NOT activate the transfer switch does NOT meet the CMS requirement.
4. Records will provide adequate detail to differentiate when the system was run under load.

Lesson 1 - Fire Protection Features of Fire Protection

Corridors



Have a plan to quickly remove "in use" obstructions such as patient lifts, laundry carts, etc.

Keep corridors clear of obstructions for a quick evacuation in case of emergency.



Corridors

Keep corridors clear and have a plan to quickly remove obstructions in use, such as a laundry cart or patient lift, etc.

Rapid movement of personnel and equipment may be necessary in the event of a fire.

In Use: Being used intermittently by staff. If it is in the corridor for more than 30 minutes without being used, **it is not in use but is storage.**

Reference: Certification and Survey letter from Center for Medicare/Medicaid Services (CMS).

- See Certification and Survey Letter 441, dated 8/12/04, from Center for Medicare/Medicaid Services (CMS).
- In a Boarding Home the minimum clearance is 44 inches.

Smoke Compartments



Smoke Compartments are designed to limit the spread of smoke and contain it to just one compartment of the building.

Smoke Compartments

Smoke and fire barriers are there to divide a building if smoke grows beyond the room of origin. This provides a smoke free area or wing to evacuate residents to.

Definition: Smoke Compartment. A smoke compartment is a space within a building enclosed by smoke barriers on all sides including the top and bottom. Life Safety Code has used the term "smoke barrier" to describe horizontal and vertical assemblies that are meant to restrict the movement of smoke in a structure.

Compartment protection can only work if fire and smoke barriers are maintained. Barriers can commonly be breached due to; building settling, damage, service from outside vendors (i.e. cable TV providers, HVAC technicians, IT technicians, etc.) , and even incomplete original construction. Facilities shall conduct regular inspection and maintenance of their facilities to ensure compartment smoke/fire barrier integrity.

Smoke and Fire Barriers



Check above suspended ceilings to ensure that fire walls have not been breached.



Repair all fire wall penetrations promptly.



Expect that surveyors will spot-check above suspended ceilings for smoke and fire barrier continuity.

Lesson 1 - Fire Protection
Features of Fire Protection

Attics - Check attic area fire walls for damage, penetrations, or unsecured openings.



Facilities shall conduct regular inspections of attic areas to ensure that fire and smoke partitions are in good repair.

Attics generally should not be used as storage areas.

Boilers, incinerators and heater rooms



Boilers, incinerators and heater rooms shall draw and discharge their combustion air from/to the outside

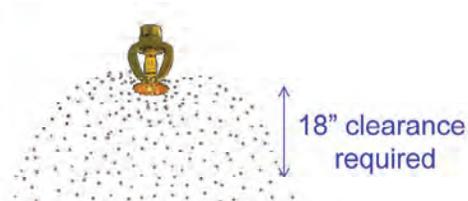
Boilers, Incinerators and Heater Rooms

- Facilities shall ensure that boilers, incinerators, heaters, furnaces, etc. draw and discharge their combustion and ventilation air from the outside.
- Facilities will ensure that rooms containing such devices (to include gas fired water heaters) do not draw their combustion air from inside the building.
- Doors to such rooms should not be equipped with louvers or transfer grilles.

Sprinkler Systems



Can extinguish or contain a fire until the fire department arrives.



Sprinkler Systems

Fire sprinkler systems are made up of a system of strategically placed sprinkler heads. These sprinkler heads have links made of special metal or liquid-filled bulbs. Both are sensitive to heat and break when a pre-set temperature is reached at the head. When the link breaks, the water is automatically sprayed on the fire. Sprinkler heads are fast-acting and effective in containing and extinguishing a fire before it gets out of control.

- Only sprinklers in the immediate vicinity of a fire will discharge. There is no deluge of water from all sprinkler heads, as may be portrayed in some movies.
- When the sprinkler system activates, the fire alarm system will automatically activate to warn that there is a fire.

Never store any material in a way that obstructs the flow of a sprinkler head. An 18 inches minimum vertical clearance from the sprinkler head deflector is required by code.

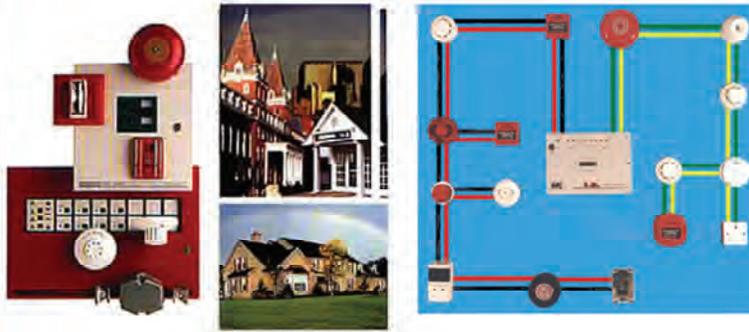
Sprinklers must be inspected and tested per NFPA 25:

- Weekly and monthly inspection by facility maintenance staff checking gauges and valves to ensure the system is turned on and has pressure.
- **Quarterly and annual testing by state certified inspection and testing technician.**

Sprinklers also save the lives of firefighters!

Reference: NFPA 25 Water Based Fire Protection Systems 1998 Edition

Fire Alarm Systems



The best smoke detector is your nose. You will smell smoke long before a smoke alarm unless you are sleeping.



Fire Alarm Systems

- An automatic fire alarm system is required for the early warning of fire. These systems can be comprised of smoke detectors, heat rate of rise detectors and/or manual pull stations.
- Single station smoke alarms also provide early warning of a fire.
- The manual part of the fire alarm system includes the fire alarm pull stations normally located in the corridors and/or at nurses' stations. Follow the simple instructions to activate the fire alarm system if you discover a fire.
- Familiarize yourself with the location of all fire alarm equipment.
- Consult with local fire authority regarding resetting of the alarm system after activation.

Lesson 1 - Fire Protection
Features of Fire Protection

Fire Alarm Systems

Smoke Alarm
Sensitivity Testing



Ensure that all fire alarm system components are maintained in good working order.

Ensure that all fire alarm system components are maintained in good working order.

Smoke detector sensitivity testing

- Sensitivity shall be checked within one year after installation
- And every alternate year thereafter, unless. . .
- After the second test, if within its listed sensitivity range for two tests in a row, the test is extended to five years.
- Records of nuisance alarms shall be maintained.
- Check NFPA 72-99 Edition Section 7-3.2.1 for allowable testing methods.

Signage



Ensure that you have proper signage posted throughout your facility.

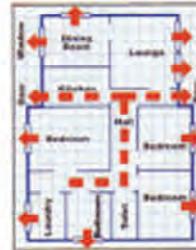
Signage

Facilities shall supply and maintain all required signage, throughout.

Each facility must have a written policy that addresses an 'out of service' fire protection system that is four or more hours in duration during any 24 hour period.

Lesson 1 - Fire Protection Features of Fire Protection

Inspection, Testing and Maintenance of Fire Protection Systems



- Fire Drills
- Emergency lighting
- Emergency generators
- Sprinkler systems
- Fire alarm systems
- Fire extinguishers
- Kitchen hood systems

Plan your
escape
route



Inspection, testing and maintenance of fire protection systems are to be conducted on a regular basis.

The most important feature of a fire protection system is well trained staff.

Fire Drills shall be conducted quarterly during each shift.

- A planned fire drill is part of the fire protection system
- Record date, time, person in charge, remarks and list of personnel participating in each drill.

Conducted by facility staff:

- Test all battery-powered lights, etc.
- Test generator and document.
- Inspect fire extinguishers monthly, date and initial tag
 - Instructor: show students the tag on the demonstration fire extinguisher.**
- Ongoing cleaning of Kitchen hoods with a record of each cleaning

Conducted annually by qualified companies:

- Inspection, Testing and maintenance of all sprinkler systems with proper documentation
- Inspection, Testing and maintenance of all fire alarm systems with proper documentation
- Inspection, Testing and maintenance of all fire extinguishers with proper documentation
- Inspection, Testing and maintenance of all kitchen hood systems. Hood systems are to be serviced two times a year. Records are to be maintained of each servicing.

Provide Facility Record Book – Give to facility maintenance staff at this time.

Questions and Answers – before continuing on to fire extinguishers.

References : NFPA 25 Water Based Fire Protection Systems

International Fire Code, Section 602.1 Definition Commercial Cooking Appliances, Hood, Section 610 Commercial Kitchen Hoods

Lesson 1 - Fire Protection
Fire Extinguishers



Fire Extinguishers

Type of Extinguisher	Classification	Materials it will Extinguish
A	Ordinary Fire	Wood, paper, cloth,
B	Flammable and Combustible Liquids	Gasoline, Cooking Oil, Paint
C	Energized Electrical Equip.	Breaker Panels, Wiring, Fuse Boxes
ABC	Multipurpose	Multipurpose
K	Cooking Oils	Deep Fat Fryers

Fire Extinguishers

Fire extinguishers are a valuable tool for extinguishing small fires that are discovered at an early stage.

Each facility is required to have on hand fire extinguishers of a type and variety that will handle any small fire.

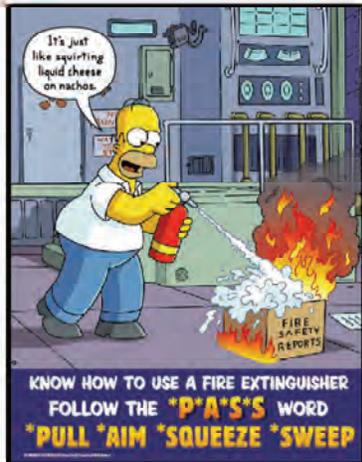
There are several types of fire extinguishers designed to extinguish different fires, as shown here.

A multipurpose fire extinguisher is a good selection.

Class K extinguishers are for cooking oil fires, especially deep fat fryers.

Lesson 1 - Fire Protection Fire Extinguishers

Operating a Fire Extinguisher



Know when to fight the fire
When to not fight the fire
When to call 911 – ALWAYS!

P – Pull
A – Aim
S – Squeeze
S - Sweep



Fighting the Fire

Sound the alarm, call 911, or assign someone else to, and evacuate the area. Every fire must be reported to a 911 dispatcher.

Know when to fight the fire – When the fire is small and easily extinguished.

A contained fire, such as in a trash can.

Know when not to fight the fire – When a fire is spreading, such as a trash can fire that has spread to the wall or curtains. Do not attempt to fight the fire if it does not go out immediately, after the fire extinguisher has been emptied or if there is a serious threat.

To Use a fire extinguisher:

P – Pull the pin. (you can also roll the pin to break the plastic holder)

A – Aim the nozzle at the base of the fire, stand back 8 to 10 feet, if possible

S – Squeeze the handle and lever on valve.

S – Sweep the nozzle from side to side until fire extinguisher is out, fire is out, or both. For floor fires, spray from the near edge in, for wall fires, spray from the bottom up.

Demonstrate with fire extinguisher.

Use facility fire extinguisher and traffic cone as the fire.

After the fire extinguisher is completely discharged, call 911 and give an update.

“The fire extinguisher has been completely discharged, the fire did not go out, I closed the door and am evacuating the area.” OR

“The fire extinguisher has put out the fire.”

The facility manager is required to report **all fires** to **DSHS** within 24 hours of the incident.

**PREVENT FIRES
IT'S YOUR JOB!**

Lesson 2 - Fire Prevention Fire Prevention-A Team Effort

50 Fires in WA LCF's in 2010

Objectives:
Recognize common fire safety deficiencies found in care facilities and report them.

Nursing Home Fires 2010



Cause	Number of Fires
Electrical	15
Cooking	4
Dryer	3
Smoking	2
Intentional	1

Fire Prevention is a team effort consisting of the staff, the maintenance director and the inspector.



Fire Prevention - a Team Effort

Fire Prevention is a team effort consisting of the staff, the maintenance director and the inspector. Staff must report any fire safety deficiencies to the maintenance director or their supervisor right away so that it can be taken care of immediately.

A delay in restoring fire safety could cause a deadly fire, building damage, temporary closing of the facility and relocation of residents. Do not delay in reporting

Enabling Objectives:

The student will be knowledgeable of:

Top 5 Citations found during fire code inspections.

- K018 - 94 - Corridor doors - Doors fail to close and latch properly, doors are wedged open, doors are obstructed.
- K062 -74 - Automatic Sprinklers where required.
- K147 – 53 – Electrical wiring - Extension cords used in place of permanent wiring, piggy-backed, used instead of approved power strip, not adequate for power demand.
- K012 – 48 – Exit and Directional Signs - EXIT signs not properly illuminated, faulty or non-existent emergency egress lighting.
- K072 – 48 – Egress - Items stored in exit corridors, such as trash containers, decorations, wheel chairs, patient lifts.

Fires in Licensed Care Facilities

There were 50 fires in Licensed Care Facilities in 2010. The leading causes were: Electrical, Cooking, Dryer, Smoking and Intentional

“As we go through this lesson, ask yourself “Do I practice these fire safety measures at home.”

Decorations



Items commonly displayed during holiday seasons may not be suitable for use in a care facility.

Prohibited decorations:

- Candles
- Cut Christmas Trees
- Evergreen Boughs
- Paper tree ornaments

Decorations and Finishes

Decorations commonly displayed during holiday season or for wall decorations, etc., may not be suitable for use in a care facility.

- Make sure all decorations are non combustible or flame retardant.
- Never hang decorations from fire sprinkler heads or pipes.
- Ensure that all decorative lighting is approved by a testing laboratory such as UL and used only in supervised areas and turned off when not in use.
- Burning candles are prohibited.
- The use of fresh evergreen boughs for decoration is prohibited.
- Natural cut Christmas trees are prohibited.
- Artificial Christmas trees must comply with the International Fire Code.
- Paper tree ornaments are prohibited.
- Trees, plants, displays, hangings, and other decorations must not block exits, visibility of exits, or fire protection appliances.
- Curtains and draperies in the nursing home shall be made of flame resistant material.
- Furniture shall have flame resistant covering.
- Decorations made of wood $\frac{1}{4}$ inch and less in thickness shall be treated with a fire retardant.
- Decorations, such as bows and paper cut-outs shall be flame resistant.

Lesson 2 - Fire Prevention Resident Rooms

Resident Rooms



Rooms should be neat and orderly.
No accumulation of paper or laundry.
No extension cords.
All items 36" from heaters.
Only approved multi-plug outlets.
No hold open devices on doors
(unless connected to the fire alarm system).

Smoking is among the leading cause of fires and fire fatalities in Licensed Care Facilities nationwide. These fires often start in a resident's room.



Resident Rooms

- Rooms should be neat and orderly.
- No accumulation of combustible materials, i.e. newspapers, laundry or clothing.
- Extension cords are prohibited.
- As a safety recommendation, all items should be 36" from heaters.
- In nursing homes, portable heaters are prohibited in patient care areas.
- In non-patient care areas only . . .

Smoking

Smoking continues to be the leading cause of fire deaths in Washington State. People falling asleep while smoking often cause fires when upholstered furniture, mattresses or bedding ignited. In licensed care facilities, often residents start their clothing on fire. The person most often killed, is the person that was smoking.

- Know your facility's smoking policy
- The policy should include an evaluation plan.
- The policy should include disciplinary action that will be taken.
- The policy should be included in the lease contract.

Most facilities do not allow smoking

Safe smoking practices include:

- Having a designated smoking area. **No tents or fabric covered structures.**
- Supervision of residents while smoking.
- Providing proper receptacles.

You must take action against persons violating the facility smoking policy.

The worst mistake is to think it was an isolated incident and won't happen again.

Smoking Policy



Most facilities do not allow smoking

- Know your facility's smoking policy

Safe smoking practices include:

- A designated smoking area.
- Supervision of residents while smoking.
- Non-combustible ash trays

Take action against persons violating the smoking policy.

The worst mistake is to think it was an isolated incident and won't happen again.

Smoking Policy

Smoking continues to be the leading cause of fire deaths in Washington State. People falling asleep while smoking often cause fires when upholstered furniture, mattresses or bedding ignited. In licensed care facilities, often residents start their clothing on fire. The person most often killed, is the person that was smoking.

Know your facility's smoking policy

- The policy should include an evaluation plan.
- The policy should include disciplinary action that will be taken.
- The policy should be included in the lease contract.

Most facilities do not allow smoking

Safe smoking practices include:

- Having a designated smoking area. **No tents or fabric covered structures.**
- Supervision of residents while smoking.
- Providing proper receptacles.

You must take action against persons violating the facility smoking policy. The worst mistake is to think it was an isolated incident and won't happen again.

Flammable Liquids



Flammable liquids must be stored in metal cabinets away from all sources of



Flammable liquids and compressed gasses can be extremely hazardous in the event of a fire.

- Store paint solvents, thinners, and other flammable liquids in approved flammable liquid storage lockers with self closing doors away from all sources of heat.
- Use approved safety cans for flammable liquids in quantities of one gallon or more.
- Fuel burning space heaters are prohibited.
- Fueled equipment (lawn care, mopeds, snow removal and portable cooking equipment) shall not be stored, operated or repaired within a licensed care facility.** (unless fully protected by an fire sprinkler system)

Lesson 2 - Fire Prevention
Oxygen and Liquid Oxygen

Oxygen



Oxygen needs to be stored in a proper storage area.

Oxygen Cylinders



Oxygen and Liquid Oxygen

No smoking when oxygen is in use or stored. **Signage Required**

Why: Clothing and bedding become oxygen enriched. When provided a heat source, such as a cigarette, fabric can catch fire very quickly and burn very fast.

- Large quantities of oxygen cannot be stored in resident rooms.
- Oxygen needs to be stored in a approved storage area.
- Oxygen cylinders must be secured and capped.
- Be aware of facility safety procedures in handling small portable oxygen tanks.

4006.3.3 Locating containers

Containers shall not be located in areas where:

1. They can be overturned due to operation of a door;
2. They are in the direct path of egress;
3. They are subject to falling objects;
4. They can become part of an electrical circuit; or
5. Open flames and high-temperature devices can cause a hazard.

Restraining Containers



Ensure that compressed gas cylinders are secured in racks or chained securely.

Medical gas and other inert gas (e.g. helium) in compressed gas cylinders are stored under extremely high pressure.

Cylinders must be properly secured to protect them from damage and potential 'rocketing'.

Cylinders must be chained, in carts, or in racks specifically designed for that purpose.

4006.3.4 Restraining containers.

Home care containers shall be restrained while in storage or use to prevent falling caused by contact, vibration or seismic activity. Containers shall be restrained by one of the following methods:

1. Restraining containers to a fixed object with one or more restraints.
2. Restraining containers within a framework, stand or assembly designed to secure the container.
3. Restraining containers by locating a container against two points of contact such as the walls of a corner of a room or a wall and a secure furnishing or object such as a desk.

Lesson 2 - Fire Prevention
Oxygen and Liquid Oxygen

Liquid Oxygen
Many rules and requirements



An "OXYGEN—NO SMOKING" sign shall be posted in each room or area where liquid oxygen containers are stored, used or filled.

Liquid Oxygen

4006.2 Information and instructions to be provided.

The seller of liquid oxygen shall provide the user with information in written form that includes, but is not limited to, the following:

1. Manufacturer's instructions and labeling for safe storage and use of the containers.
2. Locating containers away from ignition sources, exits, electrical hazards and high temperature devices in accordance with Section 4006.3.3.
3. Restraint of containers to prevent falling in accordance with Section 4006.3.4.
4. Requirements for handling containers in accordance with Section 4006.3.5.
5. Safeguards for refilling containers in accordance with Section 4006.3.
6. Signage requirements in accordance with Section 4006.6.

4006.3.3 Locating containers.

Containers shall not be located in areas where:

1. They can be overturned due to operation of a door;
2. They are in the direct path of egress;
3. They are subject to falling objects;
4. They can become part of an electrical circuit; or
5. Open flames and high-temperature devices can cause a hazard.

Liquid Oxygen Transfilling



Transfilling of liquid oxygen containers requires special precautions.

Transfilling of Liquid Oxygen

Transferring of liquid oxygen from one container to another involves hazards associated with the strong oxidizing properties of oxygen, the cryogenic temperature of the liquid and vapor, and the pressure producing potential of the vaporization and liquid expansion process. Liquid oxygen retains all of the properties of gaseous oxygen, but in addition, when allowed to warm to room temperature at atmospheric pressure, will expand to fill a volume 860 times its liquid volume. The single greatest hazard during transfer of liquid oxygen is the potential for a spill allowing the oxygen to vaporize in an enclosed, unventilated space. An ignition source such as a pilot light, an open flame such as a candle, lighted smoking material, static electricity, or electric spark may create a fire that can burn with explosive force.

4006.3.6.1 Filling location. Liquid oxygen home care containers and ambulatory containers shall be filled outdoors. **Exception:** Liquid oxygen ambulatory containers are allowed to be filled indoors where the supply container is specifically designed for filling such containers and written instructions are provided by the container manufacturer.

4006.3.6.2 Incompatible surfaces. A drip pan compatible with liquid oxygen shall be provided under home care container fill and vent connections during the filling process in order to protect against liquid oxygen spillage from coming into contact with combustible surfaces, including asphalt.

4006.6.1 No smoking sign. A sign stating "OXYGEN—NO SMOKING" shall be posted in each room or area where liquid oxygen containers are stored, used or filled.

4006.6.2 Premises signage. Where required by the fire code official, each dwelling unit or sleeping unit shall have an approved sign indicating that the unit contains liquid oxygen home care containers.

Combustible Materials



Keep combustible items 36" from heat sources.

Storage of Combustible Materials

- Never store combustibles, such as laundry, papers, blankets, bedding or trash, in boiler rooms, electrical rooms, or near any type of heating device. Use designated storage areas. This is a common violation.
- Storage of quantities of combustibles is considered a hazardous area and must be protected as such. (Rated doors with closures)
- Always keep doors closed on any room used for storage when not in use, and store materials in a neat and orderly manner.
- Store combustible waste materials in proper containers with tightly fitted lids. Containers must be emptied often.
- Watch for blankets and other cloth material too close to heaters. 36 inches is recommended

Electrical Wiring and Equipment



Electrical wiring and appliances are also among the leading cause of fires.

Do not use extension cords, or multiple plug devices in place of permanent wiring and outlets.

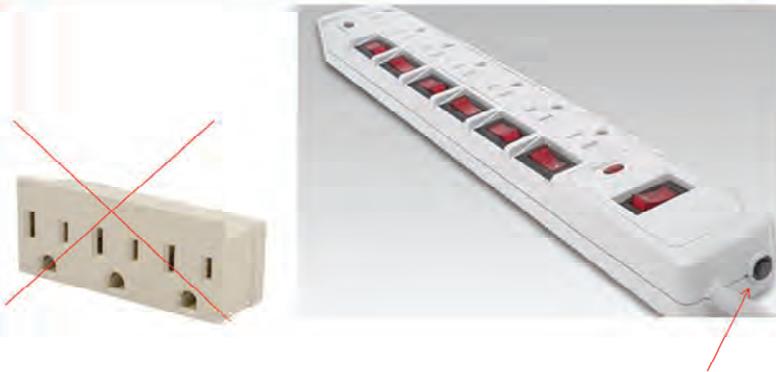


Electrical Wiring and Equipment

Improper use of electrical wiring and equipment will create fire safety hazards that have caused fires.

- Make sure all electrical appliances and equipment are in good repair.
- Do not use extension cords, or multiple plug devices in place of permanent wiring and outlets.
- Always use a properly grounded outlet for equipment with three-wire grounded plugs.
- Surge protectors and power strips that are approved and have overload protection can be used for computer equipment.
- Extension cords and multi-plug outlet and cannot be piggy-backed.
- Watch for CPSC recalls

Multi-Plug Devices



Multi-plug devices must have over-current protection and may not be 'daisy-chained'

Multi Plug Devices – Power Strips

Multi-plug devices should have a UL listing displayed, and shall be equipped with an over-current device. This can usually be identified by an exterior 're-set' switch/button or the on/off rocker may also have the word "re-set" embossed upon it.

- Care must be taken that they are only serving an electrical load below their maximum rated capacity.
- Do not use unlisted devices or those that lack an over-current protection circuit.

NOTE: Do not confuse "Over-Current" protection with "Surge" protection. "Surge Protection" is generally downstream, thus protecting your end appliance (computer, plasma TV, etc.) whereas "Over-Current Protection" is upstream, protecting wiring hidden behind the walls.

Lesson 2 - Fire Prevention Kitchen Hoods

Kitchen Hoods

Watch What you Cook!

Cooking fires are the second leading cause of fires in licensed care facilities.



Make sure kitchen hoods are cleaned regularly to prevent the accumulation of grease.

A record shall be maintained of the time and date of each cleaning.

Kitchen Hoods

The ventilation system in convection hoods shall be operated at the required rate of air movement and classified grease filters shall be in place when equipment under a kitchen grease hood is used.

- If grease extractors are installed, they shall be operated when the commercial-type cooking equipment is used.
- Hoods, grease-removal devices, fans, ducts, and other appurtenances shall be cleaned at intervals necessary to prevent the accumulation of grease.
- Cleaning shall be recorded, and records shall state the extent, time and date of cleaning. Such records shall be maintained on the premises.
- Crushable mesh filters are no longer approved and must be replaced.
- Use of a deep fat fryer requires a UL 300 fire suppression system.

Microwave Ovens

- Residents must be aware of safe use of microwave ovens and cooking appliances.

Clothes Dryers



Ensure clothes dryers and vent piping are free of accumulations of lint.

Every person that uses the dryer should know how to empty the lint trap after each use.



Clothes Dryers

Clothes dryers shall be frequently cleaned to maintain the lint trap and mechanical and heating components free from excessive accumulations of lint in and around the appliance.

Causes of fires in clothes dryers:

- Clothes dryer lint traps that are not emptied
- Dryer vents that become clogged
- Lint around mechanical or heating components
- Drying greasy rags or linens with lotion

**Lesson 2 - Fire Prevention
Clothes Dryers**

Dryers - Check exhaust ducts for damage and remove switchbacks or excessive long runs



Dryer Exhaust Ducts

One of the most common causes for dryer fires is inefficient or obstructed lint exhausting.

Facilities shall conduct regular preventive maintenance to ensure that exhaust ducts remain clean, clear, and free-flowing.

Fire Safety Inspection Deficiencies



1. K-18 = Corridor doors
2. K-62 = Sprinkler issues
3. K-147 = Electrical wiring
4. K-12 = Exit/Directional signs
5. K-72 = Obstructed egress



Fire/Smoke Doors: Doors fail to close and latch properly, doors are wedged open, doors are obstructed

Testing of Systems: Certification tests not up-to-date, monthly check of fire extinguishers, some fire extinguishers missed during annual inspection/service, generators not tested regularly, records not up to date, records not available, records disorganized

Fire Drill Records: Fire drills not being conducted as required.

Extension Cords: Used in place of permanent wiring, piggy-backed, used instead of approved power strip, not adequate for power demand.

Exit Lighting: EXIT signs not properly illuminated, faulty or non-existent emergency egress lighting

Exit Obstructions: Items stored in exit corridors, such as trash containers, decorations, wheel chairs, patient lifts

Top 5 Citations Found During Fire Code Inspections

K-Tag #Citations - Citation Description

Lesson 2 - Fire Prevention
Review

Review



What's Wrong
with this picture?



Review

Student Activity

“What’s wrong with this picture”

Access to fire extinguisher obstructed

Lesson 2 - Fire Prevention
Review

Review



What's Wrong
with this picture?



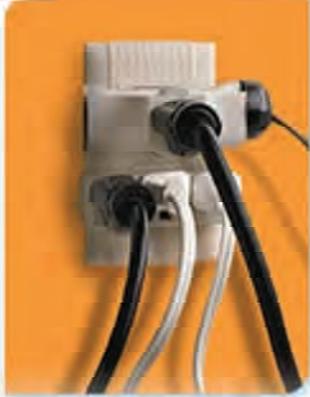
Review

Student Activity

“What’s wrong with this picture”

Fire/smoke door wedged open

Review



What's Wrong
with this picture?



Review

Student Activity

“What’s wrong with this picture”

Multi-plug adapters – overloaded circuit

Review



What's Wrong
with this picture?



Review

Student Activity

“What’s wrong with this picture”
Exit door obstructed by desk

End of Lesson 2

Student Break – 10 minutes (time permitting)

Lesson 3 Emergency Management



Objectives:

- Understand Disaster Planning
- Understand Evacuation and Fire Drill Planning

What does your resident contract say about providing care during emergencies?

Lesson 3

Enabling Objectives:

Students will be able to:

- Understand possible disasters that could occur within the facility.
- Understand the disaster planning process.
- Understand the evacuation and fire drill planning process.

Motivation: Hurricane Katrina Disaster Victims

- The confirmed death toll is 1,836. (*Louisiana Dept of Health and Hospitals*)
- 135 are still unaccounted for (*Louisiana Dept of Health and Hospitals*)
- Of the 1,577 deaths in Louisiana, 64% were 65 or older. (*Louisiana Dept of Health and Hospitals*)
- 70 nursing home residents died in 13 nursing homes during the immediate aftermath of Katrina. (*American Journal of Public Health, 7/2008*)
- 2,900 people were evacuated from hospitals and nursing homes by the Federal Government's National Disaster Medical Systems. (*American Journal of Public Health, 7/2008*)
- The Veterans Affairs (VA) Medical Center and the nearby Tulane University Hospital were relative success stories because they shared a common factor—access to an effective external source of help (*Mobile Register, 9/26/2005*)

Disaster Planning Process



Twin City Foods,
Stanwood, WA

Planning Process

1. Hazard Inventory
2. Written Plan
3. Annual Exercise and Update

During the Twin City Foods Fire of 1996 in Stanwood WA, a venting 18,000 gallon ammonia tank and a 2,000 gallon chlorine tank caused the an evacuation for a one-mile radius that included a 284 bed rest home.

Planning Process

1. Develop a Hazard Inventory –and a response to each hazard.
2. Develop a Written Plan—Managing a facility during a disaster.
3. Annual Exercise and Update

Note: Rest Home mentioned above was the Josephine Sunset Home which included 70+ boarding home beds and 160 nursing home beds.

Hazard Inventory

Geological Earthquake Tsunami Lahar	Terrorism Bomb Threat Explosion Biological Exposure
Weather Windstorms Heavy Rains Flooding Snowstorm Mudslides Wildfires	Hazardous Facilities Dams Nuclear power sites Storage areas Airports Railways Gas stations



Disaster planning must be consistent with the potential threats for a specific facility.

Hazard Inventory -- Handout

- a. **A list of disaster hazards** should be developed for each health care facility. The location of the health care facility may be effected by hazardous facilities in the area. These possible hazards need to be identified and evaluated.

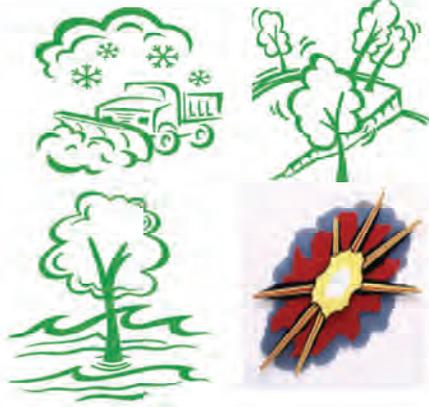
This is important because planning must be based on realistic conceptual events.

Consult with the local fire dept. Office of Emergency Management police dept. and/or, sheriff's office, in developing the hazard inventory for your area.

Geological Earthquake Tsunami Lahar	Terrorism Bomb Threat Explosion Biological exposure
Weather Windstorms Heavy rains Flooding Mudslides Snowstorm Wildfires	Hazardous Facilities Chemical Storage Dams Airports Railways Gas stations Nuclear power sites

Lesson 3 – Emergency Management Disaster Planning

Responding to Identified Hazards



Following the hazard inventory, a written plan for responding to the identified hazards shall be developed.

Responding to Identified Hazards

Following the hazard inventory, a written plan for responding to the identified hazards shall be developed.

Bomb Threat

1. The bomb threat procedure should be discussed with the local police agency. The procedures should be predetermined and outlined in the facility disaster plan. If a bomb threat is received by telephone, get as much information as you can. If possible, the information should include: location, size, type when it will explode and who is calling.
2. It is also possible that you may locate an unidentifiable object that you suspect is a bomb. In either situation, immediately initiate the emergency call list. Ask for instructions on how to proceed.
3. Total evacuation of the facility may be necessary.

Explosion

An explosion can occur from a leaking gas line, gas stove, leaking propane tank, or an explosive device. It may be necessary to partially or fully evacuate the building. Move patients to a safe area and provide patient care.

1. Call the fire department immediately and initiate the emergency call list.
2. If the explosion occurs from an explosive device, establish security of the area until law enforcement arrives.
3. Most explosions will cause substantial damage to utilities, which will then need to be turned off at the main controls. All utilities, gas, electricity, water, and fuel systems should be checked for damage before returning patients to the facility.

Extreme Weather

Windstorms, heavy rains and/or snowstorms can cause flooding, mudslides, road and bridge closures, power outages, and other inconveniences.

1. Have a plan for alternative transportation routes. Notify companies delivering important services and supplies to the facility.
2. Have a plan for prolonged power outages. This should include how to keep patients warm. **(Handout Electrical and Fuel Outages)**

Earthquake

1. Usually there is no warning when an earthquake will occur. The tremors may last from a few seconds to several minutes. During the earthquake, keep patients inside and away from windows and falling objects, if possible.
2. After the earthquake, check all patients for injury while reassuring and calming them. Establish a triage area. If necessary, initiate the emergency call list. Check all utilities to see if they are functioning properly.
3. Check the building for structural damage.

Tsunami - There may be some warning of an impending tsunami. If the facility is located in a coastal community, the facility may need a tsunami plan that coordinates with the community's tsunami plan. Be familiar with the facility's tsunami plan, transportation plan and evacuation routes.

Lahar – The greatest volcanic hazard is a Lahars which are volcanic mudflows or debris flows. A rapidly flowing mixture of rock debris and water that originates on the slopes of a volcano. If the facility is located in a community where there is a Lahar threat, the facility may need to coordinate with the community's Lahar plan.

Lesson 3 – Emergency Management Disaster Planning

The Written Plan



Managing a facility during a disaster Prioritized Goals

- Prevent loss of life.
- Prevent trauma.
- Maintain services.
- Prevent property loss.

Your services are important in the community. Residents and their families are dependant on you to continue providing services during disaster events.

Written Plan – Managing a facility during a disaster. (Handout)

Your services are important in the community. Residents and their family members are dependant on you to continue providing services during disaster events.

Invite your local Emergency Management Department to participate while you develop your disaster plan. Submit the plan to the local fire department, police department and/or Sheriff's office for review.

1. Designate lines of authority in writing. The plan must contain a list of names indicating who is in charge. The person in charge must be present in the health care facility.
2. List persons to be notified, their current phone numbers, and an alternate method of communication, if appropriate. Record who contacted the persons in what order they were contacted, and at what time there were contacted. **Handout –Emergency Call List**
3. Assign specific responsibilities to specific positions, with alternates designated.
 - Make sure they are trained and have a backup person.
4. Develop and maintain a signed written agreement for both a designated and an alternate emergency **evacuation site**. Review and update agreements annually. Agreements must be signed by the parties who are presently responsible and be consistent with the current disaster plan.
 - Nursing Home – Shelter must provide current level of care. Another Nursing home is recommended.
 - Boarding Home –A place where the current level of care is provided.
5. Develop and maintain a signed written agreement for a primary and secondary **transportation** agency. Review and update agreements annually.
 - It may be necessary to provide staff to travel with and attend to residents at the sheltering location.
6. Designate specific evacuation routes in writing and post throughout the building.
7. Develop a plan for medications, health records, and patient care supplies in the event of evacuation.
8. Develop a plan for providing food for 3 days, such as a menu plan and basic food storage.
9. Provide orientation for all new employees to the facility's disaster preparedness plan.
10. Provide regular ongoing education, training, and drills to maintain staff familiarity with disaster procedures.
11. Give consideration to the use of the facility as an emergency care center in the event of a disaster.

Lesson 3 – Emergency Management Disaster Planning

Annual Update



Plan an annual table
top exercise of your
disaster plan.

Annual Update

Disaster plans should be updated at least annually, with key agencies having dated, current copies of the plan on file. Key agencies would include the local fire and police and/or sheriff departments and the Emergency Management Department.

Annual Exercise

Contact your county Emergency Management agency and discuss conducting an annual exercise of your plan.

Lesson 3 – Emergency Management Evacuation Planning

Evacuation Planning



Administration shall:

- Develop Emergency Evacuation Plan
- Develop Fire Evacuation Plan

A simple floor plan showing the evacuation routes should be posted in prominent locations.

Evacuation Planning

Responsibilities of Administration

- Develop Emergency Evacuation Plan
- Develop Fire Evacuation Plan
- Schedule and hold Fire Drill Practice
- Maintain a Record of Fire Drill Practice

Emergency Evacuation Plan - Nursing home administration shall provide a written plan for the protection of all patients and for their evacuation in the event of an emergency.

Fire Evacuation Plan shall include the following: (IFC Section 404.3.1)

1. Emergency egress or escape routes and if evacuation is complete or partial.
2. Procedures for employees who must remain to operate critical equipment before evacuating.
3. Procedures for accounting for employees and occupants after evacuation.
4. Identification and assignment of staff responsible for rescue or emergency medical aid.
5. How to notify occupants of a fire or emergency.
6. How to report fires and other emergencies to the fire department or designated emergency response organization.
7. Identification and assignment of personnel who can be contacted for further information regarding duties.
8. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.

Nursing Homes must also meet the requirements of NFPA 101 19.7.2.2, which states that a written health care occupancy fire safety plan shall provide of the following:

1. Use of alarms
2. Transmission of alarm to fire department
3. Response to alarms
4. Isolation of fire
5. Evacuation of immediate area
6. Evacuation of smoke compartment
7. Preparation of floors and building for evacuation
8. Extinguishment of fire

End of Lesson 3

PREVENT FIRES
IT'S YOUR JOB!

Lesson 4 Emergency Preparedness

Objectives:

- Take the proper actions in a fire drill scenario.**
- Understand Actions to take in a Fire Emergency.**



**All fires must be reported to
DSHS within 24 hours**

Lesson 4 – Emergency Preparedness – 10-minute lecture

Objectives:

Take the proper actions in a fire drill scenario.

Understand actions to take in an emergency.

NFPA 99 11-5.3.8 (Nursing Homes)

Each health care facility shall implement an educational program. This program shall include an overview of the components of the emergency preparedness plan and concepts of the Incident Command System. Education concerning the staff's specific duties and responsibilities shall be conducted upon reporting to their assigned departments or position.

General overview education of the Emergency Preparedness Plan and the Incident Command System shall be conducted at the time of hire. Department/staff specific education shall be conducted upon reporting to their assignments or position and annual thereafter.

Group Activity – Fire Drill scenarios 10 minutes

Lesson 4 – Emergency Preparedness Fire Drills

Fire Drills



Fire Protection Systems are there to provide more time for people to escape during a fire emergency.

Administration shall:

- Schedule and hold Fire Drill Practices
- Maintain a Record of Fire Drill Practices

The most important feature of fire protection is a well trained staff.

Schedule and hold Fire Drill Practice WAC 212-12-044

Fire Drills require the staff to:

- Search for the fire.
- Shut doors and windows of room or area involved.
- Announce the fire location and activate the fire alarm system (9 p.m. to 6 a.m. shifts simulate activating the fire alarm system).
- Techniques for removing patients—do staff know how to move a bariatric bed.
- Carrying fire extinguishers to fire location and reviewing proper use.
- Critique of the drill is to be made by drill leaders and any corrections in the procedures or techniques are instituted, discussed with personnel and facility administration
- Record date, time, person in charge, remarks that include a critique and corrections, and list of personnel attending for each drill.

Maintain a Record of Fire Drill Practice (See Handout) IFC Section 405.5

- Licensed Care Facilities shall hold at least twelve **planned** fire drills each year. The drills shall be conducted quarterly on each shift. Fire drills familiarize personnel with signals and emergency action required under various conditions.
- A detailed written record of all fire drills shall be maintained and available for inspection at all times.
Refer to facility record book.
- When drills are conducted between 9 p.m. and 6 a.m., a coded announcement may be used instead of audible alarms.
- Fire drills shall include the transmission of a fire alarm signal and simulation of emergency conditions. If your fire alarm system hinders communication, have a plan in place.
- The local fire department shall be notified prior to the activation of the alarm system for drill purposes and again at the conclusion of the transmission and restoration of the fire alarm system to normal mode.
- Note: After activation (other than for fire drill purposes), the alarm can be silenced only with the approval of the fire chief. Do not reset.

Fire Drill Procedures

1.



2.



3.



4.



During a Fire Drill staff shall:

1. **Rescue** patients from the area of the fire.
2. **Alarm** initiation.
3. **Confine** the fire by closing the door.
4. **Evacuate** or relocate those in the fire area, and extinguish the fire.

Patients are not required to be moved during fire drills.

Notify visitors that “this is a drill.”

Fire Drill Procedures

A card can be given to a staff member on duty denoting the location selected for the simulated fire.

When the Simulated Fire is discovered, the person who discovers it will:

1. **Rescue** patients from the area of the fire. The first step may also include assessing the fire, calling out for help, as well as moving patients from danger.
2. **Alarm** initiation. This may be by calling out or by pulling down on an automatic manual alarm (except during 9 p.m. to 6 a.m. shift).. In addition, someone must indicate that they would call 911 to report the fire. Be sure to know the policy for your facility.
3. **Confine** the fire by closing the door to the room of the fire. Corridors must also be cleared and all doors closed to confine the fire.
4. **Evacuate and Extinguish** -- Relocate patients in the fire area and Extinguish the Fire -- Assess the fire to determine if it is small enough for you to extinguish
5. Staff are to follow the fire plan for their facility.

Other Personnel in the area will:

- Clear the corridors!
- Call the head nurse or supervisor on duty and give the exact location of the fire.
- Carry out necessary steps to confine the total area by shutting all doors and windows. Do not lock them. Turn off all unnecessary equipment. Fire doors in the main corridors must be latched.
- Stand by to assist. If necessary, patients and visitors can be told “We are having a fire drill.”
- All offices and departments outside the “Fire Area” shall secure the area by shutting windows and doors. do not lock

Fire Drills-Review



What we practice in a
drill we are most
likely to repeat in a
live incident.

The Kona Village fire

Review

What we practice in a drill we are most likely to repeat in a live incident.
Make your drills as realistic as possible.

- Say what you would do as you go through each step.
- Go to the fire alarm station.
- Get the fire extinguisher.
- Call out for help.

Lesson 4 – Emergency Preparedness
The Emergency Incident

The Emergency Incident
Responsibilities of Personnel



Staff shall: Be Prepared

Be prepared to assume the role you have been assigned in the disaster plan of the facility.

Responsibility of Facility Staff

Be Prepared

There is always some potential for any fire to generate a disaster situation.

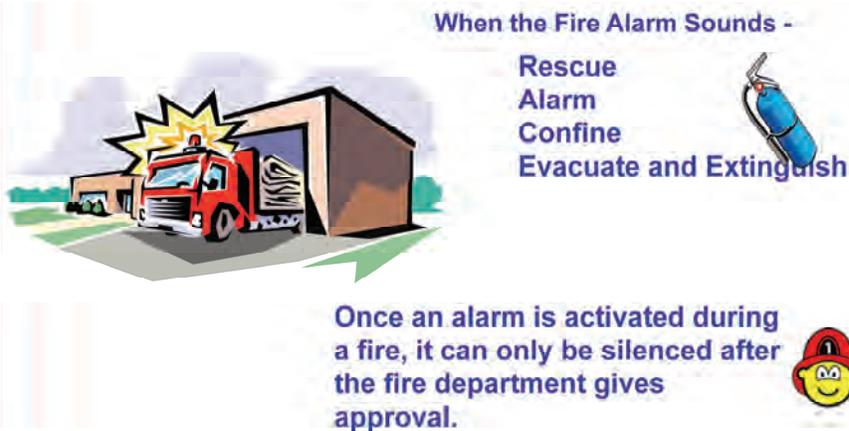
- Know the disaster plan and procedures for your facility.
- Be alert for events which can lead to a disaster situation such as a change in the weather.
- Be prepared to assume the role you have been assigned in the disaster plan of the facility.

If assigned to check the fire alarm panel:

- A red light indicates emergency alarm activation.
- **Do not silence this alarm until the fire department gives approval!**
A silenced alarm can give the impression that the fire is out and everything is ok.

Lesson 4 – Emergency Preparedness
The Emergency Incident

When the Fire Alarm Sounds



When a fire is discovered or when the Fire Alarm Sounds

All staff must know the fire plan/policy for their facility

The basic response required of staff shall include the following:

Rescue patients from the area of the fire. The first step may also include assessing the fire, and calling out for help, as well as moving patients from danger.

Alarm initiation. This may be by calling out, by pulling down on an automatic manual alarm. In addition, someone must call 911 to report the fire.

Confine the fire by closing the door to the room of the fire. Corridors must also be cleared and all doors closed.

Evacuate and Extinguish the Fire -- Relocate patients in the fire area. Assess the fire to determine if it is small enough for you to extinguish.

Lesson 4 – Emergency Preparedness The Emergency Incident

Evacuation Procedures

Coordinate the point of assembly with response agencies.



Evacuation Procedures –

If an evacuation is ordered, the head nurse or supervisor on duty will be responsible for their respective units.

Order of Patient Removal –

1. In the immediate fire area
2. Adjacent to the fire area
3. In the same smoke compartment

All staff must be trained in the evacuation procedure.

Evacuation Procedures



Close all doors



There are two kinds of Evacuation

1. Partial Evacuation
2. Total Evacuation

Evacuation Procedures –

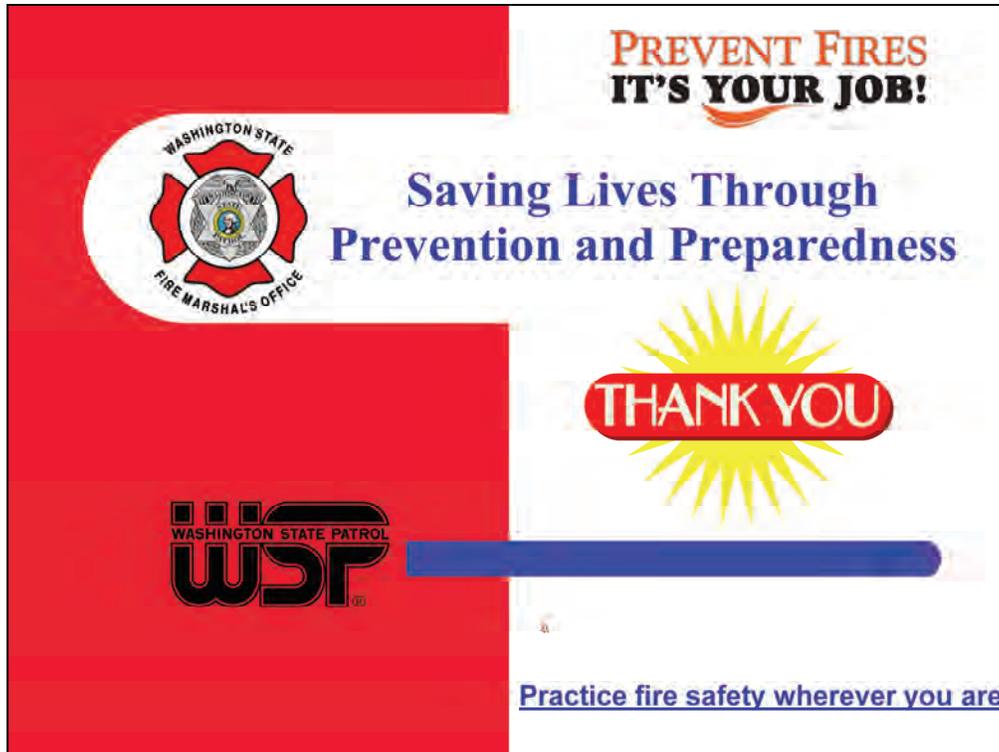
During evacuation procedure, all doors must remain closed until you enter and they must be closed when you go out.

Two Kinds of Evacuation:

1. **Partial Evacuation** – procedure of removing patients in the immediate area to places of temporary safety. (Defend in Place)
 2. **Total Evacuation** – final state of actual evacuation of the premises by patients and personnel.
- During evacuation procedure, all doors must remain closed until you enter and they must be closed when you go out.
 - Never leave a patient in a room unless you close the door.
 - Do not leave doors of empty rooms open. This permits fire to spread.

Show Video “Evacuation of Health Care Facilities” (Allow 12 minutes)
Shows Methods of Patient Removal

Group Activity –Fire Drill Scenarios – Pass out scenario cards (Allow 10 minutes – 3 minutes to prepare and a couple minutes for each group to tell what they would do.)



Are there any questions?

Remember: Fire Prevention is a team effort, it is important to recognize deficiencies and report them to your supervisor or maintenance staff right away.

We'd like to thank the facility manager for allowing us to share this information with you today.

Please help us maintain this class by offering your comments or recommendations in the class evaluation.

Thank you for your time.