



Pennsylvania
Department of Health

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LSC Essentials for Nursing Staff

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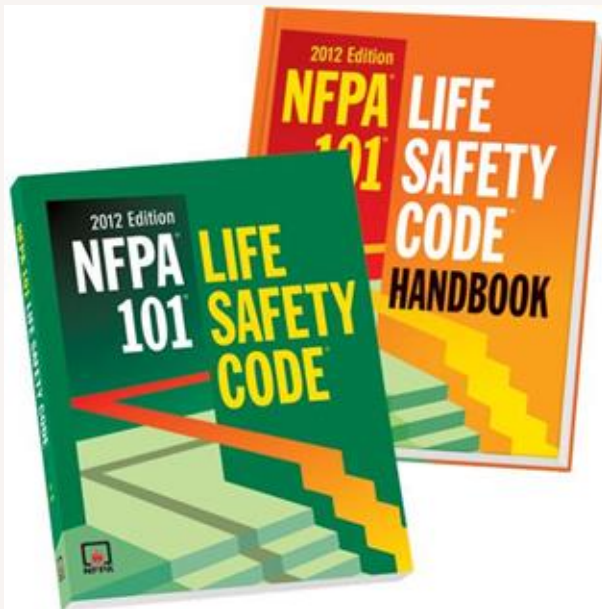
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Division of Safety Inspection (DSI)



DSI is the division within the Department of Health that ensures health care facilities comply with the National Fire Protection Association's (NFPA) 101, the Life Safety Code (LSC), and Emergency Preparedness (EP) for state licensure and federal certification purposes



Division of Safety Inspection (DSI)

DSI inspects numerous health care facility types, to include hospitals, nursing homes, ambulatory surgery centers, intermediate care facilities for intellectual disabilities, hospices, end stage renal disease (ESRD) facilities, birthing centers and pediatric extended care centers.



Division of Safety Inspection (DSI)

DSI surveys for fire safety and emergency preparedness requirements

DSI does not survey for all things physical environment, and there is an overlap with the Division of Nursing Care Facilities:

- Rodents and insects;
- Elopement;
- Hot water temperatures;
- Leaking roofs, etc.



Division of Safety Inspection (DSI)

How to eat a watermelon...



Division of Safety Inspection (DSI)

How to eat a watermelon...



Division of Safety Inspection (DSI)

How to eat a watermelon...



Basic LSC Principles – Health Care

Unlike most other building and occupancy types, “The least desirable emergency action in a health care occupancy is the wholesale relocation or evacuation of patients. For this reason, a Defend-in-Place strategy is used.” (2012 NFPA 101 Handbook, Page 703)



Basic LSC Principles – Health Care

A fire in a health care building can be devastating. Heat, smoke and other products of combustion are difficult to battle when the occupants of the building are difficult or nearly impossible to evacuate in a timely manner. “The Defend-in-Place Strategy is implemented using a total concept approach



Basic LSC Principles – Health Care

Requirements for allowable building construction types, sprinklers, alarm and detection, and staff training work in harmony to help ensure that a patient can be safely and adequately protected regardless of where a fire starts.”

(2012 NFPA 101 Handbook, Page 703)



Basic LSC Principles – Health Care

“Action by staff of a health care facility is an integral part of the life safety features required. The proper response from staff in terms of numbers, actions and management of the fire can readily influence the outcome of a fire...”



Basic LSC Principles – Health Care

...Whether it be informing patients who are not in jeopardy from the fire or helping to relocate those patients who might be in proximity to the fire, health care staff have been charged with the responsibility of preserving the safety of their charges.” (2012 NFPA 101 Handbook, Page 703)



Basic LSC Principles – Health Care

Staff action, in addition to traditional safety systems and features (construction, compartmentalization, interior finish, alarm, detection, sprinkler systems and control of contents and furnishings), provides a safe environment for a vulnerable population



Basic LSC Principles – Health Care



LSC and Nursing Crossover – Fire Alarm

Staff Action

- All health care staff must be instructed in the use of and response to fire drills
- Staff shall be instructed in the use of a code phrase to ensure transmission of an alarm under the following:
 - Staff discovering the fire must immediately aid an endangered person
 - During a malfunction of the building fire alarm system
- Staff hearing the coded announcement shall first activate the fire alarm using the nearest manual pull station, and then perform their duties as outlined in the facility's fire safety plan



LSC and Nursing Crossover – Fire Alarm

Basic Staff Response

- Remove all residents directly involved in the fire emergency;
- Transmission of the fire alarm to warn others and summon staff;
- Confinement of the effects of fire by closing doors;
- Relocation of residents as detailed in the fire safety plan.



LSC and Nursing Crossover – Fire Alarm

- Staff shall be instructed and kept informed of their duties under the plan
 - Initial training, annually, and at time of any updates/changes
- Staff must be instructed in life safety procedures and *devices*
- Fire drills shall include the transmission of the fire alarm and simulate emergency fire conditions
 - Bedridden residents shall not be required to be moved during drills;
 - Drills conducted quarterly on each shift, with varying conditions;
 - Drills between 9pm and 6am are permitted to use a coded announcement instead of audible alarms



LSC and Nursing Crossover – EP

Fire is ONE type of emergency

Nursing homes are required to have an EP plan based on an *All-Hazards Approach*

This approach includes preparedness for *natural, man-made, and or facility emergencies* that may include but is not limited to:

- care-related emergencies;
- equipment and power failures; interruptions in communications, including cyber-attacks;
- loss of a portion or all of a facility; and,
- interruptions in the normal supply of essentials, such as water and food.

Planning for an all-hazards approach should also include *emerging infectious disease* (EID) threats, to include Influenza, Ebola, Zika Virus and others.



LSC and Nursing Crossover – EP

All health care staff must be instructed in their role in the EP plan -
Staff training is required at initial hire, annually, and with changes to the plan

Know your role!

Drills should be conducted twice annually:

- One drill must be a community-based drill or actual emergency;
- Second drill can be a table-top, training, another community-based drill, facility-based drill or a second actual emergency.



LSC and Nursing Crossover - Construction

It is not expected that nursing staff be *experts* at nursing home construction and LSC issues

It is best practice to *recognize issues and report* them to the appropriate individuals who can remedy the issues



LSC and Nursing Crossover - Construction

Things to Report

- Corridor doors propped open;
- Receptacles not working or with broken covers;
- Items sitting in the corridor for more than 20 minutes;
- Smoke barrier or stairwell doors that do not close properly;
- Extension cord use or frayed electrical wires.



LSC and Nursing Crossover

Compartmentalization

- Compartments are key to keeping residents safe during fire and emergency events
- Room door closed, smoke barrier doors closed, fire doors closed ... they all play a significant role in protecting residents - Note that smoke barrier and fire doors are to close in an emergency but can be held up by devices integral with the fire alarm system
- Egress stairs, elevators, mechanical shafts, and all other floor penetrations must be protected
- No door wedges or hold open devices!



LSC and Nursing Crossover



LSC and Nursing Crossover



LSC and Nursing Crossover



LSC and Nursing Crossover

Interior Finishes

- LSC chapter dedicated to interior finishes and the importance to mitigating fire spread
- Flame retardant – NFPA 701 and 289 – you will find this information on items such as privacy curtains, decorations, and similar
- Decorations, such as photographs, paintings, and other art attached directly to the walls, ceilings, and non-fire-rated doors should NOT:
 - interfere with the operation of a door
 - exceed 50 percent in a patient sleeping room not exceeding 4 residents (walls, ceilings, or door)
 - exceed 30 percent in any other room or space



LSC and Nursing Crossover



LSC and Nursing Crossover

Fire Alarm

- The fire alarm panel is integral to the safety to all
- It is typically located in the entrance or main nurse station
- If you see that the panel is in trouble, tell someone!
- Ensure that the fire alarm system is operating properly in your work area during fire drills
- Continuous effort to keep fire alarm devices, such as manual pull stations, free of obstructions (carts and lifts)



LSC and Nursing Crossover

Sprinkler Systems

- All nursing homes are required to be fully sprinklered
- The sprinkler systems are tied into the fire alarm system
- 18 inches is still the rule for obstructions, such as storage
- 22 inches is the newer rule for privacy curtains



LSC and Nursing Crossover



LSC and Nursing Crossover

Sprinkler Systems

- Sprinkler heads that are dirty and/or covered in lint are required to be cleaned
- If the deflector is damaged, a new sprinkler is required
- The vast majority of sprinkler systems activate at each individual sprinkler head
- There is a difference between wet and dry sprinkler systems



LSC and Nursing Crossover



LSC and Nursing Crossover



LSC and Nursing Crossover

Smoke detection

- *Smoke Detection versus Smoke Alarms*
- Residential cooking areas must have both with the local smoke alarm no less than 20 ft away
- Smoke detectors also have a specific sensitivity range that must be inspected on a regular basis
- Be careful with plastic caps left on smoke detectors after maintenance or renovations / other work in the area that might create dust
- Watch for other items such as latex gloves or plastic bags used in the same fashion



LSC and Nursing Crossover



LSC and Nursing Crossover

Contents and Furnishings

- CMS rule dictates 20-minutes for carts in the corridor being storage vs considered in-use (food service, linen, medication, and similar)
- Isolation carts are permitted in the corridor with residents in active isolation precautions
- Wheeled equipment is permitted in the corridor where:
 - Does not obstruct the corridor to less than 60 inches;
 - The equipment is listed in the fire safety plan and training/drills address relocation in the event of a fire or emergency;
 - The wheeled equipment is limited to: Equipment and carts in-use, medical emergency equipment not in use, and patient lift and transport equipment.



LSC and Nursing Crossover



LSC and Nursing Crossover

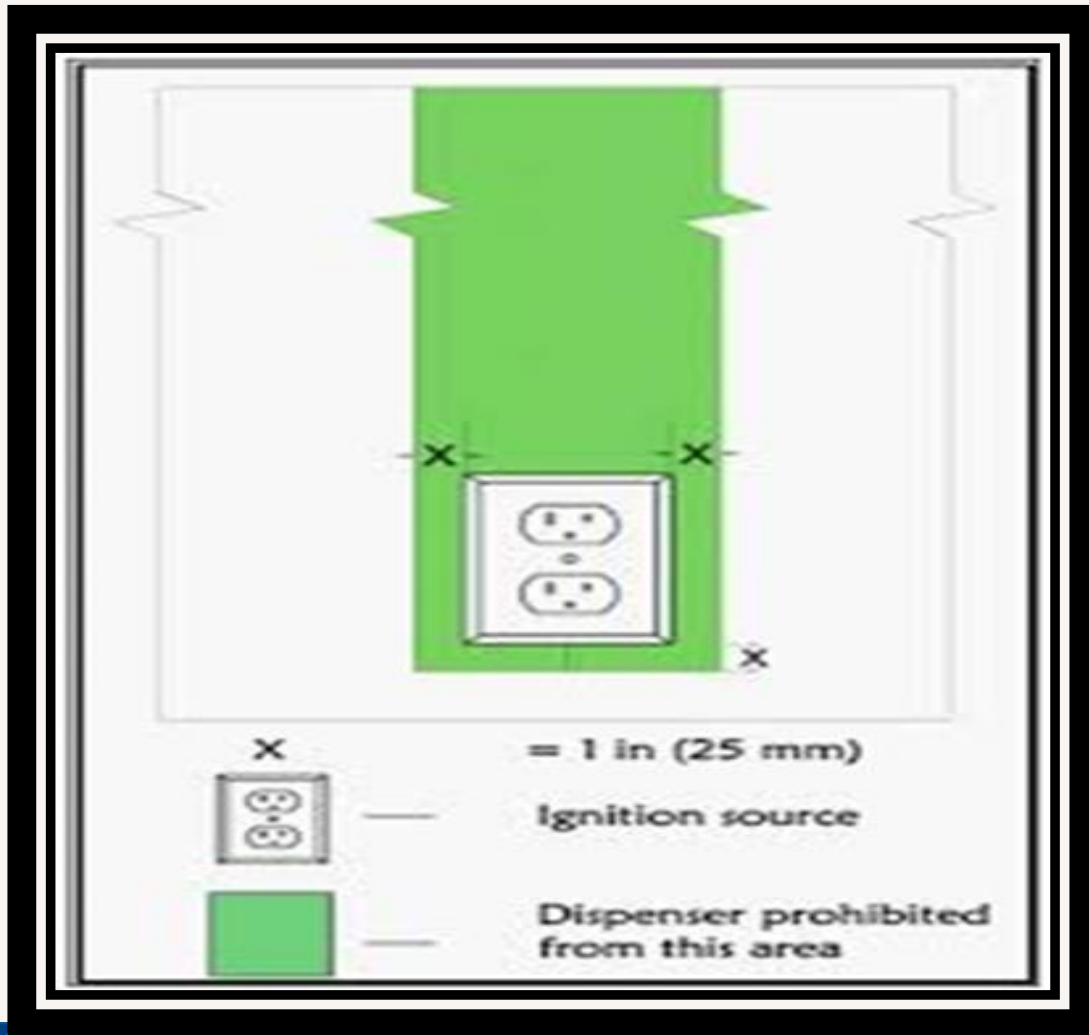
Contents and Furnishings

Alcohol-Based Hand-Rub dispensers (ABHR) are permitted

There are numerous rules but remember – 10 gallons permitted per smoke compartment, *with the exception of one per each room that does not count toward the overall amount*



LSC and Nursing Crossover



LSC and Nursing Crossover

Contents and Furnishings

Oxygen storage

- Oxygen is an oxidizer and makes items burn at a faster rate
- Cylinders are required to be stored properly - secured
- Full and empty cylinders are to be clearly separated



LSC and Nursing Crossover



LSC and Nursing Crossover

Electrical

- *Normal* electrical vs *Emergency* electrical systems
- Important to know what receptacles and equipment in the building is powered by the emergency system
- Note that local emergency preparedness and the health care coalitions have lots of resources to help if the emergency power is not sufficient for proper resident care



LSC and Nursing Crossover

Electrical

- No space heaters in resident areas
- No extension cord or outlet multiplier use
- UL and FM approved surge protectors are permitted per their manufacturer's listing
 - For example, computer, computer screen, phone and similar
 - No high draw electrical items, such as space heaters or microwaves



LSC and Nursing Crossover

Electrical

- Residents and families bringing electrical devices to resident rooms
- 2012 NFPA 99, Section 10.4 requires that facilities put a policy in place to visually inspect devices by facility staff for any electrical device within the “patient vicinity” prior to use and then provide an ongoing program to test and track the electrical devices
- Visual inspection would include the condition of the cord, UL or FM certified, device works per instructions for use, etc.



LSC and Nursing Crossover



LSC and Nursing Crossover

Electrical

- Report any receptacle damage
- Report damage to any electrical cords, especially for any devices used by residents
- Emergency lighting is required and sufficient from the inside of the nursing home to the “public way”



LSC and Nursing Crossover

Special Locking Arrangements (SLAs)

- All new SLAs are reviewed by DNCF to ensure they are not being used as restraints, and then must also go through the plan review process
- Systems that only alarm on a wandering device but do not lock are not SLAs
- SLAs are permitted where patient special needs require specialized protective measures, per the following:
 - Staff must be readily able to unlock doors at all times;
 - Complete smoke detection system thru the locked space or doors can be unlocked at a constantly attended location, similar to a nurse station

LSC and Nursing Crossover

Special Locking Arrangements (SLAs)

- Building is protected throughout by an approved, supervised, automatic sprinkler system
- Locks fail safe so as to release upon loss of power to the device
- Locks release on activation of the smoke detection system (if installed) and waterflow in the sprinkler system



LSC and Nursing Crossover



LSC and Nursing Crossover



LSC and Nursing Crossover

Special Locking Arrangements (SLAs)

Delayed-egress locks are also permitted and are often confused with or added unnecessarily to the locking arrangements permitted on the previous slides

Doors shall unlock in the direction of egress upon one of the following

- Sprinkler system
- heat detection or
- not more than two smoke detectors as part of a smoke detection system



LSC and Nursing Crossover

Special Locking Arrangements (SLAs)

Delayed-egress locks

- Unlock with loss of power
- Irreversible process shall release the doors within 15 seconds (30 if fully sprinklered);
 - The force required shall not exceed 15lbs, must be continuous for at least 3 seconds, signals audible alarm, and only relock manually.



LSC and Nursing Crossover

Interim Life Safety Measures (ISLMs)

- Any time a facility does not comply with the prescriptive LSC requirements, an alternate means of compliance is required, to include ISLMs
- For example, if the sidewalk is getting replaced, you should be trained on alternate exiting during this time
- If not, tell someone!



LSC and Nursing Crossover



LSC and Nursing Crossover



LSC and Nursing Crossover



LSC and Nursing Crossover

Interim Life Safety Measures (ISLMs)

- This may include an hourly fire watch during times where the sprinkler or fire alarm systems are inoperable
- Extra training and fire drills are recommended for existing areas undergoing more extensive and time-consuming projects



Tips and Tricks

- ✓ No new construction, renovations or alterations are permitted in a health care facility unless you receive approval from DSI plan review
- ✓ No new construction, renovations or alterations can be occupied for use without a successful occupancy survey and approval by both DSI and the Division of Nursing Care Facilities



Tips and Tricks



Tips and Tricks

- Plan approval from DSI will include a plan approval letter and the plans will have a unique DOH approval number on the first page

H-XX-XXXX

- H is for health care, the next two digits are the last two of the current year, and the next numbers are the chronological approval number
- For example, H-25-00001 was the first plan approved in the year 2025



Tips and Tricks

If you see it, tell someone so it can be fixed

If they don't fix it, be persistent!



Questions



Questions



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We envision a healthy Pennsylvania for all.

