

Fire Response in Hospitals

Fire and smoke can cause significant amounts of damage in hospitals and result in serious injuries or deaths. Knowing how to respond to a fire and/or smoke condition is essential for the safety of employees, patients, visitors, and others. Building construction codes, automatic fire detection systems, fire suppression systems, and training for staff members are all essential elements that hospitals need to have in place to prevent and respond to fires.

Contributing factors to hospital fires include an aging infrastructure, kitchen facilities, cigarettes, specialized medical equipment, hand sanitizers, gas cylinders and medical oxygen compliance, anesthesia machines, extension cord daisy chains, inadequate fire training, storage of combustible materials, faulty or poorly maintained fire safety systems, and heating equipment. Hospitals should recognize and address these areas in a comprehensive fire response plan or fire safety and evacuation plan that details specific responsibilities and protocols.

The following checklist contains various critical aspects associated with a hospital's fire response, including a written response plan, staff responsibilities and training, fire drills, and extinguishers.

	Yes	No
Fire Response/Fire Safety Plan		
Has your hospital established a comprehensive written fire response plan or fire safety and evacuation plan?		
Does your hospital ensure that all staff members (including practitioners, support staff, volunteers, students, and contractors) are trained and aware of the procedures contained in that plan?		
Does your hospital review and discuss the plan on an annual basis with local fire department representatives and the state department of health?		

	Yes	No
Fire Response/Fire Safety Plan (continued)		
Does the environment of care or safety committee review the plan on an annual basis?		
Does the hospital's chief executive officer approve the plan?		
Does the plan define general safety actions, such as staying low to avoid inhaling smoke and products of combustion, feeling closed doors for heat, turning off fans and heating, ventilation, and air-conditioning (HVAC) units, and taking appropriate actions if there is more smoke on the other side of the fire/smoke barrier door(s)?		
Does the plan include specific procedures for:		
 People in the immediate area of the fire versus those away from the fire? 		
Handling handicapped individuals?		
Interim life safety measures?		
Fire response team members?		
Operating room fire safety?		
Boiler room safety?		
Kitchen fire safety?		
Mechanical room safety?		
Electrical room safety?		
Laboratory fire safety?		
Magnetic resonance imaging (MRI) fire safety?		
Loading/storage area safety?		
Does the plan include prohibiting smoking in all areas of the hospital?		
Does the plan indicate that sources of ignition should be removed from patients receiving oxygen therapy?		

	Yes	No
Fire Response/Fire Safety Plan (continued)		
Does the plan describe how to respond to an oxygen-fed fire like a smoking incident that involves oxygen?		
Does the plan include removing all items from the corridors?		
Does the plan include prewritten approval from the local fire marshal for silencing the fire alarm once the responding agency(ies) deem the situation under control?		
Does the plan specify which staff members should meet the responding agency(ies) and where they should meet?		
Does the plan identify where patients will be relocated and then evacuated if necessary?		
Does the plan identify a predesignated emergency operations center (EOC) and back-up location?		
Does the plan identify that the local fire chief or designee is in command and will operate in conjunction with the EOC staff to formulate appropriate actions during the emergency?		
Fire Drills		
Does your hospital conduct fire drills to ensure all staff members know what to do in case of fire or smoke condition and primary and secondary exit routes?		
Does your hospital conduct fire drills on every shift once each quarter on a rotating basis at least an hour apart?		
Do the adjacent floors/smoke compartments clear the corridors as part of the drill?		
Are the adjacent floors/smoke compartments observed during the fire drill?		
Are operating room, laboratory, and kitchen fire drills conducted annually?		
Does the local fire marshal/fire department conduct regularly scheduled tours of the facility and observe fire drills?		

	Yes	No
Staff Responsibilities and Training		
Does your hospital conduct fire safety training for all staff members (including practitioners, support staff, volunteers, students, and contractors)?		
Do staff members recognize the need for immediate action in case of a smoke condition or fire to preserve the safety of people in the facility?		
Do staff members know what they should do to ensure patients remain safe in case of a fire?		
Do staff members know how to move patients quickly and safely?		
Are staff members trained to move patients in the immediate area of the fire or smoke condition horizontally into the next smoke compartment? (Note: Vertical movement of patients downward away from the fire or smoke condition via the fire stairwell is possible but very labor intensive and typically involves four people per evacuation device.)		
Are staff members trained not to use elevators during a fire emergency unless the incident commander deems it safe to do so?		
Have staff members been trained to use Med Sleds or similar patient evacuation devices?		
Do staff members close doors and windows and shut off portable fans, vents, hoods, and HVAC units in the immediate area of the fire or smoke condition?		
Are staff members taught to place wet towels around door openings, chute openings, and elevator doors to limit smoke and heat travel (especially on upper floors above the fire or smoke condition) if needed?		
Do staff members understand the terms RACE (Rescue, Alarm, Confine/Contain, Extinguish/Evacuate) and PASS (Pull the pin, Aim at the base of the fire, Squeeze the handles, Sweep back and forth at the base of the fire)?		
Are staff members extremely cautious in areas where fires could be more likely to occur, especially kitchens, laboratories, dining facilities, and laundry rooms?		
Do staff members know where the nearest fire alarm pull stations are located in the hospital and how to activate them?		

	Yes	No
Staff Responsibilities and Training (continued)		
Do staff members know what to do if the fire alarm system does not work?		
If a fire or smoke condition exists, are staff members trained to call the switchboard or 911 to report where the fire is located (building, floor, unit), what is burning, and whether any patients are being evacuated or are trapped (critical information for the fire department)?		
Do hospital switchboard operators receive training on announcing on the overhead paging systems a "Code Red" or "Code Fire" and the location of the emergency?		
Do hospital switchboard operators know to repeat the "Code Red" or "Code Fire" three times or follow the facility's policy for announcing an emergency?		
If any appliance, tool, or piece of medical equipment generates sparks, smoke, or produces unusual odors, do staff members follow the RACE protocol and unplug the piece of equipment if possible?		
Do staff members follow the RACE and PASS protocols if a small fire occurs?		
Once the condition is mitigated, do staff members notify risk management and ensure the piece of equipment is tagged and replaced?		
If any appliance, tool, or medical equipment results in a patient or staff injury or burn, do staff members sequester the device and follow organizational protocol?		
Extinguishers		
Are all staff members trained on how to operate fire extinguishers at orientation and during annual training?		
Are staff members taught to use a fire extinguisher only if it is a small fire and to maintain their back to the exit?		
Does the fire response/fire safety plan address these types of extinguishers: pressurized water, carbon dioxide, multipurpose dry chemical, MRI safe extinguishers, and wet chemical?		

	Yes	No
Extinguishers (continued)		
Does the fire response/fire safety plan address classifications of fire, including Class A, Class B, Class C, Class D, and Class K?		
When training staff members on using extinguishers, is the PASS protocol included?		

Resources

For more guidance on this topic, see MedPro's *Checklist: Fire Response in Hospitals: Infrastructure Aspects*. Other helpful resources include the National Fire Protection Association's Codes and Standards (Applicable Standards 10, 99, 101, 80, 10, 25, 72, 14, 15, 70E) and the U.S. Department of Labor's Hospitals eTool.

Endnote

This document does not constitute legal or medical advice and should not be construed as rules or establishing a standard of care. Because the facts applicable to your situation may vary, or the laws applicable in your jurisdiction may differ, please contact your attorney or other professional advisors if you have any questions related to your legal or medical obligations or rights, state or federal laws, contract interpretation, or other legal questions.

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¹ Javed, B. (2023, July 8). Fires in hospitals: Different causes and control measures. *HSE Blog*. Retrieved from www.hseblog.com/different-causes-of-hospital-fires/