



NURSING HOME FIRE

Ashland, KY

June 2, 1993



**FIRE
INVESTIGATIONS**

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SUMMARY FIRE INVESTIGATION REPORT

NURSING HOME FIRE

SPRINKLER SUCCESS

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JUNE 2, 1993

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NATIONAL FIRE PROTECTION ASSOCIATION

On the morning of Wednesday, June 2, 1993, an accidental fire occurred at the Elmwood Village Convalescent Home in Ashland, Kentucky, injuring approximately 19 residents and staff.

A staff member discovered the fire and rescued the two occupants of the room of fire origin. One of two sprinklers in the room of origin controlled the flames until fire fighters arrived and extinguished them. The fire resulted in the evacuation and/or relocation of most occupants in the facility, heavily damaged the room of fire origin, and generated smoke that spread to several areas in the facility.

The combined impact of staff actions, sprinkler operation, and fire department intervention prevented resident deaths and reduced the extent of property damage to the nursing home.

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A non-profit membership organization dedicated to promoting safety from fire, electricity, and related hazards through research, codes and standards, technical advisory services, and public education since 1896.

Introduction

The National Fire Protection Association (NFPA) telephoned the Ashland Fire Department to obtain information regarding this fire. It was not NFPA's intention to pass judgment on or fix liability for losses sustained during this fire. Rather, the NFPA documented this incident to determine significant factors that prevented the loss of life and additional property losses. The NFPA also intended to report the lessons learned to the fire service and other parties interested in preventing the loss of life and property due to fire.

Background

The building housing the Elmwood Village Convalescent Home is a single-story, wood-frame, brick-veneer structure. The initial building was constructed in 1960, and several wings have been added through the years. The fire occurred in a wing that was constructed in 1970. A dry sprinkler system with standard response sprinklers protects all occupant areas and an unheated, concealed combustible space below the building's wood-truss roof assembly. The building is also protected by a system of corridor smoke detectors.

All staff personnel receive regular fire safety training, including quarterly fire/evacuation drills, which are held on all shifts and complement the facility's fire protection training and equipment.

The Fire

The fire started in a faulty plug or wiring for a "through-the-wall" heat pump and ignited blankets, clothing, and other combustible materials on a chair adjacent to the point of fire origin. The growing fire then spread to a wood wardrobe containing clothing and other combustible materials.

A staff person performing a normal resident check discovered the fire. He was able to enter the room and rescue both occupants of the room before the

sprinklers operated. He did not close the door to the room of fire origin after removing the second patient from the room. As other staff became aware of the fire, they responded to the fire area and began evacuating residents from other rooms on the wing.

When the building's supervised sprinkler system operated at 2:49 a.m., it sent an alarm signal to the Ashland Fire Department, which has paid fire fighters on duty 24 hours a day. This automatic alarm was quickly followed by a 911 telephone call from the nursing home staff confirming the fire. The first units to respond arrived on the scene approximately two minutes later, and fire fighters found heavy smoke on the wing of fire origin. One of two sprinklers in the room of fire origin was operating and controlling the fire. Fire fighters quickly extinguished the remaining flames with a 1 3/4-inch hose line.

In addition to suppression activities, fire fighters assisted staff in evacuating and relocating about 80 of the facility's 167 residents. Apparently, smoke from the area of fire origin was able to spread to several wings when staff members and fire fighters opened fire doors during their response to the fire. This smoke spreading into remote areas was the primary reason for the evacuation and relocation of so many residents.

Eight staff members and 11 residents received minor smoke-related injuries; three residents were hospitalized as a result of their injuries. All of the injured residents were from the wing of fire origin.

The fire heavily damaged the chair and wardrobes involved in the initial fire growth. In addition, the upper portions of the room in which the fire started were heavily damaged by heat and smoke. The smoke damage extended into several rooms in the wing of fire origin and even extended into some areas beyond.

A post-fire inspection of the sprinkler system revealed that debris in the sprinkler system piping prevented the operation of one sprinkler in the room of fire origin. Fortunately, a second sprinkler in the room operated and controlled the fire until fire fighters were able to complete suppression.

Conclusion

The NFPA has investigated numerous incidents in health care facilities where fire safety deficiencies have been documented and patient deaths and extensive damage have occurred. The fire at the Elmwood Convalescent Home was different from other fires because no deaths occurred as a result of the incident.

The value of having fire protection provisions, in addition to a trained staff, and the value of trained fire fighters were revealed during this incident. The facility's automatic sprinkler and smoke detection systems were complemented by alert and trained staff members, one of whom discovered the fire before the fire protection systems operated, saving precious time. Once the sprinkler system operated, it was able to control the fire despite the failure of one sprinkler in the room. The operating sprinkler also allowed staff members to concentrate on the removal of residents from critical areas and minimized the fire that had to be extinguished when the fire fighters arrived.

Based on its investigation, the NFPA concludes that presence of an automatic sprinkler system complemented by trained staff and fire fighters reduced the potential for loss of life and decreased the amount of property damage during the fire at the Elmwood Village Convalescent Home.