



ACCIDENT/INCIDENT ALERT

No. 7, November 2005

Rest Home Resident Burns to Death in Smoking Accident

Incident

An 86-year-old rest home resident burned to death while smoking unsupervised in a small smoking room in the rest home.

He was taken to the smoking room and parked by a 'call bell' behind the door, so that he could reach the bell with his right hand (a stroke had left some disability in his left side). He lit his own cigarette and the lighter was left in the room, within the reach of the resident. The door was shut and he was told to push the call bell when he was finished. Because he sometimes slid out of his wheelchair he was strapped in.

The Fire Service report indicated the cause of the fire as "Careless disposal of smoking materials resulting in the ignition of the deceased's clothing and subsequently causing the LPG-fuelled lighter to rupture releasing flammable gas and resulting in a flash fire of sufficient intensity to result in the activation of the sprinkler system". The Fire Service indicated that the fire burned in Stoichiometric combustion conditions¹, and was inconsistent with a slow smouldering fire.

After the sprinkler system activated following the flash fire it was some minutes before the resident was found as the sprinkler system was not an addressable system whereby the indicator board would show the location of the fire. Alarm systems that are addressable are available and advocated by the New Zealand Fire Service, as being desirable.

Circumstances

One of the reasons people are placed in a rest home is to ensure that they are adequately cared for and removed from hazards in their home such as heat – stoves, cigarettes, etc., so they will not be injured. It is reasonable to expect that there is good hazard identification, risk assessment and controls in place for all significant hazards, including smoking, that both staff and residents may be exposed to. The Department of Labour does not believe smoking by rest home residents needs to be banned but good procedures do need to be put in place to manage the hazard.

Investigation

The investigation uncovered the following causation factors:

- A flash fire resulted from the careless disposal of smoking materials. The fire was confined to the area immediately around the victim, not spreading beyond this area, and had been extinguished by discharged water from the sprinkler system.
- The ignition source (lighter) was left in the smoking room in reach of the resident.
- There was poor hazard identification, risk assessment and controls in place at an individual care level, and conflict with policies and procedures.

- Training of staff in taking residents for a smoke was not adequate at the time.
- There was no supervision of the elderly resident while he was smoking nor could he be seen without opening the door and going into the room.

Recommendations

Consider the following:

There is a dedicated smoking room, which is well ventilated, and has suitable flooring and furnishings.

Ideally rest home residents are supervised when smoking.

Staff should light the cigarette for the resident and ignition sources such as lighters should be removed from the room. Should the cigarette go out, the resident should use a 'call bell' for assistance.

That the residents smoking are visible by toughened glass panels (possibly in the door or wall) e.g. Grade A safety glass which is also heat resistant, or Georgian Wire Glass which is Grade B but has a fire rating. This provides an alternative for supervision and minimises 'passive smoking' risks if staff are not themselves smokers.

¹ Stichometric Fire Conditions: Combustion conditions perfect for reduction to water vapour and carbon dioxide. Fire leaves no ash or residue when burning in these conditions, which is rare and generally only occurs in laboratory type situations.

Rest home residents who smoke should have this activity noted on their care plan, with a risk assessment of their vulnerability and control measures in place specific to the individual. This should be reviewed frequently to ensure it is always up-to-date.

Individual residents' care plans for smoking, and operational procedures and policy should not be conflicting.

Rest home staff should be adequately trained to specific operating standards for this activity.

Residents who smoke should be given an 'Emergency Response' pendant to summon prompt assistance if required rather than rely on a 'call bell', which is used for routine attention.

Rest home staff and management should be aware of the limitations of fire systems such as non-addressable sprinkler systems, and incorporate this into their training and fire practices.

Provide a protective non-flammable smoking robe which does up at the back to prevent cigarettes and/or heat from lighters contacting the residents clothing and catching fire.