Introduction

Within the UK and many of the developed countries worldwide there is increasing longevity of life. Many more people are living longer due to improvements in health, diet and preventative health care.

During the 20th Century the average life expectancy in the UK increased by thirty years. However, the risk of dying in a fire for people aged eighty and over is more than four times the national average. People aged between sixty five and seventy-nine also have a higher than average chance of dying in a fire.

While these figures are generally considered to be the average for persons living at home, there are an increasing number of persons dying while in care homes.

The number of people living longer is expected to continue to rise. And this is likely to result in a corresponding rise in the risk to these people from fire.

Is it unreasonable for a person in the latter years of their life to expect to be looked after in a caring, safe environment, particularly when the care is being delivered at a relatively expensive cost?

Government figures for England in 2013-2014 show that Fire and Rescue Services carried out 8000 safety audits during the twelve-month period in care homes in England. This figure is less than a third of the total number in England, of those audited only 67% were satisfactory.

In January 2004 a fire occurred in the early hours in a care home in Uddingston, North Lanarkshire Scotland. The outcome was fourteen elderly people died, fourteen people whose relatives had entrusted the safety of their mothers, fathers, sisters, brothers, aunts and uncles to the care home. This was not some old fashioned, crumbling care home; this was a modern purpose built home, less than ten years old and yet fourteen elderly people died needlessly in it.

That was eleven years ago, what has changed? There is now a requirement to have automatic fire sprinklers fitted to all new built care homes in Scotland. Similarly since 2014 there has been a requirement to fit automatic fire sprinklers to all new built care homes in Wales. Sadly this has not been the case in England.

While this is a significant step forward for Wales and Scotland, there still remain large numbers of existing care homes where automatic fire sprinklers do not have to be fitted in both these countries. Therefore the risk remains as high as it was in 2004 for the residents of these care homes.

During 2014 and 2015 many more residents died in care home fires including thirty-two residents in a Quebec Care Home and eight in a Spanish care home. In March 2015, London Fire Brigade reported that there had been four fire deaths and thirty injured in 530 fires in care homes in London during 2014. They appealed to operators and developers to fit automatic fire sprinklers to reduce the number of deaths and injuries.

What are Automatic Fire Sprinklers?

Automatic fire sprinklers have been in use since the late 1800s, their main use up until the 1960s was in commercial and industrial buildings. However more recently they have become a common safety feature in many hotels, hospitals, care homes, houses and schools.

The automatic fire sprinkler system provides protection for a building by a series of pipes and sprinkler heads throughout all the rooms, corridors, cupboards, service areas and roof spaces in a care home.

The system is fed from the towns water mains, this may be via a pump and if required a tank supply dependent on the pressure and flow of the water main.
How Do Automatic Fire Sprinklers Work and what do they do?

The sprinkler head operates as a heat detector and will actuate when the pre-determined temperature is reached. When the head operates, a fine water spray is discharged onto the fire and controls or extinguishes the fire.

Automatic fire sprinkler systems help control the intensity and size of a fire, suppress it and in some cases extinguish it. It can provide vulnerable occupants with additional time to escape or be evacuated following the outbreak of a fire.

In most cases only one sprinkler head will operate, occasionally more than one sprinkler head will be required to control the fire. However, sprinkler heads only operate when there is fire to be extinguished or controlled, they do not all go off simultaneously. Therefore the damage caused by a sprinkler head actuating is kept to the very minimum and certainly much less than that required by the fire service to extinguish a fire.

Why Fit Automatic Fire Sprinklers in Care Homes?

By fitting automatic fire sprinklers in care homes, you are giving the residents and staff an increased time to escape or be evacuated from the home. Many residents of care homes may have mobility and awareness problems, their understanding of the situation they are faced with may also be impaired. This is particularly the case when fires occur at night and many residents may be under the influence of medication.

The evacuation of individual residents particularly at night due to their condition can take significantly longer than during waking hours. This at a time when staff numbers are often very limited increasing the risk to residents prior to the arrival of the fire and rescue service. This risk is significantly reduced in care home premises fitted with sprinklers where only limited evacuation may be necessary.

The sprinkler system will extinguish or control the fire in its early stages, therefore increasing the residents and staff chances of survival.

The sprinkler system will minimise the fire damage to the care home, therefore allowing the home to get back to normal operations as quickly as possible.

By fitting automatic fire sprinklers to a care home you are also minimising the risk to the Firefighters who come to tackle the fire, sprinklers don’t just save the lives of residents and staff they save the lives of Firefighters.

Many insurance companies will provide discounts on insurance premiums if you fit an approved automatic fire sprinkler system in a care home.

Are there any Standards for Fitting automatic Fire Sprinklers?

For care homes an automatic life safety fire sprinkler system should be designed and installed in accordance with the recommendations contained in BS 9251:2014.

In Scotland and Wales where the fitting of automatic fire sprinklers is mandatory in all new built care homes, care should be taken to comply with the legislative requirements together with the British Standard.

By using a BAFSA Member for the installation of your system, you are ensuring that the system is third party certificated, as this is a requirement for all BAFSA Members.

Like all fire protection systems sprinklers require an ongoing maintenance programme to ensure compliance with the Regulatory Reform (Fire Safety Order) 2005 or Fire Safety (Scotland) Regulations 2006. BAFSA recommend that any maintenance work is carried out by companies holding third part certification for such work.
Retrofitting of Existing Care Homes

Automatic fire sprinklers can be easily and readily retrofitted into existing care homes. In many cases the fitting of sprinklers will provide an economic and safe method of overcoming many existing design or building faults.

Installation of systems in existing care homes can be carried out with the minimum of disruption and at a reasonable cost. In many cases this can be a cost effective long-term way of complying with a risk assessment of the premises.

Costs of Installing Automatic Fire Sprinklers

It is likely that an automatic fire sprinkler system that is installed, as part of a new build care home project will come in at 2%-3% of the project cost. A retrofit system in an existing care home is likely to be closer to 3%-4% of the project cost.

By installing an automatic fire sprinkler system there may be other savings in the project, subject to the agreement of the local Building Control and Fire and Rescue Service. Again there may also be savings on the insurance premiums from the insurers.

Fire sprinkler systems last for many years, however they do require to be maintained and serviced on an annual basis.

The total cost for the system should be considered over a period of thirty to fifty years, which with annual maintenance should be easily achievable. With this lifespan the system provides a very economic active safety system for the care home which more and more clients are looking for when choosing a property for their loved ones.
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The Facts

- Automatic Fire Sprinklers Save Lives of Residents, Staff and Firefighters
- Automatic Fire Sprinklers Give Residents More Time to Escape or be Evacuated from a fire Incident.
- Automatic Fire sprinklers Save Properties
- Automatic Fire sprinklers Provide Business Resilience
- Automatic Fire Sprinklers Provide Design Freedom for New Built Care Homes
- Automatic Fire Sprinklers enable existing Care Homes to Provide a Higher Standard of Protection to Residents, Staff and Firefighters.
- Automatic Fire Sprinklers are not Expensive to fit or Retrofit
- Automatic Fire Sprinklers Do Not Require Much Maintenance
- Only the Sprinkler Heads in the Immediate Vicinity of the Fire Actuate
- There Have Been No Multiple Fatality Fires in UK Care Homes With Working Automatic Fire Sprinkler Systems
- Look After Your Residents, Staff and Firefighters, Fit an Automatic Fire Sprinkler System in Your Care Home Today

Presented by: