



## Summary International Safety Education Seminar 2017

### **'Knowledge sharing and cooperation for community fire safety'**

'Reaching out', offering citizens the opportunity to improve fire safety in their living environment; that mission brought 200 fire experts from twelve countries to the Papendal top sports and conference centre in Arnhem, the Netherlands, on 7 and 8 June. The Netherlands had the honour of organizing the fourth edition of the International Safety Education Seminar. The Netherlands Institute for Safety (Instituut Fysieke Veiligheid - IFV), the Dutch Fire Service and the Dutch Burns Foundation joined forces and set up a two-day educational program which highlighted the approach in several different European countries. The final conclusion: knowledge sharing and cooperation are the keys to success.

The urgency of 'community fire safety' was outlined at the kick-off by Mike Hagen, chair of the European Fire Safety Alliance. He estimated that some 6000 people die by fire in Europe every year, of which 5000 are due to a fire in the home. According to Hagen, these deaths can be prevented by the right mix of measures. The community safety advocate from Merseyside in England identified some positive developments. He felt that, only ten years ago, it was unthinkable that fire brigade organizations would organize a conference on fire safety education. That was not their thing, the primary focus was on fire fighting. But in 2017, the fire service is much more active in the prevention field: the best approach to saving lives.

### **Role for politicians**

According to Hilda Raasing, director of the Zaanstreek-Waterland Safety Region and National Portfolio Manager for Community Fire Safety, the fire safety experts who had come to the seminar shared a common goal: fewer deaths, fewer injuries and less damage and loss caused by fire. Achieving that endeavour requires cooperation with a wide network of partners. Raasing also sees a facilitating role for politicians. She is therefore pleased with the support for this subject from the 50+ party. Through a video message, Henk Krol, the leader of this political party whose target group is people aged 50 and over, advocated focused attention for the fast-growing population of senior citizens, a target group with additional vulnerability. Society is ageing at a rapid pace, elderly care in a sheltered living environment is no longer a given fact, and people are living independently at home to a much greater age. But still some have limited mobility and a care issue, which means that they cannot save themselves in the event of a fire.

In Krol's opinion, the government must make more efforts to make it possible for this group of vulnerable people to live independently, and in a safe and healthy state, for as long as possible. He feels that it should be investigated whether building and fire safety regulations are in line with the societal trend of an ageing population and a changing care system.

### **'The Dutch Approach'**

The broad cooperation advocated by the European network of experts has already taken shape in Netherlands. Hester Veltman from the Dutch Fire Service gave an insight into strategic partnerships with other stakeholders in society, such as science, education, housing corporations, healthcare and elderly organizations. Together, the partners focus on the question of how the different target groups for fire prevention information, including vulnerable elderly people, can be better reached. Since 2010, all 25 fire safety regions have been active with their own programmes for community fire safety and a national website ([www.loketbrandveiligleven.nl](http://www.loketbrandveiligleven.nl)) enables organizations to share their initiatives and get to know each other. The goal is behavioural change: making citizens safety conscious, engaging with vulnerable audiences - preferably through organizations that know this group, giving advice and encouraging the placing of smoke detectors. For the next few years, the Dutch fire sector has defined four key areas: better mapping of probability and risk groups, working on behavioural change through "influencers" who know the risk groups well, promoting technical innovations for fire-safe homes, and keeping and maintaining its own expertise up to date.

It goes without saying that the Dutch Burns Foundation is an important link in this prevention alliance, especially given the indescribable pain and suffering that burns cause. Elderly people in particular run an extra high risk of dying due to injuries caused by fire, since they are physically more vulnerable, said Marieke van Daal of the Dutch Burns Foundation. This foundation organizes the Fire Prevention Weeks together with the Netherlands Fire Service and other partners. Last year, an online checklist that enabled people to rate the fire safety of their own living environment and test their knowledge of fire safety was downloaded by more than 100,000 people, and inspired 57 per cent of them to actually take action, such as installing smoke detectors. The Dutch Burns Foundation also initiated its own smoke detector team that helps people install these life-saving devices if they are not capable of installing them themselves. Van Daal emphasized that only installing a smoke detector does not suffice. She referred to last year's campaign that called on people to keep internal doors in their homes closed. These doors stop toxic smoke and thus give residents valuable extra minutes to get themselves to safety if a smoke detector is triggered. An eye opener for everyone who is involved in community fire safety, simple as well as effective.

The Dutch network approach is supported by several studies. The Dutch Fire Service Academy conducted several studies in the past few years, including into fatal fires in the home, fire spread and smoke spread in homes, and the effectiveness of smoke detectors. According to Lieuwe de Witte of the Dutch Fire Service Academy, all the data that was generated by the studies serves as input for new visions and strategies for fire safety policy and awareness campaigns. In particular, the realistic fire experiments in Zutphen in 2014 brought a host of valuable data. For example, it was discovered that fires in modern homes are different and more dangerous than the traditional fire in the home of the past used to be, due to the frequent use of plastics and the ventilation system in contemporary homes. The smoke detector campaigns, combined with the slogan: 'Hé, doe de deur dicht!' (Hey, close the door!), are based on the outcomes of these scientific fire experiments.

## **'Fire Safety of upholstered furniture and mattresses in the domestic area'**

A report by the FEU (Federation of the European Union Fire Officer Associations) on the fire safety of furniture and mattresses was also presented during the International Safety Education Seminar. Project leader René Hagen, Professor of Fire Safety, of the IFV presented the first copy to FEU chair Chris Addiers. The purpose of the report is to convince manufacturers and governments that they should use uniform test methods in order to assess the combustibility of plastic filler material. Fire service experts have been trying to bring about uniform regulations in Europe in order to improve the fire safety of furniture and mattresses. Foam rubber filler materials significantly contribute to rapid fire propagation and the rapid spread of toxic smoke in the event of fires in the home. However, it has been found to be very difficult to convince politicians that uniform policies at the European level should be adopted. That is why the FEU has now employed the expertise of the fire service and issued this report to explicitly address furniture manufacturers, hoping that they will accept their social responsibility and change their production processes, and produce fire-safe materials, backed by a good test method.

## **Children as ambassadors**

Besides the elderly, children also require their own approach for the purpose of community safety. Static leaflets or TV commercials are not effective tools to reach young people. Safety information and education should be challenging and interactive, aimed at active experience. Safety experts in a number of countries have really understood this. Herdís Storgaard gave information about the Iceland Safety House that was set up in 2006. This 'all hazard approach' for children and their parents aims to improve resilience by learning to recognize hazards at home and in the street. Besides teaching children to recognize fire and other hazards, the Antwerp Fire Information Centre also helps children to become familiar with the emergency services world by having them simulate emergency situations and dial the emergency phone number. Veerle De Decker of the Antwerp fire service has seen the effects of this! Several children who took lessons at the Fire Information Centre saved lives because they knew how to act effectively in urgent situations.

Sander Cremers talked about a similar initiative: the prevention instruction project for schools, organized by the Brabant-Zuidoost fire service. This award-winning project started in 2010 as an experiment with 97 booklets and study packages for two schools, but it quickly spread, reaching 500 schools all over the Netherlands in 2016. By now, more than 100,000 study packages have found their way to school children. The lesson taught by this project: children are a crucial target group. They are open and keen to learn and are impressed by firefighters in full gear who come to teach them. Thus, community fire safety starts with a young generation that is well informed about this subject and children like conveying their new knowledge at home and thus become fire safety 'ambassadors'.

## **Fire safety as a multicultural challenge**

Talking about special target groups: the enormous refugee crisis in Europe since 2015 has also brought its own problems with it. Germany in particular was faced with a huge challenge in 2015, with well over 900,000 registered refugees. Frieder Kircher of the Berlin fire service and Fire Safety specialist Wolfgang Hochbruck told about the effects that the flow of refugees had as regards fire safety. German fire service organizations had to work hard on two fronts: firstly to help out at the emergency shelter facilities the scale of which was unprecedented, and secondly to ensure fire safety in the emergency shelter centres which had been set up in a very

short time. Large numbers of desperate people on a small area in buildings that were not really intended for this purpose: every reason to update the newcomers on the German fire safety and behaviour standards. Quite a challenge since the language barrier frustrated communication and lots of refugees naturally fear uniformed officers. And many groups of refugees do not have the slightest awareness of fire safety risks. The refugees were given a leaflet to welcome them and familiarize them with 'the Western standard'. The crisis seems to have stabilized to some extent by now and German fire services are focussing on a new future phase: integrating migrants into the fire service organization.

And what is the situation in other countries? Guy Keen talked about the situation in Merseyside. The living conditions of many residents in the multicultural urban area around Liverpool are poor, fire risk awareness is low, and it is not easy for government bodies to look behind people's front doors in order to map their needs and requirements. But the fire service has an advantage over other authorities: it is a 'strong brand' that people have faith in. Realizing this, in Merseyside, the fire service, social services and healthcare sector joined forces. Mr Keen discussed two real-life cases where the fire services managed to solve fire safety issues thanks to their thorough knowledge of the district and the target group. One of them was the unsafe situation in which a large group of foreign employees was housed: in a poorly accessible room, that was much too small, over a restaurant. A second example was the ritual burning of personal assets of deceased people from the Romanian community. This is a tradition that Romanians find very important, but that caused a nuisance and a fire risk in the severely urbanized Liverpool region. Constructive discussions with the Romanian population led to a safe place being found where they could continue their popular tradition without jeopardizing safety.

The first day of the seminar ended in a special setting: a congress room that had been converted into a mosque, complete with Moroccan tea and sweet delicacies. Shoes off and sit down on the floor for a view of a successful community safety project in Amsterdam. Harm Balk of the fire service of the Dutch capital told the story of Zouhair Jbeh, a firefighter of Moroccan descent who devised an easier way to reach the sometimes somewhat closed Muslim community and start discussions about fire safety in people's homes and in mosques. His solution? Involve the Imam in person as an intermediary, since he is a person of authority who people listen to. His mission resulted in a series of fire safety meetings in Amsterdam mosques, which is still continuing. The key message of this contribution for the participants: 'Find your own Zouhair!' And use the doors that you can open by getting to really know the target group and their culture.

### **Smart technology and fire-proof designs**

The problems of the ageing community were discussed on day two as well. Alex Waller of the Cheshire Fire & Rescue Service saw the explosively growing group of seniors as a ticking time bomb and a problem that all countries struggle with. He presented the 'Tattenhall case study' to show how an integrated approach in which partners from the healthcare sector participate can bring the interests of fire safety and healthcare together. Residents' health, their social conditions (becoming lonely), and fire safety risks are closely connected to each other.

The Dutch partner network for fire safety concerning senior citizens is also aware of this, as the contribution by Eva van Zoonen of the Dutch Burns Foundation showed. The report on the influence of ageing on fire safety ('De invloed van vergrijzing op brandveiligheid') was discussed. The IFV and the Dutch Burns Association presented three sub-reports that gave an insight into the problems of senior citizens and that sketch possible solutions. Integrating

healthcare and safety from a holistic approach is one of the recommendations. Solutions are also possible by making better use of smart domotics technologies for rapid detection of fire situations and quickly communicating these fire alerts to informal caregivers and local networks that are set up to help neighbours. Another possible solution would be to a more fire-safe design of homes, home furnishing and kitchen and domestic equipment.

Scandinavia has seen some successes in improving the fire safety of vulnerable seniors by applying mobile water mist fire extinguishing units. After being activated by a smoke and heat detector, they spread a fine water mist under high pressure that prevents incipient fires from growing and often actually extinguishes them. They are ideal for residential situations, including residential care situations, for people whose mobility is severely limited. The situation in the home continues to be survivable until the moment when third parties or the firefighters arrive. The units are already applied on a large scale in care institutions for the elderly in Norway, Sweden and Denmark. Marcello Francati of the Copenhagen fire service is convinced of the added value of the mobile fire extinguishing units which have demonstrably saved nine lives in Copenhagen thus far.

### **The numbers tell the tale**

The second day of the seminar was also for the scientists. A set of contributions on measuring the effects of risk communication and behavioural change was the central theme of the seminar. Human behaviour plays a leading role in all fires. We should therefore try to change that, but which means and tools are effective and how can you measure this? Twente University studied the level of knowledge of people who visited the Risk Factory of the Twente fire service. The conclusion according to David Bornebroek of the Twente fire service: the level of knowledge of people who have been taught about the risks in and around the home by means of this experience method is three times as high as that of people who have not taken this course. The numbers tell the tale!

Eila Lindfors from Turku University in Finland reported on safety education for schools. A programme to help equip existing and future teachers to maintain a safe learning environment and to recognize hazards and risks was started in 2010. In recent years, Finland had significant safety issues in its schools, partly due to some 'school shootings'. Student teachers take a training course and a 'safety walk' through their work environment to teach them how to contain risks and act effectively in emergency situations by following the procedures they were trained in.

Nick Boersma talked about change in behaviour in practice in the Dutch Limburg-Noord safety region. A study among 24,000 senior citizens showed that increased awareness does not automatically mean that people will change their behaviour. For example, they know the risks of overloading of socket blocks. The problem is not that this hazard is not recognized; the problem is locating the cause. Often there are too few wall sockets in a home. Extra sockets can be installed relatively inexpensively. His plea: changing behaviour takes time. You should identify the underlying causes and integrate this into long-term fire safety policy.

Rob Ruiter of Maastricht University also explored this theme in his final contribution about evidence-based measures to bring about changes in behaviour. According to Mr Ruiter, the first step towards solving a problem is understanding the problem. "Prepare a logical model of the problem and analyse the behavioural and environmental factors. This will show which factors can be influenced by giving people good arguments as a result of which they will change their behaviour. Why must smoke detectors be installed and why must escape routes

always be kept free?” And finally there was a powerful plea addressed at all parties in the community safety sector: “If you want fire safety campaigns to be effective, then get behavioural expertise on board. Because how citizens perceive fire safety is also a matter of psychology.”

The organizers of the International Safety Education seminar can look back on a successful two-day event in which a lot of information was shared, participants learnt a lot from each other and made new connections in the growing European network for fire and community safety. So now it's on to the next edition of this event in 2019 which will most likely be held in Berlin.