

Chapter 2

Smoke and fire related incidents, deaths, injuries and property damage

2.1 This chapter examines data on smoke and fire related incidents, deaths, injuries and property damage in Australia in comparison with some overseas jurisdictions. It then considers current inconsistencies and gaps in Australian data and ways in which this might be addressed.

Fire-related incidents

2.2 In 2013–14, Australian fire agencies attended 101,867 fire related incidents, of which 19,524 (19 per cent) involved structure fires.¹ By comparison, during the same period, the New Zealand Fire Service Commission (NZFSC) attended 10,245 fire incidents, of which 5294 (50 per cent) were structure fires.² From April 2013 to March 2014, there were 212,500 fires attended by Fire and Rescue Services in Great Britain; 19 per cent of these were dwelling fires.³

2.3 Of interest to the committee, Great Britain records statistics on the status of smoke alarms at each fire incident. For example, in 2013–14 no smoke alarm was present in 12,000 (31 per cent) of dwelling fires while a smoke alarm was present but did not operate in 19 per cent of fires.⁴ England has also seen an increase in smoke alarm ownership from 8 per cent in 1988 to 88 per cent in 2011.⁵

Fire-related incidents in Australian states and territories

2.4 It is difficult to locate statistics about fire-related incidents in Australian states and territories, and even more challenging to find statistics that can be compared in a meaningful way.

2.5 The following points provide a limited snapshot of fire-related incidents in the states and territories:

1 Australasian Fire and Emergency Service Authorities Council (AFAC), *Submission 5*, p. 2.

2 New Zealand Fire Service Commission (NZFSC), *Annual Report for the year ended 30 June 2014*, available: http://www.fire.org.nz/about-us/publications/annual-reports/Documents/NZFSC_Annual_Report_2014.pdf (accessed 7 March 2016), p. 1.

3 Department of Communities and Local Government (UK), *Fire Statistics: Great Britain April 2013 to March 2014*, available: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/456652/Fire_Statistics_Great_Britain_2013-14_PDF_Version_.pdf (accessed 7 March 2016).

4 Department of Communities and Local Government (UK), *Fire Statistics: Great Britain April 2013 to March 2014*, p. 5.

5 Department of Communities and Local Government (UK), *Fire Statistics: Great Britain April 2013 to March 2014*, p. 5.

- In New South Wales (NSW) from 2010 to 2015 there were 23,766 accidental fires.⁶ Between 2009-10 and 2013-14 the number of structure fires attended by Fire and Rescue NSW (FRNSW) dropped from 7495 to 6209.⁷
- Between 2002-03 and 2006-07, Queensland Fire and Rescue (QFR) attended more than 2400 structural fire incidents each year, with those incidents increasing by 9.7 per cent during that period.⁸
- In South Australia, between the 2007-2008 and 2013-2014 financial years, there was an average of 1175.6 structure fires per year.⁹
- The Tasmanian Fire Service (TFS) attended 631 structural fires in 2013-14.¹⁰
- During 2014 there were 3000 house fires recorded in Victoria.¹¹
- From 2014-15 the Western Australia Department of Fire and Emergency Services (DFES) attended 60.27 accidental residential fires per 100,000 households.¹²

Smoke and fire-related deaths

2.6 In 1998, the Australian Bureau of Statistics (ABS) recorded that 70 people died of accidental fire or flame injuries in a house fire.¹³ In 2013-2014, the Australasian Fire and Emergency Service Authorities Council (AFAC) recorded 98 'fire deaths'.¹⁴

2.7 In New Zealand during 2013–14 there were ten 'avoidable residential fatalities' equivalent to 0.22 per 100,000 head of population.¹⁵ New Zealand has seen a significant reduction in deaths over the last five to ten years, attributed largely to the 'provision of fire safety education'.¹⁶

6 Fire & Rescue NSW (FRNSW), *Submission 20*, p. 1.

7 FRNSW, *Annual Report 2013/14*, p. 7.

8 Queensland Fire and Rescue Service (QFRS), *Efficiency Review* (June 2008), p. 4.

9 South Australian Metropolitan Fire Service (SAMFS), *Submission 1*, p. 1.

10 Tasmania Fire Service (TFS) and State Fire Commission (SFC), *Annual Report 2013-14*, p. 10.

11 Country Fire Association (CFA), *Smoke Alarm Campaign Ready to Kick Off* (2 March 2016), <http://news.cfa.vic.gov.au/news/smoke-alarm-campaign-ready-to-kick-off.html> (accessed 8 March 2016).

12 Department of Fire and Emergency Services (DFES), *Annual Report 2014-15*, p. 21.

13 Australian Bureau of Statistics (ABS), *Housing Stock: Home Fire Safety*, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/2f762f95845417aeca25706c00834efa/1672d6d197020b08ca2570ec000e5353!OpenDocument> (accessed 8 March 2016).

14 AFAC, *Submission 5*, p. 2.

15 NZFSC, *Annual Report for the year ended 30 June 2014*, p. 18.

16 NZFSC, *Annual Report for the year ended 30 June 2014*, p. 18.

2.8 During 2013–14 there were 322 fire-related deaths in Great Britain (at a fatality rate of 5.2 per million of population), 20 fewer than the year before.¹⁷ Of the 322 fatalities, 258 were dwelling fire fatalities; 41 per cent of the fire-related deaths were caused by gas, smoke or toxic fumes, 20 per cent were the result of burns alone and another 20 per cent were caused by a combination of burns and being overcome by gas or fumes.¹⁸ Nearly 40 per cent of dwelling fire deaths in Great Britain occurred in properties where no alarm was installed.¹⁹

2.9 According to the Department of Communities and Local Government (UK), throughout the 1990s and 2000s Great Britain has seen 'a clear downward trend' in fire-related fatalities.

2.10 In 2014, there were 1,298,000 reported fires in the United States of America (USA) resulting in approximately 3275 civilian deaths. Of these, 2745 deaths occurred in dwelling fires (2345 in the family home and 400 in apartment fires).²⁰ Since 1977, the USA has seen a reduction in the total number of home fire deaths and a gradual decline in the number of deaths per 1000 fires; however, over recent years (2009 to 2014) the number of civilian fire deaths per year has remained about the same.²¹ The 2015 National Fire Protection Association (NFPA) report *Fire loss in the United States During 2014* argued that:

There are five major strategies for reducing the death toll in home fires. First, more widespread public fire safety education is needed on how to prevent fires and how to avoid serious injury or death if a fire occurs. Information on the common causes of fatal home fires should be used in the design of fire safety education messages. Second, homeowners or property managers need to install and maintain smoke alarms and residents must develop and practice escape plans. Third, wider use of residential sprinklers must be aggressively pursued. Fourth, additional ways must be sought to make home products safer from fire. The regulations requiring more child resistant lighters are a good example, as are fire-safe cigarettes. And finally, the special fire safety needs of high-risk groups, such as young children, older adults, the poor, and people with disabilities need to be addressed.²²

17 Department of Communities and Local Government (UK), *Fire Statistics: Great Britain April 2013 to March 2014*, p. 4.

18 Department of Communities and Local Government (UK), *Fire Statistics: Great Britain April 2013 to March 2014*, p. 4.

19 Department of Communities and Local Government (UK), *Fire Statistics: Great Britain April 2013 to March 2014*, p. 5.

20 National Fire Protection Association (NFPA), *Fire loss in the United States During 2014*, September 2015, available: <http://www.nfpa.org/research/reports-and-statistics/fires-in-the-us/overall-fire-problem/fire-loss-in-the-united-states> (accessed 8 March 2016), p. 13.

21 NFPA, *Fire loss in the United States During 2014*, September 2015, p. 14.

22 NFPA, *Fire loss in the United States During 2014*, September 2015, p. 15.

Fire-related deaths in Australian states and territories

2.11 As with data about fire-related incidents, data about smoke and fire-related deaths in Australian states and territories can be disparate and difficult to find. The following list outlines some statistics on smoke and fire-related deaths in the states and territories:

- In 2008 there were 25 fire fatalities in NSW,²³ with accidental fires contributing to 115 fatalities from 2010-15.²⁴
- Between the 2007-2008 and 2013-2014 financial years the South Australian Metropolitan Fire Service (SAMFS) recorded 62 fire fatalities.²⁵
- There were three fire fatalities in Tasmania between 2010-11, and none from 2012-14.²⁶
- Based on hospital admission data, there were 103 fire related fatalities between 2004 and 2015 in the Melbourne Metropolitan District;²⁷ 53 of these were deemed to arise from preventable or accidental residential fires and 26 occurred in homes where there was no smoke alarm or the smoke alarm was disarmed.²⁸
- Between January 2001 and December 2006 there were 33 fire related deaths in Western Australia arising out of 30 fires.²⁹

Fire-related injuries

2.12 According to AFAC, during 2013-2014 there were 4114 hospital admissions due to fire-related injuries in Australia.³⁰

2.13 In Great Britain during 2013-14 there were 9,748 non-fatal casualties in fires (a rate of 157 per million population), a reduction of 5 per cent from the year before. The number of casualties in dwelling fires in 2013-14 constituted 80 per cent of total non-fatal casualties and was 'the lowest figure recorded in more than a decade'.³¹

23 NSW Fire Brigades, *Fire Fatalities Report: Study of Fatal Fires in NSW from 2004 to 2008*, p. 2.

24 FRNSW, *Submission 20*, p. 2.

25 SAMFS, *Submission 1*, p. 1.

26 TFS, SFC, *Annual Report 2013-14*, p. 11.P, 10.

27 Metropolitan Fire Brigade (VIC) (MFB), *Submission 4*, p. 3.

28 Mr Adam Dalrymple, Assistant Chief Fire Officer, Director of Fire Safety, Metropolitan Fire and Emergency Services Board (VIC), *Committee Hansard*, 4 December 2015, p. 1.

29 Fire and Emergency Services Authority of Western Australia (FESAWA), *Fatal Fires in Western Australia 2001-2006* (June 2010), p. 4.

30 AFAC, *Submission 5*, p. 2.

31 Department of Communities and Local Government (UK), *Fire Statistics: Great Britain April 2013 to March 2014*, p. 4.

2.14 In 2014, 15,775 civilians were injured in fires in the USA, a reduction of 0.9 per cent from the previous year. Of the injuries incurred, the vast majority (85 per cent) occurred in structure fires with 75 per cent of all civilian injuries in 2014 occurring in home fires.³²

Fire-related injuries in Australian states and territories

2.15 In NSW, 3311 injuries related to accidental fires were recorded between 2010 and 2015;³³ in South Australia, between 2007-2008 and 2013-2014 125 fire injuries were recorded.³⁴ There were 82 accidental fire injuries in Tasmania which required hospital admission in 2011-12.³⁵

Fire-related property damage

2.16 There are some difficulties associated with quantifying property damage arising from fire related incidents. Fires may not be reported and homes may not be insured, in which case the property damage is not recorded for statistical purposes.

2.17 However, some submitters did provide some estimates of the costs associated with smoke and fire-related damage to property. The Victorian Metropolitan Fire & Emergency Services Board (MFB) advised that in the past 10 years, an average of 2786 insurance claims have been made relating to residential fires, with an average cost of \$32,000 per building and in 2014 the estimated value of insurance claims relating to smoke and fire damage was over \$135 million.³⁶ AFAC told the committee that household and commercial property insurance claims in relation to fire incidents, not including major events, in the 2013-2014 totalled \$702.9 million.³⁷ The TFS recorded that house fire insurance claims as a percentage of Tasmanian housing stock varied from \$43.1 million in 2012-13 and a low of \$7.7 million in 2009-10, a differential which TFS said related to the number of homes destroyed in the 2012-13 bushfire season.³⁸

2.18 The NZFSC is required by law to protect property and measures its success in this area using the estimated dollar value of property damage. In 2013–14, fire damage to residential structures in New Zealand totalled NZD71.55 million and non-residential structures totalled NZD51.96 million; in both instances, these figures were below their respective targets of NZD75 million and NZD55 million per annum.³⁹

2.19 Statistics from the Association of British Insurers (ABI) in 2009 demonstrated that the cost of fire damage in Great Britain was at a record level: during the first half

32 NFPA, *Fire loss in the United States During 2014*, September 2015, p. iv.

33 FRNSW, *Submission 20*, p. 1.

34 SAMFS, *Submission 1*, p. 1.

35 TFS and SFC, *Annual Report 2013-14*, p. 10.

36 MFB, *Submission 4*, p. 4.

37 AFAC, *Submission 5*, p. 2.

38 TFS and SFC, *Annual Report 2013-14*, p. 11.

39 NZFSC, *Annual Report for the year ended 30 June 2014*, p. 19.

of that year, insurers paid out £639 million—£3.6 million every day—for damage caused by fires.⁴⁰ The ABI's data also showed:

- Between 2002 and 2008 the cost of the average fire claim for both commercial and domestic fires doubled, to £21,000 and £8,000 respectively.
- ...
- More open plan buildings, which allow more rapid spread of fire, and the increase in out of town developments, where fires can go for longer unnoticed, are among factors contributing to the doubling of fire costs since 2002.⁴¹

2.20 The ABI identified 'a review of the case for making sprinklers mandatory in all new buildings as one of 'two key steps needed to tackle spiralling fire costs which, if unchecked, will increasingly put lives at risk, and damage the economy'.⁴²

2.21 The NFPA estimated that the 1,298,000 fires in the USA in 2014 resulted in USD11.6 billion in direct property damage. Of that USD11.6 billion, approximately USD7.0 billion was incurred for residential properties (USD5.8 billion from family homes and USD982 million from apartments). The cost of direct property damage from fires in the USA has been declining, from USD13.8 billion in 2009.⁴³

Inconsistency and gaps in data

2.22 It is difficult to calculate the number of smoke and fire-related deaths and injuries, and the cost of associated property damage caused by smoke and fire in Australia. This is primarily due to inconsistency and gaps in the data collected. Data currently available on smoke and fire-related injuries, deaths and property damage is collected by a range of different organisations in the states and territories. Some data is recorded by state and territory fire and emergency services; other data is collected by other organisations such as hospitals and insurance companies. These organisations may gather data for different times periods, particular localities, and using their own parameters.

2.23 There is also, understandably, a paucity of data on unreported fires. As FRNSW stated there are no statistics on fires which are unreported and therefore unattended by the service, or which have been reported to another agency;⁴⁴ data is not generally captured where people with a fire related injury do not seek medical

40 Association of British Insurers (ABI), *Record rise in the costs of fire damage*, 10 December 2009, available: <https://www.abi.org.uk/News/News-releases/2009/12/Record-rise-in-the-costs-of-fire-damage> (accessed 7 March 2016).

41 ABI, *Record rise in the costs of fire damage*, 10 December 2009.

42 ABI, *Record rise in the costs of fire damage*, 10 December 2009.

43 NFPA, *Fire loss in the United States*, September 2015, p. 39.

44 Fire & Rescue NSW (FRNSW), *Submission 20*, p. 1.

treatment,⁴⁵ or where property damage has been caused but the fire was unreported and the owner was uninsured.

2.24 As AFAC highlighted with regard to fire-related injuries:

...[I]njury from smoke and fire in the residential setting is not limited to burns or smoke inhalation. AFAC research indicates that the majority of fire injuries *are* burns and/or smoke inhalation, however, other (related) injuries include wounds and punctures, fractures, heart attacks, strains and sprains which occur during a fire. Such related injuries also may not be captured in the data...notwithstanding that the injuries have resulted in hospitalisation or injury to a person as a result of a residential fire.⁴⁶

2.25 Inconsistency and gaps in data pose difficulties for authorities: as the preceding paragraphs illustrate, it is difficult to compare statistics dealing with residential fires because they are recorded in different jurisdictions in different ways over varying periods of time. For some jurisdictions it is extremely difficult to locate any statistics at all for smoke and fire related incidents, deaths or injuries. The absence of complete, accurate and consistent data in turn makes it difficult for authorities to determine the extent and impact of residential fires, identify trends, and determine whether or not particular intervention activities are warranted or effective. Indeed, Commissioner Greg Mullins, President of AFAC explained one of the ways in which NSW uses data about fire incidents to target its home fire safety visits:

We correlate our fire incident data with census data—socioeconomic status. We find there is a direct correlation, so we target those suburbs. When a fire occurs in a home, we find that is when the awareness is highest. So we letterbox drop and say, "Firefighters are going to come and visit." We find they are waiting with open arms and they say: "Please come in. What can we do?" The awareness is the highest straight after a fire. That is just human nature.⁴⁷

Committee view

2.26 As discussed above, gaps in the data for smoke and fire-related incidents are undesirable for a number of reasons. The committee recognises that data on these matters will never be absolutely complete. Some of the gaps, for example, result from an individual's decision not to report a fire or seek treatment and may never be captured. However, access to accurate and up-to-date data on residential smoke and fire injuries, deaths, and associated property damage is fundamental to understanding and subsequently addressing the prevalence of residential fires in Australia.

2.27 The committee believes that data on the prevalence, cause and outcome of residential fires throughout Australia needs to improve, its collection made consistent across Australian jurisdictions and its access facilitated by a single data holding. Such

45 AFAC, *Submission 5*, p. 2; Metropolitan Fire and Emergency Services Board (MFB), *Submission 4*, p. 4.

46 MFB, *Submission 4*, p. 4.

47 Commissioner Greg Mullins, President, AFAC, *Committee Hansard*, 4 December 2015, p. 11.

a resource would be invaluable to fire and emergency services and Australian governments, providing information to direct their efforts to reduce smoke and fire-related injuries, deaths and property damage.

2.28 With respect to data collection, the committee is of the view that fire and emergency services must be required to contribute data to a national database of residential fires. At a minimum, it should include the type of fire incident, the location of the incident, the source of the fire, details of fatalities and/or injuries, information about victims (for example age and gender), whether or not a smoke alarm was present and operating, and an estimate of the cost of any property damage. The committee understands that much of this information is already collected by state and territory fire services; the committee also notes that information such as this is collected in Great Britain.

2.29 The committee is also aware that Canada is about to establish a National Fire Information Database (NFID) to 'gather and unify 10 years of fire information from across the country and create Canada's first national system for collecting fire statistics' with the intention of linking fire data with other relevant datasets and initiating the creation of 'new evidence-based research related to fire, public safety, and security'.⁴⁸ The NFID is a collaboration between the Canadian Association of Fire Chiefs (CAFC) and the Council of Canadian Fire Marshals and Fire Commissioners (CCFMFC) with federal support from the Canadian Safety and Security Program. The national database will:

- Establish a single, central database about Canada's National Fire Experience.
- Standardize and improve data collection, methodology, and analysis.
- Link fire data with existing socioeconomic data sets including health, crime, education, housing, etc. to provide a level of public safety research and data that has never been seen before
- Provide Fire Marshals and Chief Fire Officers with evidence-based research they can use to provide policy and operational guidance that respond to trends that currently cannot be adequately identified.
- Enhance the ability of fire officials to understand incident dynamics, and actual and potential threats to public safety.
- Provide a valuable data source for in depth academic research that can be combined with incident observations and experiences to generate new knowledge in the public safety domain
- Enhance and ensure the ongoing safety of the public, Canada's firefighters and other first responders.⁴⁹

48 Canadian Association of Fire Chiefs (CAFC), *National Fire Incident Database*, available: <http://www.cafc.ca/?page=NFID> (accessed 8 March 2016).

49 CAFC, *National Fire Incident Database*, available: <http://www.cafc.ca/?page=NFID> (accessed 8 March 2016).

2.30 The CAFC has said of the NFID:

Without trusted evidence-based data, fire officials cannot act with confidence when making choices to improve policy, resource use, and other critical matters affecting the safety of Canadian communities. Moreover, fire officials are facing increasing pressure - from both the public and government decision makers - to justify their decisions and actions with hard data. While many departments are collecting data at the local level, no single jurisdiction, department, agency or organization can accomplish this alone at the national level. The NFID will bring consistency and relevance to the data that is collected, analyzed and used. It will enhance and ensure the ongoing safety of the public, Canada's firefighters and other first responders.⁵⁰

2.31 The committee therefore recommends that Australian governments work collaboratively to establish a national database of residential fire incidents, including but not limited to:

- the type of fire incident;
- the location of the incident;
- the source of the fire;
- details of fatalities and/or injuries;
- information about victims;
- the presence and operation of smoke alarms at the site of the incident; and
- an estimate of the cost of any property damage.

2.32 The committee suggests that in developing a national database, Australian governments give consideration to other similar databases already in use, such as the Australian Ballistics Information Network (ABIN). The ABIN manages electronic ballistic information and links local and national incidents involving firearms, with input from all states and territories.⁵¹

Recommendation 1

2.33 The committee recommends that Australian governments collaboratively establish a national database of residential fire incidents and that state and territory fire and emergency services are adequately resourced to collect and report data to that national database.

2.34 The committee also believes there is merit in facilitating reporting of residential fire incidents by enabling members of the public to report these directly to through a national reporting and recording mechanism, in an effort to capture statistics on currently unreported incidents. The committee suggests that such a reporting

50 CAFC, *National Fire Incident Database*, available: <http://www.cafc.ca/?page=NFID> (accessed 8 March 2016).

51 The Hon Michael Keenan MP, Minister for Justice, 'New national ballistics system for police to target firearm crime', Media Release, 21 May 2014.

mechanism is available online and also via the post and by telephone; it should also provide members of the public with information about fire safety in the home, details for local fire and emergency services, and contact details for support services including medical assistance and counselling.

2.35 The committee is aware that the success of a reporting mechanism would rely on educating people about it, its use and benefits, as well as ensuring that it is easy to use. Given that those at the highest risk of smoke and fire-related death and injury are often already vulnerable (for example older Australians and Australians with a disability), such a reporting mechanism should also be publicised throughout the community sector.

Recommendation 2

2.36 The committee recommends that Australian governments consider establishing a national residential fire reporting and recording mechanism to capture statistics of currently unreported residential fire incidents.

The impact of fire-related deaths and injuries

2.37 Smoke and fire related injuries and deaths can have life-long effects on victims, their family and friends, and the emergency personnel who attend the incident. They can also lead to serious and chronic physical and psychological injury requiring ongoing support and rehabilitation. The Logan House Fire Support Network (LHFSN) stated:

Even with a non-fatal [the occupants] have lost all of their possessions – just the shock of it all as they try to get back on their feet. We clothe them but they look at themselves and realise it is not what they used to wear. Even that affects them psychologically. It is just the little things as they try to get back on their feet. We will certainly try to help them out with furniture, but it is that lounge that you sit on after a hard days work and then here is this stranger who has come along and given you another lounge, and it is just not yours. All of the psychological effects are ongoing.⁵²

2.38 Similarly, Mr Keith Golinski, whose son suffered serious burns and lost his wife and all their children in a house fire, told the committee '[y]ou never get over it. Nobody does. You simply cannot dwell on that fact. You have a life to go on with and you have to complete it without them'.⁵³

2.39 Commissioner Greg Mullins, President of AFAC, recalling one of the first fire fatalities he attended as a firefighter, stated:

It is embedded in my memory. When we arrived, at about 4 am, flames were shooting from windows on two sides of the building and residents above the unit were trapped. We extinguished the flames—although that is

52 Mr Lou Naumovski, President, Logan House Fire Support Network (LHFSN), *Committee Hansard*, 26 October 2015, p. 7.

53 Mr Keith Golinski, *Committee Hansard*, 26 October 2015, p. 21.

a short statement, but it was really difficult to do. When we made entry to a bedroom that was totally burnt out we found a charred body sitting on the edge of the bed. I can see it now and I will never forget the walking frame just out of reach in front of where the person was.

The old lady would have been about the same age as my own grandmother. We found some photos of her with her obviously beloved grandchildren. People had heard screaming earlier in the night but said they did not want to interfere. Maybe if they had heard a smoke alarm go off they would have. I was horrified by what that lady went through and I lost a lot of sleep. In my nightmares I saw my own beautiful grandmother burning.⁵⁴

2.40 In terms of treating fire-related injuries '...treatment of burns is not a one off intervention. Surviving burn injuries involves a lifetime of ongoing treatment and rehabilitation'.⁵⁵ The financial cost of treating burn injuries is also significant. In 2010, the House of Representatives Standing Committee on Health and Ageing heard that the true cost of burn injuries is hidden. Drawing on British research which suggested that the true cost of burn injuries is obscured, with one third arising from the acute hospital cost and two thirds attributed to rehabilitation and loss of income, it was estimated that the true cost of burn injuries could be as high as \$197 million a year.⁵⁶ The MFB outlined the costs (in 2012) of treating a burns patient, not including the cost of follow-up procedures and post-hospital out-patient care and therapy: the average cost of acute hospital treatment for an adult burns patient was \$71,056; the cost for a burns patient with 62 per cent total body surface area burn was \$842,419.⁵⁷

2.41 With regard to property damage and loss, the MFB also stated:

Smoke and fire related damage...can result in a loss of possessions, essential documents and valuables. It may also result in a person living in a partially damaged home or being required to relocate to other accommodation for an extended period, resulting in additional (and unplanned) financial burdens. For people without contents and/or home insurance, and/or in socially or financially disadvantaged position, the immediate and long term costs of residential fire may be severe and potentially life changing.⁵⁸

54 Commissioner Greg Mullins, President, AFAC, *Committee Hansard*, 4 December 2015, p. 2.

55 House of Representatives Standing Committee on Health and Ageing, *Roundtable Forum on Burns Prevention*, 2010, p. 11.

56 AFAC, *Submission 5*, p. 3.

57 MFB, *Submission 4*, p. 5.

58 MFB, *Submission 4*, p. 5.

Susceptibility to fire-related deaths and injuries

2.42 Professor Ian Thomas and Emeritus Professor Dorothy Bruck advised the committee '[i]n considering improving the level of fire safety in our communities it is important to consider the people who actually die in fires now'.⁵⁹

2.43 The committee heard evidence indicating that people made vulnerable by age or another factor are most likely to be victims of smoke and fire-related deaths and injuries. Victorian coronial data from January 1998 to February 2005 shows that more than half of adult fatalities in accidental domestic building fires were mentally ill.⁶⁰ The study also indicated that 75 per cent of victims had alcohol or drugs in their bloodstream.⁶¹ The study by Professors Thomas and Bruck concluded that 'many of those currently killed (or injured) are vulnerable (or at-risk) because of their age, physical or mental condition, use of alcohol or other drugs (prescribed and non-prescribed) and other factors'.⁶²

2.44 The MFB likewise stated that those at risk include '...those who are less likely to be able to install and maintain a working smoke alarm...[including] elderly and disabled persons, international students and workers, and people who are socially or financially disadvantaged – in other words, persons who are among the most vulnerable in our community'.⁶³ The MFB highlighted that people aged 0-4 or aged over 65, and those experiencing social or financial disadvantage, are at the greatest risk of dying as a result of being involved in a residential fire.⁶⁴

2.45 The risk of death or injury as a result of fire faced by older Australians was also discussed by National Seniors Australia, which raised concerns for older Australians in residential facilities:

In 2011, 170,000 Australians were living in a nursing home. That will increase significantly as the population ages. Three-quarters, or 77 per cent, were aged 80 and over. Fifty-seven per cent were aged 85 and over. They are our most vulnerable Australians. They have limited or no mobility. They are unable to get out of bed on their own, often, and sometimes require two staff to help them up. Some have cognitive impairment and have challenges, therefore, understanding instructions for a quick evacuation. At the best of times, we all know, nursing homes are notorious for their staffing shortages, particularly after hours.⁶⁵

59 Professor Ian Thomas and Emeritus Professor Dorothy Bruck, *Submission 17*, p. 13.

60 Professor Thomas and Professor Bruck, *Submission 17*, p. 10.

61 Professor Thomas and Professor Bruck, *Submission 17*, p. 10.

62 Professor Thomas and Professor Bruck, *Submission 17*, p. 13.

63 MFB, *Submission 4*, p. 2.

64 MFB, *Submission 4*, p. 3.

65 Ms Sarah Saunders, Deputy Chief Executive and General Manager, Public Affairs, National Seniors Australia, *Committee Hansard*, 26 October 2015, p. 17.

2.46 National Seniors Australia also expressed concerns for older Australians living independently,⁶⁶ while the MFB told the committee that people aged over 65 represented 50 per cent of all preventable residential fire fatalities in the Melbourne Metropolitan District between 2000 and 2010.⁶⁷

2.47 Emergency Management Victoria (EMV) concluded that, in light of this, '[f]or an increasing number in the community, the presence (or not) of a smoke alarm alone will not be a sufficient intervention to promote, let alone guarantee, a successful fire safety outcome'.⁶⁸ Or, as the Australian Building Code Board (ABCB) concluded when considering amendments to the National Construction Code (NCC) requirements for smoke alarms in 2012, 'design and engineering solutions are only part of the answer'.⁶⁹

66 Ms Suzanne Lawless, Policy Manager, National Seniors Australia, *Committee Hansard*, 26 October 2015, p. 17.

67 MFB, *Submission 4*, p. 7.

68 Emergency Management Victoria (EMV), *Submission 6*, p. 2.

69 Australian Building Codes Board (ABCB), *Final Regulation Impact Statement for Decision: Assessment of options for residential smoke alarms provisions in the National Construction Code*, October 2012, p. 25.

