Analysis of Fatalities in Accidental Dwelling Fires between 1st April 2017 and 31st March 2018

TO BE PRESENTED TO:
Authority
Strategic Management Group

STRATEGY & PERFORMANCE
COMMUNITY RISK MANAGEMENT

Document Control

Amendment History

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1.0	30/05/2018	J Fielding	
1.1	01/06/2018	J Fielding	Minor amends as per D Appleton
1.2	04/06/2018	J Fielding	Addition of inquest remarks for case 1
1.3	09/10/2018	J Fielding	Minor amends

Sign-Off List

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Distribution List

Name	Position	I / R
Strategic Management Group		
Incident Investigation Team		
Fire Authority		

Related Documents

Reference No.	Title	Author	Version & Date
1	Analysis of Fatalities in Accidental Dwelling Fires between 1st April 2016 and 31st March 2017	J Fielding	V1.0 25/05/2017
2	Historical Analysis of Fatalities in Accidental Dwelling Fires between 2008/09 and 2017/18	J Fielding	V1.1 11/05/2018

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1. Agreement

For the purpose of this report the following agreement was made between the client and the Strategy and Performance Directorate.

This work was requested by AM Guy Keen and received on 01/04/2018.

The Manager[1] has approved this report/ piece of work can be undertaken by the Strategy and Performance Directorate.

If the scope of the work changes, authorisation must be again obtained and would be noted within the version control document sheet.

It was agreed that this report would be produced in draft format by May 2018, and would be sent electronically to the Director of Strategy and Performance Directorate and Client for comment.

The Manager / Client agreed that their comments would be received back by May 2018.

The final report, which will always be in PDF format, would be produced by May 2018, subject to receiving comments.

[1] Deb Appleton

2. Summary

The purpose of this report is to provide an analysis regarding the circumstances of fatalities in accidental dwelling fires across Merseyside during 2017/18. In summary the findings within this report are as follows:

- During 2017/18, there were 4 fatalities as a result of accidental dwelling fires, 3 fewer than in 2016/17, when 7 took place.
- The 4 deaths that took place during 2017/18, is the lowest count recorded. The previous low was for the years 2010/11 and 2011/12, where 5 fatalities took place in each year.
- Concerning accidental dwelling fire fatalities, by district there were: 3 in Liverpool and 1 in Wirral. Knowsley, Sefton and St Helens did not have any fire fatalities.
- Of the 4 victims, 3 lived alone and 1 was staying with relatives. The 3 victims who lived alone, were alone at the time of the incident.
- Concerning the ages of the victims, the ages varied between 31 and 87. In previous years, individuals above the age of 65 tended to be most prominent, though this is different for 2017/18 as the age ranges are more varied.
- Concerning gender; 2 victims were female and 2 were male. In terms of racial profile, all 4 were White British.
- Based on the National Indices of Multiple Deprivation, 3 of the 4 fatalities were located in areas that were within the 50% most deprived Super Output Areas in England.
- Of the 4 incidents where fatalities occurred; 3 were linked to smoking materials and 1 was related to the careless use of a heating appliance.
- Merseyside Fire & Rescue Service had been in contact with occupants in 1 of the 4 dwellings concerned, resulting in 1 completed HFSC.
- Concerning Smoke Alarms; within 2 dwellings a smoke alarm was in situ and actuated, in 1 incident a smoke alarm was in place but inoperable due to missing a fuse and finally, 1 property had no smoke alarms installed.

3. Introduction

This report analyses fire related fatalities across Merseyside during 2017/18. The focus of this report reviews fatalities that occurred as a result of an Accidental Dwelling Fire (ADF).

This report contains information relating to the circumstances of individuals who have regrettably died in a fire, as well as other information, including: Equality & Diversity protected characteristics, ignition source and temporal analysis, all of which will support the on-going and proactive actions of the staff involved in Community Risk Management and their actions to reduce the risk of fire.

4. Case Studies

The following section outlines case studies where people died as a result of an accidental dwelling fire during 2017/18. Merseyside Fire & Rescue Service has continued to play a significant role in reducing the number of fatalities caused by fire and works closely with partner agencies to ensure that measures have been put in place to reduce the risks associated with fire.

Case 1: Inquest Complete – Liverpool – October 2017
The deceased was a 31 year old male, who was the sole inhabitant of the flat where he lived; the deceased was alone at the time of the incident. At 21:13 hrs, Merseyside Fire & Rescue Service received a call to attend the incident. The property had not previously had a Home Fire Safety Check, though there was an Automatic Fire Alarm system installed in the building - it was inoperable due to a missing fuse. The fire occurred in the bedroom, with the victim being located in the same room. Following the inquest; t*he cause of the fire was due to a naked flame from a lighter coming into contact with bedding materials.*
Death was recorded as:
***Part 1A** (cause of death) - Asphyxia due lack of oxygen being transported around the body,*
***Part B** (due to) – Smoke inhalation*
***Part 2** (contributing factors) – Due to synthetic cannabinoids being taken.*
The death was recorded as accidental death and it was noted that Spice contributed to the failure of the deceased to respond in a fire situation. No further action was recommended by HM Coroner[2].

Case 2: Inquest Pending – Wirral – January 2018
The deceased was an 87 year old female, who was the sole inhabitant of the semi-detached property where she lived; the deceased was alone at the time of the incident. At 10:32 hrs, Merseyside Fire & Rescue Service received a call to attend the incident. The property had previously received a Home Fire Safety Check; during the safety check smoke alarms were provided free of charge, which actuated during the incident. The fire occurred in the living room, with the victim being found in the same room. The suspected cause of the fire was due to the inappropriate use of a heating appliance; as the gas ignition spark was broken, the deceased used paper tapers to light the fire, it is suspected that one of these lit tapers was accidentally dropped, which fell onto some clothing which ignited.

Case 3: Inquest Complete – Liverpool – February 2018
The deceased was a 60 year old female, who was the sole inhabitant of the flat where she lived; the deceased was alone at the time of the incident. At 03:44 hrs, Merseyside Fire & Rescue Service received a call to attend the incident. The property had not previously had a Home Fire Safety Check, though there were smoke alarms fitted within the property which actuated. The fire occurred in the bedroom, with the victim being rescued from the same room, though she succumbed to her injuries several weeks later. The suspected cause of the fire was the result of a carelessly discarded cigarette.

[2] Area Coroner Anita Bhardwaj

Case 4: Inquest Pending– Liverpool – February 2018
The deceased was a 57 year old male, who was staying with relatives at the semi-detached dwelling at the time of the incident; the deceased was accompanied by a relative at the time of the incident. At 20:38 hrs, Merseyside Fire & Rescue Service received a call to attend the incident. The property had not previously had a Home Fire Safety Check and there were no smoke alarms installed. The fire occurred in the bedroom, with the victim being rescued from the same room, the victim died several days later. The suspected cause of the fire was due to a defective lighter, which accidentally ignited bedding.

5. Methodology

This research was undertaken initially by analysing the data held and managed by the MFRA Incident Investigation Team (IIT).

Fatalities in accidental dwelling fires were originally reported under the Best Value Performance Indicator 143(ii). Since 2008 this performance indicator has become defunct at a national level; however Merseyside Fire and Authority still measure this as Key Performance Indicator DC12. Qualification for this performance indicator is decided by members of Merseyside Fire and Rescue Authority Incident Investigation Team (IIT) and the coroner. **Some data within this report is still awaiting coroner agreement and as such some figures are subject to change.**

The Long Time Series Analysis, counts have been obtained from the following:

- Between 1991/92 – 1999/2000: Freedom of Information Request from Department for Communities and Local Government
- Between 2000/01 – present: MF&RS Incident Investigation Team archives

The ratio of incidents to fatalities is: (count of total accidental dwelling fires / count of fatalities)

Indices of Multiple Deprivation 2015 (IMD 2015) has been used to measure the levels of deprivation where fire fatalities took place[3].

The IMD2015 data was then analysed in two ways:

- At a local level the IMD 2015 data was restricted to solely Merseyside, this data was then split into 10 bands with equal counts, each representing a decile of relative localised deprivation. This data is merged with fatality incident data and analysed.
- At a national level the IMD 2015 data has not been restricted to Merseyside, the national dataset is split into 10 equal bands, with each band being a decile of deprivation. This data is merged with fatality incident data and analysed.

The Indices of Multiple Deprivation 2015 were obtained from the Department for Communities and Local Government.

[3] IMD ranks deprivation in the form of an index, where low numbers indicate Super Output Areas (LSOA) which have high levels of deprivation and high numbers indicating Super Output Areas with least deprivation

The software used to complete the analysis, was Microsoft Office Excel 2013 and MapInfo Professional 11.0 for filtering and mapping the data.

6. Results

6.1 Retrospective

Long Time Series Analysis

Chart 1: Long Time Series of fatalities in Accidental Dwelling Fires between 1991/92 and 2017/18

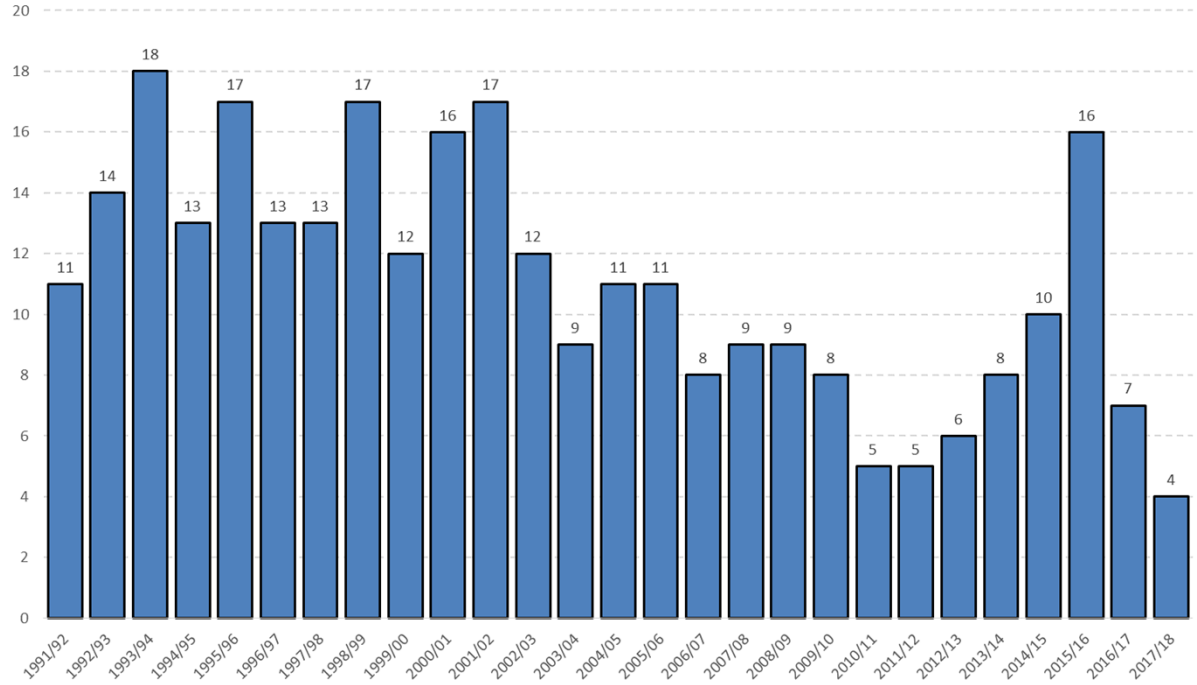

Chart 1 provides a count of accidental dwelling fire fatalities between 1991/92 and 2017/18. The chart identifies that 2015/16 resulted in the greatest number of fire fatalities within recent years, though in the past there were higher counts. Prior to 2016/17, there was an upward trend in the count of fatalities, however this upward trend was halted with the 7 deaths for 2016/17 and a low of 4 during 2017/18. Over the 27 year period, 1993/94 had the highest number of fatalities with 18, followed by 1995/96, 1998/99 and 2001/02 with 17 each.

5 Year Retrospective

Chart 2: Fatalities in Accidental Dwelling Fires between 2013/14 and 2017/18 by district

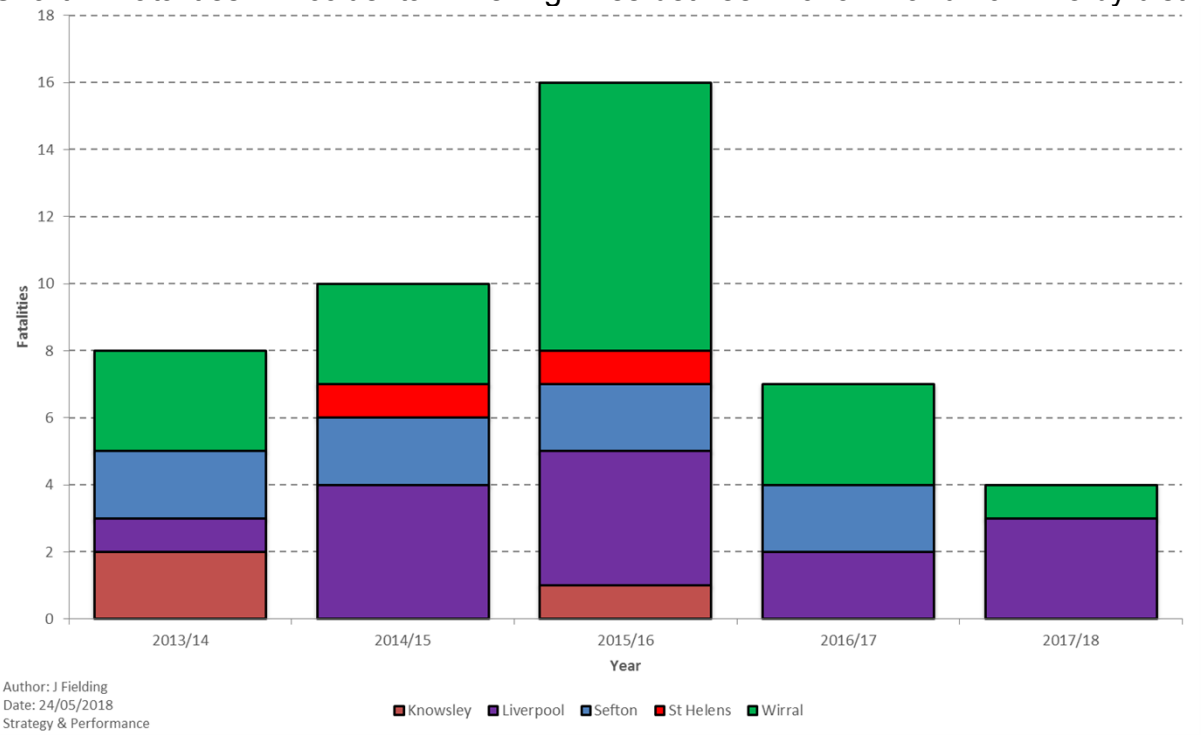

Chart 2 identifies that prior to 2016/17, fatalities as a result of accidental dwelling fires were increasing – leading to a 14 year high of 16 deaths during 2015/16. Since 2015/16 the number of fire fatalities has dropped with 7 during 2016/17 and a low of 4 during 2017/18.

When analysed by district, the counts vary, though Wirral is consistent in having fire deaths each year. Liverpool fluctuates between the years, though there were 3 during 2017/18. Prior to 2017/18, Sefton consistently had 2 dwelling fire fatalities, though there were none in 2017/18. During 2016/17 and 2017/18, the districts of Knowsley and St Helens had no fatalities.

6.2 Spatial Analysis

Table 1: Ratio of Accidental Dwelling Fire Incidents to Fatalities during 2017 /18

Counts	Knowsley	Liverpool	Sefton	St Helens	Wirral	Total
Overall Fatalities	0	3	0	0	1	4
Accidental Dwelling Fires	105	345	194	111	173	928
Ratio	0	1:115	0	0	1:173	1:232

Table 1 provides the ratio of the number of accidental dwelling fire incidents to fire deaths across Merseyside. The table identifies that Liverpool had the highest ratio of incidents to fatalities with 1 death per 115 incidents, Wirral by contrast saw 1 death per 173 incidents. In previous years, Wirral usually saw the highest incident to fatality ratio.

Deprivation Analysis

Chart 2: Fatalities from Accidental Dwelling Fires in 2017/18 in relation to Indices of Multiple Deprivation (IMD) 2015

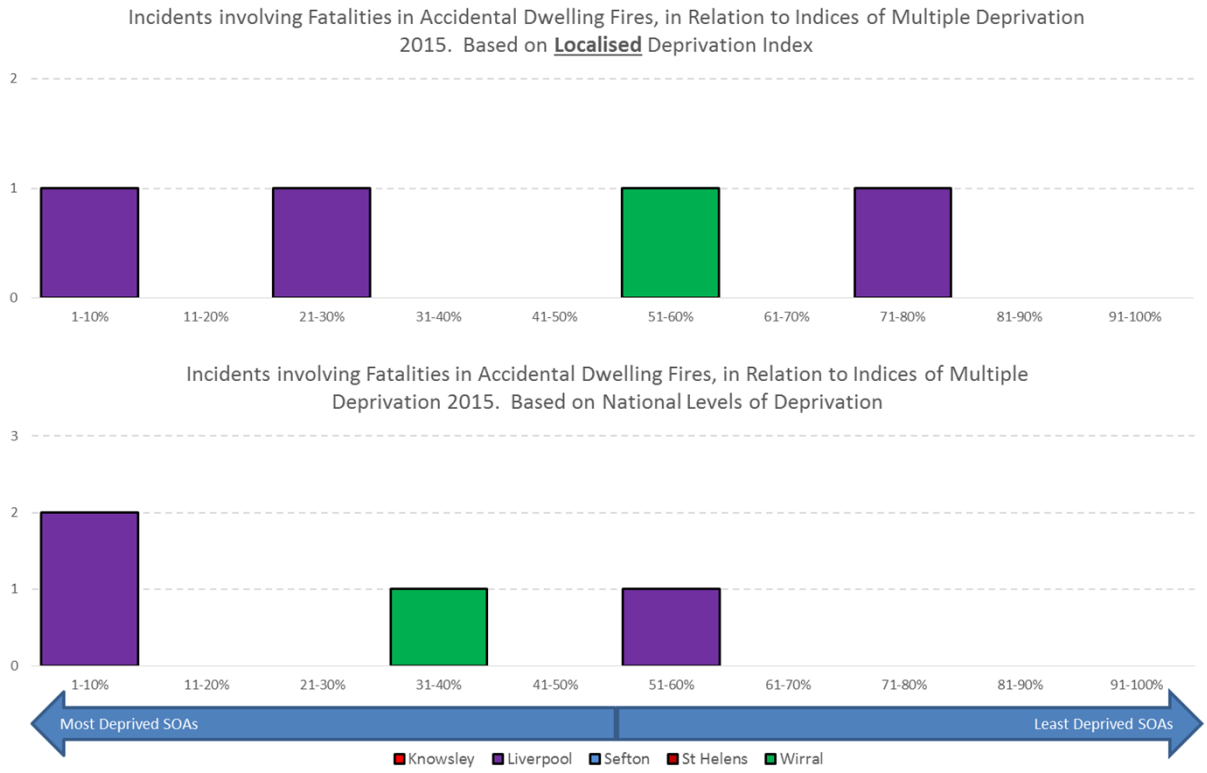

Chart 2 analyses the levels of deprivation where an incident involving a fatality took place, based on:

- A localised – Merseyside based index of deprivation
- Against national levels of deprivation

When levels of deprivation are applied locally (upper stacked bar chart), the data shows little pattern with fatal incidents occurring intermittently throughout the deprivation bandings.

When levels of deprivation are applied at a national level (lower stacked bar chart), it identifies that the majority of fatal incidents occur within the 50% most deprived areas, though this skewing is due to Merseyside as a whole being one of the most deprived counties in England.

6.3 Incident Analysis

The following section summarises the status and circumstances of victims:

Circumstances

- Concerning the fire room of origin, 3 incidents occurred in the bedroom with 1 in the living room.
- Within the bedroom, all 3 incidents were related to smoking materials (including 2 dropped cigarettes and a defective lighter) and the incident in the living room was related to the careless use of a heating appliance (a taper used to ignite a gas fire, which then ignited clothing placed below the fire).
- In all 4 incidents the victim was located in the room of origin.
- In 3 incidents the victim was the sole occupier of the property and was alone at the time of the incident. In 1 occurrence, the victim was not alone at the property where the incident took place.

The Victims

- There were 2 male and 2 female victims.
- Of the male victims the ages were 31 and 57, and for the female victims the ages were 87 and 60 respectively. In previous years, individuals above the age of 65 tended to be most prominent, though this is different for 2017/18 as the age ranges are varied[4].
- All 4 victims were White British.

Temporal Analysis

- There were no fatalities during the 1st 2 quarters of 2017/18. 1 fatality took place during October, 1 took place during January and 2 took place during February.
- Concerning the hours that incidents took place, 2 took place during the evening (between 20:00 – 21:59), 1 took place during the morning (10:00 – 10:59) and 1 took place in the early hours (03:00 – 03:59).

Fire Safety

Table 2: Fire Safety – Home Fire Safety Check & Smoke Alarm status

	HFSC Received		
Smoke Alarm Status	Yes	No	Total
Fitted & Operated	1	1	2
Fitted - Missing Fuse	0	1	1
No Smoke Alarm	0	1	1
Total	1	3	4

Table 2 identifies that 1 of the victims received a Home Fire Safety Check (HFSCs), with 3 not receiving HFSCs. In the case of the property where the HFSC took place; the smoke alarm was fitted and actuated. Where properties did not have a HFSC, 1 had a fitted smoke alarm that actuated, 1 had a smoke alarm fitted but was inoperable due to a missing fuse and finally 1 had no smoke alarm fitted.

[4] It should be noted that without further data it is not possible to suggest that this change in trend is long term.

Regardless of whether the property had received a HFSC, 2 of the 4 properties did not have working smoke alarms and therefore did not have an early warning system.

7. Information Sharing & Identification of those at fire risk

Merseyside Fire and Rescue Authority continues to work closely with key partners to ensure that the risk of fire is reduced within the community.

To identify those at risk of fire, a key area of work has been through establishing and agreeing information sharing protocols with a number of key partners. These protocols have ensured that there is a formal legal framework to share information securely.

By establishing these protocols and receiving this data, staff within MFRA can engage with vulnerable people who are already known by other professionals. This has greatly assisted in identifying those who are most vulnerable to the risks associated to fire.

Community Safety Advocates and other staff that deal directly with the most vulnerable people within the community have outlined that without the secure sharing of data, MFRA would find it more difficult to find out about a person at high risk of fire.

MFRA Home Safety Strategy primarily focuses on individuals aged over 65 years old and through the use of NHS Exeter Data have targeted individuals from that age range that also have either associated adult social needs or have not been visited by MFRA in the last 24 months. MFRA regularly review the information sharing protocols in place and the use of secure technology (AVCO) ensures that MFRA securely receives electronic data from partner agencies.