2018 Fire Fatality Summary Report
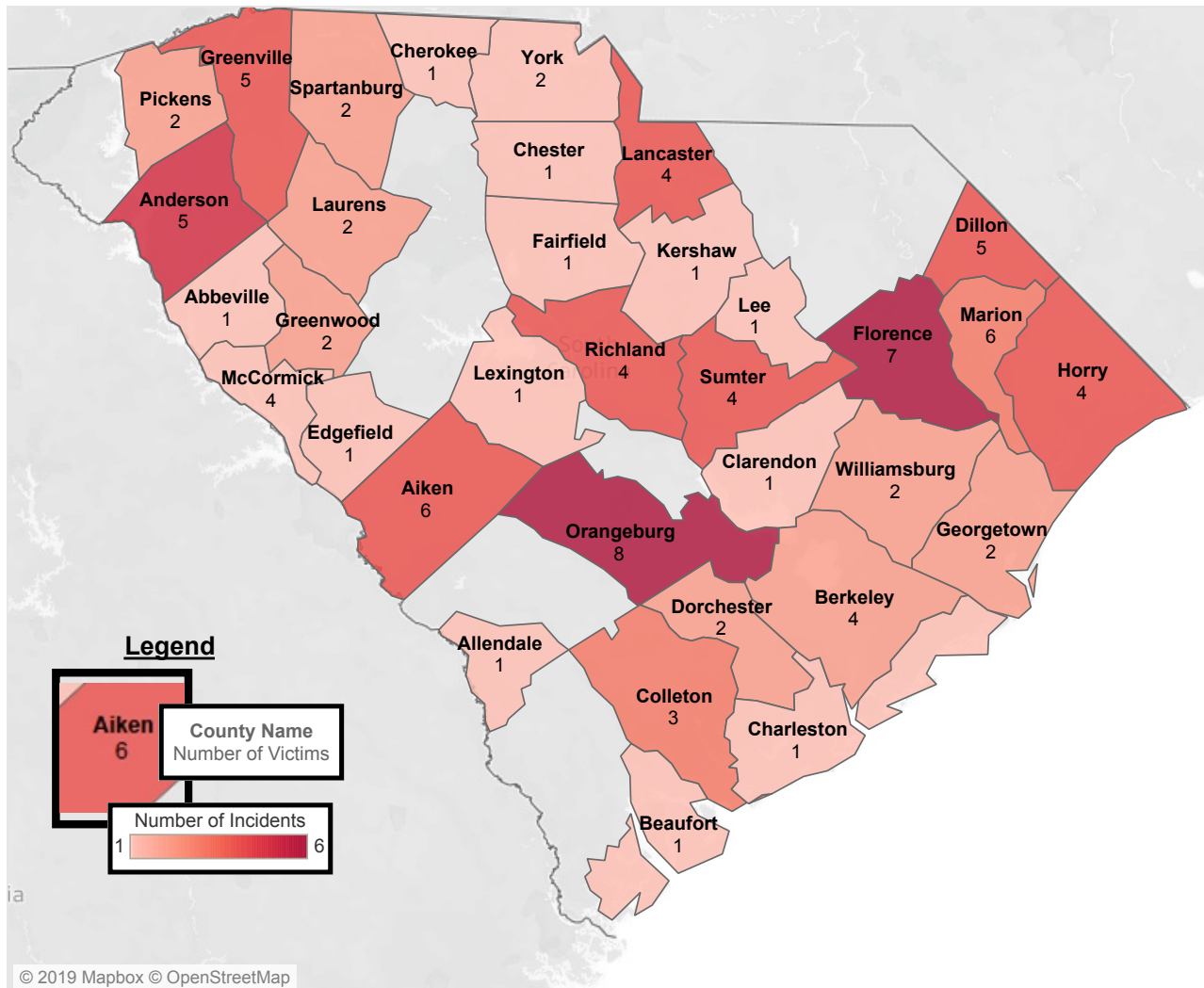
South Carolina Office of State Fire Marshal
Community Loss Education and Response (CLEAR) Team

Legend

Aiken
6

County Name
Number of Victims

Number of Incidents
1   6

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These findings are made possible by the research efforts of the CLEAR Team. In some cases, the percentages may not add up to 100% due to rounding. If you would like more information or outreach ideas based on the findings, please call South Carolina State Fire at (803) 896-9895.

This report version was last updated on September 20, 2019.

Fire Fatality Victim Profile

In 2018, there were 97 deaths from 81 incidents. The victims of fatal fires were reported in 34 of 46 counties, with the most incidents happening in Florence, Orangeburg, and Anderson counties. Aiken, Dillon, and Marion counties had a fewer number of incidents but more victims per incident. Most incidents had one victim; however, four incidents had three or more fatalities. Victims were mostly male, and 67 percent were older than the age of 50. White victims accounted for more than half of all victims, followed by black victims at 43 percent. Victims were typically found in residences, specifically single-family dwellings and mobile homes.
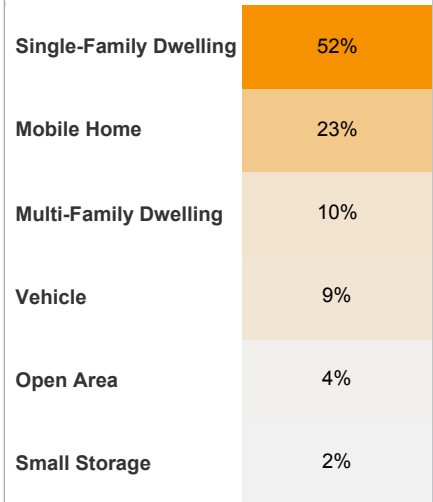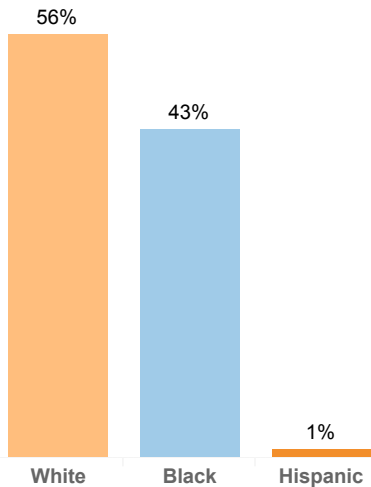
Victim Gender

Male	Female
64%	36%

Victim Race

White	Black	Hispanic
56%	43%	1%
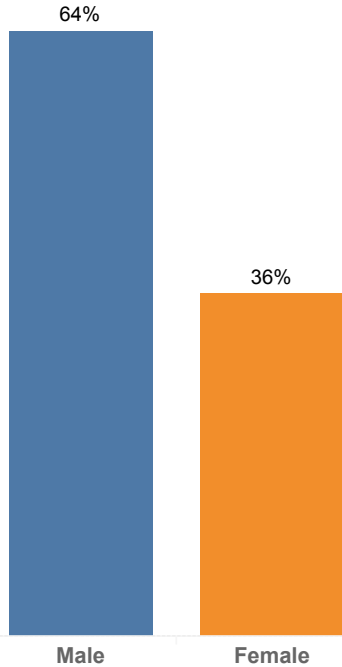
Incidents and Victims per County

	Incidents	Victims
Abbeville	1	1
Aiken	4	6
Allendale	1	1
Anderson	5	5
Beaufort	1	1
Berkeley	2	4
Charleston	1	1
Cherokee	1	1
Chester	1	1
Clarendon	1	1
Colleton	3	3
Dillon	4	5
Dorchester	2	2
Edgefield	1	1
Fairfield	1	1
Florence	6	7
Georgetown	2	2
Greenville	4	5
Greenwood	2	2
Horry	4	4
Kershaw	1	1
Lancaster	4	4
Laurens	2	2
Lee	1	1
Lexington	1	1
Marion	3	6
McCormick	1	4
Orangeburg	6	8
Pickens	2	2
Richland	4	4
Spartanburg	2	2
Sumter	4	4
Williamsburg	2	2
York	1	2
Grand Total	81	97

Occupancy Type

Single-Family Dwelling	52%
Mobile Home	23%
Multi-Family Dwelling	10%
Vehicle	9%
Open Area	4%
Small Storage	2%

Victim Age

Age	Percent
Under 20	10%
20 - 49	23%
50 - 69	35%
Over 70	32%
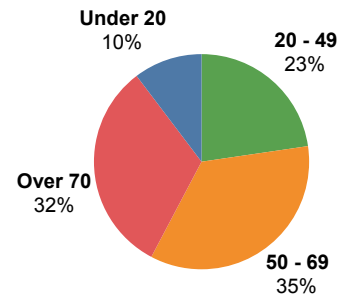
Median Age of Victims = 61

Multiple Fatality Incidents

One Victim	88%
More than One Victim	14%

Fire Fatality Victim Profile

Activity at the Time of Injury

- 48% Escape
- 16% Other or Unknown
- 9% Driving or Passenger
- 7% Investigating or Fire Control
- 7% Rescue or Retrieval
- 6% Sleeping
- 3% Medical Issue
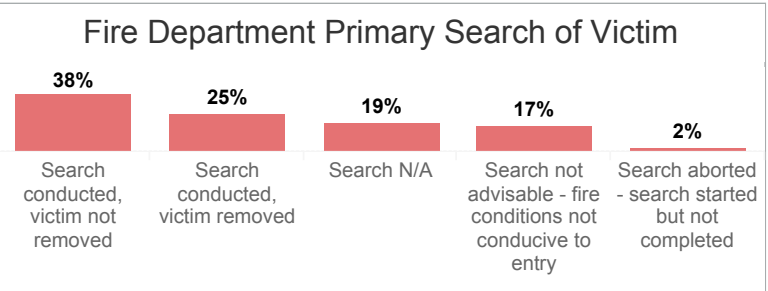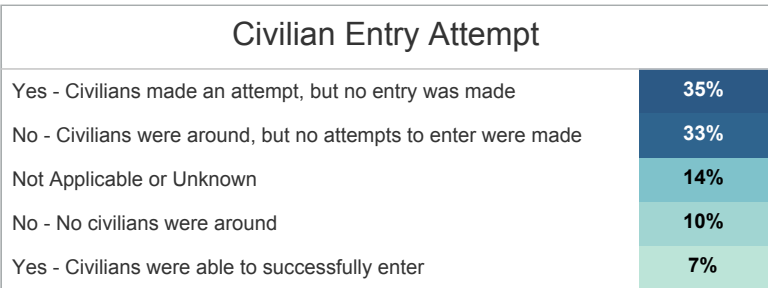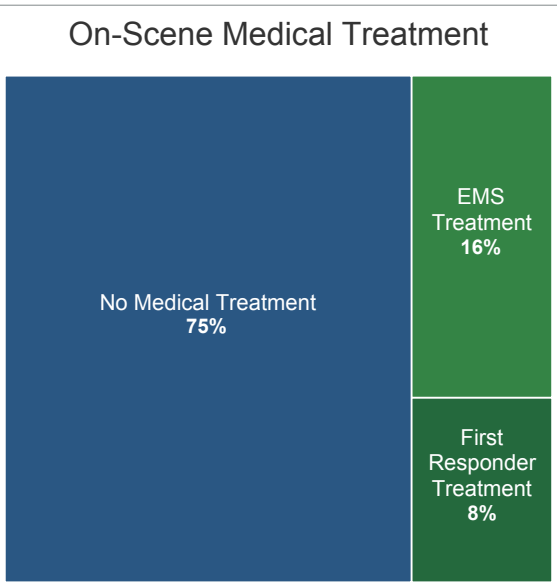- 2% Intentional Burning
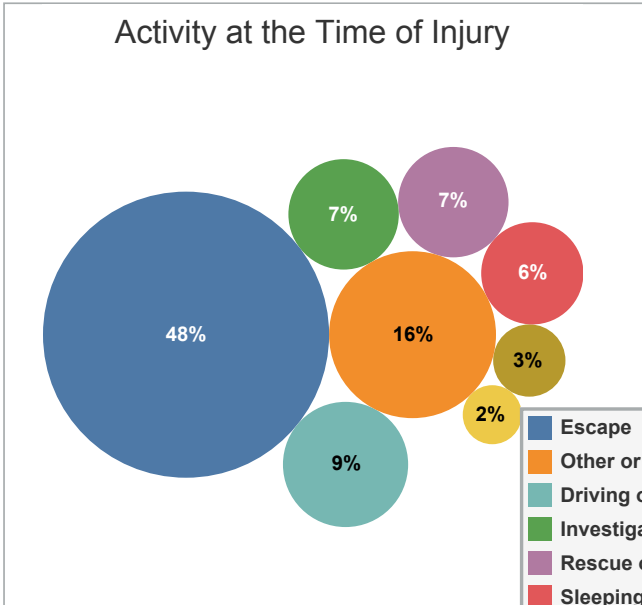
Legend:
- Escape
- Other or Unknown
- Driving or Passenger
- Investigating or Fire Control
- Rescue or Retrieval
- Sleeping
- Medical Issue
- Intentional Burning

Victim Transported by EMS

- 75% No, not transported to care facility
- 25% Yes, transported to care facility
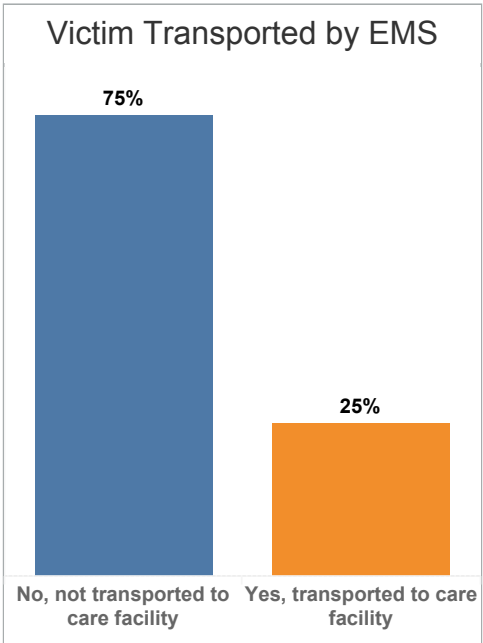
Victims were generally found to be attempting escape when they were injured. Forty-eight percent of victims attempted an escape, while only four percent of victims were successful in their attempt. Six percent did not awaken to an emergency before succumbing. In three out of four cases, the victim was pronounced deceased at the fire scene. In 40 cases (42%), citizens attempted to rescue victims. Prior to fire department arrival, unsafe conditions did not allow for citizens to assist the victim in escaping. In 17 percent of cases, the fire department could not search for the victim due to conditions. Victims were only removed during search and rescue operations in one out of every four fatal fires.

The CLEAR Team was notified about fire fatalities within 24 hours of the death 84 percent of the time, and responded on-scene 53 percent of the time. This response allows us to understand more about why some fires are fatal and connect with fire departments and their communities to prevent further tragedies.

On-Scene Medical Treatment

- No Medical Treatment 75%
- EMS Treatment 16%
- First Responder Treatment 8%

Civilian Entry Attempt

Yes - Civilians made an attempt, but no entry was made	35%
No - Civilians were around, but no attempts to enter were made	33%
Not Applicable or Unknown	14%
No - No civilians were around	10%
Yes - Civilians were able to successfully enter	7%

Fire Department Primary Search of Victim

- 38% Search conducted, victim not removed
- 25% Search conducted, victim removed
- 19% Search N/A
- 17% Search not advisable - fire conditions not conducive to entry
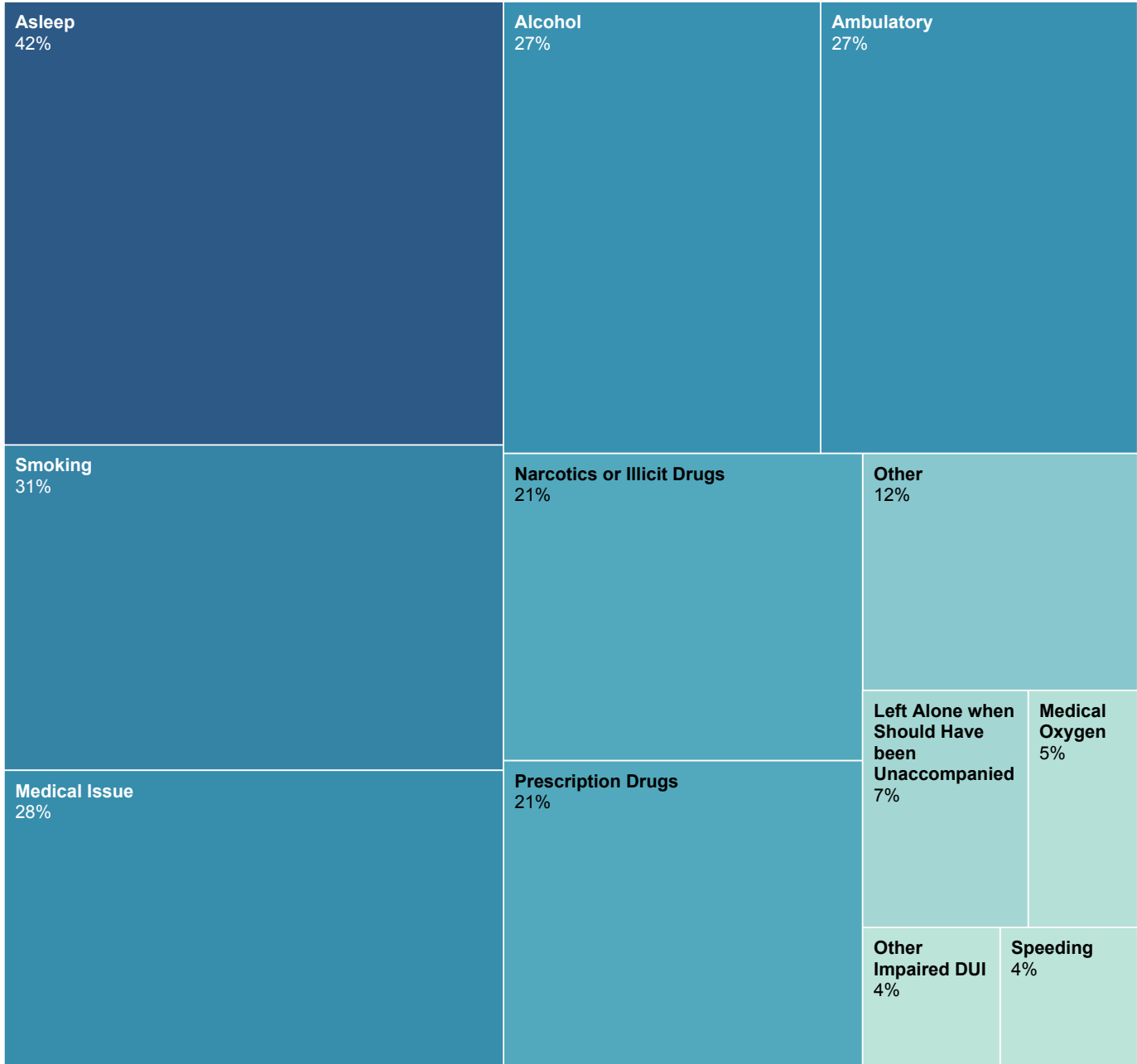- 2% Search aborted - search started but not completed

Human Factors Profile

Human factors were deemed present in 82 percent of all incidents, with 56 percent of incidents having more than one human factor present. The human factors below account for some of the factors seen in this year's incidents. An inability to be notified of an emergency, an inability to go to a safe area, and risky behaviors contributed to a person's demise in the event of a fire.

Eighty-three percent of vehicle-related and one-hundred percent of open area-related fire fatalities had at least one human factor which contributed to an improper response to the emergency.
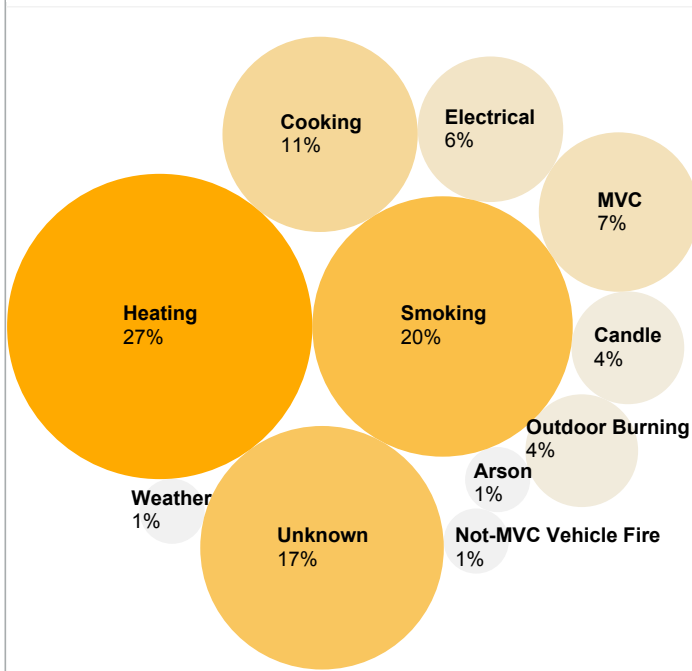
Four incidents had medical oxygen as a known human factor, and one-hundred percent of those incidents had smoking as an additional human factor present.

Asleep 42%	Alcohol 27%	Ambulatory 27%

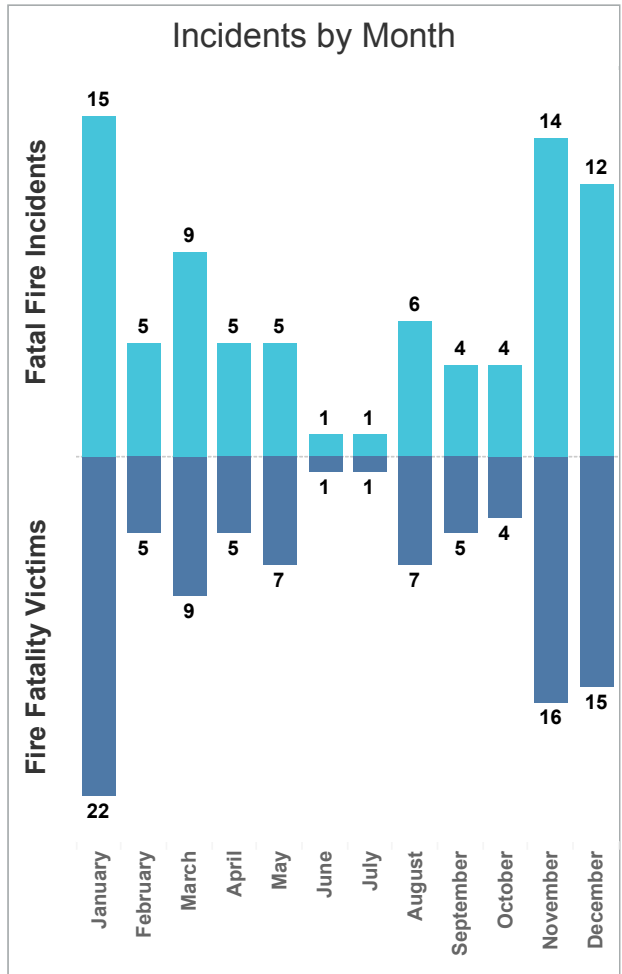| Smoking 31%	Narcotics or Illicit Drugs 21%	Other 12%
Medical Issue 28%	Prescription Drugs 21%	Left Alone when Should Have been Unaccompanied 7% / Medical Oxygen 5% / Other Impaired DUI 4% / Speeding 4%

Fatal Incidents Profile

When cause could be determined, fatal incidents were most likely caused by improperly discarded smoking materials, unattended cooking, or malfunctioning or improperly-used heaters. Incidents occured on all days of the week, with an above average amount on Tuesday, Wednesday, Friday, and Saturday. Fatal incidents generally occured during overnight hours, from 9 p.m. to 6 a.m., and in January, November, and December.

Most Probable Cause of Incidents

- Heating 27%
- Smoking 20%
- Unknown 17%
- Cooking 11%
- MVC 7%
- Electrical 6%
- Candle 4%
- Outdoor Burning 4%
- Arson 1%
- Not-MVC Vehicle Fire 1%
- Weather 1%

Incidents by Month

Fatal Fire Incidents / Fire Fatality Victims

Month	Fatal Fire Incidents	Fire Fatality Victims
January	15	22
February	5	5
March	9	9
April	5	5
May	5	7
June	1	1
July	1	1
August	6	7
September	4	5
October	4	4
November	14	16
December	12	15

Days and Times of Incidents Occurring

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Grand Total
12 AM to 3 AM	3	2	2	1	1	2	2	13
3 AM to 6 AM	4	3	2		1	4	3	17
6 AM to 9 AM	1		2	4	1		3	11
9 AM to 12 PM			2	2	1	1	1	7
12 PM to 3 PM	2		1	1	2	1	1	8
3 PM to 6 PM		2	1		1	1		5
6 PM to 9 PM		1	1	2	1		1	6
9 PM to 12 PM		3	2	2		4	3	14
Grand Total	10	11	13	12	8	13	14	81

Homes with Fatal Incidents Profile

Victim's Distance from an Egress

0 to 10 Feet
49%

Over 20 Feet
21%

11 to 20 Feet
30%

N/A
4%
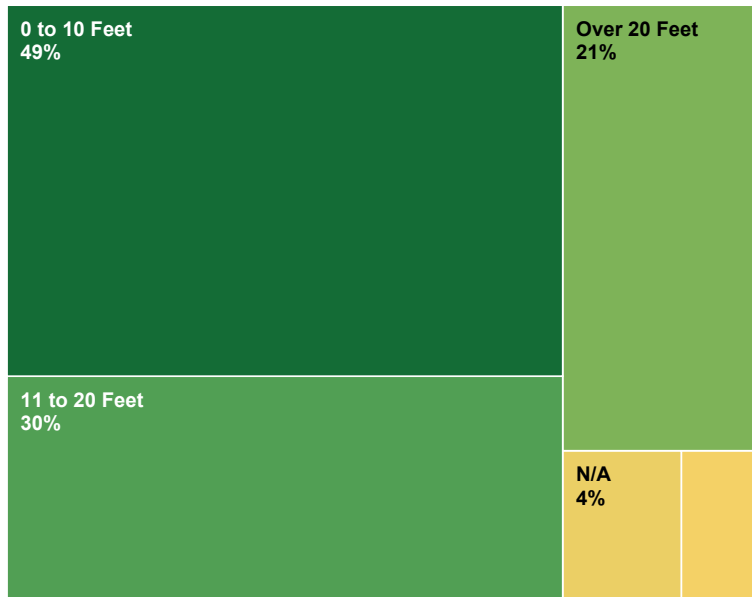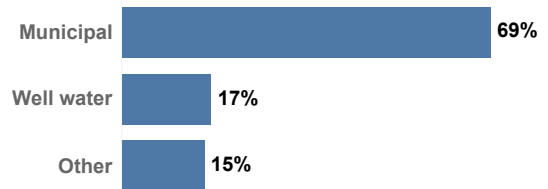
Eighty-eight percent of fatal fires occurred in residences. These homes, which are mostly owned, tend to be 30-50 years old, with most being smaller than 1,500 square feet. These homes are often supplied with city or municipal water. Smoke alarms were not always determined to be present, and if they were (33% of the time), they did not necessarily alert the occupants to an emergency. Only in four percent of fatal fires did an alarm that was present also alert the occupants. Notification by an alarm saved two occupants in two separate fires. Code and safety issues were present in 79 percent of incidents, with 46 percent of incidents having more than one issue present. Incidents where it was known the home did not have any smoke alarms present occured 41 percent of the time.
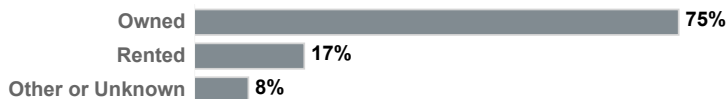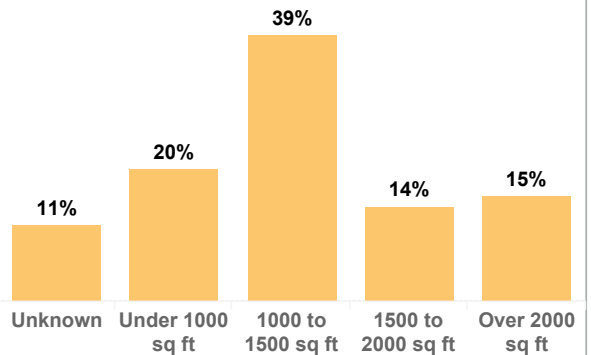
Age of Homes

Unknown	Prior to 1940	1941 - 1960	1961 - 1980	1981 - 2000	2001 - Today
20%	6%	13%	34%	15%	13%

Water Source

Municipal	69%
Well water	17%
Other	15%
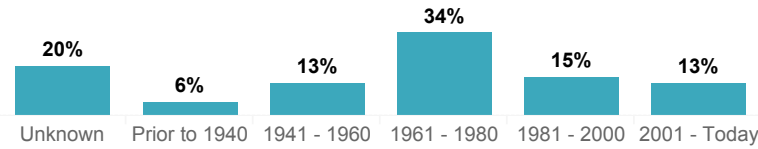
Ownership Status of Homes

Owned	75%
Rented	17%
Other or Unknown	8%

Size of Homes

Unknown	Under 1000 sq ft	1000 to 1500 sq ft	1500 to 2000 sq ft	Over 2000 sq ft
11%	20%	39%	14%	15%

Known Code & Safety Issues

No Smoke Alarms	41%
Hoarding Conditions	22%
Block Exits	21%
Derelict Conditions	20%
Issues with the Egress	14%
Improper Storage of Materials	14%
Trip Hazards	12%
Electrical Risk	12%
Poor Construction	11%
No Power to Property	1%

Survivors in Fatal Home Incidents

No survivors	62%
1 survivor	23%
2 survivors	7%
More than 3 survivors	7%
3 survivors	1%
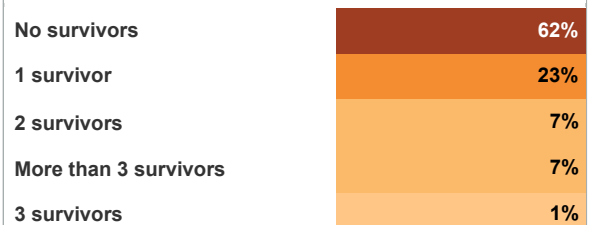
Annual and Historical Fire Fatality Information

Number of Fatal Incidents and Fire Death Victims from 2013-2018

	2013		2014		2015		2016		2017		2018	
Incidents	58		78		67		69		86		81	
Victims		73		96		78		77		102		97
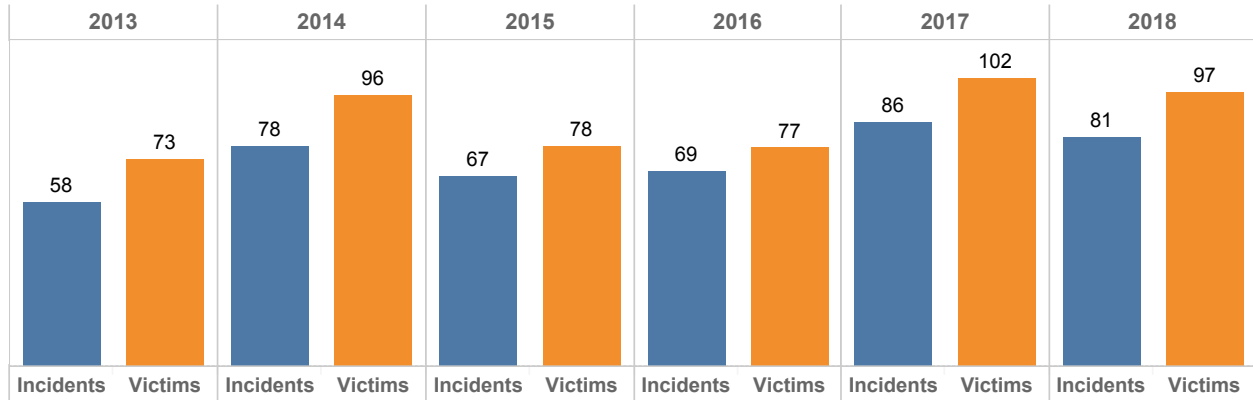
Fire deaths and fatal fires have increased steadily over the past five years. In 2013-2017, the average number of fire victims per year is 85. During the same time frame, the average number of fatal fires per year is 70. There is a 14 percent increase in fire deaths in 2018 compared to the average of the past five years. There is a 16 percent increase in fatal fires in 2018 compared to the average of the past five years. While it is unknown what is responsible for this increase in fire deaths and fatal fires, one possibility is there is better reporting by fire departments when this situation happens.

From 2013 to 2018, the number of "undetermined" cause of incidents decreased as researchers were better able to attribute a most probable cause. One cause of fatal fires that drastically increased from 2013 to 2018 was heating, from no fires to 19 fires.

Most Probable Cause of Fatal Fires from 2013-2018

Cooking	6	4	7	7	12	10
Electrical	7	7	11	6	9	4
Heating		17	6	12	9	19
MVC	1	3	7	3	5	6
Other	12	13	10	5	12	8
Smoking	4	11	18	16	14	12
Undetermined	28	23	8	20	25	22
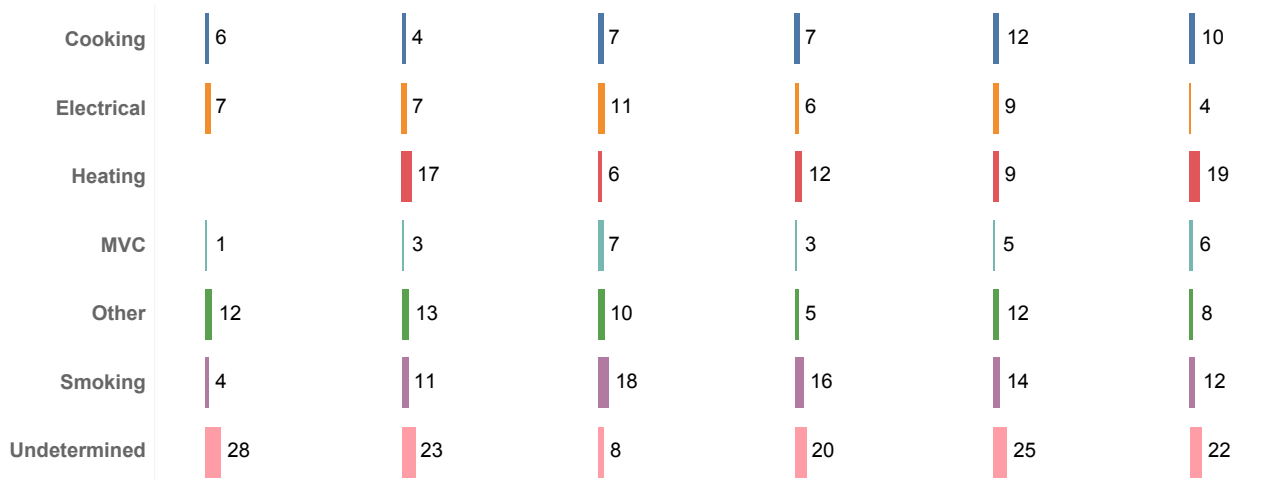
Other = Arson, Weather, Explosions, Suicide, Outdoor Burning, Playing with a Heat Source, and Unattended Candle

Detailed Fatality Information

Data contained in this report or on this site is collected, compiled, and reported for research and educational purposes only. The contents of any report or data herein is not intended to be used as a definitive conclusion related to a fire's origin and cause or a decedent's manner of death. Therefore, data contained in this report or on this site does not replace nor supersede investigative reports for origin and cause or manner of death.

January

Incident Date	County	Occupancy	Age	Gender	Race
1/3/18	Anderson	Single-Family Dwelling	62	Male	White
1/4/18	Williamsburg	Mobile Home	51	Male	White
1/5/18	Lee	Single-Family Dwelling	84	Female	Black
1/6/18	Richland	Multi-Family Dwelling	70	Male	White
1/7/18	Berkeley	Mobile Home	69	Male	Black
			79	Female	Black
1/8/18	McCormick	Mobile Home	1	Male	White
			3	Female	White
			4	Male	White
			25	Male	White
1/9/18	Lancaster	Open Area	79	Male	White
1/10/18	Clarendon	Mobile Home	65	Male	Black
1/12/18	Greenwood	Single-Family Dwelling	48	Male	White
1/14/18	Dillon	Single-Family Dwelling	74	Male	White
			79	Female	White
1/16/18	Williamsburg	Single-Family Dwelling	86	Male	Black
1/24/18	Marion	Single-Family Dwelling	53	Male	Black
			67	Male	Black
1/25/18	Greenville	Open Area	56	Male	White
1/26/18	Florence	Single-Family Dwelling	52	Female	Black
			62	Male	Black
1/29/18	Orangeburg	Single-Family Dwelling	62	Male	Black

February

Incident Date	County	Occupancy	Age	Gender	Race
2/2/18	Colleton	Single-Family Dwelling	70	Male	White
2/7/18	Laurens	Single-Family Dwelling	59	Female	Black
2/9/18	Florence	Mobile Home	38	Male	Black
2/20/18	Anderson	Mobile Home	45	Female	White
2/22/18	Anderson	Mobile Home	65	Female	White

March

Incident Date	County	Occupancy	Age	Gender	Race
3/4/18	Florence	Single-Family Dwelling	50	Male	Black
3/7/18	Florence	Multi-Family Dwelling	36	Female	White
3/12/18	Colleton	Single-Family Dwelling	86	Female	Black
3/13/18	Dillon	Single-Family Dwelling	78	Female	Black
3/16/18	Richland	Vehicle	16	Male	Black
3/24/18	Aiken	Single-Family Dwelling	26	Male	White
3/25/18	Chester	Small Storage	61	Male	White
3/31/18	Allendale	Single-Family Dwelling	5	Male	Black
	Kershaw	Single-Family Dwelling	72	Female	White

April

Incident Date	County	Occupancy	Age	Gender	Race
4/9/18	Anderson	Mobile Home	36	Female	White
	Spartanburg	Single-Family Dwelling	25	Female	White
4/14/18	Greenville	Single-Family Dwelling	87	Female	White
4/16/18	Richland	Single-Family Dwelling	86	Male	White
4/22/18	Dorchester	Vehicle	20	Female	White

May

Incident Date	County	Occupancy	Age	Gender	Race
5/2/18	Dillon	Single-Family Dwelling	69	Male	White
5/5/18	Charleston	Single-Family Dwelling	75	Male	Black
5/7/18	Orangeburg	Vehicle	2	Female	White
			4	Male	White
			24	Female	White
5/10/18	Greenwood	Single-Family Dwelling	76	Female	White
5/12/18	Colleton	Single-Family Dwelling	65	Male	White

June

Incident Date	County	Occupancy	Age	Gender	Race
6/4/18	Florence	Mobile Home	74	Male	White

July

Incident Date	County	Occupancy	Age	Gender	Race
7/28/18	Sumter	Multi-Family Dwelling	27	Male	Hispanic

August

Incident Date	County	Occupancy	Age	Gender	Race
8/8/18	Aiken	Single-Family Dwelling	101	Female	Black
	Berkeley	Single-Family Dwelling	72	Female	White
			80	Male	White
8/10/18	Pickens	Single-Family Dwelling	66	Male	White
8/14/18	Georgetown	Single-Family Dwelling	60	Male	White
8/28/18	Spartanburg	Mobile Home	30	Male	Black
8/31/18	Anderson	Single-Family Dwelling	58	Male	Black

September

Incident Date	County	Occupancy	Age	Gender	Race
9/8/18	Marion	Multi-Family Dwelling	29	Female	Black
9/24/18	Aiken	Vehicle	43	Male	White
9/29/18	York	Single-Family Dwelling	35	Female	Black
				Male	Black
9/30/18	Laurens	Mobile Home	57	Female	White

October

Incident Date	County	Occupancy	Age	Gender	Race
10/2/18	Sumter	Vehicle	44	Female	White
10/20/18	Horry	Single-Family Dwelling	88	Male	White
10/26/18	Sumter	Single-Family Dwelling	70	Male	Black
10/27/18	Dillon	Single-Family Dwelling	18	Male	Black

November

Incident Date	County	Occupancy	Age	Gender	Race
11/4/18	Lancaster	Mobile Home	51	Male	White
11/6/18	Lancaster	Vehicle	20	Male	Black
11/16/18	Edgefield	Mobile Home	58	Male	White
11/18/18	Beaufort	Open Area	71	Male	White
	Orangeburg	Single-Family Dwelling	61	Male	Black
11/21/18	Greenville	Single-Family Dwelling	52	Female	Black
	Pickens	Small storage	61	Male	White
11/22/18	Fairfield	Single-Family Dwelling	70	Male	Black
11/23/18	Abbeville	Single-Family Dwelling	58	Female	Black
	Orangeburg	Vehicle	24	Male	Black
11/28/18	Georgetown	Multi-Family Dwelling	68	Male	White
	Horry	Mobile Home	78	Male	Black
11/29/18	Aiken	Mobile Home	67	Male	White
			69	Male	White
			80	Female	White
	Orangeburg	Single-Family Dwelling	4	Female	White

December

Incident Date	County	Occupancy	Age	Gender	Race
12/1/18	Greenville	Mobile Home	9	Male	Black
			51	Male	Black
12/2/18	Lexington	Mobile Home	52	Male	White
12/8/18	Orangeburg	Single-Family Dwelling	72	Male	White
12/11/18	Florence	Mobile Home	72	Female	White
12/18/18	Horry	Mobile Home	69	Female	Black
	Lancaster	Single-Family Dwelling	85	Male	Black
12/20/18	Richland	Multi-Family Dwelling	44	Female	Black
12/24/18	Cherokee	Single-Family Dwelling	85	Male	White
	Marion	Multi-Family Dwelling	44	Female	Black
			55	Female	Black
			70	Male	Black
12/25/18	Horry	Multi-Family Dwelling	69	Male	Black
	Sumter	Single-Family Dwelling	33	Male	White
12/28/18	Dorchester	Single-Family Dwelling	73	Female	White