



Fire Injuries in Springfield
2005 – 2015
Fire and Life Safety Education Section

Using data collected by Fire Marshal investigative reports and Firehouse data, this report was created to find common factors of fire injuries in Springfield over 11 years (2005 – 2015). This information will be used in order to aid in the development of community risk reduction programs. Data collected includes property address, incident date, time of alarm, response time of emergency personnel, victim age, area of origin and other contributing factors.

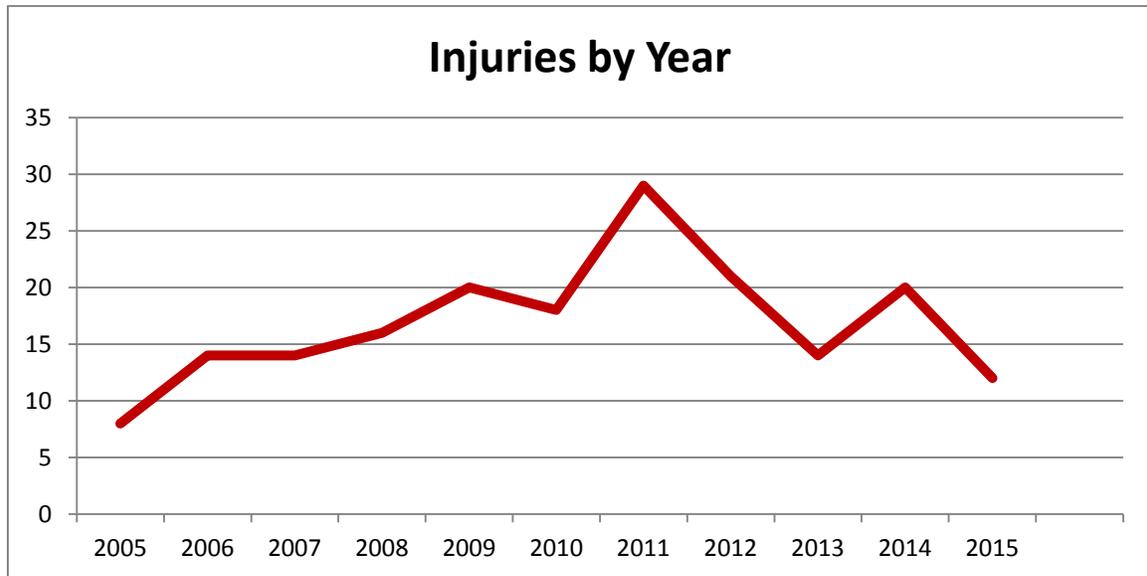
These numbers only represent the fire injuries reported to the fire department. Sometimes victims do not inform fire personnel of their injuries or the victims are unaware of the injury severity until fire personnel have left. For this reason, these numbers do not represent the full extent of injuries in Springfield, but they are the best estimate.

Summary

- Between 2005 and 2015, there were 154 fires that led to a total of 186 injuries.
- Average age of victim: 38
- Springfield fire injuries occur more during the day. This is when people are awake and making unsafe choices such as fighting the fire, moving a flaming object, or re-entering a home.
- The most common hour for fire injuries: 9 AM to 10 AM
- The most common month for fire injuries: January
- Unlike fire deaths, the leading cause of fire injuries is burns, followed by smoke inhalation.
- About 48% of fire injuries occurred in residences where there were no working smoke alarms.
- The most common cause of fires resulting in injuries was careless smoking at 14%, followed by cooking at 13% and incendiary at 11%.
- The most common area of fire origin was the bedroom, followed closely by the kitchen.
- Most common property use type: 1-or-2 Family Dwelling

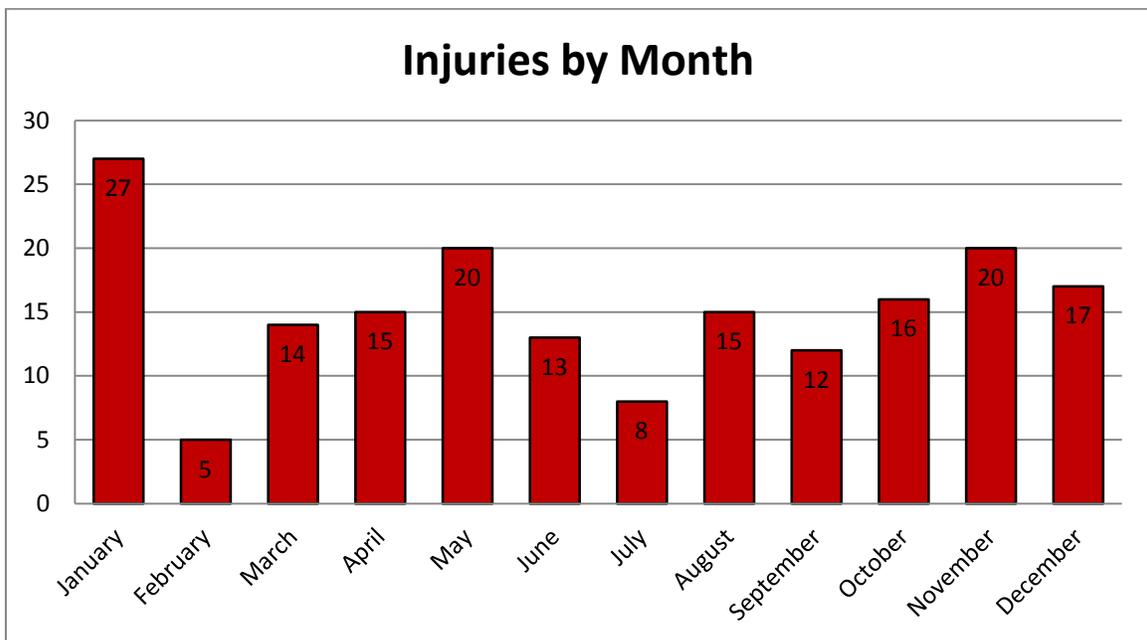
Injury Demographics

Chart 1



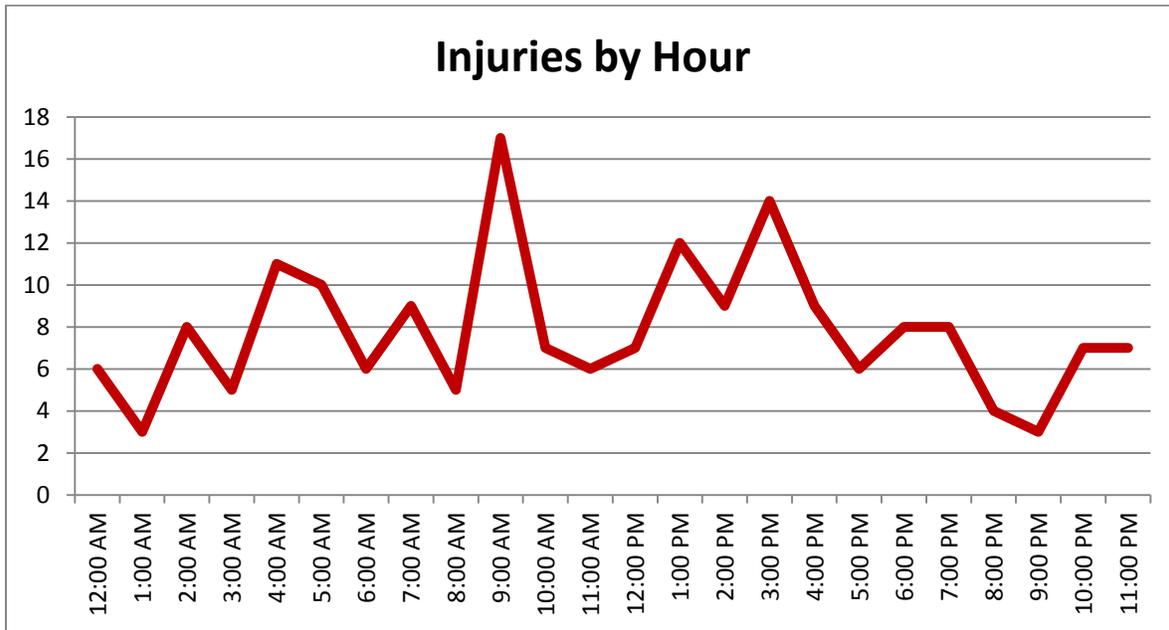
- Fire injuries increased from 2005-2011, but have decreased each year since then, with the exception of 2014.
- 2005 had the lowest number of injuries overall, with a total of 8 injuries.
- 2011 had the highest number of injuries overall, with a total of 29 injuries.

Chart 2



- In Springfield, January is the most common month for fire injuries with a total of 27.
- There were also peaks around May and November with 20 injuries each.
- Nationally, residential fire injuries also peak in January (FEMA, 2011-2013).

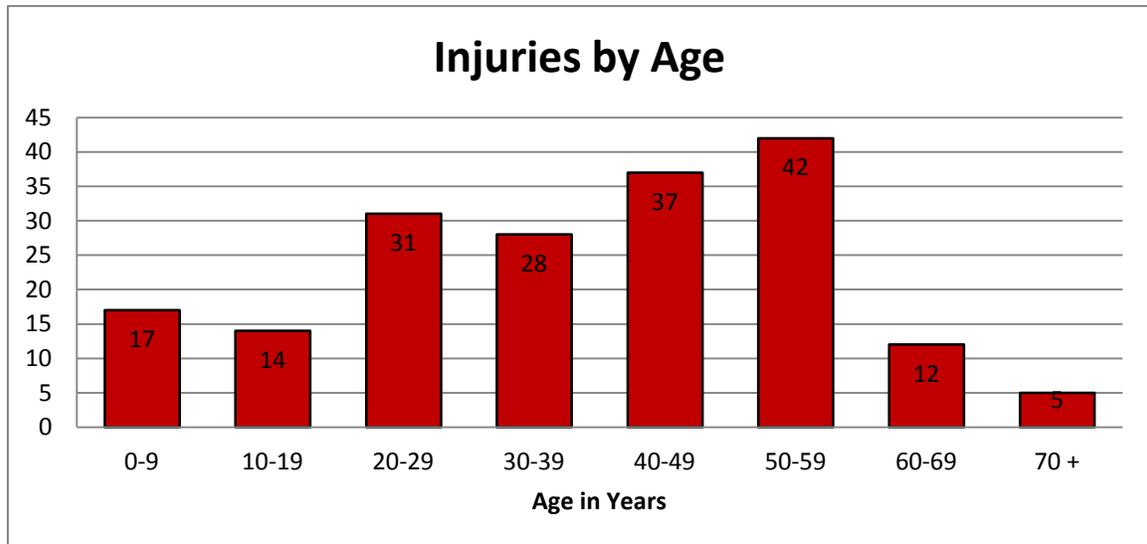
Chart 3



- While fire deaths tend to happen at night, Springfield fire injuries appear to occur more during the day. This is when people are awake and making risky choices such as fighting the fire, moving flaming objects, or re-entering the house.
- The most common hour for fire injuries is from 9 AM to 10 AM, with 17 injuries during this time period.
- Conversely, fire injuries occur nationally during late afternoon and evening hours (FEMA, 2011-2013).

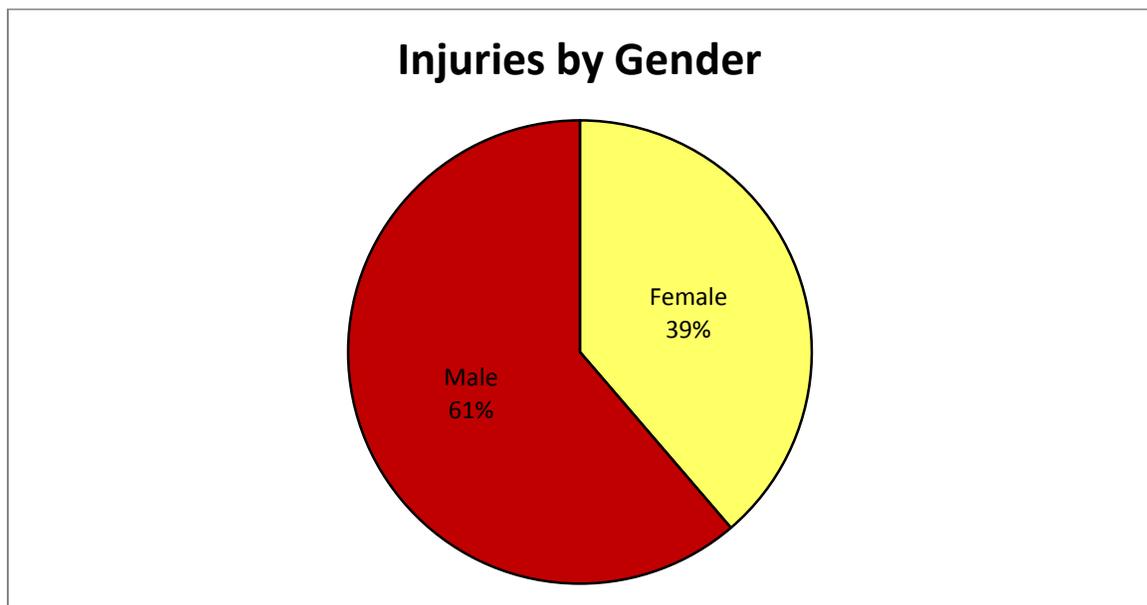
Victim Demographics

Chart 4



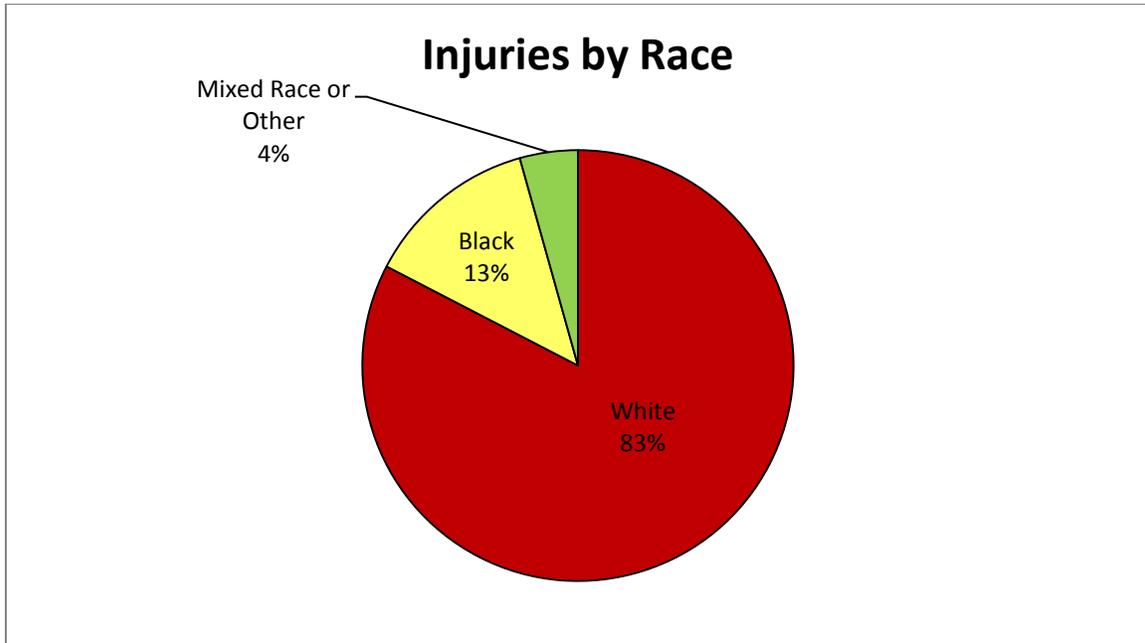
- The average age of the victim was 38 years.
- The youngest person injured was 9 months old.
 - Three children under a year old were injured.
- The oldest person injured was 89 years old.
- Most injuries impact individuals between 40 and 59 years.
- Similar trends are seen nationally. The highest category of victims is between the ages of 20 and 59, followed by ages 0-19. Those over 70 make up the smallest portion (FEMA, 2011-2013).

Chart 5



- In Springfield, men received 61% of the fire injuries and women received 39%.
- Nationally, men constitute only 53% of fire injuries; women account for the remaining 47% (FEMA, 2011-2013)

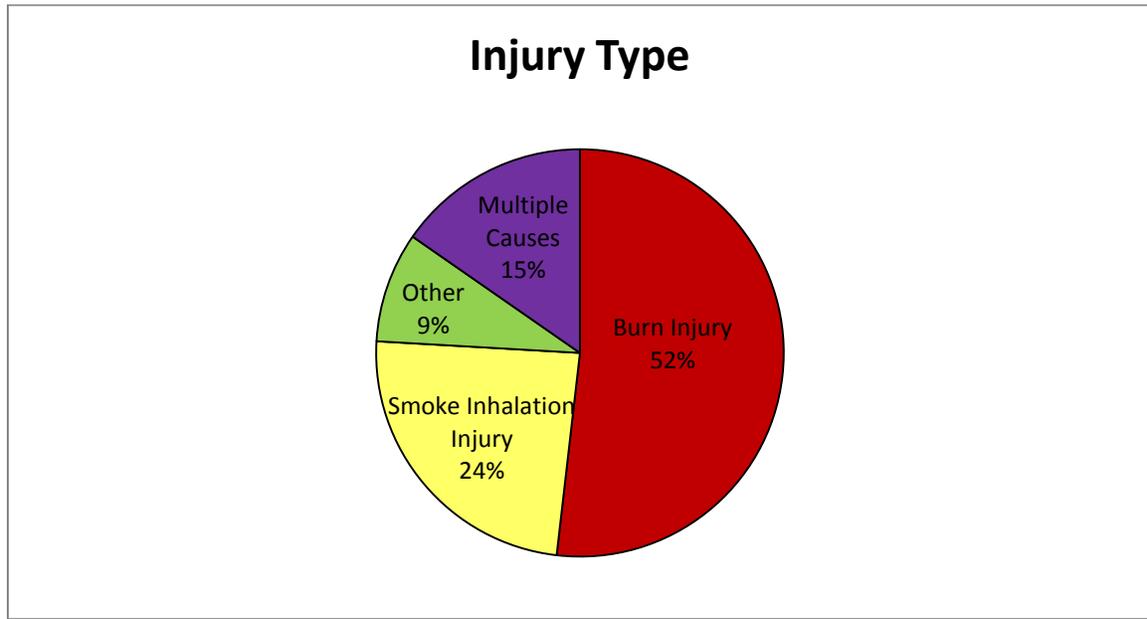
Chart 6



- Whites, making up 90.4% of the Springfield population, also make up most of the fire injuries (57 injuries, or 83%).
- In Springfield, Blacks only make 4.2% of the population, but bear three times the injury rate at 13% (9 injuries).
- Mixed races and other races make up about 5.4% of the Springfield population and about 4% (or 3 total) injuries.

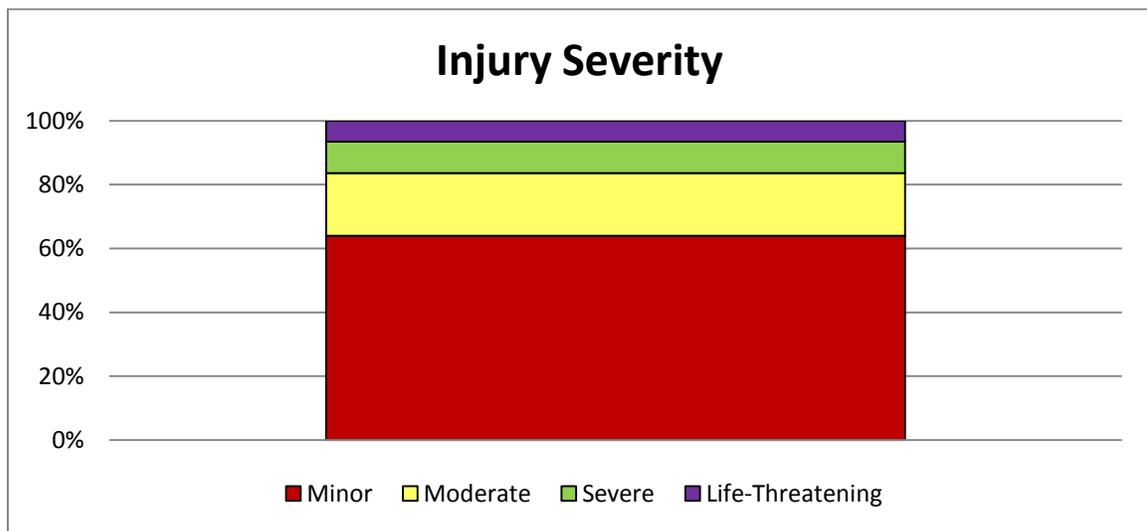
Injury Details

Chart 7



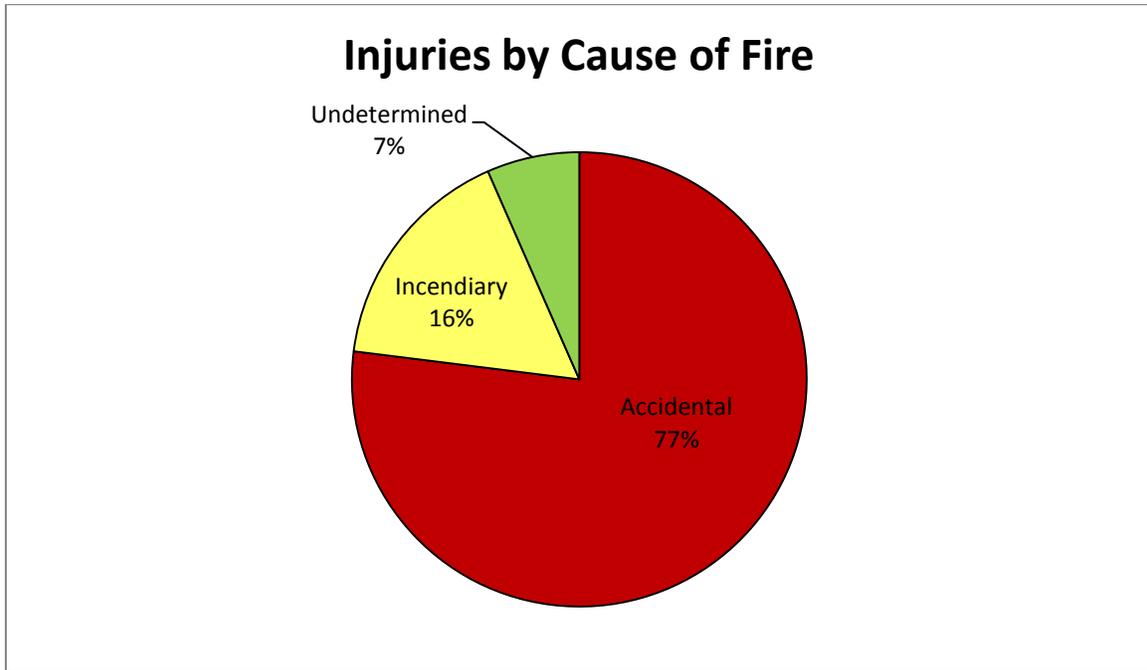
- 71 victims (52%) received burn injuries, making it the most common type of injury in Springfield.
- 33 victims (24%) suffered from injuries related to smoke inhalation.
- 12 victims (9%) received other types of injuries, including cuts, bruises, hearing loss, and twisted ankles.
- 21 victims (15%) had more than one type of injury; most often this was a combination of smoke inhalation and burn injuries.
- Nationally, smoke inhalation accounts for 42% of residential fire injuries, and thermal burn injuries represent 24% (FEMA, 2011-2013).

Chart 8



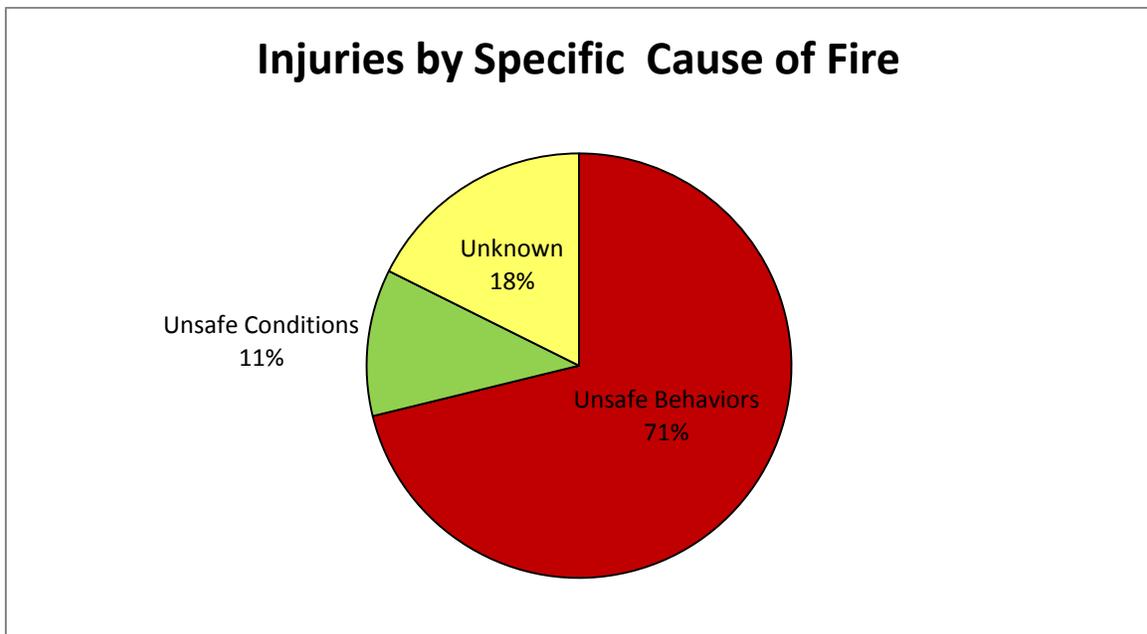
- 12 individuals received life-threatening injuries, but survived.

Chart 9



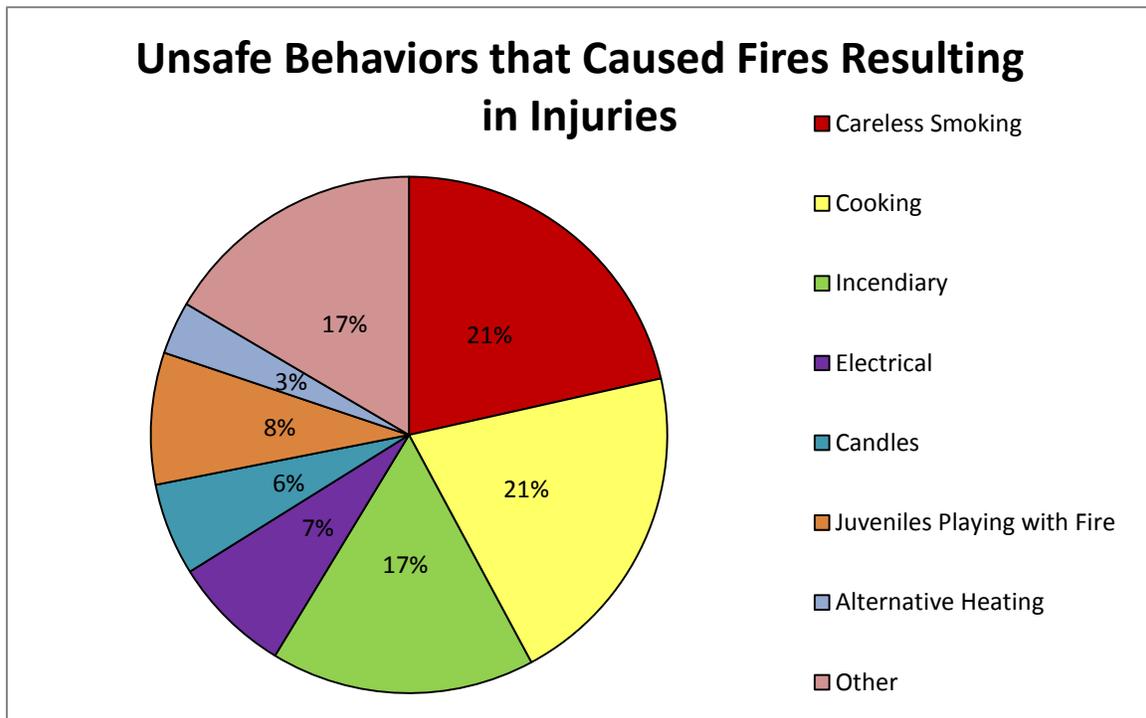
- 117 injuries (77%) occurred in accidental fires.
- 25 injuries (16%) occurred in incendiary fires.
- 10 injuries (7%) occurred in fires where the cause could not be determined.

Chart 10



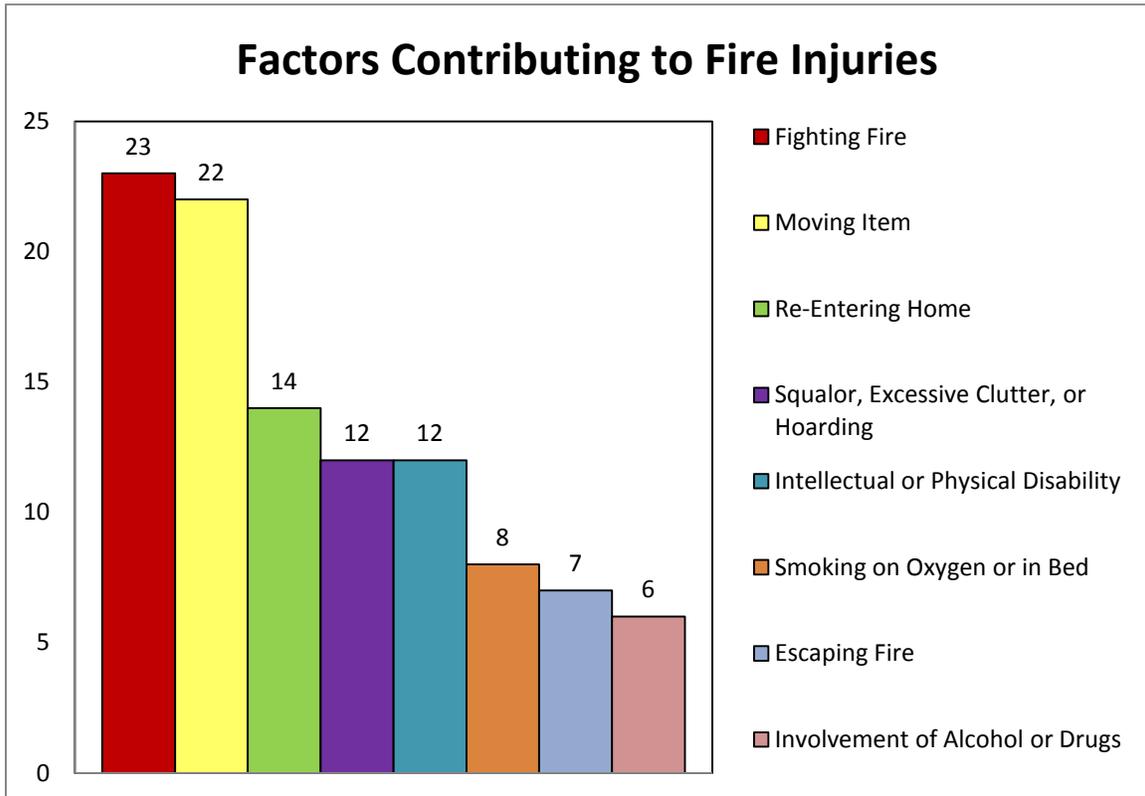
- 71% of injuries (121 total) were the result of fires caused by unsafe behaviors, such as unattended cooking or careless smoking.
- 11% of injuries (19 total) were the result of fires caused by unsafe conditions, such as unavoidable gas leaks, mechanical issues, or bad wiring.
- In the remaining 18% (30 injuries) the specific cause of fire could not be determined.

Chart 11



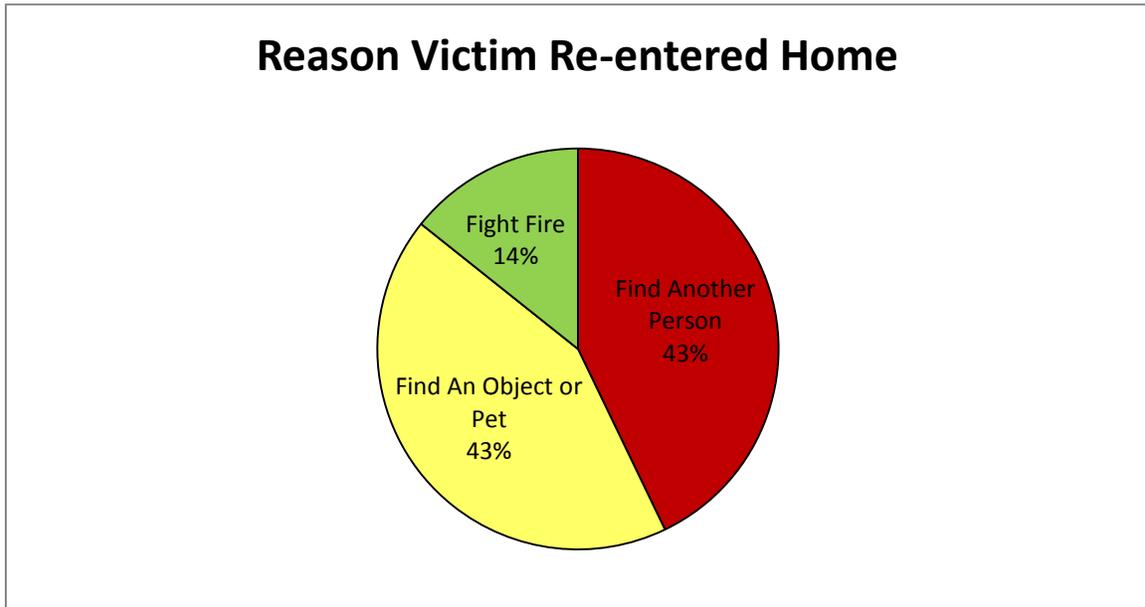
- The most common cause of fires that resulted in injuries was careless smoking, with 26 injuries (21%).
- Cooking fires were a close second, with 25 injuries (21%).
- Incendiary fires caused 20 injuries (17%)
- Electrical fires caused 9 injuries (7%)
- The fires injuries in the “Other” category included fires that were started by meth labs, dryer lint fires, and brush fires.
- Nationally, cooking is the leading cause of residential fires that resulted in injuries at 33.9%; smoking is second at 6.8% (FEMA, 2011-2013)

Chart 12



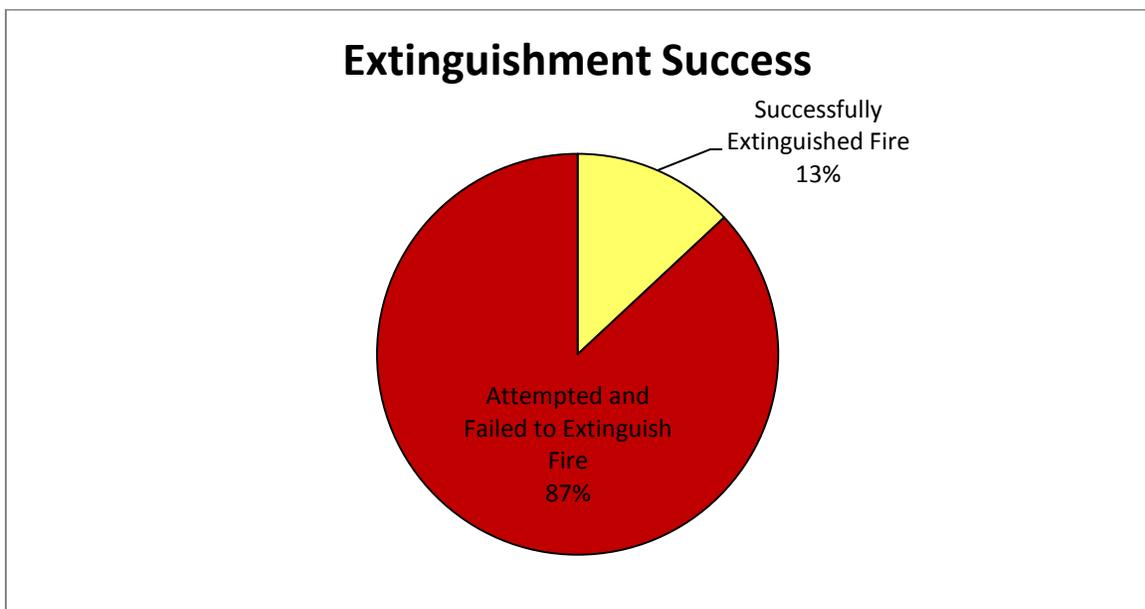
- 23 injuries (12%) occurred while the victim attempted to fight the fire.
- 22 injuries (12%) occurred while the victim tried to move a flaming object.
- 14 (8%) victims were injured while attempting to re-enter the home (see Chart 14 for further analysis).
- Hoarding was a contributing factor in 6% of fire injuries.
- Nationally, 35% of fire injuries are a result of someone attempting to control the fire. 24.5% of injuries had a contributing factor of alcohol or drugs and 18.3% of injuries had a contributing factor of physical or intellectual disabilities.

Chart 13



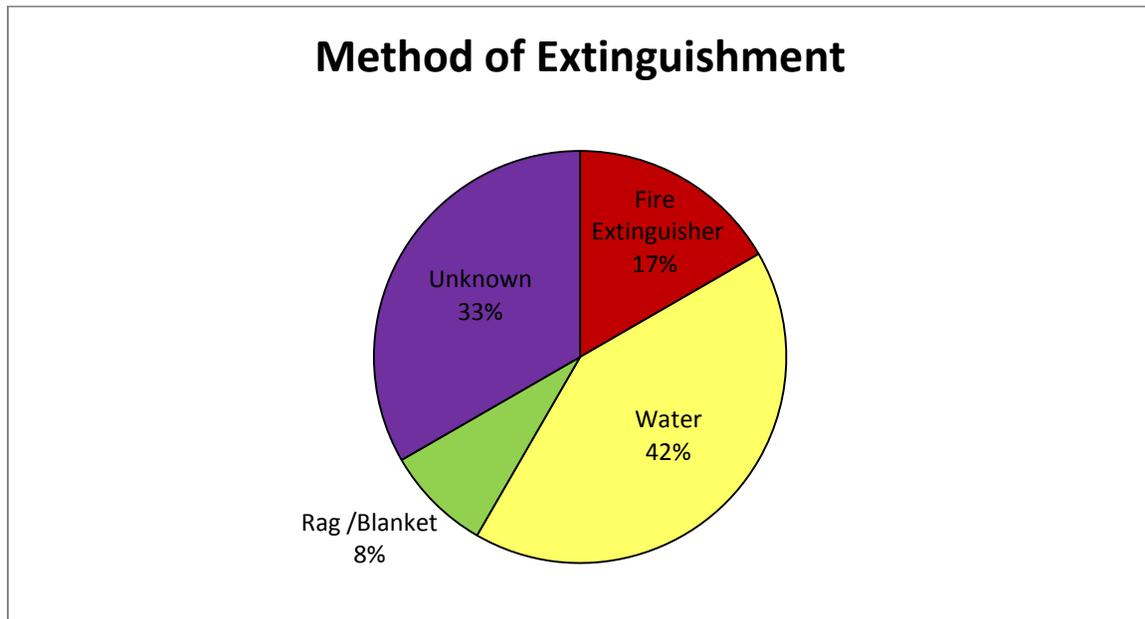
- 14 individuals were injured because they re-entered their homes.
- 6 of the 14 re-entered to find objects or pets.
- An additional 6 of the 14 re-entered to find another person.
- 2 of the 14 re-entered in order to extinguish the fire (see charts 17-18 for further analysis of fire extinguishing behaviors).

Chart 14



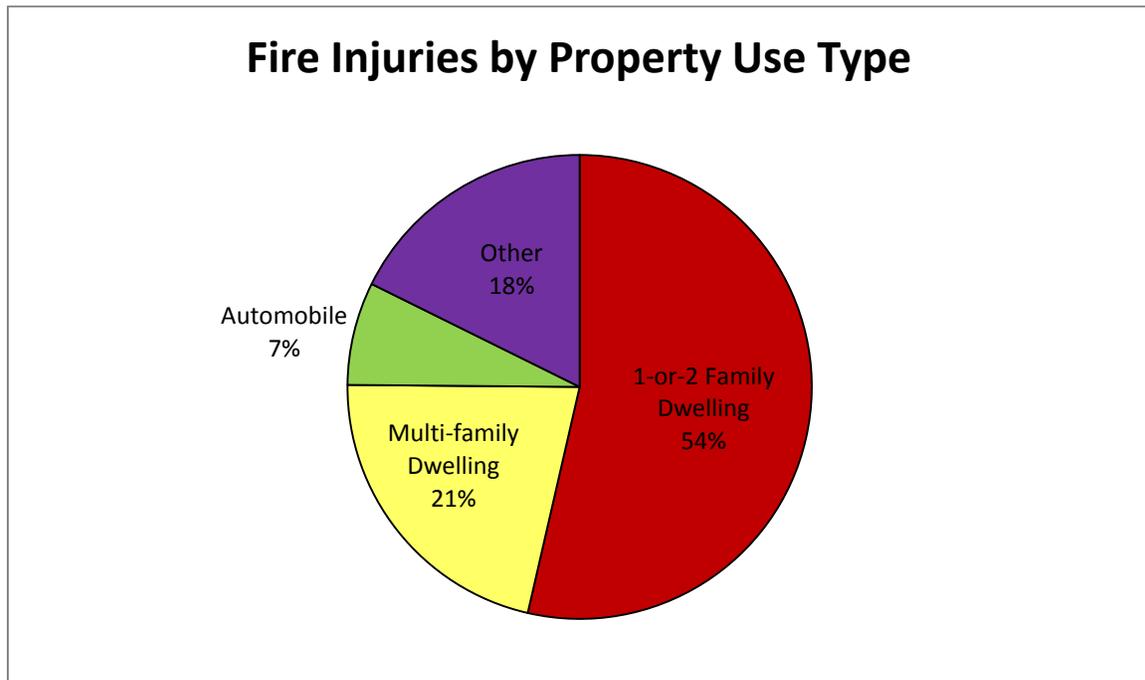
- 22 of the injured individuals were hurt trying to extinguish the fire themselves. Despite the high number of individuals who tried to do this, only four fires were out when the fire department personnel arrived.

Chart 15



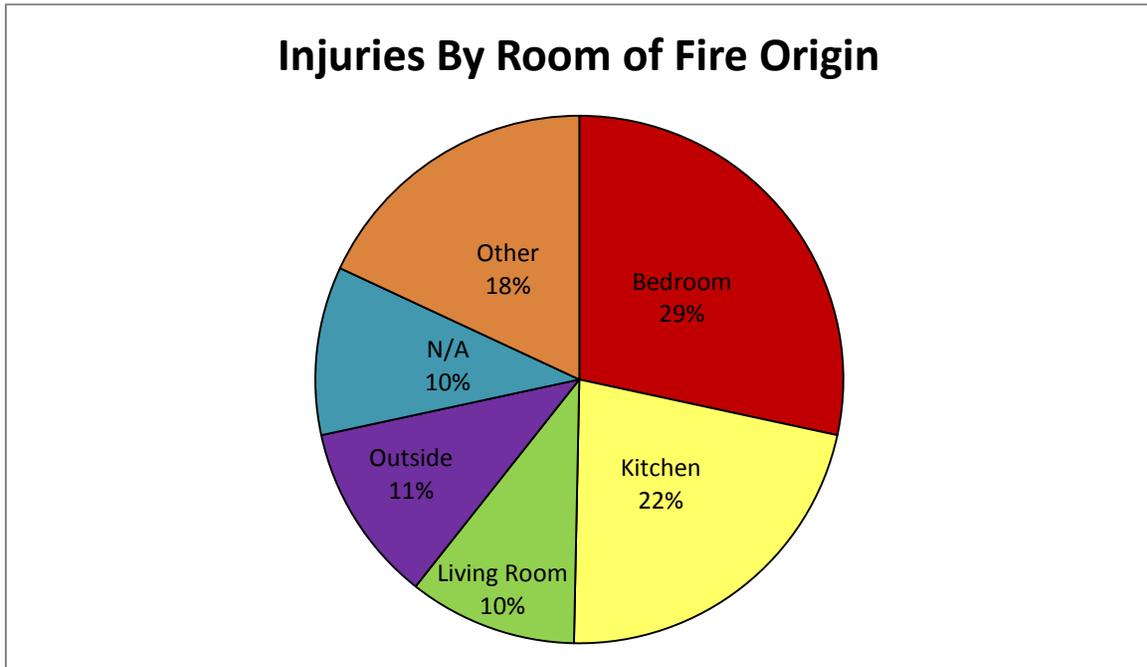
- Of the 23 people who were injured trying to extinguish fires, only 2 were successful. The third fire self-extinguished.
 - In Fire #1: The victim used an extinguisher and extinguished fire, but was hurt in the process.
 - In Fire #2: The victim was smoking while on oxygen; he got out of bed and extinguished the fire. His injuries consisted of burns on his face.
 - In Fire #3: The victim was smoking while on oxygen; he received burns to his face but other materials did not catch on fire. The fire self-extinguished.
- 10 of the 23 individuals attempted to extinguish the fire with water; all were injured.
- 3 attempted to extinguish the fire with an extinguisher.
- 1 person used a blanket and 1 person used a rag.
- The remaining 8 were injured while attempting to extinguish the fire. Their methods of extinguishment were not documented.

Chart 16



- Most people were injured in fires that occurred in 1-or-2 family dwellings (54%, or 97 total).
- 21% of fire injuries (39 total) occurred in multi-family dwellings.
- 7% of fire injuries (13 total) occurred in automobiles.
- The remaining injuries (18%, or 32 total) occurred in other properties; this includes structures such as businesses, private non-residential structures such as sheds, and outdoor fires.
- Similar trends are seen nationally. 51% of fire injuries occur in 1-or-2 family dwellings; 24% occur in apartments (NFPA, 2014).

Chart 17



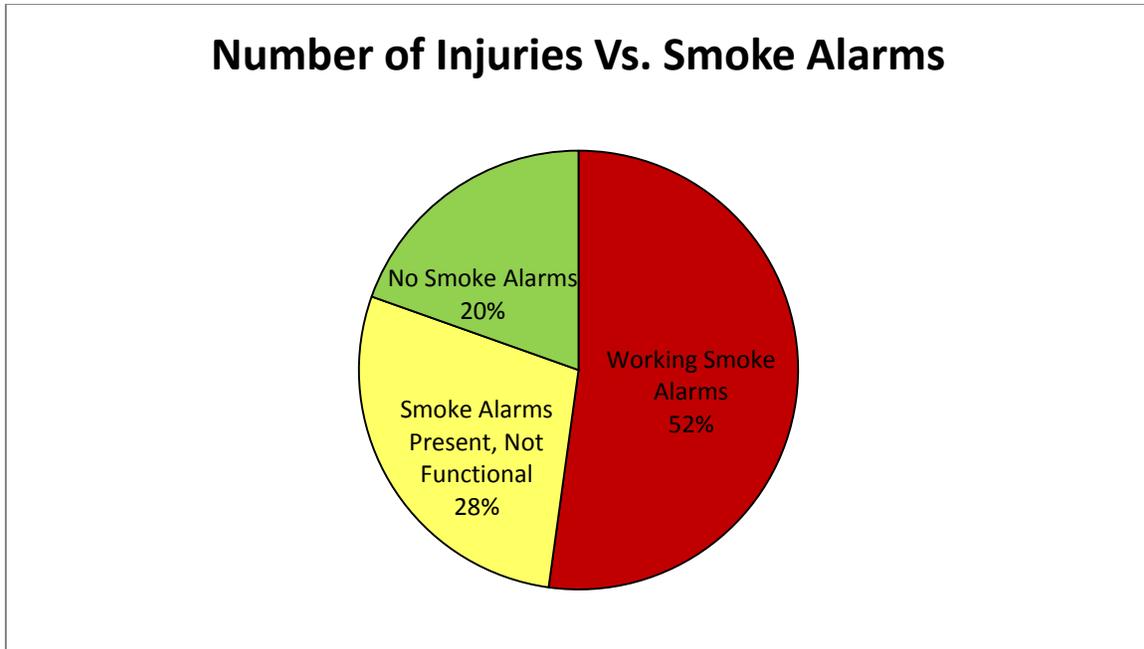
- 29% of Springfield injuries occurred in fires that originated in the bedroom.
- This was followed by 22% of fires that originated in the kitchen and 10% that occurred in the living room.

Miscellaneous

Smoke Alarms

Accurate information is difficult to obtain on smoke alarms because they are often significantly burned in a fire. For this reason, about 75% of the injuries had no information on smoke alarms. While this information is difficult to obtain, it is invaluable and therefore what has been acquired is presented.

Chart 18



- 24 injuries (52%) occurred in homes where there was a working smoke alarm.
- 13 injuries (28%) occurred in homes where non-functional smoke alarms were present.
- 9 injuries (20%) occurred in homes where there were no smoke alarms.

Home Ownership

Chart 19

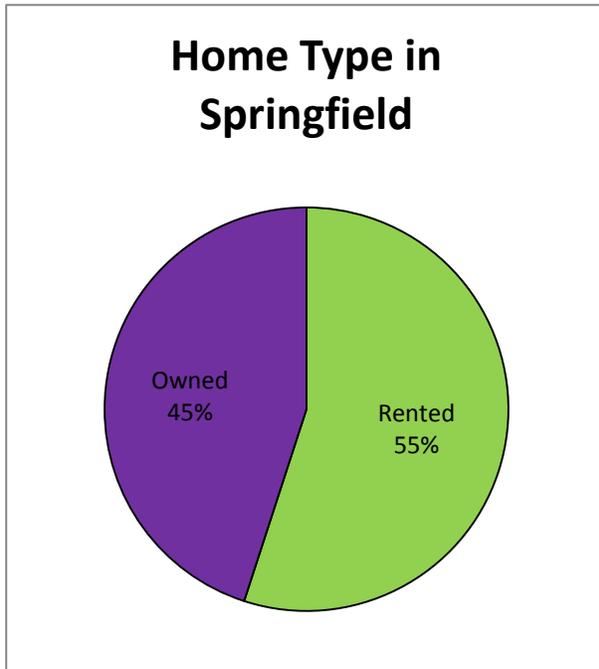
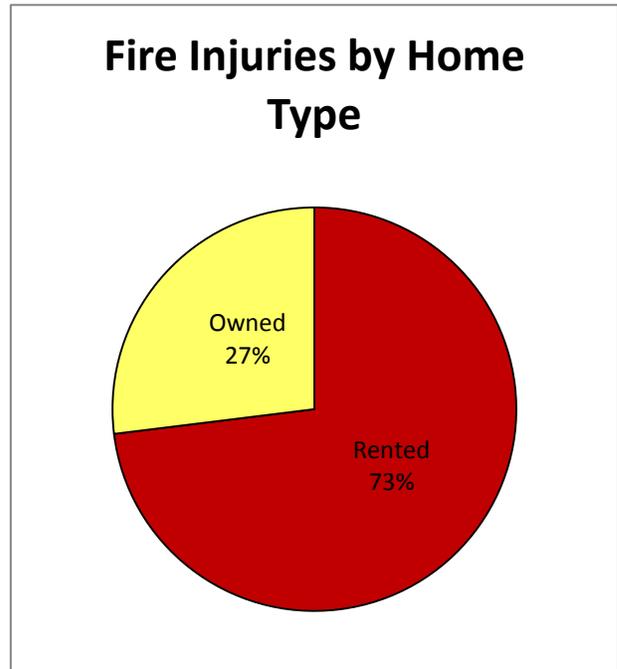


Chart 20



- 84 fires injuries occurred in rental homes, 31 occurred in owner-occupied homes.
- 55% of individuals who live in Springfield dwell in rental residences, but 73% of residential injuries occur in rental residences.