RESEARCH

Structure Fires in Health Care Facilities

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Abstract

In 2009-2013, U.S. fire departments responded to an estimated average of 5,650 structure fires in or on health care properties per year. These fires caused an average of four civilian deaths, 160 civilian injuries and $44.9 million in direct property damage annually. Almost half (46%) of the fires were in nursing homes. Although just 11% of fires were in clinics or doctors' offices, these fires accounted for 54% of the direct property damage. Cooking equipment was involved in two out of three (65%) fires, while 6% of fires were intentionally set. Electrical distribution and lighting equipment, heating equipment, and smoking materials each caused 5% of fires. Only 4% of these fires spread beyond the room of origin. Causes, circumstances, and extent of fire spread varied by occupancy.

This report provides estimates of fire frequency and associated losses for reported fires in: all health care properties; in nursing homes; in hospitals or hospices; in mental health facilities caring for those with developmental disabilities, mental illness or substance abuse issues; and in clinics or doctors' offices. Estimates were derived from NFPA's fire department survey and the USFA's National Fire Incident Reporting System (NFIRS).

Keywords: fire statistics; health care fires; nursing home fires; clinic fires; medical fires.

Acknowledgements

The National Fire Protection Association thanks all the fire departments and state fire authorities who participate in the National Fire Incident Reporting System (NFIRS) and the annual NFPA fire experience survey. These firefighters are the original sources of the detailed data that make this analysis possible. Their contributions allow us to estimate the size of the fire problem. We are also grateful to the U.S. Fire Administration for its work in developing, coordinating, and maintaining NFIRS.

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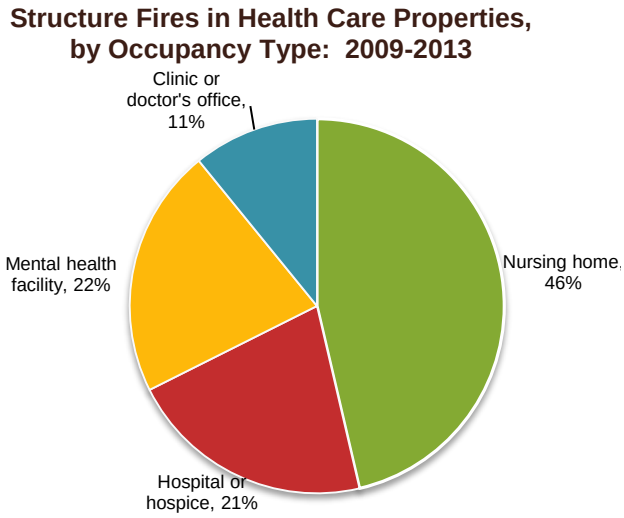
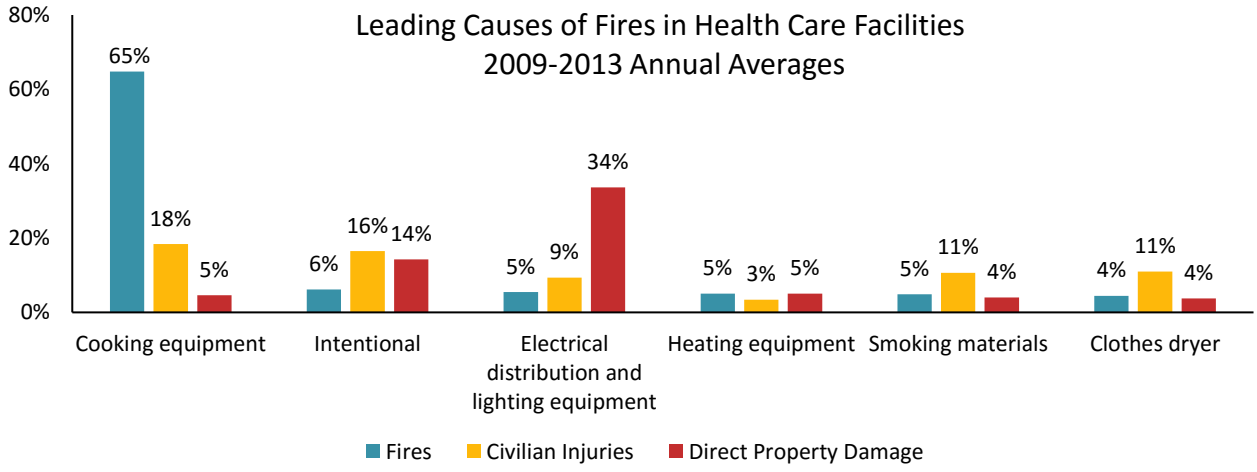
U.S. Structure Fires in Health Care Properties Fact Sheet

U.S. fire departments responded to an estimated average of 5,650 structure fires in health care properties per year in 2009-2013. These fires caused annual averages of four civilian deaths, 160 civilian injuries, and $44.9 million in direct property damage.



- Most fires in these properties are small. Fire spread beyond the room of origin in only 4% of health care fires.
- Fires in nursing homes accounted for a disproportionately higher share of civilian deaths and injuries, but a smaller share of direct property damage, relative to other health care facilities.
- The leading causes and circumstances of fires in health care facilities showed some variation by specific health care occupancy.

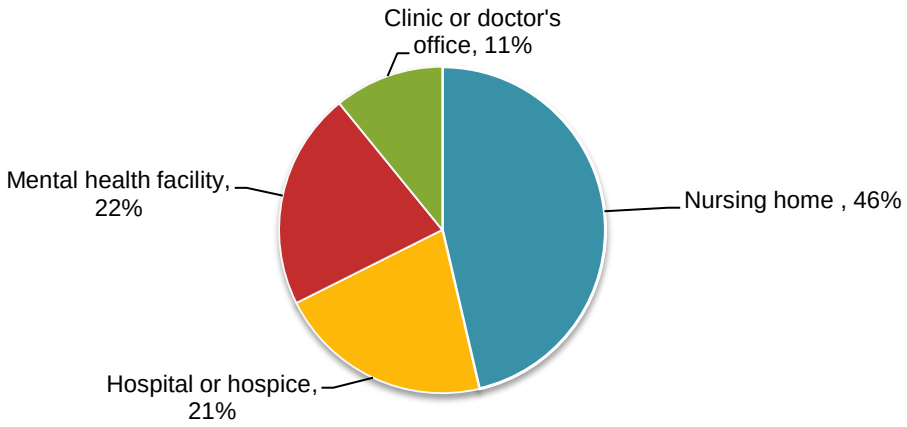
Cooking equipment was the leading cause of fires in all health care properties (65% of fires). However, these fires accounted for just 5% of direct property damage, an indication that most are confined fires. Fires that were intentionally set accounted for 6% of fires, while electrical distribution and lighting equipment, heating equipment and smoking materials each accounted for 5% of the total. Fires caused by electrical distribution and lighting equipment accounted for just over one-third (34%) of direct property damage. Clothes dryers caused 4% of fires.



Structure Fires in Health Care Facilities

During the five-year period of 2009-2013, U.S. fire departments responded to an estimated average of 5,650 structure fires in health care facilities per year. These fires caused an annual average of four civilian deaths, 160 civilian fire injuries, and $44.9 million in direct property damage. Figure 1 and Table A show that almost half (46%) of these fires were in nursing homes and just 11% in clinics or doctors' offices.

Figure 1. Structure Fires in Health Care Properties, by Occupancy Type: 2009-2013



Source: NFIRS and NFPA fire department experience survey.

For this analysis the term "health care facilities" includes four broad categories of occupancies: 1) Hospitals or hospices; 2) Licensed nursing homes providing 24-hour care; 3) Mental health facilities providing 24-hour care to individuals with substance abuse issues or developmental disabilities, or asylums or mental illness; and 4) Clinics, ambulatory care facilities, doctors' or dentists' offices or free-standing dialysis clinics.

This report includes an analysis of fires in health care properties overall and fires in each of the four major categories. There is some overlap between categories, although each incident is only captured once. Hospitals often have ambulatory clinics, and there is a continuum from nursing homes or facilities for individuals with developmental disabilities or substance abuse issues to residential board and care, assisted living, or rest homes. Residential board and care[1] (or assisted living) shares some traits with both health care and residential occupancies and is grouped with residential properties in the U.S. Fire Administration's (USFA's) National Fire Incident Reporting System (NFIRS). It is not included in this analysis.

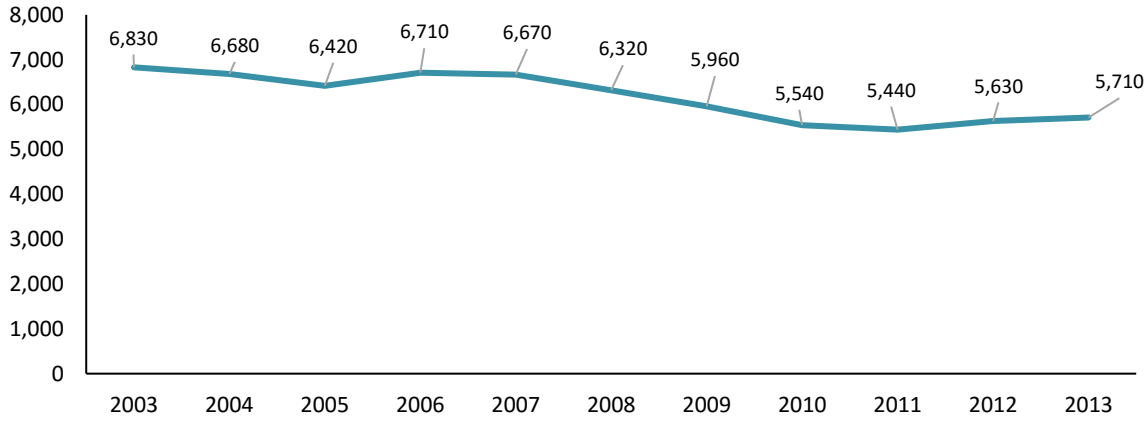
Only fires reported to public fire departments are included in these statistics. Unclassified institutional properties are not included. Supporting tables are provided at the end of this section.

[1] See NFPA's 2012 report, *Structure Fires in Residential Board and Care Facilities*, by Ben Evarts.

During 2009-2013, the 5,650 fires in health care properties accounted for 1.2% of the estimated 483,000 structure fires to which U.S. fire departments responded. The fires in health care properties accounted for 0.2% of the 2,680 civilian structure fire deaths, 1.1% of the 14,910 civilian structure fire injuries, and 0.5% of the $9.9 billion in direct property loss.

Structure fires in health care facilities have generally followed a downward trend over the past decade. The high point for fires in that period was the 6,830 fires in 2003. The number of recorded fires fell every year from 2006 to 2011. The 5,710 fires in 2013 represented a slight increase over the number of fires in the previous three years. See Table 1.

Figure 2. Structure Fires in Health Care Facilities, 2003-2013



Source: NFIRS and NFPA fire department experience survey.

Fires in nursing homes accounted for a disproportionately higher share of civilian deaths and injuries, but smaller share of direct property damage, relative to other health care facilities. Table A. provides a more detailed look at structure fires in health care occupancies during 2009-2013, with associated losses. The 46% of fires occurring in nursing homes accounted for most of the civilian deaths -- although this should be treated cautiously due to the small number of deaths -- as well as 63% of civilian injuries, but just 20% of direct property damage. Clinics and doctors' offices had the smallest share of fires, but largest share of direct property damage (54%), while mental health facilities had 22% of fires, but just 9% of civilian injuries and 6% of direct property damage.

There was little variation or pattern in the timing of fires by month (Table 2) or day of the week (Table 3). Patterns of fires by time of day are more predictable. Over half of the fires (53%) in health care facilities occurred between 9 a.m. and 6 p.m. (See Table 4). Within this time span, the hours between 3 p.m. and 6 p.m. were the peak period for fires, with 20% of the total. There were fewer fires in the overnight hours between midnight and 6 a.m., with 11% of the total, but these fires were associated with 25% of the direct property damage.

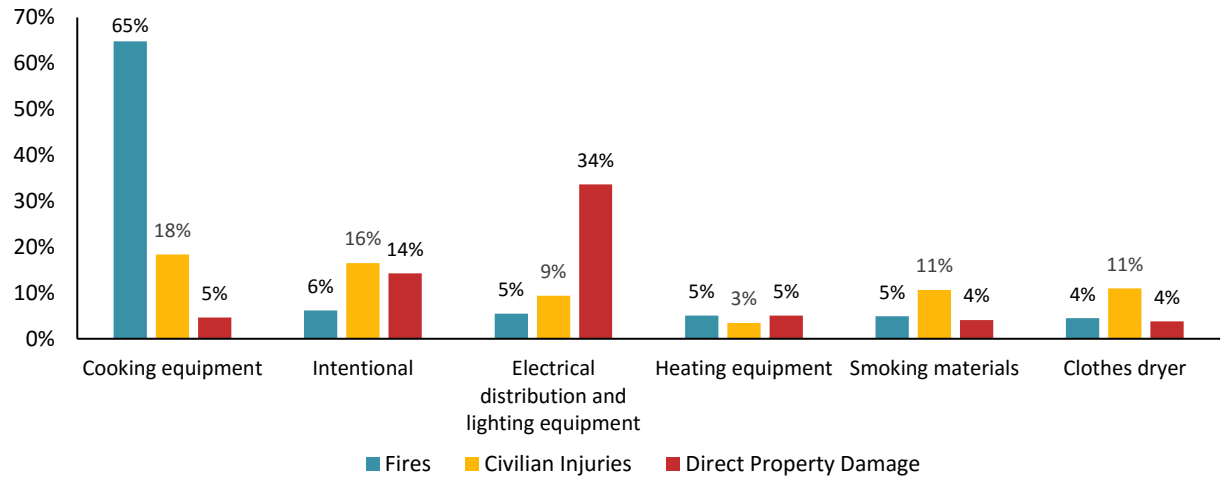
Table A. Structure Fires in Health Care Facilities, by Specific Occupancy
2009-2013 Annual Averages

Occupancy	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Nursing home	2,620	(46%)	3	(71%)	101	(63%)	$8.9	(20%)
Mental health facility	1,220	(22%)	0	(6%)	15	(9%)	$2.7	(6%)
Hospital or hospice	1,200	(21%)	0	(11%)	37	(23%)	$8.9	(20%)
Clinic or doctor's office	610	(11%)	0	(12%)	7	(4%)	$24.4	(54%)
Total	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)

Source: NFIRS and NFPA fire department experience survey.

Figure 3 and Table 5 provide a summary of leading major causes of fires in health care facilities from several data elements. They show that cooking equipment was involved in approximately two out of every three fires (65%) in health care facilities. However, cooking fires accounted for just 5% of direct property damage. Fires that were intentionally set accounted for 6% of fires, while electrical distribution and lighting equipment, heating equipment and smoking materials each accounted for 5% of the total. Clothes dryers caused 4% of fires. The fires caused by electrical distribution and lighting equipment accounted for just over one-third (34%) of direct property damage.

Figure 3. Fires in Health Care Facilities by Leading Cause, 2009-2013 Annual Averages



Source: NFIRS and NFPA fire department experience survey.

The vast majority of cooking equipment fires were confined fires that did not spread beyond the cooking equipment, as shown in Table 6. Contained trash or rubbish fires accounted for 6% of fires, followed by electrical distribution and lighting equipment (5%) and heating equipment (5%), and clothes dryers (4%). The fires involving electrical distribution and lighting equipment accounted for the highest share of property damage (34%). Table 7 shows that the vast majority of fires (75%) had an unintentional cause of ignition, while 16% were caused by a failure of equipment or heat source and 6% had an intentional cause.

Unattended equipment was the leading factor contributing to fires in health care facilities. Almost one-fifth of fires (18%) were associated with unattended equipment as a factor in the fire, as indicated in Table 8. However, almost all of these were confined fires that caused little direct property damage (1% of total). An electrical failure of malfunction was a factor in 12% of fires, which were associated with 19% of civilian injuries and over one-third (35%) of direct property damage. Other leading factors contributing to fire ignition included unclassified misuse of material or product (11%), abandoned or discarded material or product (11%), mechanical failure or malfunction (10%), and heat source too close to combustibles (9%). Over one-fifth (22%) of civilian injuries were associated with fires in which unclassified misuse of material or product was a factor, and three of four civilian deaths (64%) were associated with the fires in which a heat source too close to combustibles was a factor contributing to the fire.

Half of the fires in health care facilities involved either unclassified heat from powered equipment (26%) or radiated or conducted heat from operating equipment (24%) as a heat source. Other leading heat sources included heat sources that were unclassified (10%), arcing (8%), unclassified hot or smoldering objects (7%), and sparks, embers, or flames from operating equipment (6%). The 8% of fires in which arcing served as the heat source caused 21% of direct property damage. See Table 9 for more details.

The kitchen is the leading area of origin of fires in health care facilities. Over half (53%) of fires in health care facilities began in the kitchen or cooking area. These fires were mainly confined fires and accounted for just 4% of direct property damage, as indicated in Table 10. Other leading areas of origin were a laundry room or area (6%), bedroom or patient room (5%), and lavatory, bathroom, locker room, or check room (4%). While fires that began in a bedroom or patient room represented just 5% of the total, they accounted for 38% of civilian injuries.

Consistent with the large share of fires related to cooking, the leading item first ignited in health care facility fires was cooking materials, with 43% of total. The second leading item first ignited was electrical wire or cable insulation, accounting for 7% of fires, but 20% of direct property damage. Other leading items first ignited were unclassified items (6%) and rubbish, trash, or waste (6%). See Table 11.

Most fires in health care facilities were limited in their spread. More than five of every six fires (85%) were confined to the object of origin, as shown in Table 12. Another 11% of fires were confined to the room of origin, although these fires were associated with approximately half (49%) of civilian injuries and 25% of direct property damage. Of the fires that extended beyond the room of origin, 1% were confined to the floor of origin and 3% to the building of origin.

Sprinklers provide protection for health care properties. NFPA's most recent report on the U.S. experience with sprinklers indicates that 57% of health care properties had some form of sprinkler protection during 2007-2011.[2] The report also estimates that there was a 65% estimated reduction in direct property damage from fires in health care properties in 2007-2011 relative to health care properties that had no automatic extinguishing equipment.

[2] See NFPA's 2013 report, *U.S. Experience with Sprinklers*, by John Hall, Jr.

Data Sources, Definitions and Conventions Used in this Report

Unless otherwise specified, the statistics in this analysis are national estimates of fires reported to U.S. municipal fire departments and so exclude fires reported only to Federal or state agencies or industrial fire brigades. The 2006-2010 estimates are projections based on the detailed information collected in Version 5.0 of the U.S. Fire Administration's National Fire Incident Reporting System (NFIRS 5.0) and the National Fire Protection Association's (NFPA's) annual fire department experience survey. Except for property use and incident type, fires with unknown or unreported data were allocated proportionally in calculations of national estimates.

In general, any fire that occurs in or in a structure is considered a structure fire, even if the fire was limited to contents and the building itself was not damaged.

What are "confined" and "non-confined" fires?
NFIRS 5.0 includes a category of structure fires collectively referred to as "confined fires," identified by incident type. These include confined cooking fires, confined chimney or flue fires, confined trash fires, confined fuel burner or boiler fires, confined commercial compactor fires, and confined incinerator fires (incident type 113-118). Losses are generally minimal in these fires, which by definition, are assumed to have been limited to the object of origin. Although causal data is not required for these fires, it is sometimes present.

Confined and non-confined fires were analyzed separately and then summed for Cause of Ignition, Heat Source, Factor Contributing to Ignition, Area of Origin, and Item First Ignited. For Equipment Involved in Ignition, the confined fire incident types are assumed to provide causal information without further analysis.

Additional information
Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire. Except for trend tables, property damage has not been adjusted for inflation. Fires are rounded to the nearest ten, civilian deaths and injuries are rounded to the nearest one, and direct property damage is rounded to the nearest hundred thousand dollars.

Details on the methodology may be found in Appendices A and B.

Nursing Home Fires

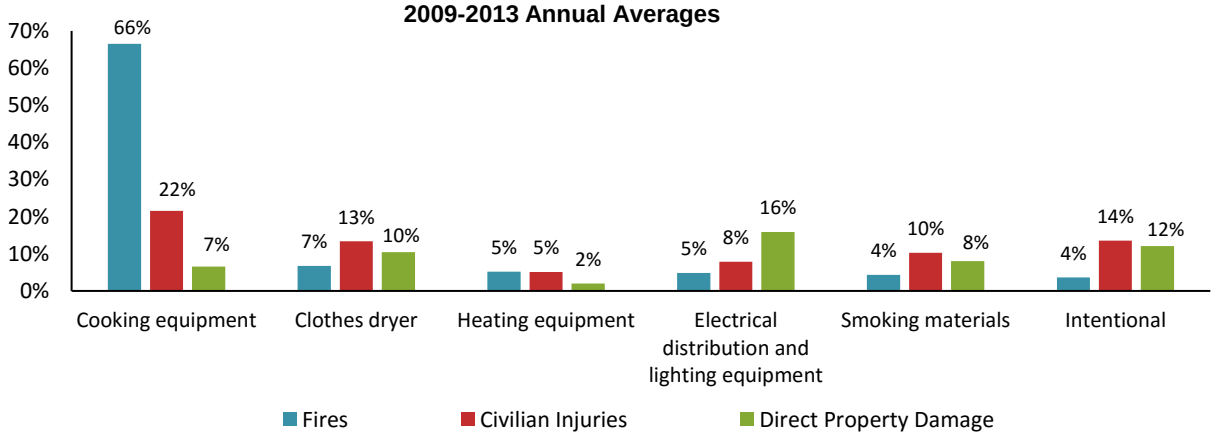
During 2009-2013, U.S. fire departments responded to an estimated average of 2,620 fires each year in nursing homes, as shown in Table A. These fires caused an average of three civilian deaths, 101 civilian injuries and $8.9 million in direct property damage annually. Nearly half (46%) of the fires in health care properties, as well as the majority of civilian deaths (71%) and civilian injuries (63%) occurred in nursing homes. These fires also accounted for one-fifth (20%) of the direct property damage experienced by health care occupancies during this period.

As shown in Table 1b, fires in nursing homes vary from year to year, but there are generally fewer fires on an annual basis than in the 1980s.

In the 2009-2013 period, the fewest fires were recorded in warm weather months, with an estimated 190 fires each month in July and August (7% of the annual total) and an estimated 200 fires each month in June and September, (8% of the total), as shown in Table 2b. There were also more fires in nursing homes on Sunday (420 fires, 16% of total) and Saturday (400 fires, 15%) than other days of the week (Table 3b). The fewest fires were recorded in hours between midnight and 6 a.m. (11% of total). The peak period for fires was the three-hour period from 3 p.m. to 6 p.m., with nearly one-fifth of the total (18%), with another 17% of fires occurring during the period from 9 a.m. to noon. See Table 4b.

Table 5b provides a summary of leading major causes extracted from several data elements. Cooking equipment was the cause of two-thirds (66%) of nursing home fires. Other leading causes included clothes dryers (7%), heating equipment (5%), electrical distribution and lighting equipment (5%), and smoking materials (4%), while another 4% had an intentional cause.

Figure 4. Structure Fires in Nursing Homes by Leading Cause, 2009-2013 Annual Averages



Source: NFIRS and NFPA fire department experience survey.

Table 6b shows the major types of equipment involved in nursing home fires. In addition to cooking equipment, other leading types of equipment included clothes dryers (7%), heating equipment (5%), and electrical distribution and lighting equipment (5%) (Table 6b.) The fires involving dryers were associated with 13% of civilian injuries, while those involving electrical distribution and lighting equipment were associated with 16% of direct property damage. As shown in Table 7b, almost four of five nursing home fires (78%) had an unintentional cause and 16% were due to a failure of equipment or heat source, while 4% had an intentional cause. Fires with an intentional cause were associated with a disproportionate share of civilian injuries (14%) and direct property damage (12%).

Unattended equipment was a contributing factor in 18% of the fires in nursing homes in 2009-2013, most of which were confined fires, as indicated in Table 8b. Other leading factors contributing to nursing home fires were unclassified misuse of a material or product (12% of fires, but 20% of civilian injuries and 20% of direct property damage), mechanical failure or malfunction (11% of fires and 18% of civilian injuries), electrical failure of malfunction (11% of fires, 16% of civilian injuries, and 24% of direct property damage), heat source too close to combustibles (10%), and abandoned or discarded material or product (10%).

The leading sources of heat for these fires included unclassified heat from operating equipment (28% of fires), radiated or conducted heat from operating equipment (25%), an unclassified heat source (9%), arcing (7%), and spark, ember, or flame from operating equipment (7%), as shown in Table 9b. The 7% of fires in which arcing was a heat source accounted for a disproportionate share of direct property damage (23%). Smoking materials were involved in 4% of fires.

Consistent with the prevalence of cooking equipment in nursing home fires, the kitchen or cooking area was the leading area of origin in these fires in 2009-2013, with 58% of the total. Another 9% of fires originated in the laundry room or area, followed by bedroom or patient room (7%). Fires originating in the bedroom or patient room accounted for 42% of civilian injuries and 16% of direct property damage. See Table 10b.

Cooking materials, including food, were first ignited in 44% of nursing home fires, followed by electrical wire or cable insulation (7% of fires), unclassified items (6%), and linen other than bedding (5%). See Table 11b.

Nearly nine in 10 fires in nursing homes (86%) did not spread beyond the object of origin, as shown in Table 12b. Of the remaining fires, only 3% spread beyond the room of origin.

In NFPA's most recent report on the U.S. experience with sprinklers, 69% of nursing homes had some form of sprinkler protection in 2007-2011.

Hospital or Hospice Fires

In the 2009-2013 period, U.S. fire departments responded to an estimated average of 1,200 fires each year in hospitals or hospices, (Table A). These fires caused an average of 37 civilian injuries and $8.9 million in direct property damage annually. Less than one death per year occurred as a result of fires in these properties. Hospices accounted for just 35, or 3%, of the 1,200 fires. Annual data are available in Table 1c.

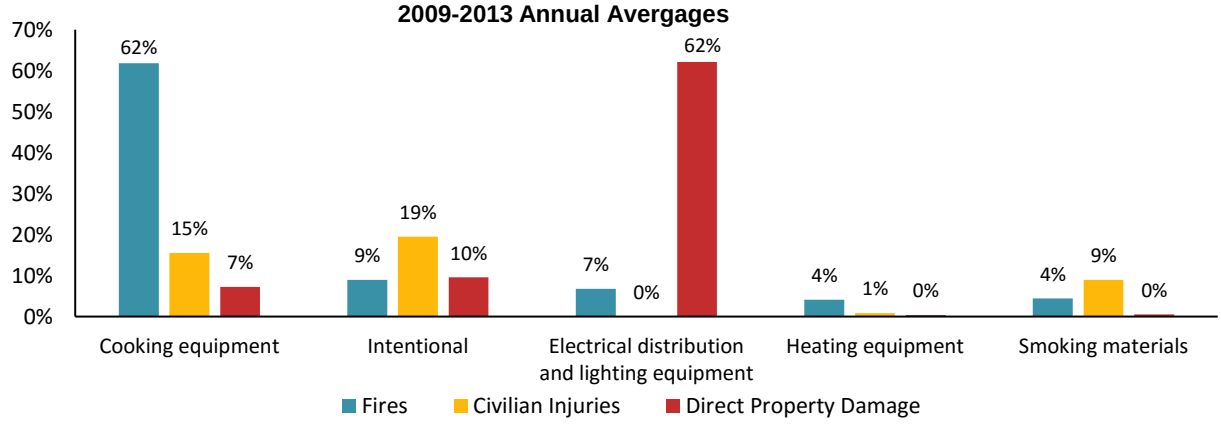
As shown in Table A, one-fifth (21%) of health care property fires and almost one-quarter (23%) of civilian injuries in health care property fires during 2009-2013 occurred in hospitals or hospices. These fires accounted for 0.2% of the 483,000 total structure fires during 2009-2013, less than 0.1% of the 2,680 civilian fire deaths, 0.2% of the 14,910 civilian fire injuries, and 0.1% of $9.9 billion in direct property damage.

There were an estimated 1,190 hospital or hospice fires in 2013, far below the high of 8,330 fires in 1980. See Table 1c. Fires fell most dramatically during the early to late 1980s, and there have been fewer than 2,000 fires each year since 1995.

Fires were distributed fairly evenly on a monthly basis during 2009-2013, as shown in Table 2c. Table 3c shows that these fires were less common on Saturdays and Sundays. Table 4c indicates that the peak period for fires was from 10 a.m. to 1 p.m. They were least common between midnight and 6 a.m.

Cooking equipment was involved in three of five fires (62%) in hospitals and hospices in 2009-2013, but these fires accounted for just 15% of civilian injuries and 7% of direct property damage. As indicated in Figure 5 and Table 5c, the other leading causes of fires in hospitals and hospices included intentional fires (9%), electrical distribution and lighting equipment (7%), heating equipment (4%), and smoking materials (4%). The fires caused by electrical distribution and lighting equipment were responsible for 62% of direct property damage. Table 6c provides additional information on equipment involved in hospice and hospital fires.

Figure 5. Structure Fires in Hospitals or Hospices by Leading Cause, 2009-2013 Annual Averages



Source: NFIRS and NFPA fire department experience survey.

The great majority of hospital and hospice fires (71%) have an unintentional cause, as shown in Table 7c, while a failure of equipment or heat source accounts for almost one-fifth (18%) of fires, and 9% had an intentional cause. Unattended equipment was a contributing factor in 16% of the fires in hospitals and hospices. (Table 8c). Other leading factors contributing to hospital and hospital fires in 2009-2013 included electrical failures or malfunctions (13%), mechanical failure or malfunctions (11%), abandoned or discarded materials or products (11%), unclassified misuse of materials or products (10%), and heat source too close to combustibles (9%).

The heat sources most often involved in hospital and hospice fires included unclassified heat from powered equipment (25% of fires), radiated or conducted heat from operating equipment (22%), arcing (8%), an unclassified hot or smoldering object (7%), and a spark, ember, or flame from operating equipment (6%), as shown in Table 9c. Over two of five hospital and hospice fires (44%) originated in a kitchen or cooking area, while 7% originated in a lavatory, locker room, or check room, and 4% started in a bedroom or patient room. Fires originating in a bedroom or patient room were associated with over one-third (34%) of civilian injuries. See Table 10c.

Table 11c provides information on items first ignited and indicates that cooking materials were the item first ignited in 42% of fires, followed by rubbish, trash or waste (10%), electrical wire or cable insulation (7%), and an unclassified item first ignited (7%).

Nearly nine of 10 hospital and hospice fires in 2009-2013 were either coded as confined fires that did not spread beyond the object or container of origin (72%) or were coded as confined to the object of origin (15%). Just 3% of the fires spread beyond the room of origin. See Table 12c for more information.

In NFPA's most recent report on the U.S. experience with sprinklers, 69% of hospitals had some form of sprinkler protection in 2007-2011.

Fires in Mental Health Facilities Providing 24-Hour Care

In the 2009-2013 period, U.S. fire departments responded to an estimated average of 1,220 fires in facilities providing 24-hour care to individuals with developmental disabilities, mental illness, or substance abuse issues. (Table A). These fires caused an estimated average of 15 civilian injuries and $2.7 million in direct property damage each year. Less than one civilian death per year occurred in these fires. Facilities caring for people with developmental disabilities accounted for two-thirds (66%) of these fires, while alcohol or substance abuse recovery centers accounted for 28% of fires and asylums or mental institutions accounted for the remaining 7% of fires.

Table A. shows that slightly more than one-fifth (22%) of health care property fires occurred in mental health facilities. These fires accounted for 9% of civilian injuries and 6% of the direct property damage associated with fires in health care properties. Fires in mental health facilities also accounted for 0.3% of the 483,000 fires in all structures from 2009 to 2013, as

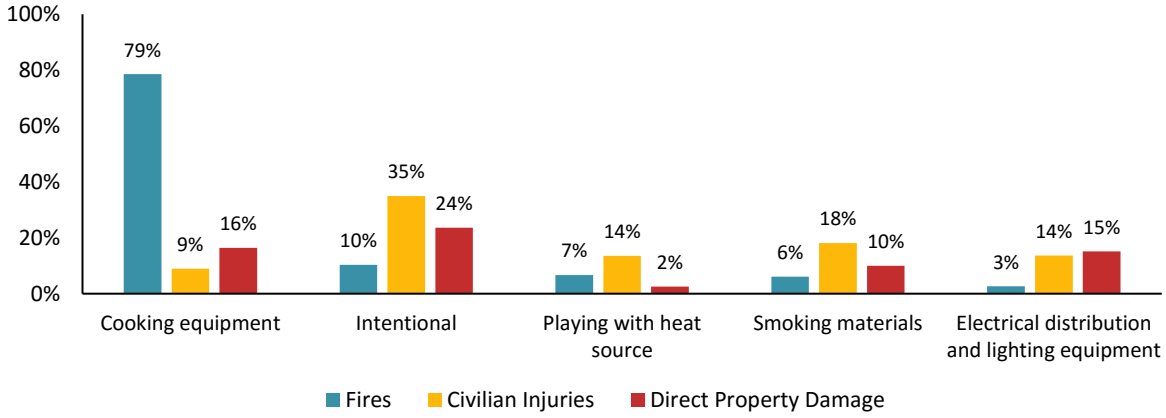
well as 0.01% of civilian deaths, 0.1% of civilian injuries, and 0.03% of direct property damage associated with fires in all structures.

In 2013, there were 1,200 fires in mental health facilities, a 22% drop from the 1,530 recorded in 2003. The number of fires has fluctuated from year to year since 2003, but there is a clear downward trend (Table 1d). Because of changes in NFIRS, we have not provided long-term trend data.

Fires in mental health facilities were distributed fairly evenly through the year on a monthly basis in the 2009-2013 period, as indicated in Table 2d. Fires were more common on a Saturday (16%) or Sunday (17%) than other days of the week (Table 3d). Fires peaked between 3 p.m. and 6 p.m. and were least common between midnight and 6 a.m., as shown in Table 4d.

Figure 6 and Table 5d indicate that cooking equipment was involved in 79% of fires in mental health facilities, while 10% were intentionally set, 7% were caused by play with a heat source, 6% by smoking materials, and 3% by electrical distribution and lighting equipment.

Figure 6. Structure Fires in Mental Health Facilities by Leading Cause, 2009-2013 Annual Averages



Source: NFIRS and NFPA fire department experience survey.

Table 6d shows that the vast majority of cooking equipment fires were confined fires (76%), while no equipment was involved in 6% of fires and clothes dryers in 3% of fires. Nearly four of five fires in mental health facilities had an unintentional cause (77%) and 10% had an intentional cause, with another 9% caused by a failure of equipment or heat source, as shown in Table 7d.

Unattended equipment was a factor in one-quarter of these fires and abandoned or discarded materials or products in another 12%, followed by unclassified misuse of materials or products (10%), a failure to clean (9%), mechanical failure or malfunction (7%), and play with a heat source (7%). See Table 8d. Table 9d includes data on heat source and indicates that radiated or conducted heat from operating equipment accounted for almost three in ten

fires (28%) and that unclassified heat from powered equipment accounted for 23% of fires, followed by unclassified heat sources (13%), unclassified hot or smoldering objects (7%), lighters (6%), smoking materials (6%), and a spark, ember, or flame from operating equipment (6%).

Two-thirds of the fires in mental health facilities (66%) started in a kitchen or cooking area, 6% in a bedroom or patient room, and 5% in a lavatory, bathroom or checkroom. Fires originating in a bedroom or patient room caused 39% of the civilian injuries, as well as 12% of direct property damage. See Table 10d.

Nearly nine of 10 fires in mental health facilities in 2009-2013 were either coded as confined fires that did not spread beyond the object or container of origin (82%) or were coded as confined to the object of origin (7%).

As shown in Table 11d, cooking materials were the item first ignited in 54% of fires, only 1% of which were non-confined fires. The other leading items first ignited included unclassified items (7%) and rubbish, trash or waste (5%). Just 3% of the fires spread beyond the room of origin. See Table 12d for more information on extent of fire spread.

Fires in Clinics or Doctors' Offices

In the 2009-2013 period, U.S. fire departments responded to an annual average of 610 fires per year in clinics of doctors' offices. These fires caused an average of seven civilian injuries and $24.4 million in direct property damage. Less than one civilian death per year occurred in these fires. Fires in clinics, offices of doctors, dentists, or oral surgeons accounted for 230, or 37%, of these fires, while there were 80 fires in clinics or clinic-type infirmaries (13%), 10 fires per year in hemodialysis units (2%), and 300 fires in unclassified clinics or doctors' offices (48%).

Table B.
Structure Fires in Clinics or Doctors' Offices, by Specific Occupancy
2009-2013 Annual Averages

Occupancy	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Doctor, dentist or oral surgeon's office	230	(37%)	3	(2%)	$12.9	(29%)
Clinic, clinic-type infirmary	80	(13%)	1	(1%)	$1.9	(4%)
Hemodialysis unit	10	(2%)	0	(0%)	$0.0	(0%)
Unclassified clinics, doctors' offices, hemodialysis centers	300	(48%)	3	(2%)	$9.5	(21%)
Total	610	(100%)	7	(100%)	$24.4	(100%)

Source: NFIRS and NFPA fire department experience survey.

Fires in clinics or doctors' offices represented 11% of the fires in all health care properties in 2009-2013, as well as 4% of the associated fire injuries and over half (54%) of direct property damage. These fires also accounted for 0.1% of the 483,000 total structure fires,

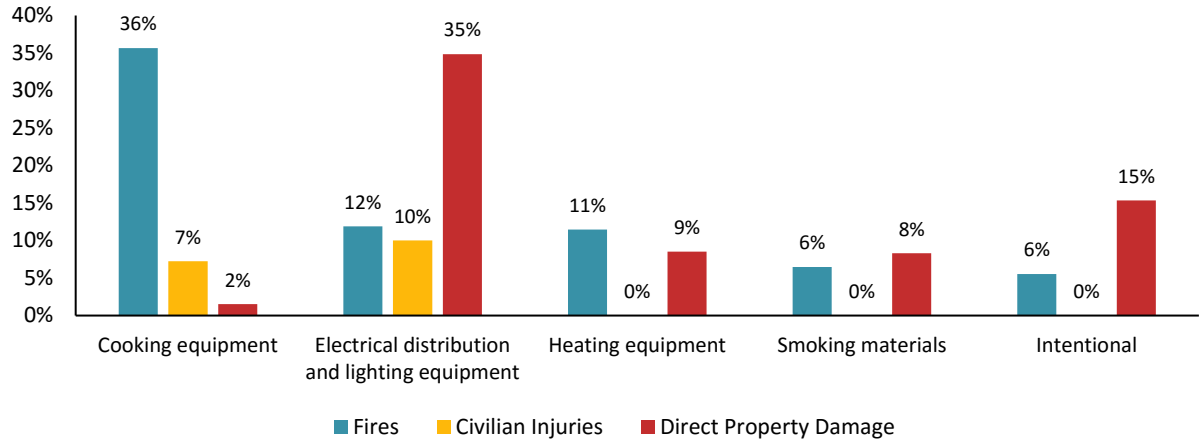
.02% of civilian structure fire deaths, .05% of the 14,910 civilian structure fire injuries, and 0.2% of the $9.9 billion in direct property damage.

The annual average of 610 fires in clinics or doctors' offices in the five-year period from 2009-2013 was 14% lower than the annual average of 720 fires in these properties in the preceding five years between 2004 and 2008. See Table 1e. We have not undertaken long-term trend analysis due to changes in NFIRS.

The greatest number of fires in 2009-2013 came in January, which recorded 10% of the annual total, but there was generally little variation in fire incidence in clinics and doctors' offices from month to month. See Table 2e. Fires were less common on Saturday or Sunday, as shown in Table 3e. The peak period for fires was from 8 a.m. to 4 p.m. (Table 4e). The fewest fires were recorded in the overnight hours from 10 p.m. to 6 a.m.

Cooking equipment was involved in just over one-third of these fires (36%), while electrical distribution and lighting equipment was involved in 12% of fires and heating equipment was involved in 11% of fires. Smoking materials caused 6% of fires, and another 6% of fires were intentionally set (Figure 7 and Table 5e).

Figure 7. Structure Fires in Clinics or Doctors' Offices by Leading Cause, 2009-2013 Annual Averages



Source: NFIRS and NFPA fire department experience survey.

Table 6e provides a comprehensive breakdown of fires by equipment involved in ignition. Besides cooking equipment and electrical distributing and lighting equipment, the table shows that heating equipment was involved in 11% of fires in clinics or doctors' offices and that fans were involved in 6% of fires. The great majority of fires (65%) had an unintentional cause, and approximately one-quarter (26%) were caused by a failure of equipment or heat source, with 6% of the fires intentionally set (Table 7e).

An electrical failure of malfunction was a factor in one-fifth of fires. These fires were associated with one-third (33%) of direct property damage. Other leading factors that contributed to fires in clinics and doctor's offices included equipment that was left

unattended (13%), abandoned or discarded materials or products (11%), mechanical failures or malfunctions (11%), and heat sources too close to combustibles (8%). See Table 8e.

Table 9e shows that the major sources of heat in these properties were unclassified heat from powered equipment (25%), radiated or conducted heat from operating equipment (18%), arcing (14%), unclassified hot or smoldering objects (8%), unclassified heat sources (7%), smoking material (6%), and a spark, ember, or flame from operating equipment (6%).

Almost three of 10 fires (28%) started in a kitchen or cooking area and 10% started in an office. Other leading areas of fire origin were a lavatory, locker room or check room (7%) and heating equipment room (5%). See Table 10e. As shown in Table 11e, cooking materials were the leading item first ignited (25% of fires), followed by electrical wire or cable insulation (14%), rubbish, trash, or waste (8%), unclassified items (7%) and flammable and combustible liquids and gases, piping and filter (7%).

Two-thirds (67%) of these fires either had an incident type indicating a confined fire that did not spread beyond the container or object of origin (49%) or, for other incident types, was confined to the object of origin (18%). Fire spread beyond the room of origin in 16% of incidents, substantially more than other health care occupancies. See Table 12e.

Table 1.
Structure Fires in Health Care Facilities by Year, 2003-2013

Year	Fires	Civilian Deaths	Civilian Injuries	Direct Property Damage (in Millions) As Reported	Direct Property Damage (in Millions) In 2013 Dollars
2003	6,830	57	183	$35.6	$45.2
2004	6,680	6	134	$31.8	$39.3
2005	6,420	6	199	$34.3	$41.0
2006	6,710	6	206	$39.0	$45.1
2007	6,670	5	172	$40.7	$45.7
2008	6,320	8	147	$83.4	$90.4
2009	5,960	8	166	$56.5	$61.4
2010	5,540	4	164	$40.7	$43.5
2011	5,440	1	98	$31.8	$33.0
2012	5,630	6	180	$51.6	$52.5
2013	5,710	2	191	$43.8	$43.8

Note: These are national estimates of fires reported to U.S. municipal fire departments and so exclude fires reported only to Federal or state agencies or industrial fire brigades. These national estimates are projections based on the detailed information collected in Version 5.0 of NFIRS. Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire. Inflation adjustments were based on the consumer price index found in the U.S. Census Bureau's Purchasing Power of the Dollar.

Source: NFIRS and NFPA fire department experience survey.

Table 1b.
Structure Fires in Nursing Homes by Year, 1980-2013

Year	Fires	Civilian Injuries	Direct Property Damage (in Millions)	
			As Reported	In 2013 Dollars
1980	3,720	120	$1.5	$4.2
1981	3,630	264	$1.8	$4.6
1982	3,450	129	$1.4	$3.4
1983	3,190	173	$1.6	$3.7
1984	2,820	163	$3.4	$7.6
1985	3,250	170	$4.2	$9.1
1986	2,910	178	$2.0	$4.3
1987	3,080	93	$1.7	$3.5
1988	2,720	160	$2.0	$3.9
1989	2,650	135	$3.0	$5.6
1990	2,580	248	$2.5	$4.5
1991	2,580	295	$3.9	$6.7
1992	2,580	152	$4.7	$7.8
1993	2,500	247	$4.6	$7.4
1994	2,590	250	$5.6	$8.8
1995	2,200	175	$2.3	$3.5
1996	2,270	149	$5.6	$8.3
1997	2,430	264	$3.2	$4.6
1998	2,140	199	$4.0	$5.7
1999	1,230	102	$43.5	$60.8
2000	1,820	63	$2.3	$3.1
2001	2,960	92	$3.4	$4.5
2002	2,620	150	$5.9	$7.6
2003	2,950	142	$9.0	$11.4
2004	2,970	99	$6.5	$8.0
2005	2,750	129	$4.9	$5.8
2006	2,970	123	$12.8	$14.8
2007	3,060	130	$6.3	$7.1
2008	3,000	103	$30.0	$32.5
2009	2,660	92	$8.0	$8.7
2010	2,510	104	$8.0	$8.6
2011	2,510	61	$4.7	$4.8
2012	2,680	106	$10.6	$10.8
2013	2,730	142	$13.2	$13.2

Table 1b. (Continued)
Structure Fires in Nursing Homes by Year, 1980-2013

Year	Fires	Civilian Injuries	Direct Property Damage (in Millions)	
			As Reported	In 2013 Dollars

Note: These are national estimates of fires reported to U.S. municipal fire departments and so exclude fires reported only to Federal or state agencies or industrial fire brigades. These national estimates are projections based on the detailed information collected in Version 5.0 of NFIRS. NFIRS 5.0, first introduced in 1999, instituted major changes in the coding rules and definitions. Estimates for 1999-2009 are based on data collected originally in NFIRS Version 5.0. Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire. Because of the small numbers, civilian deaths are not shown. *Because of low participation in NFIRS Version 5.0 during 1999-2001, estimates for those years are highly uncertain and must be used with caution.* Inflation adjustments were based on the consumer price index found in the U.S. Census Bureau's Purchasing Power of the Dollar.

Source: NFIRS and NFPA fire department experience survey

Table 1c.
Structure Fires in Hospitals and Hospices by Year, 1980-2013

Year	Fires	Civilian Injuries	Direct Property Damage (in Millions)	
			As Reported	In 2013 Dollars
1980	8,330	315	$6.8	$19.3
1981	8,230	213	$9.2	$23.5
1982	7,080	216	$78.5	$189.4
1983	6,370	194	$4.2	$9.8
1984	5,560	128	$2.4	$5.4
1985	5,610	145	$4.2	$9.1
1986	4,720	182	$3.9	$8.3
1987	4,590	146	$4.5	$9.2
1988	3,640	166	$8.9	$17.6
1989	3,210	154	$6.9	$13.0
1990	2,880	131	$5.6	$10.0
1991	2,570	103	$6.1	$10.4
1992	2,590	73	$5.8	$9.6
1993	2,360	132	$3.2	$5.2
1994	2,410	97	$8.3	$13.1
1995	1,860	68	$5.2	$8.0
1996	1,940	97	$3.8	$5.7
1997	1,920	132	$3.7	$5.4
1998	1,610	96	$5.8	$8.3
1999	780	34	$9.0	$12.6
2000	1,100	32	$2.0	$2.7
2001	1,160	24	$2.2	$2.9
2002	1,340	25	$3.0	$3.9
2003	1,640	27	$10.0	$12.7
2004	1,560	12	$3.1	$3.8
2005	1,580	46	$2.7	$3.2
2006	1,610	30	$6.0	$6.9
2007	1,520	28	$12.2	$13.7
2008	1,450	23	$8.4	$9.1
2009	1,360	49	$7.7	$8.4
2010	1,200	31	$3.3	$3.5
2011	1,110	30	$2.4	$2.5
2012	1,150	48	$23.0	$23.4
2013	1,190	27	$8.4	$8.4

Table 1c. (Continued)
Structure Fires in Hospitals and Hospices by Year, 1980-2013

Year	Fires	Civilian Injuries	Direct Property Damage (in Millions)	
			As Reported	In 2013 Dollars

Note: These are national estimates of fires reported to U.S. municipal fire departments and so exclude fires reported only to Federal or state agencies or industrial fire brigades. These national estimates are projections based on the detailed information collected in Version 5.0 of NFIRS. NFIRS 5.0, first introduced in 1999, instituted major changes in the coding rules and definitions. Estimates for 1999-2009 are based on data collected originally in NFIRS Version 5.0. Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire. Because of the small numbers, civilian deaths are not shown. *Because of low participation in NFIRS Version 5.0 during 1999-2001, estimates for those years are highly uncertain and must be used with caution.* Inflation adjustments were based on the consumer price index found in the U.S. Census Bureau's Purchasing Power of the Dollar.

Source: NFIRS and NFPA fire department experience survey

Table 1d.
Structure Fires in Mental Health Facilities by Year, 2003-2013

Year	Fires	Civilian Deaths	Civilian Injuries	Direct Property Damage (in Millions) As Reported	Direct Property Damage (in Millions) In 2013 Dollars
2003	1,530	0	2	$2.0	$2.5
2004	1,450	2	18	$2.6	$3.2
2005	1,400	1	20	$2.4	$2.9
2006	1,430	0	49	$3.7	$4.3
2007	1,310	0	7	$6.4	$7.2
2008	1,180	1	11	$7.5	$8.1
2009	1,290	0	20	$4.9	$5.3
2010	1,210	0	27	$2.3	$2.5
2011	1,210	0	5	$1.6	$1.7
2012	1,180	1	10	$1.6	$1.6
2013	1,200	0	12	$3.0	$3.0

Note: These are national estimates of fires reported to U.S. municipal fire departments and so exclude fires reported only to Federal or state agencies or industrial fire brigades. These national estimates are projections based on the detailed information collected in Version 5.0 of NFIRS. Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire. *Because of low participation in NFIRS Version 5.0 during 1999-2001, estimates for those years are highly uncertain and must be used with caution.* Inflation adjustments were based on the consumer price index found in the U.S. Census Bureau's Purchasing Power of the Dollar.

Source: NFIRS and NFPA fire department experience survey

Table 1e.
Structure Fires in Clinics and Doctors' Offices, 2003-2013

Alarm Year	Fires	Civilian Deaths	Civilian Injuries	Direct Property Damage (in Millions)	
				As Reported	In 2013 Dollars
2003	710	0	11	$15	$18
2004	710	0	5	$20	$24
2005	690	0	3	$24	$29
2006	710	0	4	$16	$19
2007	770	0	7	$16	$18
2008	700	0	11	$37	$41
2009	640	0	5	$36	$39
2010	620	0	2	$27	$29
2011	600	0	2	$23	$24
2012	610	2	17	$17	$17
2013	590	0	10	$19	$19

Note: These are national estimates of fires reported to U.S. municipal fire departments and so exclude fires reported only to Federal or state agencies or industrial fire brigades. These national estimates are projections based on the detailed information collected in Version 5.0 of NFIRS. Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire. Inflation adjustments were based on the consumer price index found in the U.S. Census Bureau's Purchasing Power of the Dollar.

Source: NFIRS and NFPA fire department experience survey

Table 2.
Structure Fires in Health Care Properties by Month,
2009-2013 Annual Averages

Month	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
January	530	(9%)	1	(25%)	9	(6%)	$3.5	(8%)
February	450	(8%)	1	(12%)	14	(9%)	$2.1	(5%)
March	520	(9%)	1	(18%)	12	(7%)	$3.9	(9%)
April	470	(8%)	0	(0%)	11	(7%)	$4.1	(9%)
May	490	(9%)	0	(0%)	12	(7%)	$3.0	(7%)
June	450	(8%)	0	(0%)	8	(5%)	$4.3	(10%)
July	430	(8%)	0	(5%)	18	(11%)	$5.9	(13%)
August	430	(8%)	1	(17%)	16	(10%)	$2.5	(6%)
September	440	(8%)	1	(12%)	12	(7%)	$4.0	(9%)
October	480	(9%)	0	(0%)	14	(8%)	$6.2	(14%)
November	480	(8%)	0	(0%)	16	(10%)	$3.2	(7%)
December	490	(9%)	1	(12%)	19	(12%)	$2.3	(5%)
Totals	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 2b.
Structure Fires in Nursing Homes by Month,
2009-2013 Annual Averages

Month	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
January	250	(10%)	8	(7%)	$0.8	(9%)
February	210	(8%)	10	(9%)	$0.4	(4%)
March	240	(9%)	9	(9%)	$0.5	(5%)
April	220	(8%)	9	(9%)	$1.1	(13%)
May	230	(9%)	6	(6%)	$0.9	(10%)
June	200	(8%)	3	(3%)	$1.9	(21%)
July	190	(7%)	13	(12%)	$1.2	(13%)
August	190	(7%)	9	(9%)	$0.4	(5%)
September	200	(8%)	3	(3%)	$0.4	(5%)
October	230	(9%)	12	(11%)	$0.4	(5%)
November	220	(8%)	12	(12%)	$0.3	(3%)
December	240	(9%)	8	(8%)	$0.5	(6%)
Totals	2,620	(100%)	101	(100%)	$8.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 2c.
Structure Fires in Hospitals and Hospices by Month,
2009-2013 Annual Averages

Month	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
January	110	(9%)	1	(2%)	$0.3	(3%)
February	100	(8%)	3	(8%)	$0.2	(2%)
March	120	(10%)	1	(2%)	$0.4	(4%)
April	100	(8%)	1	(1%)	$0.2	(2%)
May	100	(8%)	4	(10%)	$0.6	(6%)
June	100	(8%)	3	(7%)	$0.1	(2%)
July	90	(7%)	3	(7%)	$0.1	(1%)
August	100	(8%)	4	(11%)	$0.9	(10%)
September	90	(8%)	8	(21%)	$0.4	(4%)
October	100	(9%)	0	(1%)	$4.2	(47%)
November	100	(9%)	2	(5%)	$1.5	(16%)
December	100	(8%)	9	(24%)	$0.3	(3%)
Total	1,200	(100%)	37	(100%)	$8.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 2d.
Structure Fires in Mental Health Facilities by Month,
2009-2013 Annual Averages

Month	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
January	100	(9%)	0	(3%)	$0.3	(13%)
February	100	(8%)	1	(8%)	$0.1	(4%)
March	110	(9%)	1	(9%)	$0.3	(9%)
April	100	(8%)	1	(9%)	$0.3	(13%)
May	110	(9%)	1	(9%)	$0.2	(7%)
June	100	(8%)	2	(11%)	$0.2	(9%)
July	100	(8%)	1	(7%)	$0.2	(6%)
August	90	(8%)	2	(15%)	$0.2	(6%)
September	100	(8%)	1	(3%)	$0.4	(16%)
October	110	(9%)	1	(6%)	$0.3	(11%)
November	110	(9%)	1	(9%)	$0.1	(3%)
December	100	(8%)	2	(10%)	$0.1	(4%)
Total	1,220	(100%)	15	(100%)	$2.7	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 2e.
Structure Fires in Clinics and Doctors' Offices by Month,
2009-2013 Annual Averages

Month	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
January	60	(10%)	0	(0%)	$2.0	(8%)
February	50	(8%)	1	(7%)	$1.4	(6%)
March	60	(9%)	1	(13%)	$2.8	(12%)
April	60	(9%)	0	(0%)	$2.4	(10%)
May	50	(9%)	0	(7%)	$1.4	(6%)
June	50	(9%)	0	(7%)	$2.0	(8%)
July	50	(8%)	2	(27%)	$4.4	(18%)
August	50	(8%)	1	(21%)	$1.1	(4%)
September	50	(7%)	0	(0%)	$2.8	(11%)
October	50	(7%)	0	(7%)	$1.3	(5%)
November	50	(8%)	1	(11%)	$1.4	(6%)
December	50	(8%)	0	(0%)	$1.4	(6%)
Totals	610	(100%)	7	(100%)	$24.4	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 3.
Structure Fires in Health Care Facilities by Day of Week,
2009-2013 Annual Averages

Day of Week	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Sunday	800	(14%)	1	(16%)	20	(12%)	$6.1	(14%)
Monday	790	(14%)	1	(17%)	27	(17%)	$5.6	(12%)
Tuesday	830	(15%)	1	(12%)	27	(17%)	$4.6	(10%)
Wednesday	810	(14%)	1	(17%)	16	(10%)	$13.6	(30%)
Thursday	830	(15%)	1	(15%)	21	(13%)	$4.6	(10%)
Friday	800	(14%)	0	(12%)	25	(16%)	$5.5	(12%)
Saturday	790	(14%)	1	(12%)	24	(15%)	$4.9	(11%)
Totals	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 3b.
Structure Fires in Nursing Homes by Day of Week,
2009-2013 Annual Averages

Day of Week	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Sunday	420	(16%)	15	(14%)	$1.7	(19%)
Monday	350	(13%)	18	(18%)	$1.0	(11%)
Tuesday	360	(14%)	17	(17%)	$2.0	(23%)
Wednesday	360	(14%)	11	(10%)	$1.2	(13%)
Thursday	360	(14%)	9	(9%)	$1.1	(13%)
Friday	370	(14%)	19	(19%)	$0.7	(8%)
Saturday	400	(15%)	13	(13%)	$1.1	(12%)
Totals	2,620	(100%)	101	(100%)	$8.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 3c.
Structure Fires in Hospitals and Hospices by Day of Week,
2009-2013 Annual Averages

Day of Week	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Sunday	100	(12%)	3	(7%)	$1.5	(17%)
Monday	200	(14%)	7	(18%)	$0.3	(3%)
Tuesday	200	(16%)	6	(17%)	$0.7	(7%)
Wednesday	200	(16%)	3	(8%)	$4.9	(55%)
Thursday	200	(16%)	8	(21%)	$0.7	(7%)
Friday	200	(15%)	3	(7%)	$0.6	(7%)
Saturday	100	(12%)	7	(20%)	$0.2	(3%)
Total	1,200	(100%)	37	(100%)	$8.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 3d.
Structure Fires in Mental Health Facilities by Day of Week,
2009-2013 Annual Averages

Day of Week	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Sunday	200	(17%)	2	(12%)	$0.7	(26%)
Monday	170	(14%)	1	(6%)	$0.3	(10%)
Tuesday	160	(13%)	3	(19%)	$0.4	(14%)
Wednesday	160	(13%)	2	(13%)	$0.2	(8%)
Thursday	170	(14%)	3	(23%)	$0.3	(11%)
Friday	160	(13%)	2	(15%)	$0.5	(17%)
Saturday	190	(16%)	2	(12%)	$0.4	(13%)
Total	1,220	(100%)	15	(100%)	$2.7	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 3e.
Structure Fires in Clinics and Doctors' Offices by Day of Week,
2009-2013 Annual Averages

Day of Week	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Sunday	40	(7%)	0	(7%)	$2.2	(9%)
Monday	100	(17%)	1	(14%)	$4.0	(17%)
Tuesday	110	(18%)	1	(14%)	$1.5	(6%)
Wednesday	100	(17%)	1	(7%)	$7.3	(30%)
Thursday	110	(18%)	1	(14%)	$2.5	(10%)
Friday	90	(15%)	1	(17%)	$3.6	(15%)
Saturday	50	(9%)	2	(27%)	$3.2	(13%)
Total	610	(100%)	7	(100%)	$24.4	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 4.
Structure Fires in Health Care Facilities by Alarm Time,
2009-2013 Annual Averages

Alarm Time	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Midnight- 12:59 a.m.	140	(2%)	0	(5%)	6	(4%)	$1.7	(4%)
1:00-1:59 a.m.	110	(2%)	1	(12%)	3	(2%)	$1.5	(3%)
2:00-2:59 a.m.	90	(2%)	0	(10%)	6	(3%)	$2.6	(6%)
3:00-3:59 a.m.	90	(2%)	0	(6%)	6	(4%)	$2.8	(6%)
4:00-4:59 a.m.	80	(1%)	1	(17%)	5	(3%)	$1.4	(3%)
5:00-5:59 a.m.	110	(2%)	0	(12%)	4	(2%)	$1.3	(3%)
6:00-6:59 a.m.	190	(3%)	0	(0%)	3	(2%)	$1.4	(3%)
7:00-7:59 a.m.	270	(5%)	0	(0%)	11	(7%)	$0.9	(2%)
8:00-8:59 a.m.	330	(6%)	0	(0%)	10	(6%)	$1.0	(2%)
9:00-9:59 a.m.	300	(5%)	0	(0%)	7	(4%)	$1.3	(3%)
10:00-10:59 a.m.	340	(6%)	0	(0%)	10	(6%)	$1.0	(2%)
11:00-11:59 a.m.	340	(6%)	0	(0%)	5	(3%)	$1.0	(2%)
12:00-12:59 p.m.	360	(6%)	0	(0%)	8	(5%)	$1.0	(2%)
1:00-1:59 p.m.	290	(5%)	0	(0%)	9	(5%)	$1.3	(3%)
2:00-2:59 p.m.	270	(5%)	0	(0%)	6	(4%)	$1.4	(3%)
3:00-3:59 p.m.	320	(6%)	0	(0%)	13	(8%)	$0.7	(2%)
4:00-4:59 p.m.	400	(7%)	0	(5%)	5	(3%)	$5.5	(12%)
5:00-5:59 p.m.	390	(7%)	0	(0%)	7	(4%)	$2.3	(5%)
6:00-6:59 p.m.	290	(5%)	0	(0%)	7	(4%)	$2.9	(6%)
7:00-7:59 p.m.	230	(4%)	0	(0%)	3	(2%)	$3.1	(7%)
8:00-8:59 p.m.	230	(4%)	1	(18%)	7	(5%)	$2.7	(6%)
9:00-9:59 p.m.	200	(4%)	1	(15%)	8	(5%)	$1.4	(3%)
10:00-10:59 p.m.	150	(3%)	0	(0%)	7	(5%)	$3.0	(7%)
11:00-11:59 p.m.	140	(2%)	0	(0%)	7	(4%)	$1.6	(4%)
Total	5,650	100%	4	(100%)	160	(100%)	$44.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 4b.
Structure Fires in Nursing Homes by Alarm Time,
2009-2013 Annual Averages

Alarm Time	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Midnight- 12:59 a.m.	70	(3%)	5	(5%)	$0.2	(3%)
1:00-1:59 a.m.	50	(2%)	1	(1%)	$0.1	(2%)
2:00-2:59 a.m.	40	(2%)	5	(5%)	$0.8	(9%)
3:00-3:59 a.m.	40	(2%)	5	(5%)	$0.2	(3%)
4:00-4:59 a.m.	40	(2%)	4	(4%)	$0.4	(4%)
5:00-5:59 a.m.	50	(2%)	1	(1%)	$0.1	(1%)
6:00-6:59 a.m.	90	(4%)	0	(0%)	$0.1	(1%)
7:00-7:59 a.m.	130	(5%)	7	(7%)	$0.1	(1%)
8:00-8:59 a.m.	150	(6%)	4	(4%)	$0.5	(5%)
9:00-9:59 a.m.	150	(6%)	1	(1%)	$0.3	(3%)
10:00-10:59 a.m.	150	(6%)	4	(4%)	$0.1	(2%)
11:00-11:59 a.m.	150	(6%)	4	(4%)	$0.5	(5%)
12:00-12:59 p.m.	150	(6%)	5	(5%)	$0.3	(4%)
1:00-1:59 p.m.	130	(5%)	5	(5%)	$0.2	(3%)
2:00-2:59 p.m.	120	(5%)	5	(5%)	$0.6	(6%)
3:00-3:59 p.m.	150	(6%)	12	(12%)	$0.2	(2%)
4:00-4:59 p.m.	160	(6%)	4	(4%)	$0.2	(2%)
5:00-5:59 p.m.	160	(6%)	4	(4%)	$0.4	(4%)
6:00-6:59 p.m.	150	(6%)	5	(5%)	$0.5	(5%)
7:00-7:59 p.m.	120	(5%)	2	(2%)	$1.6	(18%)
8:00-8:59 p.m.	110	(4%)	5	(5%)	$0.1	(1%)
9:00-9:59 p.m.	100	(4%)	5	(5%)	$0.2	(2%)
10:00-10:59 p.m.	80	(3%)	3	(3%)	$0.8	(9%)
11:00-11:59 p.m.	70	(3%)	4	(4%)	$0.5	(6%)
Totals	2,620	(100%)	101	(100%)	$8.9	(100%)
	100	(4%)	0	(4%)	$0.4	(4%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 4c.
Structure Fires in Hospitals and Hospices by Alarm Time,
2009-2013 Annual Averages

Alarm Time	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Midnight- 12:59 a.m.	30	(2%)	0	(0%)	$0.2	(2%)
1:00-1:59 a.m.	30	(3%)	1	(1%)	$0.1	(1%)
2:00-2:59 a.m.	20	(2%)	0	(0%)	$0.0	(0%)
3:00-3:59 a.m.	20	(2%)	1	(2%)	$0.3	(3%)
4:00-4:59 a.m.	20	(2%)	1	(1%)	$0.2	(2%)
5:00-5:59 a.m.	30	(3%)	2	(6%)	$0.1	(1%)
6:00-6:59 a.m.	40	(3%)	1	(2%)	$0.1	(1%)
7:00-7:59 a.m.	50	(4%)	2	(7%)	$0.1	(1%)
8:00-8:59 a.m.	70	(6%)	6	(16%)	$0.1	(2%)
9:00-9:59 a.m.	70	(6%)	5	(14%)	$0.2	(2%)
10:00-10:59 a.m.	80	(7%)	5	(13%)	$0.5	(5%)
11:00-11:59 a.m.	80	(6%)	1	(1%)	$0.1	(2%)
12:00-12:59 p.m.	90	(7%)	1	(1%)	$0.0	(0%)
1:00-1:59 p.m.	70	(6%)	2	(5%)	$0.1	(1%)
2:00-2:59 p.m.	60	(5%)	0	(0%)	$0.4	(5%)
3:00-3:59 p.m.	60	(5%)	1	(2%)	$0.1	(1%)
4:00-4:59 p.m.	70	(6%)	0	(0%)	$4.3	(48%)
5:00-5:59 p.m.	70	(5%)	2	(5%)	$0.3	(3%)
6:00-6:59 p.m.	50	(4%)	1	(3%)	$0.1	(1%)
7:00-7:59 p.m.	40	(4%)	0	(1%)	$0.1	(1%)
8:00-8:59 p.m.	50	(4%)	1	(3%)	$1.2	(14%)
9:00-9:59 p.m.	40	(4%)	2	(4%)	$0.1	(1%)
10:00-10:59 p.m.	40	(3%)	2	(5%)	$0.1	(1%)
11:00-11:59 p.m.	30	(3%)	2	(6%)	$0.2	(2%)
Total	1,200	(100%)	37	(100%)	$8.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 4d.
Structure Fires in Mental Health Facilities by Alarm Time,
2009-2013 Annual Averages

Alarm Time	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Midnight- 12:59 a.m.	30	(2%)	1	(7%)	$0.2	(6%)
1:00-1:59 a.m.	20	(2%)	1	(10%)	$0.3	(10%)
2:00-2:59 a.m.	20	(1%)	0	(0%)	$0.0	(1%)
3:00-3:59 a.m.	10	(1%)	0	(0%)	$0.3	(12%)
4:00-4:59 a.m.	10	(1%)	0	(0%)	$0.0	(0%)
5:00-5:59 a.m.	20	(1%)	0	(0%)	$0.1	(2%)
6:00-6:59 a.m.	40	(3%)	0	(0%)	$0.0	(1%)
7:00-7:59 a.m.	60	(5%)	1	(7%)	$0.2	(7%)
8:00-8:59 a.m.	60	(5%)	0	(0%)	$0.1	(2%)
9:00-9:59 a.m.	50	(4%)	0	(2%)	$0.1	(3%)
10:00-10:59 a.m.	60	(5%)	1	(6%)	$0.1	(3%)
11:00-11:59 a.m.	70	(6%)	0	(3%)	$0.1	(5%)
12:00-12:59 p.m.	80	(7%)	1	(6%)	$0.1	(3%)
1:00-1:59 p.m.	50	(4%)	1	(5%)	$0.0	(2%)
2:00-2:59 p.m.	50	(4%)	0	(0%)	$0.1	(2%)
3:00-3:59 p.m.	70	(6%)	0	(0%)	$0.0	(1%)
4:00-4:59 p.m.	130	(11%)	1	(6%)	$0.1	(3%)
5:00-5:59 p.m.	130	(11%)	1	(6%)	$0.1	(5%)
6:00-6:59 p.m.	70	(6%)	0	(3%)	$0.5	(19%)
7:00-7:59 p.m.	50	(4%)	0	(3%)	$0.1	(4%)
8:00-8:59 p.m.	50	(4%)	1	(8%)	$0.1	(3%)
9:00-9:59 p.m.	40	(4%)	1	(5%)	$0.0	(1%)
10:00-10:59 p.m.	30	(2%)	2	(16%)	$0.0	(2%)
11:00-11:59 p.m.	30	(2%)	1	(7%)	$0.1	(3%)
Total	1,220	(100%)	15	(100%)	$2.7	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 4e.
Structure Fires in Clinics and Doctors' Offices by Alarm Time,
2009-2013 Annual Averages

Alarm Time	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Midnight- 12:59 a.m.	10	(2%)	0	(0%)	$1.1	(4%)
1:00-1:59 a.m.	10	(1%)	0	(0%)	$1.0	(4%)
2:00-2:59 a.m.	10	(1%)	0	(7%)	$1.7	(7%)
3:00-3:59 a.m.	10	(1%)	0	(6%)	$2.0	(8%)
4:00-4:59 a.m.	10	(1%)	0	(0%)	$0.9	(4%)
5:00-5:59 a.m.	10	(1%)	0	(0%)	$1.1	(4%)
6:00-6:59 a.m.	20	(3%)	1	(20%)	$1.3	(5%)
7:00-7:59 a.m.	30	(4%)	0	(7%)	$0.4	(2%)
8:00-8:59 a.m.	40	(7%)	0	(0%)	$0.4	(2%)
9:00-9:59 a.m.	40	(7%)	0	(0%)	$0.8	(3%)
10:00-10:59 a.m.	50	(8%)	0	(7%)	$0.4	(1%)
11:00-11:59 a.m.	40	(7%)	0	(0%)	$0.2	(1%)
12:00-12:59 p.m.	50	(8%)	1	(19%)	$0.6	(2%)
1:00-1:59 p.m.	40	(7%)	1	(14%)	$1.0	(4%)
2:00-2:59 p.m.	40	(7%)	1	(21%)	$0.3	(1%)
3:00-3:59 p.m.	40	(6%)	0	(0%)	$0.4	(2%)
4:00-4:59 p.m.	30	(5%)	0	(0%)	$1.0	(4%)
5:00-5:59 p.m.	30	(5%)	0	(0%)	$1.5	(6%)
6:00-6:59 p.m.	20	(4%)	0	(0%)	$1.8	(7%)
7:00-7:59 p.m.	20	(3%)	0	(0%)	$1.3	(5%)
8:00-8:59 p.m.	20	(3%)	0	(0%)	$1.3	(5%)
9:00-9:59 p.m.	20	(3%)	0	(0%)	$1.2	(5%)
10:00-10:59 p.m.	10	(2%)	0	(0%)	$2.1	(8%)
11:00-11:59 p.m.	10	(2%)	0	(0%)	$0.8	(3%)
Total	610	(100%)	7	(100%)	$24.4	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 5.
Structure Fires in Health Care Facilities by Leading Cause,
2009-2013 Annual Averages

Cause of Ignition	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	3,660	(65%)	1	(15%)	29	(18%)	$2.1	(5%)
Intentional	350	(6%)	1	(29%)	26	(16%)	$6.4	(14%)
Electrical distribution and lighting equipment	310	(5%)	1	(18%)	15	(9%)	$15.1	(34%)
Heating equipment	290	(5%)	0	(0%)	5	(3%)	$2.3	(5%)
Smoking materials	280	(5%)	1	(12%)	17	(11%)	$1.8	(4%)
Clothes dryer	250	(4%)	0	(0%)	18	(11%)	$1.7	(4%)

Note: Sums may not equal totals due to rounding errors. This table summarizes findings from multiple fields, meaning that the same fire may be listed under multiple causes. The methodology used is described in Appendix B.

Source: NFIRS and NFPA fire department experience survey.

Table 5b.
Structure Fires in Nursing Homes by Leading Cause,
2009-2013 Annual Averages

Cause	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	1,740	(66%)	22	(22%)	$0.6	(7%)
Clothes dryer	180	(7%)	14	(13%)	$0.9	(10%)
Heating equipment	130	(5%)	5	(5%)	$0.2	(2%)
Electrical distribution and lighting equipment	130	(5%)	8	(8%)	$1.4	(16%)
Smoking materials	110	(4%)	10	(10%)	$0.7	(8%)
Intentional	100	(4%)	14	(14%)	$1.1	(12%)

Note: Sums may not equal totals due to rounding errors. This table summarizes findings from multiple fields, meaning that the same fire may be listed under multiple causes. The methodology used is described in Appendix B.

Source: NFIRS and NFPA fire department experience survey.

Table 5c.
Structure Fires in Hospitals and Hospices by Leading Cause,
2009-2013 Annual Averages

Cause	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	740	(62%)	6	(15%)	$0.6	(7%)
Intentional	110	(9%)	7	(19%)	$0.9	(10%)
Electrical distribution and lighting equipment	80	(7%)	0	(0%)	$5.6	(62%)
Heating equipment	50	(4%)	0	(1%)	$0.0	(0%)
Smoking materials	50	(4%)	3	(9%)	$0.0	(0%)

Note: Sums may not equal totals due to rounding errors. This table summarizes findings from multiple fields, meaning that the same fire may be listed under multiple causes. The methodology used is described in Appendix B.

Source: NFIRS and NFPA fire department experience survey.

Table 5d.
Structure Fires in Mental Health Facilities by Leading Cause,
2009-2013 Annual Averages

Cause	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	960	(79%)	1	(9%)	$0.4	(16%)
Intentional	130	(10%)	5	(35%)	$0.6	(24%)
Playing with heat source	80	(7%)	2	(14%)	$0.1	(2%)
Smoking materials	70	(6%)	3	(18%)	$0.3	(10%)
Electrical distribution and lighting equipment	30	(3%)	2	(14%)	$0.4	(15%)

Note: Sums may not equal totals due to rounding errors. This table summarizes findings from multiple fields, meaning that the same fire may be listed under multiple causes. The methodology used is described in Appendix B.

Source: NFIRS and NFPA fire department experience survey.

Table 5e.
Structure Fires in Clinics and Doctors' Offices by Leading Cause,
2009-2013 Annual Averages

Cause of Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	220	(36%)	1	(7%)	$0.4	(2%)
Electrical distribution and lighting equipment	70	(12%)	1	(10%)	$8.5	(35%)
Heating equipment	70	(11%)	0	(0%)	$2.1	(9%)
Smoking materials	40	(6%)	0	(0%)	$0.6	(8%)
Intentional	30	(6%)	0	(0%)	$3.7	(15%)

Note: Sums may not equal totals due to rounding errors. This table summarizes findings from multiple fields, meaning that the same fire may be listed under multiple causes. The methodology used is described in Appendix B.

Source: NFIRS and NFPA fire department experience survey.

Table 6.
Structure Fires in Health Care Facilities by Equipment Involved in Ignition,
2009-2013 Annual Averages

Equipment Involved	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	3,660	(65%)	1	(15%)	29	(18%)	$2.1	(5%)
Confined cooking fire	3,520	(62%)	0	(0%)	20	(12%)	$1.1	(2%)
Range with or without oven, cooking surface	80	(1%)	1	(15%)	9	(6%)	$0.5	(1%)
Other known cooking equipment	70	(1%)	0	(0%)	0	(0%)	$0.5	(1%)
Contained trash or rubbish fire	330	(6%)	0	(0%)	1	(1%)	$0.1	(0%)
Electrical distribution and lighting equipment	310	(5%)	1	(18%)	15	(9%)	$15.1	(34%)
Wiring and related equipment	140	(2%)	1	(18%)	5	(3%)	$6.7	(15%)
Lamp, bulb or lighting	130	(2%)	0	(0%)	7	(4%)	$2.6	(6%)
Transformers and power supplies	40	(1%)	0	(0%)	1	(1%)	$1.8	(4%)
Other known electrical distribution or lighting equipment	10	(0%)	0	(0%)	1	(1%)	$4.0	(9%)
Heating equipment	290	(5%)	0	(0%)	5	(3%)	$2.3	(5%)
Confined fuel burner or boiler fire	150	(3%)	0	(0%)	3	(2%)	$0.0	(0%)
Fixed or portable space heater	60	(1%)	0	(0%)	2	(1%)	$0.2	(0%)
Other known heating equipment	80	(1%)	0	(0%)	0	(0%)	$2.1	(5%)
No equipment involved in ignition	270	(5%)	3	(67%)	50	(31%)	$15.6	(35%)
Clothes dryer	250	(4%)	0	(0%)	18	(11%)	$1.7	(4%)
Fan	120	(2%)	0	(0%)	13	(8%)	$0.9	(2%)
Air conditioner	80	(1%)	0	(0%)	2	(1%)	$0.2	(1%)
Unclassified equipment involved in ignition	40	(1%)	0	(0%)	3	(2%)	$1.3	(3%)
Other known equipment involved in ignition	300	(5%)	0	(0%)	22	(14%)	$5.6	(12%)
Total	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 6b.
Structure Fires in Nursing Homes by Equipment Involved in Ignition,
2009-2013 Annual Averages

Equipment Involved	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	1,740	(66%)	22	(22%)	$0.6	(7%)
Confined cooking fire	1,670	(64%)	12	(12%)	$0.1	(1%)
Range with or without oven, cooking surface	40	(2%)	9	(9%)	$0.2	(2%)
Other known cooking equipment	30	(1%)	0	(0%)	$0.3	(3%)
Clothes dryer	180	(7%)	14	(13%)	$0.9	(10%)
Heating equipment	130	(5%)	5	(5%)	$0.2	(2%)
Confined fuel burner or boiler fire	70	(3%)	3	(3%)	$0.0	(0%)
Fixed or portable space heater	30	(1%)	2	(2%)	$0.1	(1%)
Other known heating equipment	30	(1%)	0	(0%)	$0.0	(0%)
Electrical distribution and lighting equipment	130	(5%)	8	(8%)	$1.4	(16%)
Lamp, bulb or lighting	60	(2%)	4	(4%)	$0.3	(4%)
Wiring and related equipment	60	(2%)	3	(3%)	$1.1	(12%)
Other known electrical distribution or lighting equipment	10	(0%)	1	(1%)	$0.0	(0%)
Contained trash or rubbish fire	120	(5%)	0	(0%)	$0.0	(0%)
No equipment involved in ignition	100	(4%)	31	(30%)	$4.2	(47%)
Fan	60	(2%)	13	(13%)	$0.4	(4%)
Air conditioner	50	(2%)	2	(2%)	$0.1	(1%)
Unclassified equipment involved in ignition	10	(1%)	3	(3%)	$0.1	(1%)
Other known equipment involved in ignition	100	(4%)	3	(3%)	$1.0	(11%)
Total	2,620	(100%)	101	(100%)	$8.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 6c.
Structure Fires in Hospitals and Hospices by Equipment Involved in Ignition,
2009-2013 Annual Averages

Equipment Involved	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	740	(62%)	6	(15%)	$0.6	(7%)
Confined cooking fire	710	(59%)	6	(15%)	$0.4	(4%)
Range with or without oven, cooking surface	10	(1%)	0	(0%)	$0.2	(2%)
Other known cooking equipment	20	(2%)	0	(0%)	$0.1	(1%)
Contained trash or rubbish fire	100	(9%)	0	(0%)	$0.0	(0%)
Electrical distribution and lighting equipment*	80	(7%)	5	(0%)	$5.6	(62%)
Lamp, bulb or lighting	30	(2%)	0	(0%)	$0.1	(1%)
Wiring and related equipment	30	(2%)	0	(0%)	$0.2	(3%)
Transformers and power supplies	20	(2%)	0	(0%)	$0.8	(8%)
Heating equipment	50	(4%)	0	(1%)	$0.0	(0%)
Confined fuel burner or boiler fire	30	(2%)	0	(0%)	$0.0	(0%)
Fixed or portable space heater	10	(1%)	0	(0%)	$0.0	(0%)
Other known heating equipment	10	(1%)	0	(1%)	$0.0	(0%)
No equipment involved in ignition	50	(4%)	13	(35%)	$0.5	(5%)
Clothes dryer	20	(2%)	1	(2%)	$0.1	(1%)
Air conditioner	20	(1%)	0	(0%)	$0.1	(1%)
Unclassified equipment involved in ignition	10	(1%)	0	(0%)	$0.1	(1%)
Torcher, burner or soldering iron	10	(1%)	6	(17%)	$0.2	(2%)
Fan	10	(1%)	0	(0%)	$0.1	(1%)
Elevator or lift	10	(1%)	0	(0%)	$0.2	(2%)
Unclassified medical equipment	10	(1%)	3	(8%)	$0.0	(1%)
Other known equipment involved in ignition	80	(6%)	3	(9%)	$1.4	(15%)
Total	1,200	(100%)	37	(100%)	$8.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

*All civilian injuries associated with electrical distribution and lighting equipment resulted from fires codes as "electrical distribution or lighting, other." These fires were allocated proportionally across the specific types of electrical distribution or lighting equipment. Because no injuries resulted from fires in the specific categories, civilian injuries resulting from electrical distribution and lighting equipment are show only at the level of the broad category.

Table 6d.
Structure Fires in Mental Health Facilities by Equipment Involved in Ignition,
2009-2013 Annual Averages

Equipment Involved	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	960	(79%)	1	(9%)	$0.4	(16%)
Confined cooking fire	930	(76%)	1	(9%)	$0.2	(8%)
Range with or without oven, cooking surface	20	(2%)	0	(0%)	$0.2	(9%)
No equipment involved in ignition	70	(6%)	8	(54%)	$1.2	(46%)
Contained trash or rubbish fire	50	(4%)	0	(0%)	$0.0	(0%)
Clothes dryer	30	(3%)	2	(11%)	$0.3	(13%)
Electrical distribution and lighting equipment	30	(3%)	2	(14%)	$0.4	(15%)
Wiring and related equipment	20	(1%)	2	(14%)	$0.3	(13%)
Lamp, bulb or lighting	10	(1%)	0	(0%)	$0.0	(0%)
Heating equipment	30	(2%)	0	(0%)	$0.0	(1%)
Fireplace	20	(2%)	0	(0%)	$0.0	(0%)
Other known heating equipment	10	(1%)	0	(0%)	$0.0	(1%)
Fan	20	(2%)	0	(0%)	$0.1	(5%)
Other known Equipment involved in ignition	30	(3%)	0	(0%)	$0.1	(4%)
Total	1,220	(100%)	15	(100%)	$2.7	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 6e.
Structure Fires in Clinics and Doctors' Offices by Equipment Involved in Ignition,
2009-2013 Annual Averages

Equipment Involved	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking equipment	220	(36%)	1	(7%)	$0.4	(2%)
Confined cooking fire	210	(34%)	1	(7%)	$0.3	(1%)
Portable cooking or warming equipment	10	(1%)	0	(0%)	$0.0	(0%)
Microwave oven	0	(1%)	0	(0%)	$0.0	(0%)
Electrical distribution and lighting equipment	70	(12%)	1	(10%)	$8.5	(35%)
Wiring and related equipment	40	(6%)	0	(0%)	$5.2	(21%)
Lamp, bulb or lighting	20	(4%)	0	(0%)	$2.2	(9%)
Transformers and power supplies	10	(1%)	1	(10%)	$1.1	(5%)
Heating equipment	70	(11%)	0	(0%)	$2.1	(9%)
Confined fuel burner or boiler fire	30	(5%)	0	(0%)	$0.0	(0%)
Central heat	10	(2%)	0	(0%)	$1.8	(7%)
Fixed or portable space heater	10	(2%)	0	(0%)	$0.0	(0%)
Water heater	10	(1%)	0	(0%)	$0.3	(1%)
No equipment involved in ignition	60	(9%)	0	(6%)	$9.2	(38%)
Contained trash or rubbish fire	50	(9%)	0	(7%)	$0.0	(0%)
Fan	30	(6%)	0	(0%)	$0.4	(1%)
Medical or dental equipment	30	(4%)	2	(29%)	$0.8	(3%)
Air conditioner	10	(2%)	0	(0%)	$0.0	(0%)
Unclassified equipment involved in ignition	10	(2%)	0	(0%)	$1.2	(5%)
Computer	10	(1%)	0	(0%)	$0.6	(3%)
Torcher, burner or soldering iron	10	(1%)	0	(0%)	$0.8	(3%)
Clothes dryer	10	(1%)	2	(29%)	$0.1	(0%)
Other known equipment involved in ignition	30	(7%)	1	(10%)	$0.8	(3%)
Total	610	(100%)	7	(100%)	$24.4	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 7.
Structure Fires in Health Care Facilities by Cause of Ignition,
2009-2013 Annual Averages

Cause of Ignition	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Unintentional	4,230	(75%)	2	(44%)	99	(62%)	$20.4	(45%)
Non-confined	820	(15%)	2	(44%)	85	(53%)	$19.2	(43%)
Confined	3,420	(60%)	0	(0%)	14	(9%)	$1.1	(3%)
Failure of equipment or heat source	910	(16%)	1	(15%)	35	(22%)	$14.7	(33%)
Non-confined	580	(10%)	1	(15%)	24	(15%)	$14.6	(33%)
Confined	330	(6%)	0	(0%)	10	(7%)	$0.1	(0%)
Intentional	350	(6%)	1	(29%)	26	(16%)	$6.4	(14%)
Non-confined	150	(3%)	1	(29%)	26	(16%)	$6.4	(14%)
Confined	200	(4%)	0	(0%)	0	(0%)	$0.0	(0%)
Unclassified cause	140	(2%)	1	(12%)	0	(0%)	$1.2	(3%)
Non-confined	30	(1%)	1	(12%)	0	(0%)	$1.2	(3%)
Confined	100	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Act of Nature	20	(0%)	0	(0%)	0	(0%)	$2.2	(5%)
Non-confined	20	(0%)	0	(0%)	0	(0%)	$2.2	(5%)
Confined	0	(0%)	0	(0%)	0	(0%)	$0.0	(0%)
Total	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)
Non-confined	1,600	(28%)	4	(100%)	136	(85%)	$43.7	(97%)
Confined	4,050	(72%)	0	(0%)	24	(15%)	$1.2	(3%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 7b.
Structure Fires in Nursing Homes by Cause of Ignition,
2009-2013 Annual Averages

Cause of Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unintentional	2,030	(78%)	60	(59%)	$5.8	(65%)
Non-confined	400	(15%)	49	(48%)	$5.7	(64%)
Confined	1,630	(62%)	11	(11%)	$0.1	(1%)
Failure of equipment or heat source	420	(16%)	28	(27%)	$1.8	(20%)
Non-confined	270	(10%)	23	(23%)	$1.8	(20%)
Confined	150	(6%)	5	(5%)	$0.0	(0%)
Intentional	100	(4%)	14	(14%)	$1.1	(12%)
Non-confined	40	(2%)	14	(14%)	$1.1	(12%)
Confined	50	(2%)	0	(0%)	$0.0	(0%)
Unclassified cause	60	(2%)	0	(0%)	$0.0	(0%)
Non-confined	10	(0%)	0	(0%)	$0.0	(0%)
Confined	50	(2%)	0	(0%)	$0.0	(0%)
Other known cause	10	(1%)	0	(0%)	$0.2	(2%)
Non-confined	10	(0%)	0	(0%)	$0.2	(2%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Total	2,620	(100%)	101	(100%)	$8.9	(100%)
Non-confined	730	(28%)	85	(84%)	$8.7	(98%)
Confined	1,890	(72%)	16	(16%)	$0.2	(2%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 7c.
Structure Fires in Hospitals and Hospices by Cause of Ignition,
2009-2013 Annual Averages

Cause of Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unintentional	860	71%	25	(67%)	$2.5	(28%)
Non-confined	160	13%	22	(61%)	$2.1	(23%)
Confined	700	58%	2	(6%)	$0.4	(5%)
Failure of equipment or heat source	210	18%	5	(13%)	$5.6	(62%)
Non-confined	140	11%	1	(3%)	$5.6	(62%)
Confined	80	7%	4	(10%)	$0.0	(0%)
Intentional	110	9%	7	(19%)	$0.9	(10%)
Non-confined	40	3%	7	(19%)	$0.8	(9%)
Confined	70	6%	0	(0%)	$0.0	(0%)
Unclassified cause	20	2%	0	(0%)	$0.0	(0%)
Non-confined	10	1%	0	(0%)	$0.0	(0%)
Confined	10	1%	0	(0%)	$0.0	(0%)
Other known cause	0	0%	0	(0%)	$0.0	(0%)
Non-confined	0	0%	0	(0%)	$0.0	(0%)
Confined	0	0%	0	(0%)	$0.0	(0%)
Total	1,200	100%	37	(100%)	$8.9	(100%)
Non-confined	340	28%	31	(84%)	$8.5	(95%)
Confined	860	72%	6	(16%)	$0.5	(5%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 7d.
Structure Fires in Mental Health Facilities by Cause of Ignition,
2009-2013 Annual Averages

Cause of Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unintentional	940	(77%)	10	(65%)	$1.0	(37%)
Non-confined	110	(9%)	8	(56%)	$0.8	(29%)
Confined	830	(68%)	1	(9%)	$0.2	(8%)
Intentional	130	(10%)	5	(35%)	$0.6	(24%)
Non-confined	50	(4%)	5	(35%)	$0.6	(23%)
Confined	80	(7%)	0	(0%)	$0.0	(0%)
Failure of equipment or heat source	110	(9%)	0	(0%)	$0.4	(16%)
Non-confined	50	(4%)	0	(0%)	$0.4	(16%)
Confined	60	(5%)	0	(0%)	$0.0	(0%)
Unclassified cause	40	(4%)	0	(0%)	$0.5	(18%)
Non-confined	10	(1%)	0	(0%)	$0.5	(18%)
Confined	40	(3%)	0	(0%)	$0.0	(0%)
Total	1,220	(100%)	15	(100%)	$2.7	(100%)
Non-confined	220	(18%)	13	(91%)	$2.5	(92%)
Confined	1,000	(82%)	1	(9%)	$0.2	(8%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 7e.
Structure Fires in Clinics and Doctors' Offices by Cause of Ignition,
2009-2013 Annual Averages

Cause of Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unintentional	400	(65%)	7	(100%)	$10.3	(42%)
Non-confined	150	(24%)	6	(86%)	$9.9	(41%)
Confined	250	(41%)	1	(14%)	$0.4	(1%)
Failure of equipment or heat source	160	(26%)	0	(0%)	$7.9	(32%)
Non-confined	120	(20%)	0	(0%)	$7.9	(32%)
Confined	40	(6%)	0	(0%)	$0.0	(0%)
Intentional	30	(6%)	0	(0%)	$3.7	(15%)
Non-confined	30	(4%)	0	(0%)	$3.7	(15%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Unclassified cause	10	(2%)	0	(0%)	$0.6	(2%)
Non-confined	10	(2%)	0	(0%)	$0.6	(2%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Other known cause	10	(1%)	0	(0%)	$1.9	(8%)
Non-confined	10	(1%)	0	(0%)	$1.9	(8%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Total	610	(100%)	7	(100%)	$24.4	(100%)
Non-confined	310	(51%)	6	(86%)	$24.0	(99%)
Confined	300	(49%)	1	(14%)	$0.4	(1%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 8.
Structure Fires in Health Care Facilities by Factor Contributing to Ignition,
2009-2013 Annual Averages

Factor Contributing to Ignition	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Equipment unattended	1,040	(18%)	0	(0%)	10	(6%)	$0.3	(1%)
Non-confined	50	(1%)	0	(0%)	5	(3%)	$0.3	(1%)
Confined	990	(18%)	0	(0%)	5	(3%)	$0.0	(0%)
Electrical failure or malfunction	660	(12%)	1	(27%)	31	(19%)	$15.9	(35%)
Non-confined	490	(9%)	1	(27%)	31	(19%)	$15.9	(35%)
Confined	170	(3%)	0	(0%)	0	(0%)	$0.0	(0%)
Unclassified misuse of material or product	610	(11%)	0	(0%)	36	(22%)	$3.4	(7%)
Non-confined	120	(2%)	0	(0%)	31	(20%)	$2.8	(6%)
Confined	490	(9%)	0	(0%)	5	(3%)	$0.5	(1%)
Abandoned or discarded material or product	590	(11%)	2	(37%)	9	(6%)	$2.8	(6%)
Non-confined	110	(2%)	2	(37%)	9	(6%)	$2.8	(6%)
Confined	480	(9%)	0	(0%)	0	(0%)	$0.0	(0%)
Mechanical failure or malfunction	580	(10%)	0	(0%)	25	(16%)	$2.5	(6%)
Non-confined	290	(5%)	0	(0%)	13	(8%)	$2.5	(6%)
Confined	290	(5%)	0	(0%)	12	(7%)	$0.0	(0%)
Heat source too close to combustibles	510	(9%)	3	(64%)	25	(16%)	$5.4	(12%)
Non-confined	160	(3%)	3	(64%)	22	(14%)	$5.4	(12%)
Confined	350	(6%)	0	(0%)	3	(2%)	$0.0	(0%)
Failure to clean	350	(6%)	0	(0%)	2	(1%)	$1.3	(3%)
Non-confined	70	(1%)	0	(0%)	2	(1%)	$1.3	(3%)
Confined	280	(5%)	0	(0%)	0	(0%)	$0.0	(0%)
Unclassified factor contributed to ignition	350	(6%)	0	(11%)	5	(3%)	$4.9	(11%)
Non-confined	80	(1%)	0	(11%)	5	(3%)	$4.3	(10%)
Confined	260	(5%)	0	(0%)	0	(0%)	$0.5	(1%)
Equipment not being operated properly	210	(4%)	0	(0%)	0	(0%)	$0.4	(1%)
Non-confined	20	(0%)	0	(0%)	0	(0%)	$0.4	(1%)
Confined	190	(3%)	0	(0%)	0	(0%)	$0.0	(0%)

Table 8.
Structure Fires in Health Care Facilities by Factor Contributing to Ignition,
2009-2013 Annual Averages (Continued)

Factor Contributing to Ignition	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Accidentally turned on, not turned off	190	(3%)	0	(0%)	2	(1%)	$0.3	(1%)
Non-confined	20	(0%)	0	(0%)	2	(1%)	$0.3	(1%)
Confined	170	(3%)	0	(0%)	0	(0%)	$0.0	(0%)
Unclassified operational deficiency	140	(2%)	0	(0%)	0	(0%)	$0.1	(0%)
Non-confined	30	(1%)	0	(0%)	0	(0%)	$0.1	(0%)
Confined	110	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Improper container or storage	120	(2%)	0	(0%)	2	(1%)	$0.2	(0%)
Non-confined	30	(0%)	0	(0%)	2	(1%)	$0.2	(0%)
Confined	100	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Playing with heat source	120	(2%)	0	(0%)	4	(3%)	$1.5	(3%)
Non-confined	40	(1%)	0	(0%)	4	(3%)	$1.5	(3%)
Confined	80	(1%)	0	(0%)	0	(0%)	$0.0	(0%)
Other known factor contributing to ignition	360	(6%)	0	(0%)	20	(10%)	$8.9	(20%)
Non-confined	170	(3%)	0	(0%)	20	(10%)	$8.9	(20%)
Confined	190	(3%)	0	(0%)	0	(0%)	$0.0	(0%)
Total fires	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)
Non-confined	1,600	(28%)	4	(100%)	136	(85%)	$43.7	(97%)
Confined	4,050	(72%)	0	(0%)	24	(15%)	$1.2	(3%)
Total factors	5,830	(103%)	6	(140%)	168	(105%)	$47.8	(106%)
Non-confined	1,680	(30%)	6	(140%)	144	(90%)	$46.6	(104%)
Confined	4,150	(73%)	0	(0%)	24	(15%)	$1.2	(3%)

Note: Sums may not equal totals due to rounding errors. Multiple entries are allowed in this field, so total factors add up to more than total fires. Electrical failures or malfunctions and mechanical failures or malfunctions were summed from NFIRS factors contributing to ignition codes 30-37 and 20-27, respectively.

Source: NFIRS and NFPA fire department experience survey.

Table 8b.
Structure Fires in Nursing Homes by Factor Contributing to Ignition,
2009-2013 Annual Averages

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Equipment unattended	480	(18%)	9	(9%)	$0.2	(2%)
Non-confined	30	(1%)	4	(4%)	$0.1	(2%)
Confined	460	(17%)	6	(6%)	$0.0	(0%)
Unclassified misuse of material or product	320	(12%)	20	(20%)	$1.8	(20%)
Non-confined	60	(2%)	20	(20%)	$1.8	(20%)
Confined	270	(10%)	0	(0%)	$0.0	(0%)
Mechanical failure or malfunction	290	(11%)	18	(18%)	$0.5	(6%)
Non-confined	140	(5%)	13	(13%)	$0.5	(6%)
Confined	150	(6%)	5	(5%)	$0.0	(0%)
Electrical failure or malfunction	280	(11%)	16	(16%)	$2.1	(24%)
Non-confined	210	(8%)	16	(16%)	$2.1	(24%)
Confined	70	(3%)	0	(0%)	$0.0	(0%)
Heat source too close to combustibles	260	(10%)	14	(14%)	$0.9	(10%)
Non-confined	80	(3%)	9	(9%)	$0.9	(10%)
Confined	180	(7%)	5	(5%)	$0.0	(0%)
Abandoned or discarded material or product	250	(10%)	8	(8%)	$0.8	(9%)
Non-confined	50	(2%)	8	(8%)	$0.8	(9%)
Confined	200	(8%)	0	(0%)	$0.0	(0%)
Failure to clean	170	(6%)	2	(2%)	$1.1	(12%)
Non-confined	50	(2%)	2	(2%)	$1.1	(12%)
Confined	120	(5%)	0	(0%)	$0.0	(0%)
Unclassified factor contributed to ignition	160	(6%)	3	(3%)	$0.6	(7%)
Non-confined	40	(1%)	3	(3%)	$0.6	(6%)
Confined	120	(5%)	0	(0%)	$0.0	(0%)
Equipment not being operated properly	110	(4%)	0	(0%)	$0.1	(1%)
Non-confined	10	(0%)	0	(0%)	$0.1	(1%)
Confined	100	(4%)	0	(0%)	$0.0	(0%)
Accidentally turned on, not turned off	80	(3%)	2	(2%)	$0.2	(2%)
Non-confined	10	(0%)	2	(2%)	$0.2	(2%)
Confined	70	(3%)	0	(0%)	$0.0	(0%)

Table 8b.
Structure Fires in Nursing Homes by Factor Contributing to Ignition,
2009-2013 Annual Averages (Continued)

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unclassified operational deficiency	80	(3%)	0	(0%)	$0.1	(1%)
Non-confined	20	(1%)	0	(0%)	$0.1	(1%)
Confined	60	(2%)	0	(0%)	$0.0	(0%)
Improper container or storage	80	(3%)	2	(2%)	$0.2	(2%)
Non-confined	20	(1%)	2	(2%)	$0.1	(2%)
Confined	60	(2%)	0	(0%)	$0.0	(0%)
Other known factor contributing to ignition	150	(6%)	10	(6%)	$1.7	(19%)
Non-confined	60	(2%)	10	(6%)	$1.7	(19%)
Confined	90	(3%)	0	(0%)	$0.0	(0%)
Total Fires	2,620	(100%)	101	(100%)	$8.9	(100%)
Non-confined	730	(28%)	85	(84%)	$8.7	(98%)
Confined	1,890	(72%)	16	(16%)	$0.2	(2%)
Total Factors	2,700	(103%)	101	(100%)	$10.2	(114%)
Non-confined	770	(29%)	85	(84%)	$10.0	(112%)
Confined	1,940	(74%)	16	(15%)	$0.2	(2%)

Note: Sums may not equal totals due to rounding errors. Multiple entries are allowed in this field, so total factors add up to more than total fires. Electrical failures or malfunctions and mechanical failures or malfunctions were summed from NFIRS factors contributing to ignition codes 30-37 and 20-27, respectively.

Source: NFIRS and NFPA fire department experience survey.

Table 8c.
Structure Fires in Hospitals and Hospices by Factor Contributing to Ignition,
2009-2013 Annual Averages

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Equipment unattended	190	(16%)	1	(1%)	$0.0	(0%)
Non-confined	10	(0%)	1	(1%)	$0.0	(0%)
Confined	180	(15%)	0	(0%)	$0.0	(0%)
Electrical failure or malfunction	160	(13%)	11	(31%)	$6.0	(67%)
Non-confined	110	(9%)	11	(31%)	$6.0	(67%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)
Mechanical failure or malfunction	130	(11%)	4	(11%)	$1.1	(13%)
Non-confined	70	(6%)	0	(0%)	$1.1	(13%)
Confined	60	(5%)	4	(11%)	$0.0	(0%)
Abandoned or discarded material or product	130	(11%)	0	(0%)	$0.2	(2%)
Non-confined	20	(1%)	0	(0%)	$0.2	(2%)
Confined	110	(9%)	0	(0%)	$0.0	(0%)
Unclassified misuse of material or product	120	(10%)	8	(20%)	$0.7	(8%)
Non-confined	30	(3%)	5	(15%)	$0.3	(3%)
Confined	90	(7%)	2	(6%)	$0.4	(5%)
Heat source too close to combustibles	110	(9%)	11	(29%)	$0.3	(3%)
Non-confined	30	(2%)	11	(29%)	$0.3	(3%)
Confined	80	(7%)	0	(0%)	$0.0	(0%)
Failure to clean	70	(6%)	0	(0%)	$0.1	(1%)
Non-confined	10	(1%)	0	(0%)	$0.1	(1%)
Confined	60	(5%)	0	(0%)	$0.0	(0%)
Unclassified factor contributed to ignition	70	(5%)	1	(3%)	$0.3	(3%)
Non-confined	20	(2%)	1	(3%)	$0.3	(3%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)
Equipment not being operated properly	60	(5%)	0	(0%)	$0.0	(0%)
Non-confined	0	(0%)	0	(0%)	$0.0	(0%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)
Accidentally turned on, not turned off	50	(4%)	0	(0%)	$0.0	(0%)
Non-confined	0	(0%)	0	(0%)	$0.0	(0%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)

Table 8c.
Structure Fires in Hospitals and Hospices by Factor Contributing to Ignition,
2009-2013 Annual Averages (Continued)

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unclassified operational deficiency	30	(3%)	0	(0%)	$0.0	(0%)
Non-confined	10	(1%)	0	(0%)	$0.0	(0%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Cutting or welding too close to combustibles	30	(2%)	8	(21%)	$0.2	(2%)
Non-confined	20	(1%)	8	(21%)	$0.2	(2%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Playing with heat source	20	(2%)	1	(4%)	$0.2	(2%)
Non-confined	10	(1%)	1	(4%)	$0.2	(2%)
Confined	20	(1%)	0	(0%)	$0.0	(0%)
Other known factor contributing to ignition	80	(6%)	0	(0%)	$0.4	(5%)
Non-confined	20	(2%)	0	(0%)	$0.4	(5%)
Confined	50	(5%)	0	(0%)	$0.0	(0%)
Total fires	1,200	(100%)	37	(100%)	$8.9	(100%)
Non-confined	340	(28%)	31	(84%)	$8.5	(95%)
Confined	860	(72%)	6	(16%)	$0.5	(5%)
Total factors	1,240	(103%)	45	(121%)	$9.6	(107%)
Non-confined	350	(29%)	39	(105%)	$9.1	(102%)
Confined	890	(74%)	6	(16%)	$0.5	(5%)

Note: Sums may not equal totals due to rounding errors. Multiple entries are allowed in this field, so total factors add up to more than total fires. Electrical failures or malfunctions and mechanical failures or malfunctions were summed from NFIRS factors contributing to ignition codes 30-37 and 20-27, respectively.

Source: NFIRS and NFPA fire department experience survey.

Table 8d.
Structure Fires in Mental Health Facilities by Factor Contributing to Ignition,
2009-2013 Annual Averages

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Equipment unattended	300	(25%)	1	(5%)	$0.1	(3%)
Non-confined	10	(1%)	1	(5%)	$0.1	(2%)
Confined	290	(24%)	0	(0%)	$0.0	(0%)
Abandoned or discarded material or product	150	(12%)	1	(5%)	$0.1	(3%)
Non-confined	20	(2%)	1	(5%)	$0.1	(3%)
Confined	120	(10%)	0	(0%)	$0.0	(0%)
Unclassified misuse of material or product	120	(10%)	4	(29%)	$0.3	(10%)
Non-confined	20	(2%)	4	(29%)	$0.2	(6%)
Confined	100	(8%)	0	(0%)	$0.1	(4%)
Failure to clean	110	(9%)	0	(0%)	$0.1	(2%)
Non-confined	10	(1%)	0	(0%)	$0.1	(2%)
Confined	90	(8%)	0	(0%)	$0.0	(0%)
Mechanical failure or malfunction	80	(7%)	0	(0%)	$0.2	(7%)
Non-confined	30	(2%)	0	(0%)	$0.2	(7%)
Confined	60	(5%)	0	(0%)	$0.0	(0%)
Unclassified factor contributed to ignition	80	(7%)	0	(0%)	$0.2	(6%)
Non-confined	10	(1%)	0	(0%)	$0.1	(2%)
Confined	70	(6%)	0	(0%)	$0.1	(4%)
Playing with heat source	80	(7%)	2	(14%)	$0.1	(2%)
Non-confined	20	(1%)	2	(14%)	$0.1	(2%)
Confined	60	(5%)	0	(0%)	$0.0	(0%)
Electrical failure or malfunction	80	(6%)	3	(18%)	$0.3	(12%)
Non-confined	50	(4%)	3	(18%)	$0.3	(12%)
Confined	30	(2%)	0	(0%)	$0.0	(0%)
Heat source too close to combustibles	80	(6%)	2	(14%)	$0.3	(10%)
Non-confined	20	(2%)	2	(14%)	$0.3	(10%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)
Accidentally turned on, not turned off	50	(4%)	0	(0%)	$0.1	(2%)
Non-confined	0	(0%)	0	(0%)	$0.1	(2%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)

Table 8d.
Structure Fires in Mental Health Facilities by Factor Contributing to Ignition,
2009-2013 Annual Averages (Continued)

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Equipment not being operated properly	30	(2%)	0	(0%)	$0.0	(0%)
Non-confined	0	(0%)	0	(0%)	$0.0	(0%)
Confined	30	(2%)	0	(0%)	$0.0	(0%)
Improper container or storage	20	(2%)	0	(0%)	$0.0	(1%)
Non-confined	0	(0%)	0	(0%)	$0.0	(1%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Other known factor contributing to ignition	70	(6%)	0	(12%)	$1.2	(45%)
Non-confined	30	(2%)	0	(12%)	$1.2	(45%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)
Total fires	1,220	(100%)	15	(100%)	$2.7	(100%)
Non-confined	220	(18%)	13	(91%)	$2.5	(92%)
Confined	1,000	(82%)	1	(9%)	$0.2	(8%)
Total factors	1,250	(103%)	14	(96%)	$2.8	(103%)
Non-confined	230	(19%)	14	(96%)	$2.5	(95%)
Confined	1,020	(84%)	0	(0%)	$0.2	(8%)

Note: Sums may not equal totals due to rounding errors. Multiple entries are allowed in this field, so total factors add up to more than total fires. Electrical failures or malfunctions and mechanical failures or malfunctions were summed from NFIRS factors contributing to ignition codes 30-37 and 20-27, respectively.

Source: NFIRS and NFPA fire department experience survey.

Table 8e.
Structure Fires in Clinics and Doctors' Offices by Factor Contributing to Ignition,
2009-2013 Annual Averages

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Electrical failure or malfunction	140	(22%)	2	(26%)	$8.1	(33%)
Non-confined	120	(19%)	2	(26%)	$8.1	(33%)
Confined	20	(3%)	0	(0%)	$0.0	(0%)
Equipment unattended	80	(13%)	1	(14%)	$0.1	(0%)
Non-confined	10	(1%)	0	(0%)	$0.1	(0%)
Confined	80	(12%)	1	(14%)	$0.0	(0%)
Abandoned or discarded material or product	70	(11%)	0	(0%)	$1.6	(7%)
Non-confined	20	(4%)	0	(0%)	$1.6	(7%)
Confined	50	(8%)	0	(0%)	$0.0	(0%)
Mechanical failure or malfunction	70	(11%)	0	(0%)	$0.8	(3%)
Non-confined	50	(8%)	0	(0%)	$0.8	(3%)
Confined	20	(3%)	0	(0%)	$0.0	(0%)
Heat source too close to combustibles	50	(8%)	1	(13%)	$3.7	(15%)
Non-confined	30	(5%)	1	(13%)	$3.7	(15%)
Confined	20	(4%)	0	(0%)	$0.0	(0%)
Unclassified misuse of material or product	40	(7%)	2	(22%)	$0.5	(2%)
Non-confined	10	(2%)	2	(22%)	$0.5	(2%)
Confined	30	(5%)	0	(0%)	$0.0	(0%)
Unclassified factor contributed to ignition	40	(7%)	1	(13%)	$3.6	(15%)
Non-confined	20	(3%)	1	(13%)	$3.3	(14%)
Confined	30	(4%)	0	(0%)	$0.4	(1%)
Accidentally turned on, not turned off	20	(3%)	0	(0%)	$0.0	(0%)
Non-confined	0	(1%)	0	(0%)	$0.0	(0%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Failure to clean	10	(2%)	0	(0%)	$0.1	(0%)
Non-confined	10	(1%)	0	(0%)	$0.1	(0%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Exposure fire	10	(2%)	0	(0%)	$0.7	(3%)
Non-confined	10	(2%)	0	(0%)	$0.7	(3%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)

Table 8e.
Structure Fires in Clinics and Doctors' Offices by Factor Contributing to Ignition, 2009-2013 Annual Averages (Continued)

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Equipment not being operated properly	10	(2%)	0	(0%)	$0.3	(1%)
Non-confined	0	(0%)	0	(0%)	$0.3	(1%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Unclassified operational deficiency	10	(2%)	0	(0%)	$0.0	(0%)
Non-confined	0	(1%)	0	(0%)	$0.0	(0%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Cutting or welding too close to combustibles	10	(2%)	0	(0%)	$0.3	(1%)
Non-confined	10	(2%)	0	(0%)	$0.3	(1%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Other known factor contributing to ignition	60	(11%)	0	(13%)	$5.5	(22%)
Non-confined	40	(7%)	0	(13%)	$5.5	(22%)
Confined	20	(4%)	0	(0%)	$0.0	(0%)
Total fires	610	(100%)	7	(100%)	$24.4	(100%)
Non-confined	310	(51%)	6	(86%)	$24.0	(99%)
Confined	300	(49%)	1	(14%)	$0.4	(1%)
Total factors	640	(104%)	7	(100%)	$25.3	(104%)
Non-confined	330	(54%)	6	(86%)	$25.0	(102%)
Confined	310	(50%)	1	(14%)	$0.4	(1%)

Note: Sums may not equal totals due to rounding errors. Multiple entries are allowed in this field, so total factors add up to more than total fires. Electrical failures or malfunctions and mechanical failures or malfunctions were summed from NFIRS factors contributing to ignition codes 30-37 and 20-27, respectively.

Source: NFIRS and NFPA fire department experience survey.

Table 9. Structure Fires in Health Care Facilities by Heat Source, 2009-2013 Annual Averages

Heat Source	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Unclassified heat from powered equipment	1,470	(26%)	0	(0%)	18	(11%)	$8.2	(18%)
Non-confined	360	(6%)	0	(0%)	9	(6%)	$7.1	(16%)
Confined	1,110	(20%)	0	(0%)	9	(5%)	$1.1	(2%)
Radiated or conducted heat from operating equipment	1,360	(24%)	0	(0%)	27	(17%)	$3.8	(8%)
Non-confined	250	(4%)	0	(0%)	14	(9%)	$3.8	(8%)
Confined	1,120	(20%)	0	(0%)	13	(8%)	$0.0	(0%)
Unclassified heat source	540	(10%)	1	(14%)	5	(3%)	$1.5	(3%)
Non-confined	60	(1%)	1	(14%)	4	(2%)	$1.5	(3%)
Confined	470	(8%)	0	(0%)	1	(1%)	$0.0	(0%)
Arcing	430	(8%)	1	(16%)	19	(12%)	$9.4	(21%)
Non-confined	330	(6%)	1	(16%)	19	(12%)	$9.4	(21%)
Confined	100	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Unclassified hot or smoldering object	380	(7%)	0	(0%)	5	(3%)	$3.5	(8%)
Non-confined	90	(2%)	0	(0%)	5	(3%)	$3.5	(8%)
Confined	290	(5%)	0	(0%)	0	(0%)	$0.0	(0%)
Spark, ember or flame from operating equipment	360	(6%)	1	(13%)	21	(13%)	$1.0	(2%)
Non-confined	110	(2%)	1	(13%)	21	(13%)	$1.0	(2%)
Confined	250	(4%)	0	(0%)	0	(0%)	$0.0	(0%)
Smoking materials	280	(5%)	1	(12%)	17	(11%)	$1.8	(4%)
Non-confined	100	(2%)	1	(12%)	17	(11%)	$1.8	(4%)
Confined	170	(3%)	0	(0%)	0	(0%)	$0.0	(0%
Heat from direct flame or convection currents	180	(3%)	0	(0%)	3	(2%)	$0.2	(0%)
Non-confined	20	(0%)	0	(0%)	2	(1%)	$0.2	(0%)
Confined	170	(3%)	0	(0%)	1	(1%)	$0.0	(0%)
Lighter	180	(3%)	1	(13%)	28	(17%)	$3.9	(9%)
Non-confined	90	(2%)	1	(13%)	28	(17%)	$3.9	(9%)
Confined	90	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Hot ember or ash	90	(2%)	0	(0%)	4	(3%)	$3.8	(8%)
Non-confined	30	(1%)	0	(0%)	4	(3%)	$3.8	(8%)
Confined	60	(1%)	0	(0%)	0	(0%)	$0.0	(0%)

Table 9.
Structure Fires in Health Care Facilities by Heat Source,
2009-2013 Annual Averages (Continued)

Heat Source	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Other known heat source	380	(7%)	1	(32%)	10	(6%)	$7.8	(17%)
Non-confined	160	(3%)	1	(32%)	10	(6%)	$7.8	(17%)
Confined	210	(4%)	0	(0%)	0	(0%)	$0.0	(0%)
Total	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)
Non-confined	1,600	(28%)	4	(100%)	136	(88%)	$43.7	(97%)
Confined	4,050	(72%)	0	(0%)	24	(13%)	$1.2	(3%)

Note: Sums may not equal totals due to rounding errors. The statistics on smoking materials and lighters include a proportional share of fires in which the heat source was heat from an unclassified open flame or smoking material.

Source: NFIRS and NFPA fire department experience survey.

Table 9b.
Structure Fires in Nursing Homes by Heat Source,
2009-2013 Annual Averages

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unclassified heat from powered equipment	730	(28%)	15	(15%)	$0.9	(10%)
Non-confined	180	(7%)	8	(8%)	$0.8	(9%)
Confined	550	(21%)	7	(7%)	$0.0	(1%)
Radiated or conducted heat from operating equipment	660	(25%)	19	(19%)	$0.8	(9%)
Non-confined	130	(5%)	12	(12%)	$0.8	(9%)
Confined	530	(20%)	7	(7%)	$0.1	(1%)
Unclassified heat source	240	(9%)	2	(2%)	$0.1	(1%)
Non-confined	20	(1%)	2	(2%)	$0.1	(1%)
Confined	220	(8%)	0	(0%)	$0.0	(0%)
Arcing	190	(7%)	9	(9%)	$2.1	(23%)
Non-confined	150	(6%)	9	(9%)	$2.0	(23%)
Confined	50	(2%)	0	(0%)	$0.0	(0%)
Spark, ember or flame from operating equipment	180	(7%)	12	(12%)	$0.2	(2%)
Non-confined	50	(2%)	12	(12%)	$0.2	(2%)
Confined	130	(5%)	0	(0%)	$0.0	(0%)
Unclassified hot or smoldering object	170	(6%)	3	(3%)	$0.4	(4%)
Non-confined	40	(2%)	3	(3%)	$0.4	(4%)
Confined	130	(5%)	0	(0%)	$0.0	(0%)
Smoking materials	110	(4%)	10	(10%)	$0.7	(8%)
Non-confined	40	(2%)	10	(10%)	$0.7	(8%)
Confined	70	(3%)	0	(0%)	$0.0	(0%)
Heat from direct flame or convection currents	80	(3%)	3	(3%)	$0.1	(1%)
Non-confined	10	(0%)	1	(1%)	$0.1	(1%)
Confined	80	(3%	2	(2%)	$0.0	(0%)
Spontaneous combustion or chemical reaction	50	(2%)	2	(2%)	$0.1	(1%)
Non-confined	20	(1%)	2	(2%)	$0.1	(1%)
Confined	30	(1%)	0	(0%)	$0.0	(0%)
Hot ember or ash	40	(2%)	3	(3%)	$0.1	(1%)
Non-confined	10	(1%)	3	(3%)	$0.1	(1%)
Confined	30	(1%)	0	(0%)	$0.0	(0%)

Table 9b.
Structure Fires in Nursing Homes by Heat Source,
2009-2013 Annual Averages (Continued)

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Other known heat source	160	(6%)	20	(23%)	$3.5	(39%)
Non-confined	90	(3%)	20	(23%)	$3.4	(39%)
Confined	70	(3%)	0	(0%)	$0.0	(0%)
Total	2,620	(100%)	101	(100%)	$8.9	(100%)
Non-confined	730	(28%)	85	(84%)	$8.7	(98%)
Confined	1,890	(72%)	16	(16%)	$0.2	(2%)

Note: Sums may not equal totals due to rounding errors. The statistics on smoking materials include a proportional share of fires in which the heat source was heat from an unclassified open flame or smoking material.

Source: NFIRS and NFPA fire department experience survey.

Table 9c.
Structure Fires in Hospitals and Hospices by Heat Source,
2009-2013 Annual Averages

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unclassified heat from powered equipment	300	(25%)	3	(8%)	$3.2	(36%)
Non-confined	80	(7%)	1	(2%)	$2.8	(31%)
Confined	210	(18%)	2	(6%)	$0.4	(5%)
Radiated or conducted heat from operating equipment	260	(22%)	4	(11%)	$0.6	(7%)
Non-confined	50	(4%)	0	(1%)	$0.6	(7%)
Confined	220	(18%)	4	(10%)	$0.0	(0%)
Unclassified heat source	100	(9%)	1	(2%)	$0.1	(1%)
Non-confined	10	(1%)	1	(2%)	$0.1	(1%)
Confined	90	(7%)	0	(0%)	$0.0	(0%)
Arcing	100	(8%)	8	(20%)	$1.1	(13%)
Non-confined	70	(6%)	8	(20%)	$1.1	(13%)
Confined	30	(2%)	0	(0%)	$0.0	(0%)
Unclassified hot or smoldering object	80	(7%)	1	(3%)	$3.0	(33%)
Non-confined	20	(2%)	1	(3%)	$3.0	(33%)
Confined	60	(5%)	0	(0%)	$0.0	(0%)
Spark, ember or flame from operating equipment	70	(6%)	6	(17%)	$0.3	(3%)
Non-confined	30	(2%)	6	(17%)	$0.3	(3%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)
Lighter	60	(5%)	7	(19%)	$0.5	(5%)
Non-confined	30	(2%)	7	(19%)	$0.5	(5%)
Confined	40	(3%)	0	(0%)	$0.0	(0%)
Heat from direct flame or convection currents	60	(5%)	0	(0%)	$0.0	(0%)
Non-confined	0	(0%)	0	(0%)	$0.0	(0%)
Confined	60	(5%)	0	(0%)	$0.0	(0%)
Smoking materials	50	(4%)	3	(9%)	$0.0	(0%)
Non-confined	10	(1%)	3	(9%)	$0.0	(0%)
Confined	40	(3%)	0	(0%)	$0.0	(0%)
Match	20	(2%)	1	(2%)	$0.0	(0%)
Non-confined	0	(0%)	1	(2%)	$0.0	(0%)
Confined	20	(1%)	0	(0%)	$0.0	(0%)

Table 9c.
Structure Fires in Hospitals and Hospices by Heat Source,
2009-2013 Annual Averages (Continued)

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Molten or hot material	20	(2%)	0	(1%)	$0.0	(0%)
Non-confined	10	(1%)	0	(1%)	$0.0	(0%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Other known heat source	60	(5%)	0	(9%)	$0.1	(1%)
Non-confined	20	(2%)	0	(9%)	$0.1	(1%)
Confined	40	(3%)	0	(0%)	$0.0	(0%)
Total	1,200	(100%)	37	(100%)	$8.9	(100%)
Non-confined	340	(28%)	31	(84%)	$8.5	(95%)
Confined	860	(72%)	6	(16%)	$0.5	(5%)

Note: Sums may not equal totals due to rounding errors. The statistics on lighters, smoking materials and matches include a proportional share of fires in which the heat source was heat from an unclassified open flame or smoking material.

Source: NFIRS and NFPA fire department experience survey.

Table 9d.
Structure Fires in Mental Health Facilities by Heat Source,
2009-2013 Annual Averages

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Radiated or conducted heat from operating equipment	340	(28%)	1	(6%)	$0.3	(11%)
Non-confined	30	(3%)	1	(6%)	$0.3	(11%)
Confined	310	(25%)	0	(0%)	$0.0	(0%)
Unclassified heat from powered equipment	280	(23%)	1	(4%)	$0.4	(15%)
Non-confined	40	(3%)	1	(4%)	$0.2	(8%)
Confined	240	(20%)	0	(0%)	$0.2	(7%)
Unclassified heat source	150	(13%)	3	(17%)	$0.1	(3%)
Non-confined	10	(1%)	1	(8%)	$0.1	(2%)
Confined	140	(12%)	1	(9%)	$0.0	(0%)
Unclassified hot or smoldering object	80	(7%)	0	(0%)	$0.0	(2%)
Non-confined	10	(1%)	0	(0%)	$0.0	(2%)
Confined	70	(5%)	0	(0%)	$0.0	(0%)
Lighter	80	(6%)	4	(27%)	$0.1	(4%)
Non-confined	30	(2%)	4	(27%)	$0.1	(4%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)
Smoking materials	70	(6%)	3	(18%)	$0.3	(10%)
Non-confined	30	(2%)	3	(18%)	$0.3	(10%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)
Spark, ember or flame from operating equipment	70	(6%)	0	(0%)	$0.2	(7%)
Non-confined	10	(1%)	0	(0%)	$0.2	(7%)
Confined	60	(5%)	0	(0%)	$0.0	(0%)
Arcing	50	(4%)	2	(16%)	$0.1	(5%)
Non-confined	30	(2%)	2	(16%)	$0.1	(5%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Heat from direct flame or convection currents	30	(3%)	1	(7%)	$0.1	(3%)
Non-confined	0	(0%)	1	(7%)	$0.1	(3%)
Confined	30	(2%)	0	(0%)	$0.0	(0%)
Other known heat source	60	(5%)	0	(4%)	$1.1	(41%)
Non-confined	30	(2%)	0	(4%)	$1.1	(41%)
Confined	40	(3%)	0	(0%)	$0.0	(0%)

Table 9d.
Structure Fires in Mental Health Facilities by Heat Source,
2009-2013 Annual Averages (Continued)

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Total	1,220	(100%)	15	(100%)	$2.7	(100%)
Non-confined	220	(18%)	13	(91%)	$2.5	(92%)
Confined	1,000	(82%)	1	(9%)	$0.2	(8%)

Note: Sums may not equal totals due to rounding errors. The statistics on lighters and smoking materials include a proportional share of fires in which the heat source was heat from an unclassified open flame or smoking material.

Source: NFIRS and NFPA fire department experience survey.

Table 9e.
Structure Fires in Clinics and Doctors' Offices by Heat Source,
2009-2013 Annual Averages

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unclassified heat from powered equipment	150	(25%)	0	(0%)	$4.1	(17%)
Non-confined	60	(10%)	0	(0%)	$3.7	(15%)
Confined	90	(15%)	0	(0%)	$0.4	(1%)
Radiated or conducted heat from operating equipment	110	(18%)	2	(27%)	$2.0	(8%)
Non-confined	40	(6%)	1	(13%)	$2.0	(8%)
Confined	70	(12%)	1	(14%)	$0.0	(0%)
Arcing	90	(14%)	0	(0%)	$6.0	(24%)
Non-confined	80	(13%)	0	(0%)	$6.0	(24%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Unclassified hot or smoldering object	50	(8%)	1	(14%)	$0.7	(3%)
Non-confined	20	(4%)	1	(14%)	$0.7	(3%)
Confined	30	(4%)	0	(0%)	$0.0	(0%)
Unclassified heat source	40	(7%)	0	(0%)	$1.2	(5%)
Non-confined	10	(2%)	0	(0%)	$1.2	(5%)
Confined	30	(5%)	0	(0%)	$0.0	(0%)
Smoking materials	40	(6%)	1	(8%)	$0.8	(3%)
Non-confined	20	(3%)	1	(8%)	$0.8	(3%)
Confined	20	(4%)	0	(0%)	$0.0	(0%)
Spark, ember or flame from operating equipment	30	(6%)	3	(38%)	$0.4	(1%)
Non-confined	20	(4%)	3	(38%)	$0.4	(1%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Hot ember or ash	10	(2%)	0	(0%)	$3.7	(15%)
Non-confined	10	(1%)	0	(0%)	$3.7	(15%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Match	10	(2%)	0	(0%)	$0.9	(4%)
Non-confined	0	(1%)	0	(0%)	$0.9	(4%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Molten or hot material	10	(2%)	1	(13%)	$0.0	(0%)
Non-confined	0	(1%)	1	(13%)	$0.0	(0%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)

Table 9e.
Structure Fires in Clinics and Doctors' Offices by Heat Source,
2009-2013 Annual Averages (Continued)

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Other known heat source	60	(10%)	0	(0%)	$4.7	(19%)
Non-confined	50	(8%)	0	(0%)	$4.7	(19%)
Confined	20	(3%)	0	(0%)	$0.0	(0%)
Total	610	(100%)	7	(100%)	$24.4	(100%)
Non-confined	310	(51%)	6	(86%)	$24.0	(99%)
Confined	300	(49%)	1	(14%)	$0.4	(1%)

Note: Sums may not equal totals due to rounding errors. The statistics on smoking materials and matches include a proportional share of fires in which the heat source was heat from an unclassified open flame or smoking material.

Source: NFIRS and NFPA fire department experience survey.

Table 10.
Structure Fires in Health Care Facilities by Area of Origin,
2009-2013 Annual Averages

Area of Origin	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Kitchen or cooking area	2,980	(53%)	1	(29%)	36	(23%)	$1.8	(4%)
Non-confined	160	(3%)	1	(29%)	14	(9%)	$1.5	(3%)
Confined	2,820	(50%)	0	(0%)	22	(14%)	$0.3	(1%)
Laundry room or area	320	(6%)	0	(0%)	15	(9%)	$1.7	(4%)
Non-confined	220	(4%)	0	(0%)	15	(9%)	$1.7	(4%)
Confined	90	2%)	0	(0%)	0	(0%)	$0.0	(0%)
Bedroom	310	(5%)	1	(26%)	61	(38%)	$2.5	(6%)
Non-confined	210	(4%)	1	(26%)	61	(38%)	$2.5	(6%)
Confined	90	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Lavatory, locker room or check room	240	(4%)	0	(11%)	6	(4%)	$0.7	(2%)
Non-confined	110	(2%)	0	(11%)	6	(4%)	$0.7	(1%)
Confined	130	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Common room, living room, family room, lounge or den	120	(2%)	1	(29%)	6	(4%)	$0.7	(2%)
Non-confined	30	(1%)	1	(29%)	6	(4%)	$0.7	(2%)
Confined	90	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Unclassified area of origin	110	(2%)	0	(0%)	0	(0%)	$0.3	(1%)
Non-confined	30	(1%)	0	(0%)	0	(0%)	$0.3	(1%)
Confined	90	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Office	110	(2%)	0	(0%)	1	(1%)	$4.0	(9%)
Non-confined	60	(1%)	0	(0%)	1	(1%)	$3.7	(8%)
Confined	50	(1%)	0	(0%)	0	(0%)	$0.4	(1%)
Dining room, bar or beverage area, cafeteria	110	(2%)	0	(0%)	0	(0%)	$0.2	(1%)
Non-confined	10	(0%)	0	(0%)	0	(0%)	$0.2	(1%)
Confined	90	(2%)	0	(0%	0	(0%)	$0.0	(0%)
Heating equipment room	100	(2%)	0	(0%)	0	(0%)	$0.5	(1%)
Non-confined	30	(1%)	0	(0%)	0	(0%)	$0.5	(1%)
Confined	70	(1%)	0	(0%)	0	(0%)	$0.0	(0%)
Other known area of origin	1,250	(22%)	0	(6%)	35	(22%)	$32.3	(72%)
Non-confined	730	(13%)	0	(6%)	33	(21%)	$31.9	(71%)
Confined	520	(9%)	0	(0%)	2	(1%)	$0.5	(1%)

Table 10.
Structure Fires in Health Care Facilities by Area of Origin,
2009-2013 Annual Averages (Continued)

Area of Origin	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Total	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)
Non-confined	1,600	(28%)	4	(100%)	136	(88%)	$43.7	(97%)
Confined	4,050	(72%)	0	(0%)	24	(13%)	$1.2	(3%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 10b.
Structure Fires in Nursing Homes by Area of Origin,
2009-2013 Annual Averages

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Kitchen or cooking area	1,510	(58%)	25	(25%)	$0.9	(10%)
Non-confined	90	(3%)	12	(12%)	$0.8	(9%)
Confined	1,410	(54%)	13	(13%)	$0.1	(1%)
Laundry room or area	240	(9%)	11	(11%)	$1.1	(13%)
Non-confined	170	(6%)	11	(11%)	$1.1	(13%)
Confined	70	(3%)	0	(0%)	$0.0	(0%)
Bedroom or patient room	180	(7%)	43	(42%)	$1.4	(16%)
Non-confined	140	(5%)	43	(42%)	$1.4	(15%)
Confined	40	(2%)	0	(0%)	$0.0	(0%)
Lavatory, locker room or check room	60	(2%)	4	(4%)	$0.3	(3%)
Non-confined	40	(2%)	4	(4%)	$0.3	(3%)
Confined	20	(1%)	0	(0%)	$0.0	(0%)
Common room, living room, family room, lounge or den	60	(2%)	4	(4%)	$0.3	(3%)
Non-confined	20	(1%)	4	(4%)	$0.3	(3%)
Confined	40	(2%)	0	(0%)	$0.0	(0%)
Unclassified area of origin	50	(2%)	0	(0%)	$0.0	(0%)
Non-confined	10	(0%)	0	(0%)	$0.0	(0%)
Confined	40	(2%)	0	(0%)	$0.0	(0%)
Dining room, bar or beverage area, cafeteria	50	(2%)	0	(0%)	$0.2	(2%)
Non-confined	10	(0%)	0	(0%)	$0.2	(2%)
Confined	40	(2%)	0	(0%)	$0.0	(0%)
Heating equipment room	40	(2%)	0	(0%)	$0.2	(2%)
Non-confined	20	(1%)	0	(0%)	$0.2	(2%)
Confined	30	(1%)	0	(0%)	$0.0	(0%)
Other known area of origin	430	(16%)	14	(14%)	$4.5	(51%)
Non-confined	250	(10%)	12	(12%)	$4.5	(50%)
Confined	180	(7%)	3	(3%)	$0.0	(0%)

Table 10b.
Structure Fires in Nursing Homes by Area of Origin,
2009-2013 Annual Averages (Continued)

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Total	2,620	(100%)	101	(100%)	$8.9	(100%)
Non-confined	730	(28%)	85	(84%)	$8.7	(98%)
Confined	1,890	(72%)	16	(16%)	$0.2	(2%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 10c.
Structure Fires in Hospitals and Hospices by Area of Origin,
2009-2013 Annual Averages

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Kitchen or cooking area	530	(44%)	6	(17%)	$0.3	(3%)
Non-confined	30	(2%)	1	(2%)	$0.2	(2%)
Confined	500	(42%)	6	(15%)	$0.0	(0%)
Lavatory, locker room or check room	80	(7%)	2	(5%)	$0.1	(1%)
Non-confined	20	(2%)	2	(5%)	$0.1	(1%)
Confined	60	(5%)	0	(0%)	$0.0	(0%)
Bedroom or patient room	50	(4%)	13	(34%)	$0.7	(8%)
Non-confined	40	(3%)	13	(34%)	$0.7	(8%)
Confined	20	(1%)	0	(0%)	$0.0	(0%)
Machinery room or area or elevator machinery room	40	(3%)	0	(0%)	$0.4	(4%)
Non-confined	30	(2%)	0	(0%)	$0.4	(4%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Trash or rubbish chute, area or container	30	(3%)	0	(0%)	$0.1	(1%)
Non-confined	0	(0%)	0	(0%)	$0.1	(1%)
Confined	30	(3%)	0	(0%)	$0.0	(0%)
Unclassified area of origin	30	(3%)	0	(0%)	$0.0	(0%)
Non-confined	10	(0%)	0	(0%)	$0.0	(0%)
Confined	30	(2%)	0	(0%)	$0.0	(0%)
Dining room, bar or beverage area, cafeteria	30	(2%)	0	(0%)	$0.0	(0%)
Non-confined	0	(0%)	0	(0%)	$0.0	(0%)
Confined	30	(2%)	0	(0%)	$0.0	(0%)
Unclassified function area	30	(2%)	0	(1%)	$0.5	(6%)
Non-confined	10	(1%)	0	(1%)	$0.1	(1%)
Confined	20	(2%)	0	(0%)	$0.4	(4%)
Office	30	(2%)	0	(0%)	$0.2	(2%)
Non-confined	10	(1%)	0	(0%)	$0.2	(2%)
Confined	20	(1%)	0	(0%)	$0.0	(0%)
Laundry room or area	30	(2%)	2	(5%)	$0.2	(2%)
Non-confined	20	(2%)	2	(5%)	$0.2	(2%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)

Table 10c.
Structure Fires in Hospitals and Hospices by Area of Origin,
2009-2013 Annual Averages (Continued)

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Common room, living room, family room, lounge or den	20	(2%)	0	(0%)	$0.0	(0%)
Non-confined	0	(0%)	0	(0%)	$0.0	(0%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Hallway, corridor, or mall	20	(2%)	0	(0%)	$0.0	(0%)
Non-confined	10	(1%)	0	(0%)	$0.0	(0%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Unclassified equipment or service area	20	(2%)	0	(1%)	$0.1	(1%)
Non-confined	10	(1%)	0	(1%)	$0.1	(1%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Other known area of origin	260	(21%)	13	(36%)	$6.4	(72%)
Non-confined	150	(12%)	13	(36%)	$6.4	(71%)
Confined	110	(9%)	0	(0%)	$0.0	(0%)
Total	1,200	(100%)	37	(99%)	$8.9	(100%)
Non-confined	340	(28%)	31	(84%)	$8.5	(95%)
Confined	860	(71%)	6	(15%)	$0.5	(5%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 10d.
Structure Fires in Mental Health Facilities by Area of Origin,
2009-2013 Annual Averages

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Kitchen or cooking area	810	(66%)	3	(20%)	$0.4	(14%)
Non-confined	30	(2%)	2	(11%)	$0.2	(6%)
Confined	780	(64%)	1	(9%)	$0.2	(8%)
Bedroom or patient room	70	(6%)	6	(39%)	$0.3	(12%)
Non-confined	40	(3%)	6	(39%)	$0.3	(12%)
Confined	40	(3%)	0	(0%)	$0.0	(0%)
Lavatory, locker room or check room	60	(5%)	0	(3%)	$0.0	(1%)
Non-confined	20	(2%)	0	(3%)	$0.0	(1%)
Confined	40	(3%)	0	(0%)	$0.0	(0%)
Laundry room or area	30	(2%)	0	(3%)	$0.1	(4%)
Non-confined	20	(2%)	0	(3%)	$0.1	(4%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Common room, living room, family room, lounge or den	30	(2%)	2	(12%)	$0.2	(6%)
Non-confined	10	(1%)	2	(12%)	$0.2	(6%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Unclassified outside area	20	(2%)	0	(0%)	$0.0	(0%)
Non-confined	0	(0%)	0	(0%)	$0.0	(0%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Other known area of origin	190	(16%)	3	(23%)	$1.7	(63%)
Non-confined	90	(7%)	3	(23%)	$1.7	(62%)
Confined	90	(7%)	0	(0%)	$0.0	(0%)
Total	1,220	(100%)	15	(100%)	$2.7	(100%)
Non-confined	220	(18%)	13	(91%)	$2.5	(92%)
Confined	1,000	(82%)	1	(9%)	$0.2	(8%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 10e.
Structure Fires in Clinics and Doctors' Offices by Area of Origin,
2009-2013 Annual Averages

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Kitchen or cooking area	170	(28%)	1	(14%)	$0.2	(1%)
Non-confined	10	(2%)	0	(0%)	$0.2	(1%)
Confined	150	(25%)	1	(14%)	$0.0	(0%)
Office	60	(10%)	1	(8%)	$3.4	(14%)
Non-confined	40	(7%)	1	(8%)	$3.1	(13%)
Confined	20	(3%)	0	(0%)	$0.4	(1%)
Lavatory, locker room or check room	40	(7%)	0	(0%)	$0.3	(1%)
Non-confined	20	(3%)	0	(0%)	$0.3	(1%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Heating equipment room	30	(5%)	0	(0%)	$0.3	(1%)
Non-confined	10	(2%)	0	(0%)	$0.3	(1%)
Confined	20	(3%)	0	(0%)	$0.0	(0%)
Unclassified outside area	20	(3%)	0	(0%)	$0.5	(2%)
Non-confined	10	(2%)	0	(0%)	$0.5	(2%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Exterior roof surface	20	(3%)	1	(8%)	$0.8	(3%)
Non-confined	10	(2%)	1	(8%)	$0.8	(3%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Unclassified equipment or service area	20	(3%)	1	(7%)	$0.3	(1%)
Non-confined	10	(2%)	1	(7%)	$0.3	(1%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Duct for HVAC, cable, exhaust, heating, or AC	20	(3%)	0	(0%)	$0.0	(0%)
Non-confined	10	(2%)	0	(0%)	$0.0	(0%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Attic or ceiling/roof assembly or concealed space	10	(2%)	0	(0%)	$3.2	(13%)
Non-confined	10	(2%)	0	(0%)	$3.2	(13%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Exterior wall surface	10	(2%)	0	(0%)	$0.4	(2%)
Non-confined	10	(2%)	0	(0%)	$0.4	(2%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Laundry room or area	10	(2%)	2	(22%)	$0.1	(0%)
Non-confined	10	(2%)	2	(22%)	$0.1	(0%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)

Table 10e.
Structure Fires in Clinics and Doctors' Offices by Area of Origin,
2009-2013 Annual Averages (Continued)

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Unclassified area of origin	10	(2%)	0	(0%)	$0.2	(1%)
Non-confined	10	(2%)	0	(0%)	$0.2	(1%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Trash or rubbish chute, area or container	10	(2%)	0	(0%)	$0.2	(1%)
Non-confined	0	(0%)	0	(0%)	$0.2	(1%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Common room, living room, family room, lounge or den	10	(2%)	0	(0%)	$0.2	(1%)
Non-confined	0	(0%)	0	(0%)	$0.2	(1%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Other known area of origin	180	(30%)	3	(41%)	$14.3	(59%)
Non-confined	140	(23%)	3	(41%)	$14.3	(59%)
Confined	40	(7%)	0	(0%)	$0.0	(0%)
Total	610	(100%)	7	(100%)	$24.4	(100%)
Non-confined	310	(51%)	6	(86%)	$24.0	(99%)
Confined	300	(49%)	1	(14%)	$0.4	(1%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 11.
Structure Fires in Health Care Facilities by Item First Ignited,
2009-2013 Annual Averages

Item First Ignited	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking materials, including food	2,450	(43%)	0	(0%)	18	(11%)	$1.0	(2%)
Non-confined	70	(1%)	0	(0%)	5	(3%)	$0.4	(1%)
Confined	2,380	(42%)	0	(0%)	13	(8%)	$0.7	(2%)
Electrical wire or cable insulation	410	(7%)	0	(0%)	14	(9%)	$9.1	(20%)
Non-confined	320	(6%)	0	(0%)	14	(9%)	$9.1	(20%)
Confined	80	(1%)	0	(0%)	0	(0%)	$0.0	(0%)
Unclassified item first ignited	370	(6%)	0	(9%)	10	(6%)	$1.9	(4%)
Non-confined	110	(2%)	0	(9%)	7	(4%)	$1.9	(4%)
Confined	260	(5%)	0	(0%)	3	(2%)	$0.0	(0%)
Rubbish, trash, or waste	340	(6%)	0	(0%)	3	(2%)	$0.5	(1%)
Non-confined	40	(1%)	0	(0%)	3	(2%)	$0.4	(1%)
Confined	300	(5%)	0	(0%)	0	(0%)	$0.0	(0%)
Linen other than bedding	190	(3%)	0	(0%)	7	(5%)	$1.0	(2%)
Non-confined	90	(2%)	0	(0%)	6	(4%)	$1.0	(2%)
Confined	90	(2%)	0	(0%)	1	(1%)	$0.0	(0%)
Appliance housing or casing	180	(3%)	0	(0%)	13	(8%)	$2.1	(5%)
Non-confined	60	(1%)	0	(0%)	13	(8%)	$2.1	(5%)
Confined	120	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Flammable or combustible liquids or gases, piping or filter	180	(3%)	0	(0%)	13	(8%)	$0.9	(2%)
Non-confined	60	(1%)	0	(0%)	11	(7%)	$0.9	(2%)
Confined	120	(2%)	0	(0%)	2	(2%)	$0.0	(0%)
Mattress or bedding	150	(0%)	2	(52%)	33	(21%)	$2.1	(5%)
Non-confined	110	(2%)	2	(52%)	33	(21%)	$2.1	(5%)
Confined	40	(1%)	0	(0%)	0	(0%)	$0.0	(0%)
Household utensils	130	(2%)	0	(0%)	2	(1%)	$0.1	(0%)
Non-confined	10	(0%)	0	(0%)	2	(1%)	$0.1	(0%)
Confined	120	(2%)	0	(0%)	0	(0%)	$0.0	(0%)
Magazine, newspaper, writing paper	120	(2%)	0	(0%)	0	(0%)	$1.2	(3%)
Non-confined	30	(1%)	0	(0%)	0	(0%)	$1.2	(3%)
Confined	90	(2%)	0	(0%)	0	(0%)	$0.0	(0%)

Table 11.
Structure Fires in Health Care Facilities by Item First Ignited,
2009-2013 Annual Averages (Continued)

Item First Ignited	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Clothing	110	(2%)	0	(9%)	9	(5%)	$0.8	(2%)
Non-confined	70	(1%)	0	(9%)	7	(5%)	$0.8	(2%)
Confined	40	(1%)	0	(0%)	1	(1%)	$0.0	(0%)
Dust, fiber, lint, including sawdust or excelsior	100	(2%)	0	(0%)	1	(0%)	$1.4	(3%)
Non-confined	60	(1%)	0	(0%)	1	(0%)	$1.4	(3%)
Confined	40	(1%)	0	(0%)	0	(0%)	$0.0	(0%)
Other known item first ignited	940	(17%)	1	(29%)	36	(22%)	$22.9	(51%)
Non-confined	560	(10%)	1	(29%)	32	(20%)	$22.5	(50%)
Confined	380	(7%)	0	(0%)	4	(2%)	$0.4	(1%)
Total	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)
Non-confined	1,600	(28%)	4	(100%)	140	(88%)	$43.7	(97%)
Confined	4,050	(72%)	0	(0%)	20	(13%)	$1.2	3%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 11b.
Structure Fires in Nursing Homes by Item First Ignited,
2009-2013 Annual Averages

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking materials, including food	1,150	(44%)	10	(10%)	$0.3	(3%)
Non-confined	30	(1%)	3	(3%)	$0.2	(2%)
Confined	1,110	(43%)	7	(7%)	$0.1	(1%)
Electrical wire or cable insulation	200	(7%)	8	(8%)	$0.8	(10%)
Non-confined	150	(6%)	8	(8%)	$0.8	(9%)
Confined	50	(2%)	0	(0%)	$0.0	(0%)
Unclassified item first ignited	160	(6%)	6	(6%)	$0.1	(1%)
Non-confined	50	(2%)	3	(3%)	$0.1	(1%)
Confined	110	(4%)	3	(3%)	$0.0	(0%)
Linen (other than bedding)	140	(5%)	7	(7%)	$0.3	(4%)
Non-confined	70	(3%)	5	(5%)	$0.3	(3%)
Confined	70	(3%)	2	(2%)	$0.0	(0%)
Rubbish, trash, or waste	90	(4%)	3	(3%)	$0.1	(1%)
Non-confined	10	(0%)	3	(3%)	$0.1	(1%)
Confined	80	(3%)	0	(0%)	$0.0	(0%)
Household utensils	90	(4%)	2	(2%)	$0.1	(1%)
Non-confined	10	(0%)	2	(2%)	$0.1	(1%)
Confined	80	(3%)	0	(0%)	$0.0	(0%)
Appliance housing or casing	90	(3%)	13	(13%)	$0.4	(4%)
Non-confined	30	(1%)	13	(13%)	$0.4	(4%)
Confined	50	(2%)	0	(0%)	$0.0	(0%)
Mattress or bedding	80	(3%)	20	(20%)	$1.4	(15%)
Non-confined	70	(2%)	20	(20%)	$1.4	(15%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Flammable or combustible liquids or gases, piping or filter	70	(3%)	4	(4%)	$0.1	(1%)
Non-confined	20	(1%)	4	(4%)	$0.1	(1%)
Confined	50	(2%)	0	(0%)	$0.0	(0%)
Clothing	60	(2%)	6	(6%)	$0.5	(6%)
Non-confined	50	(2%)	4	(4%)	$0.5	(6%)
Confined	10	(1%)	2	(2%)	$0.0	(0%)

Table 11b.
Structure Fires in Nursing Homes by Item First Ignited,
2009-2013 Annual Averages (continued)

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Dust, fiber, lint, including sawdust or excelsior	60	(2%)	1	(1%)	$1.1	(12%)
Non-confined	40	(1%)	1	(1%)	$1.0	(12%)
Confined	20	(1%)	0	(0%)	$0.0	(0%)
Magazine, newspaper, or writing paper	50	(2%)	0	(0%)	$0.0	(0%)
Non-confined	10	(0%)	0	(0%)	$0.0	(0%)
Confined	40	(2%)	0	(0%)	$0.0	(0%)
Unclassified soft goods or wearing apparel	50	(2%)	2	(2%)	$0.2	(2%)
Non-confined	30	(1%)	2	(2%)	$0.2	(2%)
Confined	20	(1%)	0	(0%)	$0.0	(0%)
Other known item first ignited	340	(13%)	19	(19%)	$3.6	(40%)
Non-confined	180	(7%)	16	(16%)	$3.5	(40%)
Confined	160	(6%)	2	(2%)	$0.0	(0%)
Total	2,620	(100%)	101	(100%)	$8.9	(100%)
Non-confined	730	(28%)	85	(84%)	$8.7	(98%)
Confined	1,890	(72%)	16	(16%)	$0.2	(2%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 11c.
Structure Fires in Hospitals and Hospices by Item First Ignited,
2009-2013 Annual Averages

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking materials, including food	510	(42%)	4	(11%)	$0.5	(5%)
Non-confined	20	(1%)	0	(1%)	$0.1	(1%)
Confined	490	(41%)	4	(10%)	$0.4	(5%)
Rubbish, trash, or waste	120	(10%)	0	(0%)	$0.1	(1%)
Non-confined	10	(1%)	0	(0%)	$0.1	(1%)
Confined	110	(9%)	0	(0%)	$0.0	(0%)
Electrical wire or cable insulation	90	(7%)	5	(14%)	$4.9	(55%)
Non-confined	80	(6%)	5	(14%)	$4.9	(55%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Unclassified item first ignited	80	(7%)	2	(5%)	$0.9	(10%)
Non-confined	30	(3%)	2	(5%)	$0.8	(9%)
Confined	50	(4%)	0	(0%)	$0.0	(0%)
Flammable or combustible liquids or gases, piping or filter	40	(3%)	8	(21%)	$0.3	(3%)
Non-confined	20	(1%)	7	(18%)	$0.3	(3%)
Confined	30	(2%)	1	(3%)	$0.0	(0%)
Mattress or bedding	40	(3%)	7	(19%)	$0.2	(2%)
Non-confined	20	(2%)	7	(19%)	$0.2	(2%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Appliance housing or casing	40	(3%)	0	(0%)	$0.0	(0%)
Non-confined	10	(1%)	0	(0%)	$0.0	(0%)
Confined	30	(2%)	0	(0%)	$0.0	(0%)
Linen (other than bedding)	30	(2%)	1	(2%)	$0.1	(1%)
Non-confined	10	(1%)	1	(2%)	$0.1	(1%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Magazine, newspaper, or writing paper	30	(2%)	0	(0%)	$0.3	(3%)
Non-confined	10	(0%)	0	(0%)	$0.2	(3%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Dust, fiber, lint, including sawdust or excelsior	20	(2%)	0	(0%)	$0.0	(0%)
Non-confined	10	(1%)	0	(0%)	$0.0	(0%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Unclassified organic materials	20	(2%)	1	(1%)	$0.0	(0%)
Non-confined	0	(0%)	1	(1%)	$0.0	(0%)
Confined	20	(1%)	0	(0%)	$0.0	(0%)

Table 11c.
Structure Fires in Hospitals and Hospices by Item First Ignited,
2009-2013 Annual Averages (Continued)

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Other known item first ignited	190	(16%)	9	(25%)	$1.7	(19%)
Non-confined	120	(10%)	8	(22%)	$1.7	(19%)
Confined	70	(6%)	1	(3%)	$0.0	(0%)
Total	1,200	(100%)	37	(100%)	$8.9	(100%)
Non-confined	340	(28%)	31	(84%)	$8.5	(95%)
Confined	860	(72%)	6	(16%)	$0.5	(5%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 11d.
Structure Fires in Mental Health Facilities by Item First Ignited,
2009-2013 Annual Averages

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking materials, including food	660	(54%)	1	(6%)	$0.3	(10%)
Non-confined	10	(1%)	1	(6%)	$0.1	(3%)
Confined	640	(53%)	0	(0%)	$0.2	(7%)
Unclassified item first ignited	90	(7%)	2	(17%)	$0.0	(2%)
Non-confined	10	(1%)	1	(8%)	$0.0	(1%)
Confined	80	(6%)	1	(9%)	$0.0	(0%)
Rubbish, trash, or waste	60	(5%)	0	(0%)	$0.0	(0%)
Non-confined	10	(1%)	0	(0%)	$0.0	(0%)
Confined	60	(5%)	0	(0%)	$0.0	(0%)
Appliance housing or casing	40	(3%)	0	(0%)	$0.0	(0%)
Non-confined	10	(0%)	0	(0%)	$0.0	(0%)
Confined	40	(3%)	0	(0%)	$0.0	(0%)
Clothing	40	(3%)	1	(10%)	$0.1	(3%)
Non-confined	20	(1%)	1	(10%)	$0.1	(3%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Electrical wire or cable insulation	40	(3%)	0	(2%)	$0.2	(8%)
Non-confined	30	(2%)	0	(2%)	$0.2	(8%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Mattress or bedding	30	(2%)	5	(36%)	$0.1	(6%)
Non-confined	20	(2%)	5	(36%)	$0.1	(6%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Magazine, newspaper, or writing paper	30	(2%)	0	(0%)	$0.4	(14%)
Non-confined	10	(1%)	0	(0%)	$0.4	(14%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Household utensils	20	(2%)	0	(0%)	$0.0	(0%)
Non-confined	0	(0%)	0	(0%)	$0.0	(0%)
Confined	20	(2%)	0	(0%)	$0.0	(0%)
Other known item first ignited	220	(18%)	4	(29%)	$1.5	(57%)
Non-confined	110	(9%)	4	(29%)	$1.5	(57%)
Confined	110	(9%)	0	(0%)	$0.0	(0%)

Table 11d.
Structure Fires in Mental Health Facilities by Item First Ignited,
2009-2013 Annual Averages (Continued)

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Total	1,220	(100%)	15	(100%)	$2.7	(100%)
Non-confined	220	(18%)	13	(91%)	$2.5	(92%)
Confined	1,000	(82%)	1	(9%)	$0.2	(8%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 11e.
Structure Fires in Clinics and Doctors' Offices by Item First Ignited,
2009-2013 Annual Averages

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cooking materials, including food	150	(25%)	1	(14%)	$0.0	(0%)
Non-confined	0	(1%)	0	(0%)	$0.0	(0%)
Confined	150	(25%)	1	(14%)	$0.0	(0%)
Electrical wire or cable insulation	80	(14%)	1	(13%)	$4.4	(18%)
Non-confined	70	(12%)	1	(13%)	$4.4	(18%)
Confined	10	(2%)	0	(0%)	$0.0	(0%)
Rubbish, trash, or waste	50	(8%)	1	(13%)	$0.2	(1%)
Non-confined	10	(2%)	1	(13%)	$0.2	(1%)
Confined	40	(7%)	0	(0%)	$0.0	(0%)
Unclassified item first ignited	40	(7%)	1	(8%)	$1.1	(5%)
Non-confined	20	(4%)	1	(8%)	$1.1	(5%)
Confined	20	(3%)	0	(0%)	$0.0	(0%)
Flammable and combustible liquids and gases, piping and filter	40	(7%)	1	(13%)	$0.6	(2%)
Non-confined	20	(3%)	1	(13%)	$0.6	(2%)
Confined	20	(4%)	0	(0%)	$0.0	(0%)
Appliance housing or casing	20	(3%)	0	(0%)	$1.6	(7%)
Non-confined	10	(2%)	0	(0%)	$1.6	(7%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Structural member or framing	20	(3%)	0	(0%)	$3.5	(14%)
Non-confined	20	(3%)	0	(0%)	$3.5	(14%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Unclassified organic materials	20	(3%)	0	(0%)	$0.4	(2%)
Non-confined	10	(1%)	0	(0%)	$0.0	(0%)
Confined	10	(2%)	0	(0%)	$0.4	(1%)
Insulation within structural area	20	(3%)	1	(14%)	$0.9	(4%)
Non-confined	10	(2%)	1	(14%)	$0.9	(4%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Exterior wall covering or finish	20	(3%)	0	(0%)	$2.9	(12%)
Non-confined	20	(3%)	0	(0%)	$2.9	(12%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)
Exterior roof covering or finish	10	(2%)	0	(0%)	$1.1	(5%)
Non-confined	10	(2%)	0	(0%)	$1.1	(5%)
Confined	0	(0%)	0	(0%)	$0.0	(0%)

Table 11e.
Structure Fires in Clinics and Doctors' Offices by Item First Ignited,
2009-2013 Annual Averages (Continued)

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Magazine, newspaper, writing paper	10	(2%)	0	(0%)	$0.5	(2%)
Non-confined	10	(1%)	0	(0%)	$0.5	(2%)
Confined	10	(1%)	0	(0%)	$0.0	(0%)
Multiple items first ignited	10	(2%)	0	(0%)	$2.4	(10%)
Non-confined	10	(1%)	0	(0%)	$2.4	(10%)
Confined	0	(1%)	0	(0%)	$0.0	(0%)
Other known item first ignited	120	(19%)	2	(25%)	$4.7	(19%)
Non-confined	90	(15%)	2	(25%)	$4.7	(19%)
Confined	30	(4%)	0	(0%)	$0.0	(0%)
	0					
Total	610	(100%)	7	(100%)	$24.4	(100%)
Non-confined	310	(51%)	6	(86%)	$24.0	(99%)
Confined	300	(49%)	1	(14%)	$0.4	(1%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 12.
Structure Fires in Health Care Facilities by Extent of Fire Spread,
2009-2013 Annual Averages

Extent of Fire Spread	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Confined fire by incident type	4,050	(72%)	0	(0%)	20	(13%)	$1.2	(3%)
Confined to object of origin	730	(13%)	0	(0%)	47	(29%)	$3.8	(8%)
Confined to room of origin	620	(11%)	2	(55%)	78	(49%)	$11.1	(25%)
Confined to floor of origin	80	(1%)	0	(5%)	3	(2%)	$5.0	(11%)
Confined to building of origin	160	(3%)	2	(40%)	8	(5%)	$20.2	(45%)
Beyond building of origin	20	(0%)	0	(0%)	0	(0%)	$3.6	(8%)
Total	5,650	(100%)	4	(100%)	160	(100%)	$44.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 12b.
Structure Fires in Nursing Homes by Extent of Fire Spread,
2009-2013 Annual Averages

Extent of Fire Spread	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Confined fire by incident type	1,890	(72%)	16	(16%)	$0.2	(2%)
Confined to object of origin	360	(14%)	34	(33%)	$0.7	(8%)
Confined to room of origin	310	(12%)	44	(44%)	$2.6	(29%)
Confined to floor of origin	20	(1%)	1	(1%)	$1.2	(14%)
Confined to building of origin	40	(2%)	6	(6%)	$3.8	(43%)
Beyond building of origin	0	(0%)	0	(0%)	$0.4	(4%)
Total	2,620	(100%)	101	(100%)	$8.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 12c.
Structure Fires in Hospitals and Hospices by Extent of Fire Spread,
2009-2013 Annual Averages

Extent of Fire Spread	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Confined fire identified by incident type	860	(72%)	6	(15%)	$0.5	(5%)
Confined to object of origin	180	(15%)	6	(17%)	$2.2	(25%)
Confined to room of origin	120	(10%)	24	(66%)	$5.5	(62%)
Confined to floor of origin	20	(2%)	0	(1%)	$0.2	(2%)
Confined to building of origin	20	(2%)	0	(0%)	$0.5	(6%)
Beyond building of origin	0	(0%)	0	(0%)	$0.0	(0%)
Total	1,200	(100%)	37	(100%)	$8.9	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 12d.
Structure Fires in Mental Health Facilities by Extent of Fire Spread,
2009-2013 Annual Averages

Extent of Fire Spread	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Confined fire identified by incident type	1,000	(82%)	1	(9%)	$0.2	(8%)
Confined to object of origin	90	(7%)	5	(31%)	$0.1	(3%)
Confined to room of origin	90	(7%)	7	(48%)	$0.5	(19%)
Confined to floor of origin	10	(1%)	0	(3%)	$0.3	(10%)
Confined to building of origin	30	(2%)	1	(6%)	$1.5	(57%)
Beyond building of origin	0	(0%)	0	(3%)	$0.1	(3%)
Total	1,220	(100%)	15	(100%)	$2.7	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Table 12e.
Structure Fires in Clinics and Doctors' Offices by Extent of Fire Spread,
2009-2013 Annual Averages

Extent of Fire Spread	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Confined fire identified by incident type	300	(49%)	0	(0%)	$0.4	(1%)
Confined to object of origin	110	(18%)	3	(36%)	$0.7	(3%)
Confined to room of origin	100	(17%)	2	(29%)	$2.4	(10%)
Confined to floor of origin	20	(4%)	1	(7%)	$3.3	(14%)
Confined to building of origin	70	(11%)	1	(13%)	$14.5	(60%)
Beyond building of origin	10	(1%)	0	(0%)	$3.1	(13%)
Total	610	(100%)	7	(100%)	$24.4	(100%)

Note: Sums may not equal totals due to rounding errors.

Source: NFIRS and NFPA fire department experience survey.

Appendix A.
How National Estimates Statistics Are Calculated

The statistics in this analysis are estimates derived from the U.S. Fire Administration's (USFA's) National Fire Incident Reporting System (NFIRS) and the National Fire Protection Association's (NFPA's) annual survey of U.S. fire departments. NFIRS is a voluntary system by which participating fire departments report detailed factors about the fires to which they respond. Roughly two-thirds of U.S. fire departments participate, although not all of these departments provide data every year. Fires reported to federal or state fire departments or industrial fire brigades are not included in these estimates.

NFIRS provides the most detailed incident information of any national database not limited to large fires. NFIRS is the only database capable of addressing national patterns for fires of all sizes by specific property use and specific fire cause. NFIRS also captures information on the extent of flame spread, and automatic detection and suppression equipment. For more information about NFIRS visit http://www.nfirs.fema.gov/. Copies of the paper forms may be downloaded from http://www.nfirs.fema.gov/documentation/design/NFIRS_Paper_Forms_2008.pdf.

NFIRS has a wide variety of data elements and code choices. The NFIRS database contains coded information. Many code choices describe several conditions. These cannot be broken down further. For example, area of origin code 83 captures fires starting in vehicle engine areas, running gear areas or wheel areas. It is impossible to tell the portion of each from the coded data.

Methodology may change slightly from year to year.
NFPA is continually examining its methodology to provide the best possible answers to specific questions, methodological and definitional changes can occur. *Earlier editions of the same report may have used different methodologies to produce the same analysis, meaning that the estimates are not directly comparable from year to year*.

NFPA's fire department experience survey provides estimates of the big picture.
Each year, NFPA conducts an annual survey of fire departments which enables us to capture a summary of fire department experience on a larger scale. Surveys are sent to all municipal departments protecting populations of 50,000 or more and a random sample, stratified by community size, of the smaller departments. Typically, a total of roughly 3,000 surveys are returned, representing about one of every ten U.S. municipal fire departments and about one third of the U.S. population.

The survey is stratified by size of population protected to reduce the uncertainty of the final estimate. Small rural communities have fewer people protected per department and are less likely to respond to the survey. A larger number must be surveyed to obtain an adequate sample of those departments. (NFPA also makes

follow-up calls to a sample of the smaller fire departments that do not respond, to confirm that those that did respond are truly representative of fire departments their size.) On the other hand, large city departments are so few in number and protect such a large proportion of the total U.S. population that it makes sense to survey all of them. Most respond, resulting in excellent precision for their part of the final estimate.

The survey includes the following information: (1) the total number of fire incidents, civilian deaths, and civilian injuries, and the total estimated property damage (in dollars), for each of the major property use classes defined in NFIRS; (2) the number of on-duty firefighter injuries, by type of duty and nature of illness; 3) the number and nature of non-fire incidents; and (4) information on the type of community protected (e.g., county versus township versus city) and the size of the population protected, which is used in the statistical formula for projecting national totals from sample results. The results of the survey are published in the annual report *Fire Loss in the United States*. To download a free copy of the report, visit http://www.nfpa.org/assets/files/PDF/OS.fireloss.pdf.

Projecting NFIRS to National Estimates

As noted, NFIRS is a voluntary system. Different states and jurisdictions have different reporting requirements and practices. Participation rates in NFIRS are not necessarily uniform across regions and community sizes, both factors correlated with frequency and severity of fires. This means NFIRS may be susceptible to systematic biases. No one at present can quantify the size of these deviations from the ideal, representative sample, so no one can say with confidence that they are or are not serious problems. But there is enough reason for concern so that a second database -- the NFPA survey -- is needed to project NFIRS to national estimates and to project different parts of NFIRS separately. This multiple calibration approach makes use of the annual NFPA survey where its statistical design advantages are strongest.

Scaling ratios are obtained by comparing NFPA's projected totals of residential structure fires, non-residential structure fires, vehicle fires, and outside and other fires, and associated civilian deaths, civilian injuries, and direct property damage with comparable totals in NFIRS. Estimates of specific fire problems and circumstances are obtained by multiplying the NFIRS data by the scaling ratios. Reports for incidents in which mutual aid was given are excluded from NFPA's analyses.

Analysts at the NFPA, the USFA and the Consumer Product Safety Commission developed the specific basic analytical rules used for this procedure. "The National Estimates Approach to U.S. Fire Statistics," by John R. Hall, Jr. and Beatrice Harwood, provides a more detailed explanation of national estimates. A copy of the article is available online at http://www.nfpa.org/osds or through NFPA's One-Stop Data Shop.

Version 5.0 of NFIRS, first introduced in 1999, used a different coding structure for many data elements, added some property use codes, and dropped others. The essentials of the

approach described by Hall and Harwood are still used, but some modifications have been necessary to accommodate the changes in NFIRS 5.0.

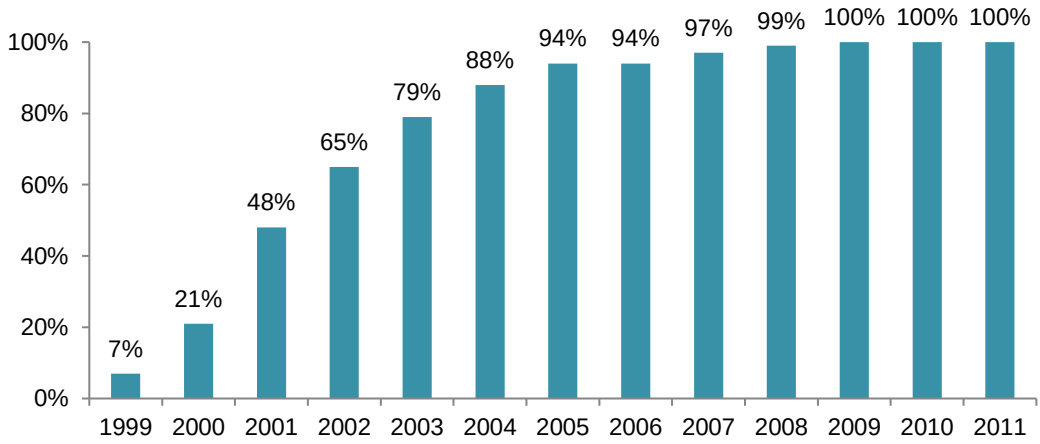
Figure A.1 shows the percentage of fires originally collected in the NFIRS 5.0 system. Each year's release version of NFIRS data also includes data collected in older versions of NFIRS that were converted to NFIRS 5.0 codes.

From 1999 data on, analyses are based on scaling ratios using only data originally collected in NFIRS 5.0:

$$\frac{\text{NFPA survey projections}}{\text{NFIRS totals (Version 5.0)}}$$

For 1999 to 2001, the same rules may be applied, but estimates for these years in this form will be less reliable due to the smaller amount of data originally collected in NFIRS 5.0; they should be viewed with extreme caution.

Figure A.1. Fires Originally Collected in NFIRS 5.0 by Year



NFIRS 5.0 introduced six categories of confined structure fires, including:

- cooking fires confined to the cooking vessel,
- confined chimney or flue fires,
- confined incinerator fire,
- confined fuel burner or boiler fire or delayed ignition,
- confined commercial compactor fire, and
- trash or rubbish fires in a structure with no flame damage to the structure or its contents.

Because this analysis focused on fatalities only, no distinction was made between confined and non-confined fires.

For most fields other than Property Use and Incident Type, NFPA allocates unknown data proportionally among known data. This approach assumes that if the missing data were known, it would be distributed in the same manner as the known data. NFPA makes additional adjustments to several fields. *Casualty and loss projections can be heavily influenced by the inclusion or exclusion of unusually serious fire.*

In the formulas that follow, the term "all fires" refers to all fires in NFIRS on the dimension studied. The percentages of fires with known or unknown data are provided for non-confined fires and associated losses, and for confined fires only.

Rounding and percentages. The data shown are estimates and generally rounded. An entry of zero may be a true zero or it may mean that the value rounds to zero. Percentages are calculated from unrounded values. It is quite possible to have a percentage entry of up to 100% even if the rounded number entry is zero. The same rounded value may account for a slightly different percentage share. Because percentages are expressed in integers and not carried out to several decimal places, percentages that appear identical may be associated with slightly different values.

In the formulas that follow, the term "all fires" refers to all fires in NFIRS on the dimension studied. The percentages of fires with known or unknown data are provided for non-confined fires and associated losses, and for confined fires only.

Cause of Ignition: This field is used chiefly to identify intentional fires. "Unintentional" in this field is a specific entry and does not include other fires that were not intentionally set: failure of equipment or heat source, act of nature, or "other" (unclassified)." The last should be used for exposures but has been used for other situations as well. Fires that were coded as under investigation and those that were coded as undetermined after investigation were treated as unknown.

Factor Contributing to Ignition: In this field, the code "none" is treated as an unknown and allocated proportionally. For Human Factor Contributing to Ignition, NFPA enters a code for "not reported" when no factors are recorded. "Not reported" is treated as an unknown, but the code "none" is treated as a known code and not allocated. Multiple entries are allowed in both of these fields. Percentages are calculated on the total number of fires, not entries, resulting in sums greater than 100%. Although Factor Contributing to Ignition is only required when the cause of ignition was coded as: 2) unintentional, 3) failure of equipment or heat source; or 4) act of nature, data is often present when not required. Consequently, any fire in which no factor contributing to ignition was entered was treated as unknown.

In some analyses, all entries in the category of mechanical failure, malfunction (factor contributing to ignition 20-29) are combined and shown as one entry, "mechanical failure or malfunction." This category includes:

21. Automatic control failure;
22. Manual control failure;

23. Leak or break. Includes leaks or breaks from containers or pipes. Excludes operational deficiencies and spill mishaps;
25. Worn out;
26. Backfire. Excludes fires originating as a result of hot catalytic converters;
27. Improper fuel used; Includes the use of gasoline in a kerosene heater and the like; and
20. Mechanical failure or malfunction, other.

Entries in "electrical failure, malfunction" (factor contributing to ignition 30-39) may also be combined into one entry, "electrical failure or malfunction." This category includes:

31. Water-caused short circuit arc;
32. Short-circuit arc from mechanical damage;
33. Short-circuit arc from defective or worn insulation;
34. Unspecified short circuit arc;
35. Arc from faulty contact or broken connector, including broken power lines and loose connections;
36. Arc or spark from operating equipment, switch, or electric fence;
37. Fluorescent light ballast; and
30. Electrical failure or malfunction, other.

Heat Source. In NFIRS 5.0, one grouping of codes encompasses various types of open flames and smoking materials. In the past, these had been two separate groupings. A new code was added to NFIRS 5.0, which is code 60: "Heat from open flame or smoking material, other." NFPA treats this code as a partial unknown and allocates it proportionally across the codes in the 61-69 range, shown below.

61. Cigarette;
62. Pipe or cigar;
63. Heat from undetermined smoking material;
64. Match;
65. Lighter: cigarette lighter, cigar lighter;
66. Candle;
67 Warning or road flare, fuse;
68. Backfire from internal combustion engine. Excludes flames and sparks from an exhaust system, (11); and
69. Flame/torch used for lighting. Includes gas light and gas-/liquid-fueled lantern.

In addition to the conventional allocation of missing and undetermined fires, NFPA multiplies fires with codes in the 61-69 range by

$$\frac{\text{All fires in range 60-69}}{\text{All fires in range 61-69}}$$

The downside of this approach is that heat sources that are truly a different type of open flame or smoking material are erroneously assigned to other categories. The grouping "smoking materials" includes codes 61-63 (cigarettes, pipes or cigars, and heat from undetermined smoking material, with a proportional share of the code 60s and true unknown data.

Equipment Involved in Ignition (EII). NFIRS 5.0 originally defined EII as the piece of equipment that provided the principal heat source to cause ignition if the equipment malfunctioned or was used improperly. In 2006, the definition was modified to "the piece of equipment that provided the principal heat source to cause ignition." However, much of the data predates the change. Individuals who have already been trained with the older definition may not change their practices. To compensate, NFPA treats fires in which EII = NNN and heat source is not in the range of 40-99 as an additional unknown.

To allocate unknown data for EII, the known data is multiplied by

$$\frac{\text{All fires}}{\text{(All fires – blank – undetermined – [fires in which EII =NNN and heat source <>40-99])}}$$

In addition, the partially unclassified codes for broad equipment groupings (i.e., code 100 - heating, ventilation, and air conditioning, other; code 200 - electrical distribution, lighting and power transfer, other; etc.) were allocated proportionally across the individual code choices in their respective broad groupings (heating, ventilation, and air conditioning; electrical distribution, lighting and power transfer, other; etc.). Equipment that is totally unclassified is not allocated further. This approach has the same downside as the allocation of heat source 60 described above. Equipment that is truly different is erroneously assigned to other categories.

In some analyses, various types of equipment are grouped together.

Code Grouping	EII Code	NFIRS definitions
Central heat	132	Furnace or central heating unit
	133	Boiler (power, process or heating)
Fixed or portable space heater	131	Furnace, local heating unit, built-in
	123	Fireplace with insert or stove
	124	Heating stove
	141	Heater, excluding catalytic and oil-filled
	142	Catalytic heater
	143	Oil-filled heater
Fireplace or chimney	120	Fireplace or chimney
	121	Fireplace, masonry
	122	Fireplace, factory-built
	125	Chimney connector or vent connector
	126	Chimney – brick, stone or masonry
	127	Chimney-metal, including stovepipe or flue

Fixed wiring and related equipment	210	Unclassified electrical wiring
	211	Electrical power or utility line
	212	Electrical service supply wires from utility
	213	Electric meter or meter box
	214	Wiring from meter box to circuit breaker
	215	Panel board, switch board or circuit breaker board
	216	Electrical branch circuit
	217	Outlet or receptacle
	218	Wall switch
	219	Ground fault interrupter
Transformers and power supplies	221	Distribution-type transformer
	222	Overcurrent, disconnect equipment
	223	Low-voltage transformer
	224	Generator
	225	Inverter
	226	Uninterrupted power supply (UPS)
	227	Surge protector
	228	Battery charger or rectifier
	229	Battery (all types)
Code Grouping	**EII Code**	**NFIRS definitions**
Lamp, bulb or lighting	230	Unclassified lamp or lighting
	231	Lamp-tabletop, floor or desk
	232	Lantern or flashlight
	233	Incandescent lighting fixture
	234	Fluorescent light fixture or ballast
	235	Halogen light fixture or lamp
	236	Sodium or mercury vapor light fixture or lamp
	237	Work or trouble light
	238	Light bulb
	241	Nightlight
	242	Decorative lights – line voltage
	243	Decorative or landscape lighting – low voltage
	244	Sign
Cord or plug	260	Unclassified cord or plug
	261	Power cord or plug, detachable from appliance
	262	Power cord or plug- permanently attached

	263	Extension cord
Torch, burner or soldering iron	331	Welding torch
	332	Cutting torch
	333	Burner, including Bunsen burners
	334	Soldering equipment
Portable cooking or warming equipment	631	Coffee maker or teapot
	632	Food warmer or hot plate
	633	Kettle
	634	Popcorn popper
	635	Pressure cooker or canner
	636	Slow cooker
	637	Toaster, toaster oven, counter-top broiler
	638	Waffle iron, griddle
	639	Wok, frying pan, skillet
	641	Breadmaking machine

Equipment was not analyzed separately for confined fires. Instead, each confined fire incident type was listed with the equipment or as other known equipment.

Item First Ignited. In most analyses, mattress and pillows (item first ignited 31) and bedding, blankets, sheets, and comforters (item first ignited 32) are combined and shown as "mattresses and bedding." In many analyses, wearing apparel not on a person (code 34) and wearing apparel on a person (code 35) are combined and shown as "clothing." In some analyses, flammable and combustible liquids and gases, piping and filters (item first ignited 60-69) are combined and shown together.

Area of Origin. Two areas of origin: bedroom for more than five people (code 21) and bedroom for less than five people (code 22) are combined and shown as simply "bedroom." Chimney is no longer a valid area of origin code for non-confined fires.

Rounding and percentages. The data shown are estimates and generally rounded. An entry of zero may be a true zero or it may mean that the value rounds to zero. Percentages are calculated from unrounded values. It is quite possible to have a percentage entry of up to 100% even if the rounded number entry is zero. The same rounded value may account for a slightly different percentage share. Because percentages are expressed in integers and not carried out to several decimal places, percentages that appear identical may be associated with slightly different values.

Appendix B.
Methodology and Definitions Used in "Leading Cause" Tables

The cause table reflects relevant causal factors that accounted for at least 2% of the fires in a given occupancy. Only those causes that seemed to describe a scenario are included. Because the causal factors are taken from different fields, some double counting is possible. Percentages are calculated against the total number of structure fires, including both confined and non-confined fires. Bear in mind that every fire has at least three "causes" in the sense that it could have been prevented by changing behavior, heat source, or ignitability of first fuel, the last an aspect not reflected in any of the major cause categories. For example, several of the cause categories in this system refer to types of equipment (cooking, heating, electrical distribution and lighting, clothes dryers and washers, torches). However, the problem may be not with the equipment but with the way it is used. The details in national estimates are derived from the U.S. Fire Administration's National Fire Incident Reporting System (NFIRS). This methodology is based on the coding system used in Version 5.0 of NFIRS. The *NFIRS 5.0 Reference Guide*, containing all of the codes, can be downloaded from http://www.nfirs.fema.gov/documentation/reference/.

Cooking equipment and heating equipment are calculated by summing fires identified by equipment involved in ignition and relevant confined fires. Confined fires will be shown if they account for at least 2% of the incidents. **Confined cooking fires** (cooking fires involving the contents of a cooking vessel without fire extension beyond the vessel) are identified by NFIRS incident type 113.

Confined heating equipment fires include **confined chimney or flue fires (**incident type 114) and **confined fuel burner or boiler** fires (incident type 116). The latter includes delayed ignitions and incidents where flames caused no damage outside the fire box. The two types of confined heating fires may be combined or listed separately, depending on the numbers involved.

Intentional fires are identified by fires with a "1" (intentional) in the field "cause." The estimate includes a proportional share of fires in which the cause was undetermined after investigation, under investigation, or not reported. All fires with intentional causes are included in this category regardless of the age of the person involved. Earlier versions of NFIRS included codes for incendiary and suspicious. Intentional fires were deliberately set; they may or may not be incendiary in a legal sense. No age restriction is applied.

Fires caused by **playing with heat source** (typically matches or lighters) are identified by code 19 in the field "factor contributing to ignition." Fires in which the factor contribution to ignition was undetermined (UU), entered as none (NN) or left blank are considered unknown and allocated proportionally. Because factor contributing to ignition is not required for intentional fires, the share unknown, by these definitions, is somewhat larger than it should be.

The heat source field is used to identify fires started by: **smoking materials** (cigarette, code 61; pipe or cigar, code 62; and heat from undetermined smoking material, code 63); **candles**

(code 66), **lightning** (code 73); and **spontaneous combustion or chemical reaction** (code 72). Fires started by heat from unclassified open flame or smoking materials (code 60) are allocated proportionally among the "other open flame or smoking material" codes (codes 61-69) in an allocation of partial unknown data. This includes smoking materials and candles. This approach results in any true unclassified smoking or open flame heat sources such as incense being inappropriately allocated. However, in many fires, this code was used as an unknown.

The equipment involved in ignition field is used to find several cause categories. This category includes equipment that functioned properly and equipment that malfunctioned.

Cooking equipment Non-confined fire refers to equipment used to cook, heat or warm food (codes 620-649 and 654). Fire in which ranges, ovens or microwave ovens, food warming appliances, fixed or portable cooking appliances, deep fat fryers, open fired charcoal or gas grills, grease hoods or ducts, or other cooking appliances) were involved in the ignition are said to be caused by cooking equipment. Food preparation devices that do not involve heating, such as can openers or food processors, are not included here. As noted in Appendix A, a proportional share of unclassified kitchen and cooking equipment (code 600) is included here.

Heating equipment Non-confined fire (codes 120-199) includes central heat, portable and fixed heaters (including wood stoves), fireplaces, chimneys, hot water heaters, and heat transfer equipment such as hot air ducts or hot water pipes. Heat pumps are not included. As noted in Appendix A, a proportional share of unclassified heating, ventilation and air condition equipment (code 100) is included here.

Confined fires are excluded from the tallies of the remaining categories of fires involving equipment.

Electrical distribution and lighting equipment (codes 200-299) include: fixed wiring; transformers; associated overcurrent or disconnect equipment such as fuses or circuit breakers; meters; meter boxes; power switch gear; switches, receptacles and outlets; light fixtures, lamps, bulbs or lighting; signs; cords and plugs; generators, transformers, inverters, batteries and battery charges.

Torch, burner or soldering iron (codes 331-334) includes welding torches, cutting torches, Bunsen burners, plumber furnaces, blowtorches, and soldering equipment. As noted in Appendix A, a proportional share of shop tools and industrial equipment (code 300) is included here.

Clothes dryer or washer (codes 811, 813 and 814) includes clothes dryers alone, washer and dryer combinations within one frame, and washing machines for clothes. As noted in Appendix A, a proportional share of unclassified personal and household equipment (code 800) is included here.

Electronic, office or entertainment equipment (codes 700-799) includes: computers and related equipment; calculators and adding machines; telephones or answering machines; copiers; fax machines; paper shredders; typewriters; postage meters; other office equipment; musical instruments; stereo systems and/or components; televisions and cable TV converter boxes,, cameras, excluding professional television studio cameras, video equipment and other electronic equipment. Older versions of NFIRS had a code for electronic equipment that included radar, X-rays, computers, telephones, and transmitter equipment.

Shop tools and industrial equipment excluding torches, burners or soldering irons (codes 300-330, 335-399) includes power tools; painting equipment; compressors; atomizing equipment; pumps; wet/dry vacuums; hoists, lifts or cranes; powered jacking equipment; water or gas drilling equipment; unclassified hydraulic equipment; heat-treating equipment; incinerators, industrial furnaces, ovens or kilns; pumps; compressors; internal combustion engines; conveyors; printing presses; casting, molding; or forging equipment; heat treating equipment; tar kettles; working or shaping machines; coating machines; chemical process equipment; waste recovery equipment; power transfer equipment; power takeoff; powered valves; bearings or brakes; picking, carding or weaving machines; testing equipment; gas regulators; separate motors; non-vehicular internal combustion engines; and unclassified shop tools and industrial equipment. . As noted in Appendix A, a proportional share of shop tools and industrial equipment (code 300) is included here.

Medical equipment (codes 410-419) includes: dental, medical or other powered bed, chair or wheelchair; dental equipment; dialysis equipment; medical monitoring and imaging equipment; oxygen administration equipment; radiological equipment; medical sterilizers, therapeutic equipment and unclassified medical equipment. As noted in Appendix A, a proportional share of commercial and medical equipment (code 400) is included here.

Exposures are fires that are caused by the spread of or from another fire. These were identified by factor contributing to ignition code 71. This code is automatically applied when the exposure number is greater than zero.