Massachusetts Burn Injury Reporting System

2009 Annual Report

Deval L. Patrick
Governor

Mary Elizabeth Heffernan
Secretary of Public Safety

Stephen D. Coan
State Fire Marshal

Massachusetts Burn Injury Reporting System

2009 Annual Report

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Authorized by Ellen Bickelman, State Purchasing Agent

Stephen D. Coan, State Fire Marshal
Commonwealth of Massachusetts • Department of Fire Services
Post Office Box 1025 State Road • Stow, Massachusetts 01775
Telephone (978) 567-3300 • Facsimile (978) 567-3199
www.mass.gov/dfs

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Executive Summary

In 2009, the twenty-fourth full year of the Massachusetts Burn Injury Reporting System (M-BIRS), 46 acute care hospitals and other health care facilities reported 454 victims of burns. Thirty-six (36) of these 454 victims received care at two Massachusetts hospitals and were reported to the system twice. M-BIRS was established in the Department of Public Safety in 1984 as a tool to help fire service and law enforcement personnel identify arsonists that may have been burned while setting fires. M-BIRS, along with the Office of the State Fire Marshal, was carried over to the Department of Fire Services in 1996. It remains a joint program of the Department of Fire Services and the Massachusetts Department of Public Health (DPH). The "Burn Registry" also provides valuable data on the nature of the burn problem in the Commonwealth.

Massachusetts is renowned for its medical institutions and in particular for the advanced treatment available for burn and trauma victims. Many advances in treatment that have lead to increased ability for victims to survive serious burn injuries took place in Massachusetts. Those advances started in the desperate days after the deadly 1942 nightclub fire at Boston's Cocoanut Grove and continue today.

Statutory Authority for M-BIRS in MGL 112, Section 12A
According to Massachusetts General Law (MGL) Chapter 112, Section 12A, the treatment of all burn injuries extending over 5% or more of a person's body surface area must be reported immediately to the State Fire Marshal.

M-BIRS Has Two Main Purposes — Identifying Arsonists and Burn Prevention
Data collected by the Massachusetts Burn Injury Reporting System is used in several ways. Investigators use the data to determine if an arsonist was treated for a burn that resulted from an attempt to illegally burn a building or vehicle. If these burns are not reported promptly, arsonists may continue to light fires that threaten life and property.

Our data has also been used to identify problems that need to be addressed by public education, regulation or development of appropriate intervention strategies. We need to know what type of activity injures whom, if the injuries are seasonal and how old the victims are to develop and implement effective prevention programs. We appreciate the efforts of the many dedicated doctors, nurses and clerical personnel who report the burn injuries promptly and completely. They make the program work.

Painful, disfiguring and expensive burn injuries exact a tremendous toll from their victims, their families and society. The statistics in this report illustrate the need for more burn prevention education and indicate to whom specific safety messages should be targeted.

State Fire Marshal Stephen D. Coan invites fire, health and medical professionals, classroom and community educators, day care teachers and elder service workers to join with him in making the Commonwealth safer from burn injuries.

DPH Alerts OSHA to Severe Burn Injuries in the Workplace
DPH notifies one of the three OSHA area offices about those companies in which an employee was burned as a result of explosions, chemical exposures, electrocutions, or those that appeared to indicate likely violations of OSHA standards. Seventeen (17) burn injuries were referred to OSHA in 2009 for cases that met the criteria.

Scalds Caused 46% of Reported Burn Injuries
Scalds have been the leading cause of burn injuries for the past 22 years. In 2009, scalds caused 192, or 46%, of the burn injuries reported to M-BIRS. Hot beverages caused the majority of scald burns. Cooking liquids and grease, hot tap water, and hot foods also caused scald burns.

Keep Hot Liquids Away from Babies and Preschoolers
In 2009, young children were the most frequent victims of scald burns. Fifty-two percent (52%) of the 192 scald victims were under five years old, and most were less than one year old. Children under five years of age were almost eight and a half times more likely to be scalded. Hot beverages posed the greatest risk to these young children; parents and caregivers of young children must remember that it is dangerous to drink coffee or tea while holding a baby.

Set Hot Water Heaters at 125°F or Lower
Hot tap water is also a danger to very young children. It takes only one second of exposure to water at 155°F to cause a third degree burn. Hot water heaters should be set to temperatures of 125°F or lower. Massachusetts state law states that the temperature must be set between 110°F and 130°F. Caregivers should never leave a baby or toddler alone in a bath. Young children like to turn knobs and use levers and they may turn on the hot water when a parent is distracted.

Kitchen is a Dangerous Place
A significant number of the burn injuries occur in the kitchen each year. Flame burns such as sleeves igniting while cooking, scald burns from grease splatters and hot liquids while cooking, many hot coffee and tea spills, contact burns from touching hot stoves, take place in the kitchen. Since we must cook every day, we must learn to do so safely. Young children should also be kept in a safe area such as a high chair or playpen while cooking is taking place.

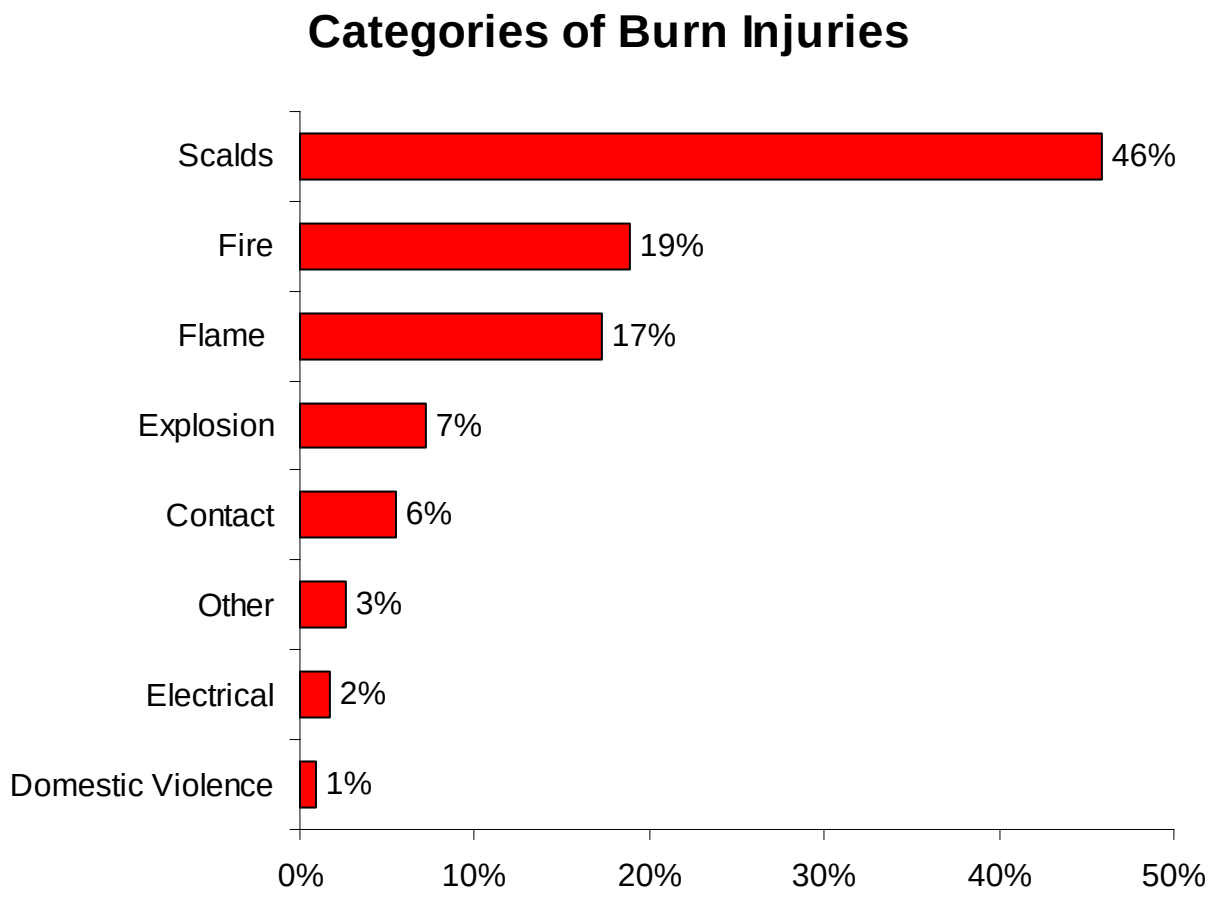
Burns from Fire Cause the 2nd Most Burns
Burn injuries from fires were the second highest cause of burn injuries in 2009 accounting for 19% of the burn injuries. Camp or bon fires caused 49% of burns from fire. Flame burns accounted for 17% of all burn injuries. Clothing ignitions while cooking caused 24% of flame burn injuries

Almost 34 of Burns Occurred in the Victim's Home
Of the 418 burn injuries reported to M-BIRS in 2009, 305, or 73%, occurred in the victim's home or surrounding yard. Fifty-two percent (52%) of these burn injuries were scalds. Seven (7), or 3%, of the home-related burn injuries resulted in the victim succumbing to his or her injuries.

Causes of Burn Injuries

In this report, we look at burn injuries in two different ways. In the first section, we look at the type of incident that caused the burn. Was the burn caused by a fire, a flame[3], a scald or something else? In the second section we look at burns by age, gender, work-related burns, burns in the home, burns reported by individual hospital, and burn injuries by month.

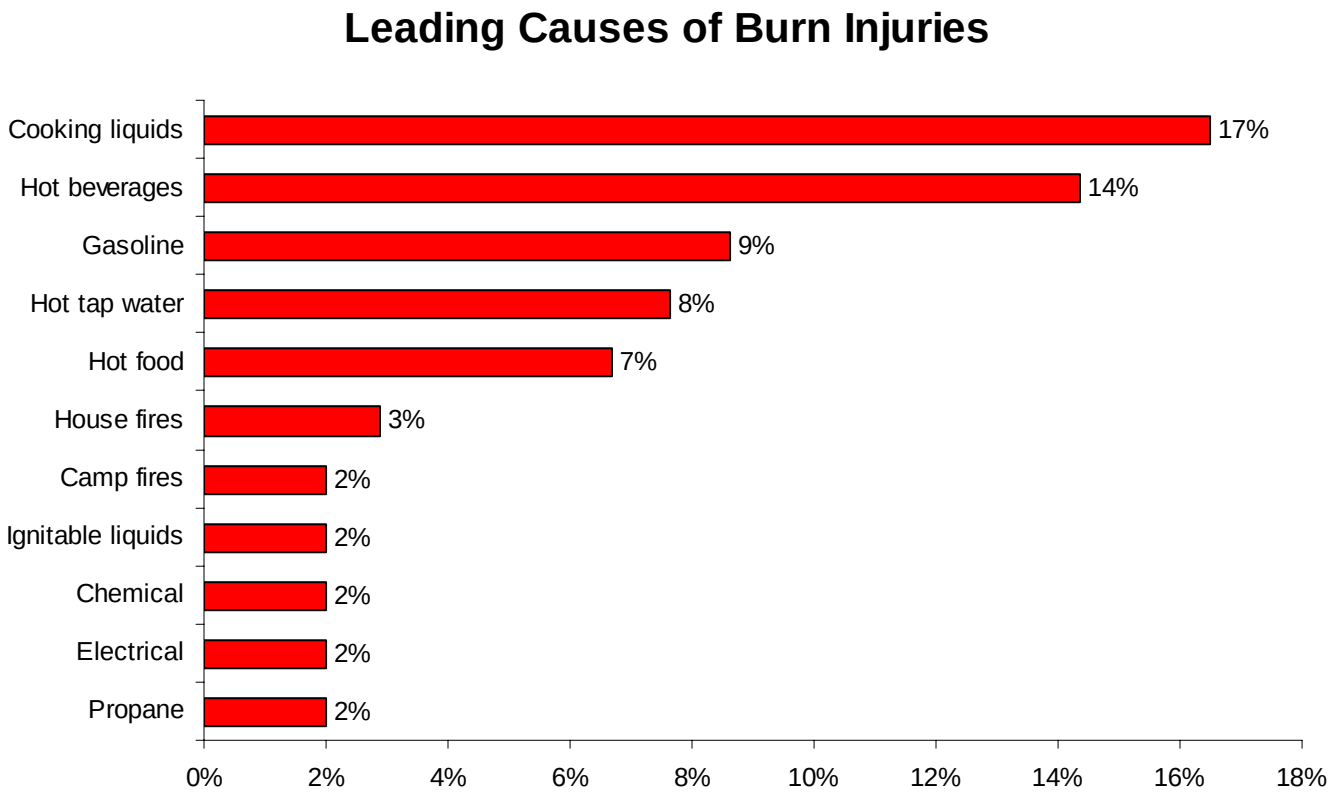
Almost 1/2 of All Burn Victims Never Come Near a Flame
Scalds from cooking liquids and grease, hot liquids, tap water food and steam caused 46% of the 418 burn injuries reported in 2009. Nineteen percent (19%) were caused by fires. Flames from burning clothing, bedding or similar objects caused 17% of the burns. Explosions caused 7% of these burns; 6% were caused by contact with hot objects while electrical incidents such as electrocutions, flashburns[4] and explosions caused 2% of the burns. Burns from domestic violence assaults caused 1% of these burns. Three percent (3%) of the reported burns in 2009 had other causes, such as chemical burns or sunburns.



[3] A burn is said to result from a flame when the fire is confined to the victim or the victim's clothing. When a wider area burns, the injury is considered to result from fire.
[4] A flashburn is a burn caused by short-term exposure to super-heated air, there is no direct contact with flame.

Type of Incidents Causing Burn Injuries

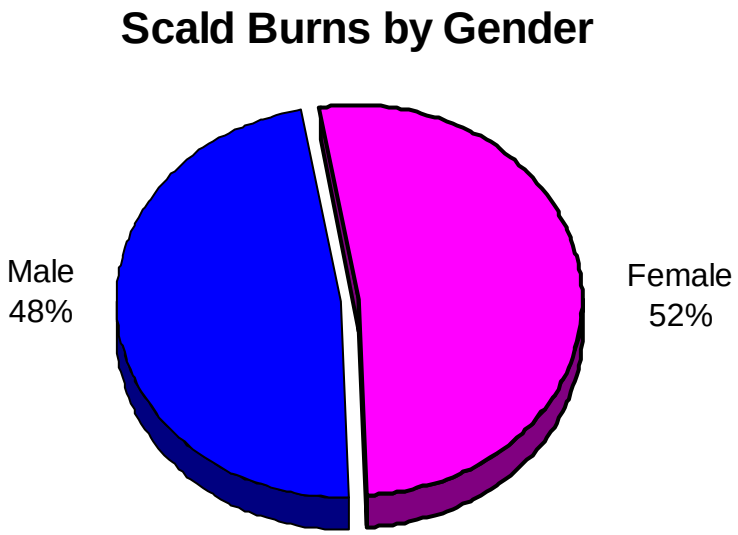
Look at Specific Causes and Equipment to Develop Prevention Strategies
To develop effective burn prevention policies and programs, we must first look at the specific items or behaviors that caused the burns. Seventeen percent (17%) of the 418 burn injuries reported in 2009 were scalds from cooking liquids. Fourteen percent (14%) of the burns were caused by hot beverages. Gasoline use by adults was also involved in 9% of the burn injuries in 2009. Hot tap water caused 8% of the burn injuries and hot food caused 7%. House fires caused 3% of burn injuries. Camp fires, ignitable liquids other than gasoline, chemicals, electrical items, and propane each caused 2% of the total burn injuries in Massachusetts in 2009. For more information, please refer to the table *Specific Causes of Burn Injuries* in the Appendix.



Burn Injuries Caused by Scalds

Scalds Have Been the Leading Cause of Burn Injuries Every Year
Scalds have been the leading cause of burn injuries every year since the inception of M-BIRS. Over the past 10 years, scalds have averaged 39% of total burns. The percentage of total burns has declined from a high of 41% in 2004 to a low of 35% in 2005. The 10-year average from 1999 through 2009 is 39%[5] of total annual reported burns.

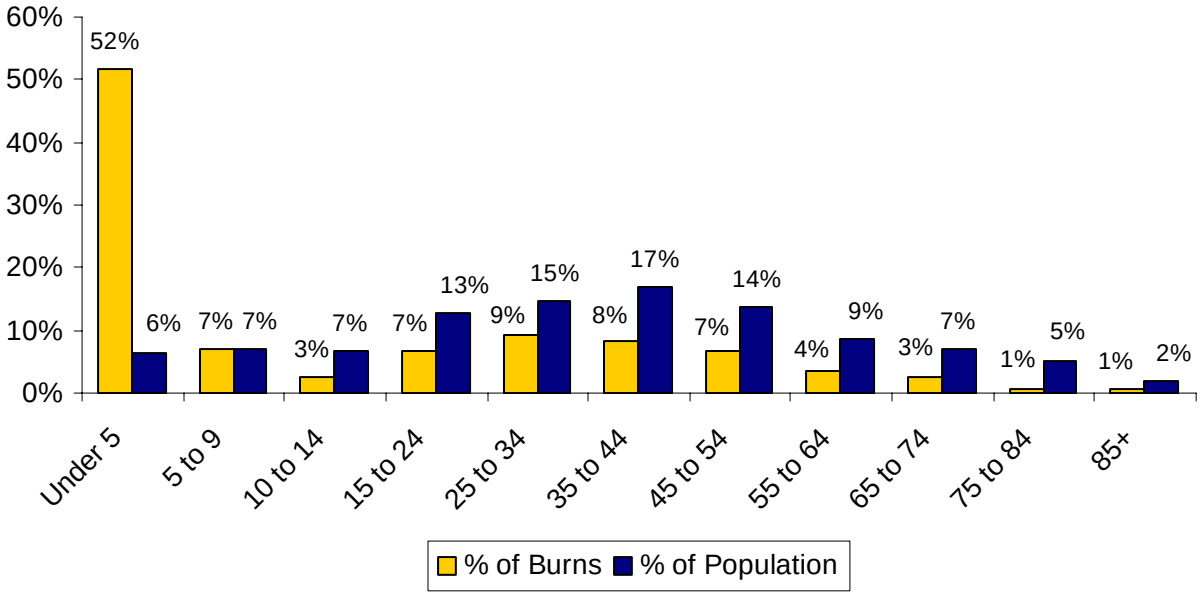
Scalds Caused 46% of All Burns
One hundred ninety-two (192), or 46%, of the 418 reported burns were hot scalds. Twenty-one (21), or 11%, of the 192 scalds occurred while the victim was working. One hundred (100), or 52%, of the 192 scald victims were female and 92, or 48%, were male.



Children Under 5 Years Old Were Most at Risk for Scald Burns
Young children were the most frequent victims of scald burns. According to the 2000 U.S. Census, children under the age of five comprised 6% of the Massachusetts population. However that same age group accounted for over half, 52% of all scald burns in 2009. Sixty-two (62), or 32%, were infants one year old or younger. Children aged five to nine accounted for 7% of scald burn injuries, while children aged 10 to 14 accounted for 3% of these injuries.

[5] In 2003, scalds represented 36% of all the burns reported to M-BIRS. However if not for The Station nightclub fire victims that were treated in Massachusetts, scalds would have represented 38% which would still be the second lowest in the past 10 years.

Scalds by Age Group



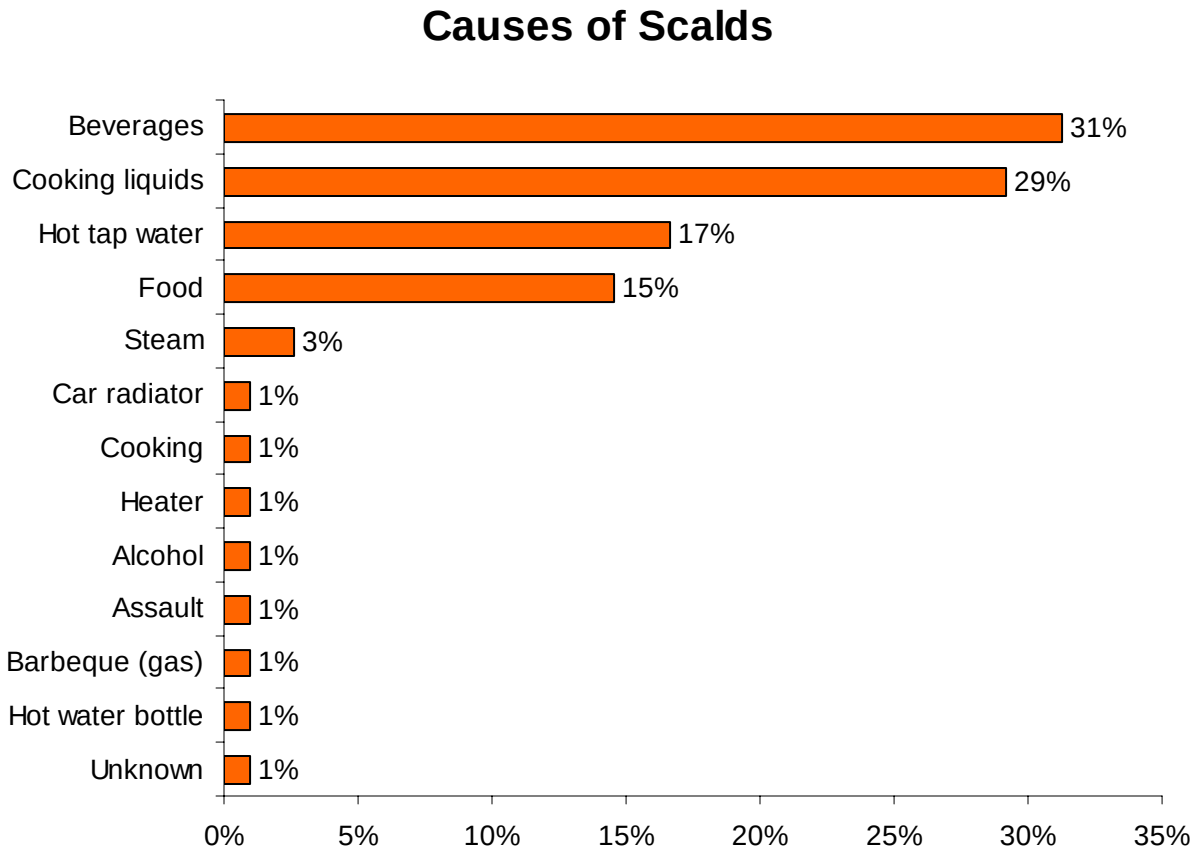
Pre-schoolers Over 8 Times More Likely to Suffer Scald Burns

Many adults also suffered burns from scalds. Seven percent (7%) of scald burn victims were between 15 and 24 years old; 9% were between 25 and 34; 8% were between 35 and 44 years of age; 7% were between 45 and 54; 4% were between 55 and 64; 3% were between 65 and 74; 1% were between 75 and 84; and 1% were over the age of 84. A three-month old girl was the youngest scald burn victim, while the oldest victim was a 91-year old woman. When the gold shaded bar of the graph representing the percent of scald burns is higher than the blue shaded bar representing percent of population, higher than expected risk at this type of injury exists. Only pre-schoolers were scalded at a disproportionate rate; they were over eight times more likely to suffer a scald burn.

Hot Beverages Caused Almost 1/3 of All Scald Burns

For the first time since 2004, hot beverages were the leading cause of scald burns, accounting for 31% of all scald burns. Since the beginning of M-BIRS in 1984, hot beverages had been the leading cause of scalds, however, this was not the case in 1999 or from 2005 through 2008[6]. Scald burns from cooking liquids were the second leading cause of scald burns, causing 29%, of the 192 scald burns. Seventeen percent (17%) were caused by hot tap water. Fifteen percent (15%) were caused by hot foods. Three percent (3%) were caused by steam. Car radiators, unspecified cooking acts, heaters, alcohol, an assault, a gas barbeque, a hot water bottle and an unspecified scald each caused 1% of these scald burn injuries in 2009.

[6] In 1999 scald burns from cooking liquids were one percentage point higher than scald burns from hot beverages. In 1999, and from 2005 – 2008, cooking liquids were the leading cause of scald burns.



44-Year Old Man Scalded by Steam at Work
On April 24, 2009, a 44-year old man received scald burns to 75% of his body surface area while at work at Deer Island. A burst steam pipe was the cause of the burns.

49-Year Old Woman Receives Scald from Hot Tea
On January 30, 2009, a 49-year old Westfield woman received scald burns to multiple areas of her lower body when she spilled hot tea on herself.

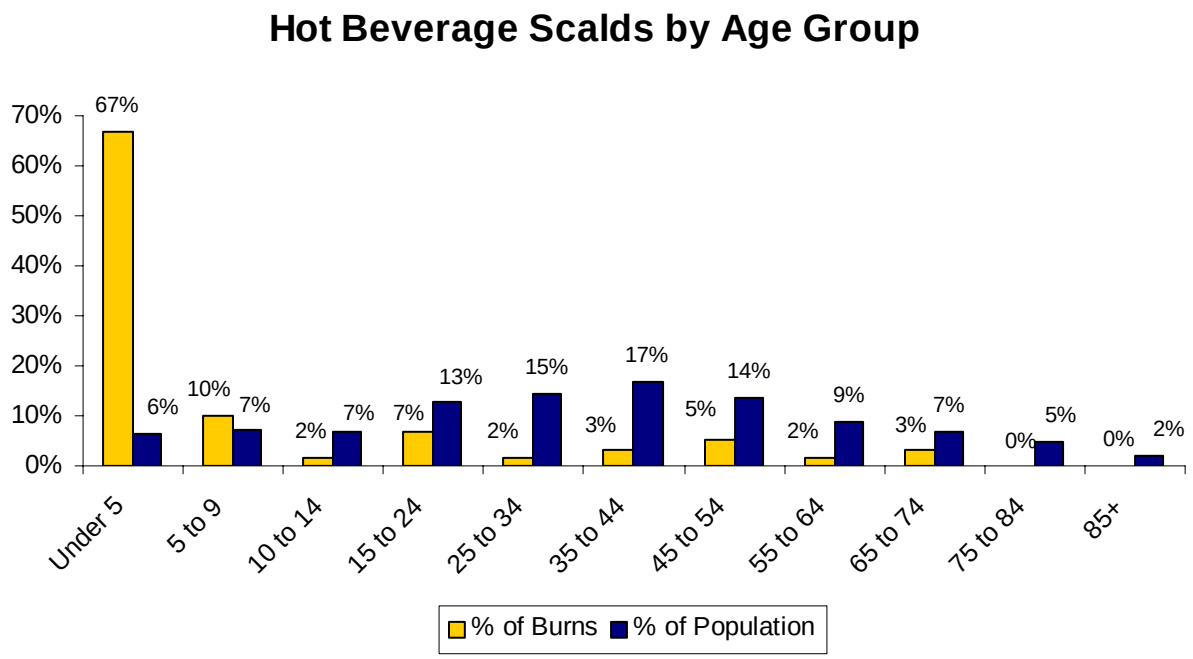
Hot Beverages

Hot Beverages Caused Almost 1/3 of All Scalds
Sixty (60), or 31%, of the 192 scald burns were caused by hot beverages and 14% of the 418 total burn injuries. In 2008, hot beverages accounted for 43 burns, or 10% of the 418 burn injuries reported. Historically, since the inception of M-BIRS in 1984, hot beverages have been the leading cause of scald burns except for 1999, and from 2005 to 2008.

Forty-five percent (45%) of the 60 hot beverage scald victims were male and 55% were female. In 2009, one man and one woman were reported to have received a hot beverage scald while working.

2/3 of the Hot Beverage Scald Victims Were Under 5

Sixty-seven percent (67%) of the 60 hot beverage scald victims were less than five years of age. Children under five years old were 11 times more likely to be scalded by a hot beverage. Thirty-two (32), or 53%, of the victims who were scalded were one-year old or younger. Another five, or 8%, were two-year old toddlers. Last year, 79% of the victims of hot beverage scalds were also less than five years old.



Ten percent (10%) of the hot beverage scald victims were between five and nine years old; 2% were between the ages of 10 and 14; 7% were between the ages of 15 and 24; 2% were also between 25 and 34; 3% were between 35 and 44; 5% were between 45 to 54 years old; 2% of these victims were between 55 and 64 years old; and 3% were between 65 and 74 years old. No one over the age of 73 received a scald burn from a hot beverage in 2009. A three-month old girl was the youngest person to be scalded by a hot beverage in 2009, while the oldest person was a 73-year old woman.

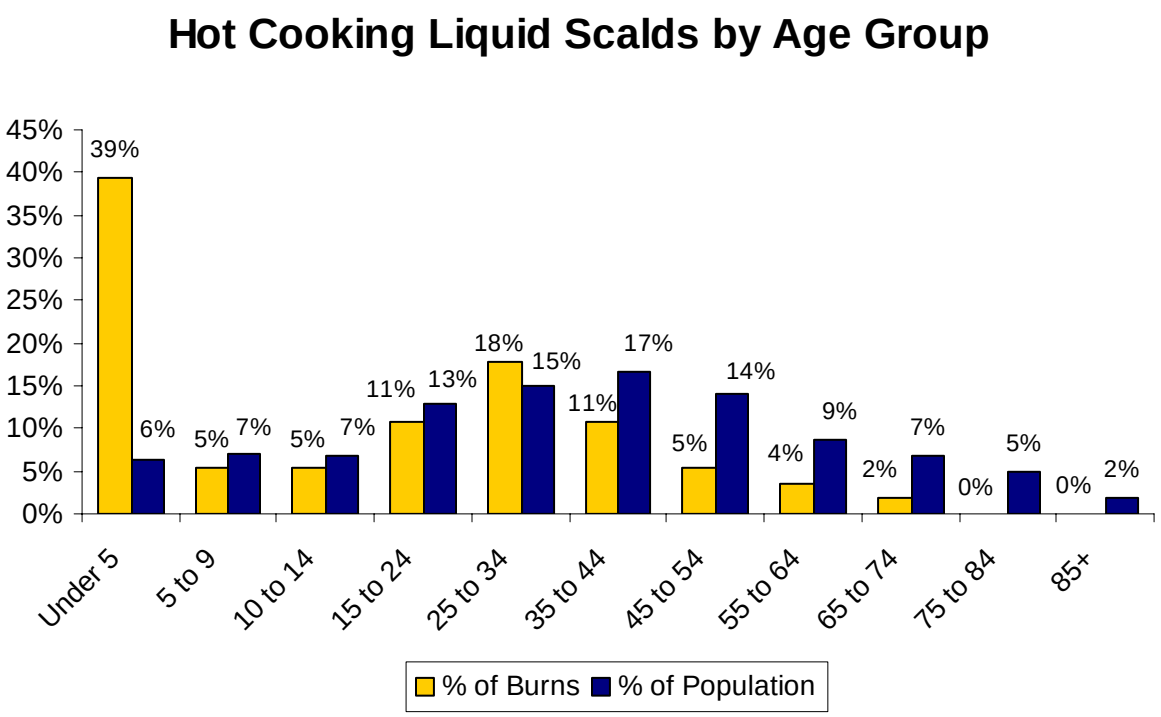
10-Month Old Scalded by Beverage

On May 23, 2009 a 10-month old Rockland girl unintentionally spilled a cup of hot water on herself. She received scald burns to her face and upper torso.

Hot Cooking Liquids

Hot Cooking Liquids Caused 29% of Scalds, 13% of All Burns
For the first time since 2004, scald burns from hot cooking liquids were not the leading cause of burn injuries. Hot cooking liquids which includes boiling water, grease and oil, caused 56, or 29%, of the 192 scald burns and 13% of the 418 total burn injuries reported in 2009. Fifty-five percent (55%) of the victims were female and 45% were male. Hot cooking liquids scalded nine people while they were at work, seven were men and two victims were women.

39% of Cooking Liquid Scald Victims Were Under the Age of 5
Those most likely to be under foot in the kitchen were most at risk to be burned by hot liquids on the stovetop. Thirty-nine percent (39%) of the cooking liquid scald victims were under five years old. They were over six times more likely to be victims of a hot cooking liquid scald; in 2008 they were 6.3 times more likely to be victims of a hot cooking liquid scald, in 2007 they were 3.5 times more likely; in 2006 they were 5.7 times more likely, in 2005 they were 3.3 times and in 2004 they were 3.6 times more likely to be victims of a hot cooking liquid scald. This spike is most likely attributed to children getting in the way of adults as they prepare meals.



Five percent (5%) were children between the ages of five and nine. Another 5% of the victims were within the age group between 10 and 14; members of the age group between 15 and 24 accounted for 11%; this is most likely due to young adults working for the first time especially in fast food restaurants and also cooking for themselves for the first time. Eighteen percent (18%) were between 25 and 34, this is the only other age group other than children under five that were more likely to get a scald burn. Eleven percent (11%) were between 35 and 44; 5% were between

45 and 54; 4% were between 55 and 64; and 2% were between 65 and 74; no one over the age of 71 received a scald burn injury from hot cooking liquids. The youngest hot cooking liquid scald burn victim was a one-month old boy, while the oldest person to have one of these burns was a 71-year old woman.

2-Year Old Scalded by Cooking Liquids
On January 22, 2009 a 2-year old Marshfield boy unintentionally spilled a pot of boiling water on himself. He received scald burns to his arm and chest.

32-Year Old Man Scalded by Cooking Liquids
On February 10, 2009 a 32-year old Abington man unintentionally dropped a pot of boiling water, splashing it on himself. He received scald burns to his chest, neck and wrist.

Hot Tap Water

Hot Tap Water Caused 17% of All Scalds
Excessively hot tap water caused 32, or 17%, of the 192 scald burns and 8% of the 418 total burn injuries reported to M-BIRS in 2009. Hot water heaters should be set to temperatures of 125º Fahrenheit or less. Massachusetts law states that the temperature must be set between 110º and 130º F and most dishwashers have coils to boost their internal water temperature. It is important for homeowners to make sure their own water heaters are set in the appropriate range. At 155º F it takes only one second to sustain a third degree burn. At 130º F it takes thirty seconds. At 120º F it can take a full five minutes to sustain a third degree burn.[2] Adults may prepare a safe bath, but a child may turn on the hot water if left alone for a moment or two. Experts recommend placing a child in the tub facing away from the faucet.

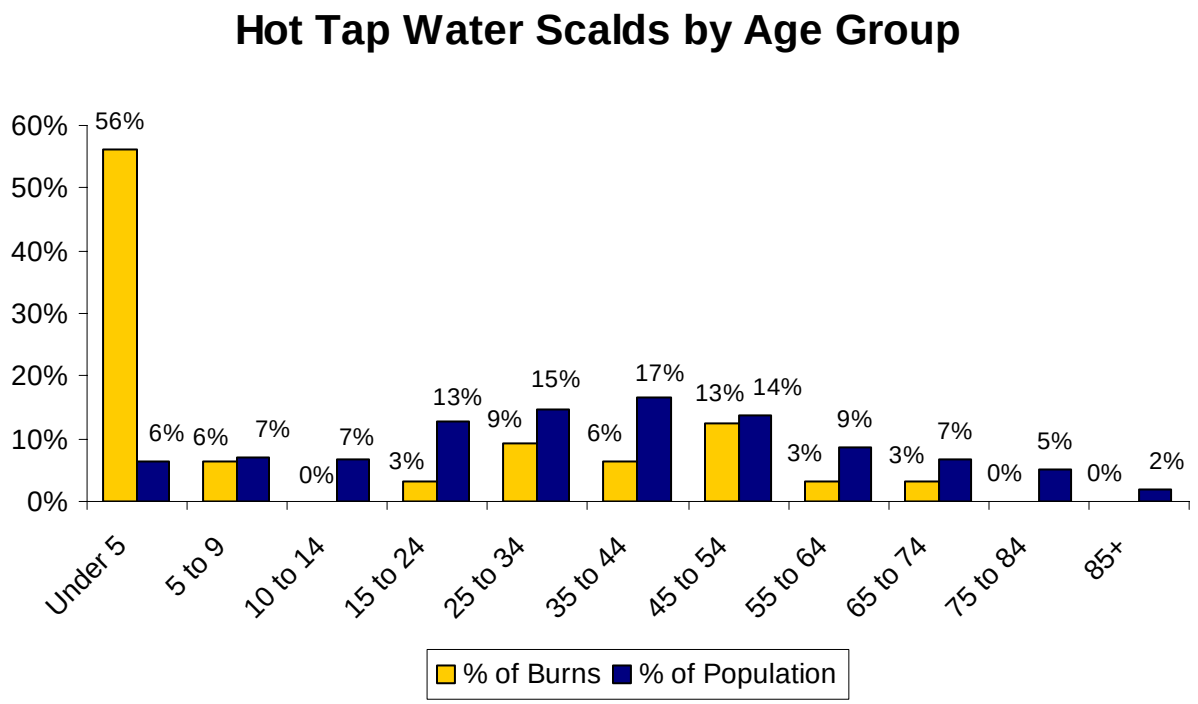
In 2009, 59% of the victims were male while the other 41% were female. Since the beginning of M-BIRS, 53% of the hot tap water scald victims have been men and 47% have been women, but in the previous five years, more females have been burned by hot tap water than males. Three (3), or 9%, of the 32 victims were scalded during work-related activities.

56% of Tap Water Scald Victims Were Under the Age of 5
Fifty-six percent (56%) of the 32 hot tap water scald victims were less than five years old. Some were very young infants placed in water that was too hot for their sensitive skin. Other children were interested in exploring their environment and turned on faucets. Last year in 2008, 65% of the hot tap water scald burn victims were under the age of five.

Six percent (6%) of the reported hot tap water scald burn victims were between the ages of five and nine years old; there were no injuries between 10 and 14 years of age; 3% were between 15 and 24 years of age; 9% were between the ages of 25 and 34; 6% were between 35 and 44; 13% were between the ages of 45 and 54; 3% were between 55 and 64 years old; and another 3% were between the ages of 65 and 74. No one over the age of 70 received a hot tap water scald in

[2] Source: Knapp Burn Foundation

2009. The youngest hot tap water scald burn victim was a five-month old girl, while the oldest person to have one of these burns was a 70-year old woman.



4-Year Old Scalded While Taking a Bath
On June 30, 2009, a 4-year old East Longmeadow girl was scalded while taking a bath. She received scald burns to her shoulder, chest and abdomen.

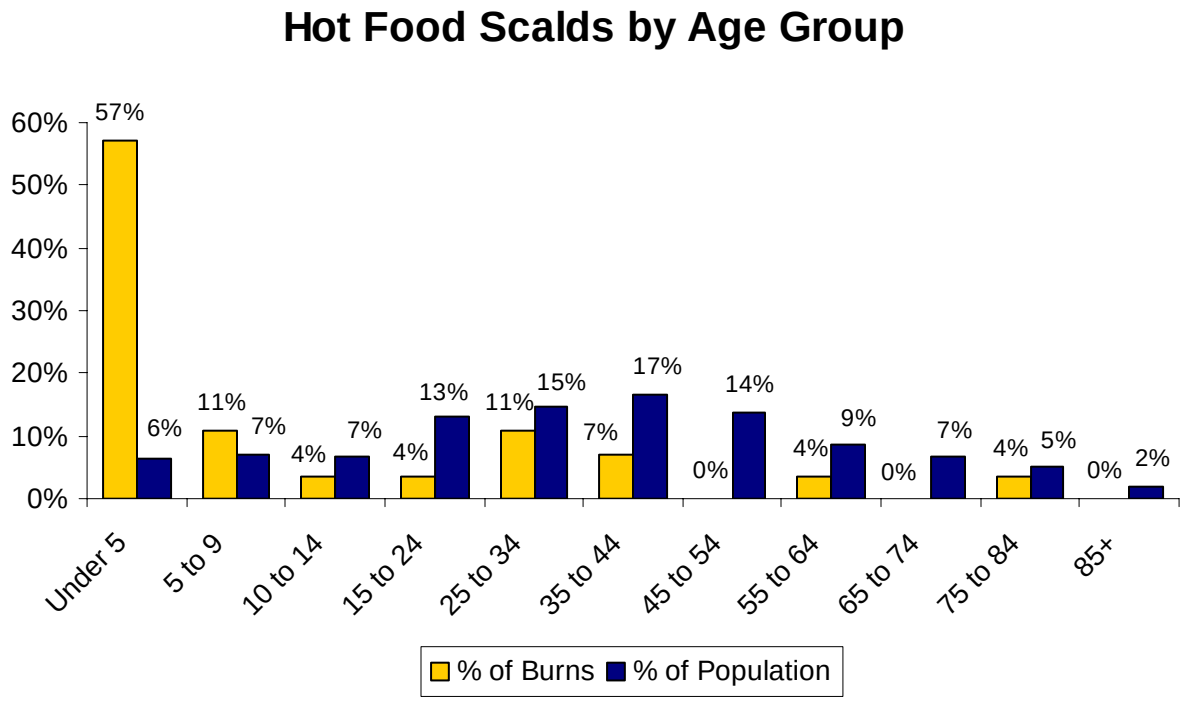
70-Year Old Scalded While Taking a Bath
On December 24, 2009, a 70-year old Taunton woman was scalded while taking a bath. She was found unresponsive in her bathtub with burns to 70% of her body.

Hot Food

Hot Food Caused 15% of Scalds, 7% of All Burns
Hot food caused 28, or 15%, of the 192 scald burns and 7% of the 418 total burn injuries reported in 2009. Sixty-one percent (61%) of the victims were female and 39% were male. There were two work-related hot food scalds reported in 2009, both were men.

57% of Hot Food Scald Victims Were Under 5
Of the 28 reported scald victims from hot food in 2009, 16, or 57%, were under five years old; three victims, or 11%, were between five and nine; one victim, or 4%, was between the age of 10 and 14; another victim, or 4%, was between 15 and 24; three victims, or 11%, were between the ages of 25 and 34; two victims, or 7% were between 35 and 44; one victim, no one between the

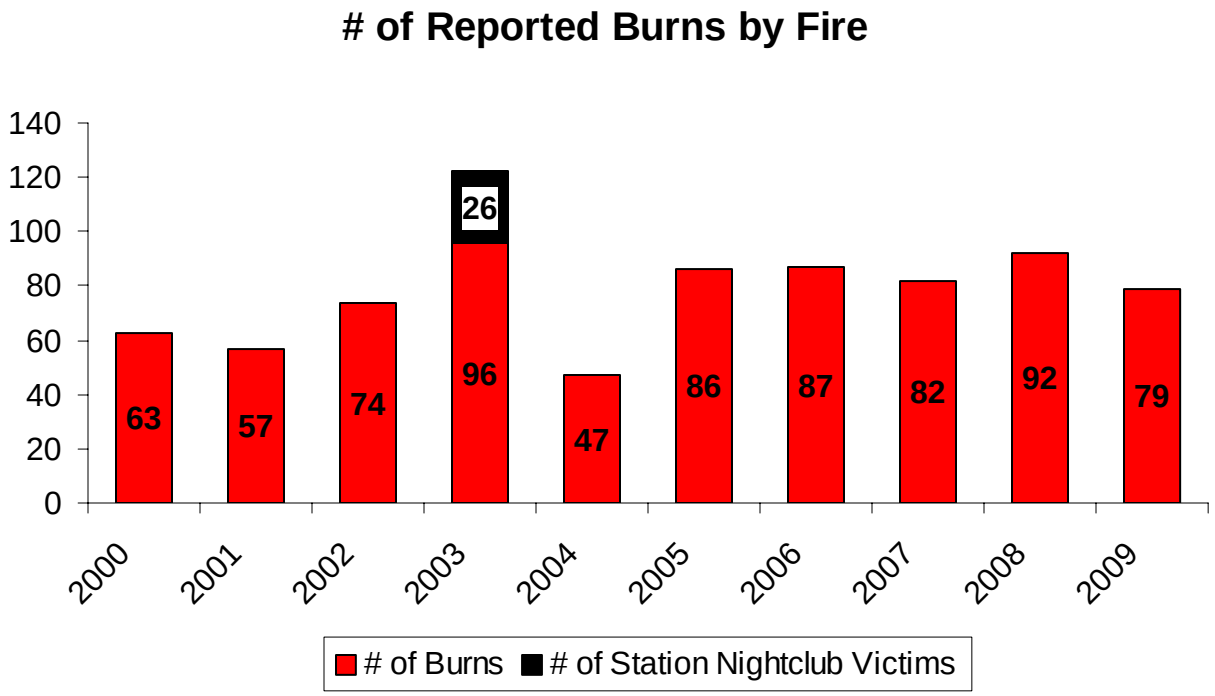
ages of 45 and 54 years old was reported to be scalded by food; one victim, or 4%, was between the ages 55 and 64 years old; no one between the ages of 65 and 74 was reported to receive one of these burns; and one person, or 4%, was between the ages of 75 and 84. No one over the age of 76 was reported to have received a scald burn injury from hot food in 2009. The youngest hot food scald burn victim was a three-month old girl, while the oldest person to have one of these burns was a 76-year old woman.



11-Month Old Boy Receives Scald Burns from Food
On March 30, 2009, an 11-month old Boston boy received scald burns to his hands, back and stomach when he pulled a bowl of hot soup off of the table.

Burn Injuries Caused by Fires

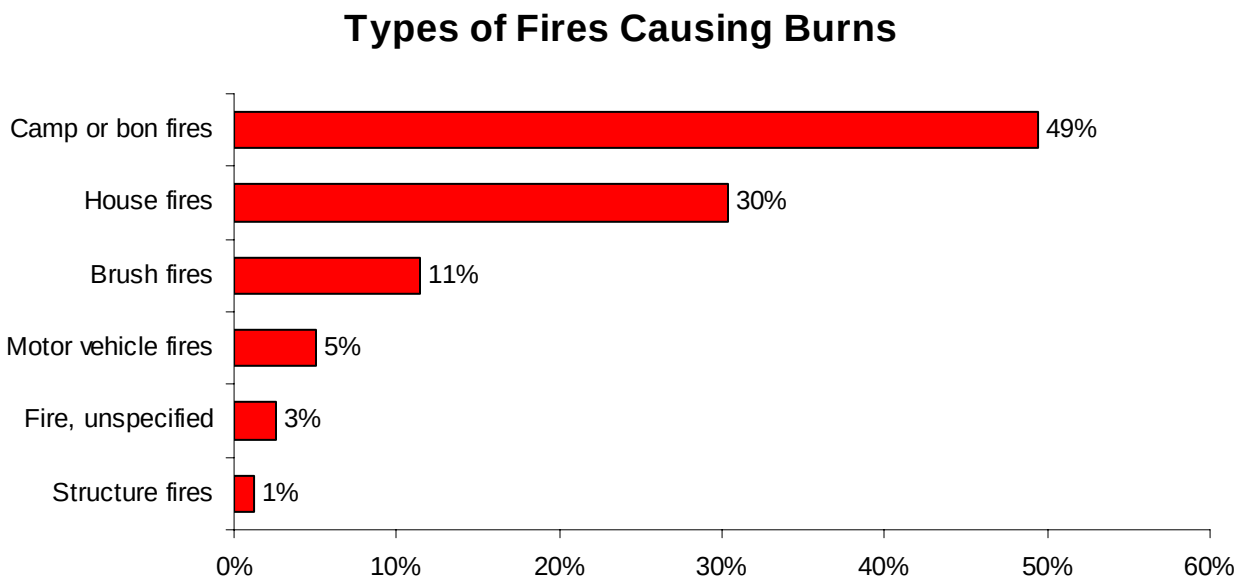
Fires Caused 19% of All Burn Injuries
Seventy-nine (79), or 19% of the 418 burn injuries reported in 2009 were caused by fires. This is a 14% decrease from the 92 fire burns reported the previous year. The highest number of burn injuries from a fire were the 96 burn injuries in 2003, excluding the 26 burn victims from the Station nightclub fire that were treated in Massachusetts. The following graph shows the number of burns from fire reported to M-BIRS from 2000 through 2009.



Seventy-five percent (75%) of the 79 victims were male and 25% were female. Analysis of data from the Massachusetts Fire Incident Reporting System found that the majority of fire injuries occurred while the victim was escaping or attempting to control the fire and that men are more likely than women to attempt to control the fire and become injured[7].

[7] 2008 Annual Report of the Massachusetts Fire Incident Reporting System, MA Dept. of Fire Services, pg. 111.

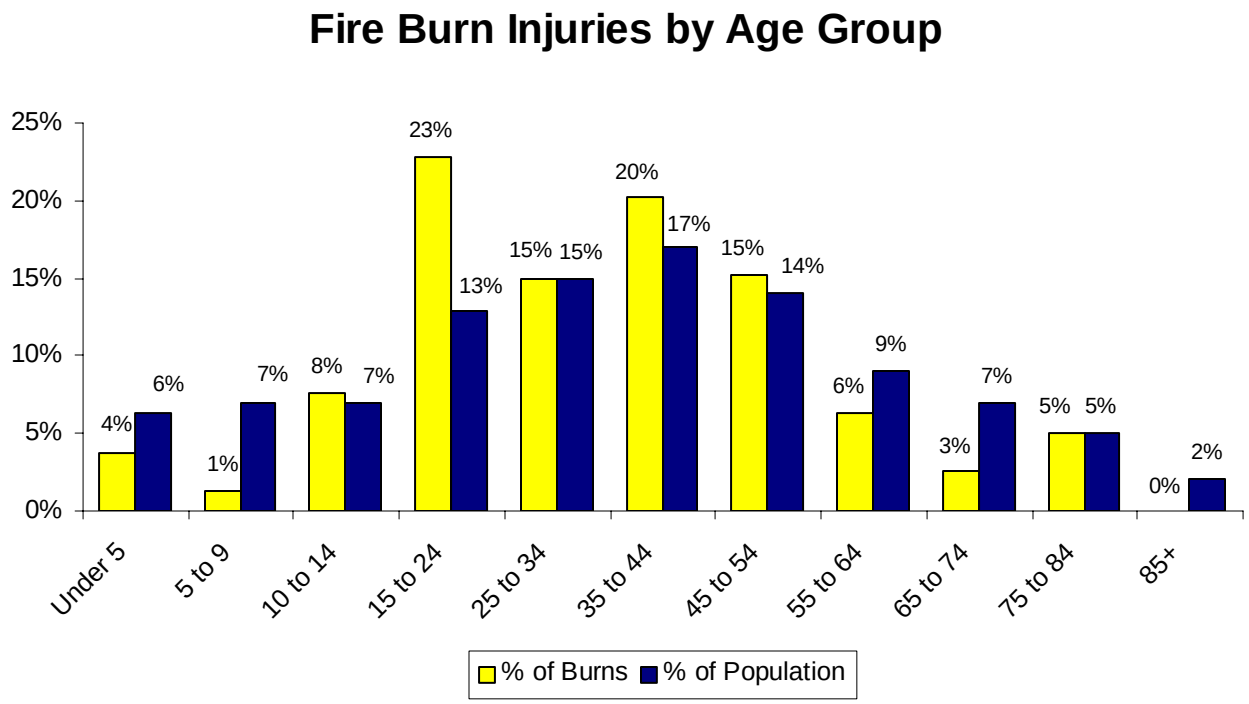
Almost 1/2 of Fire Burn Injuries Occurred at Camp or Bon Fires
Camp or bon fires caused 39, or 49% of the 79 fire burn injuries reported in 2009. House fires caused 24, or 30%. Nine (9), or 11%, of the victims received their burns at brush fires; four, or 5%, were due to motor vehicle fires; one victim, or 1%, was burned in a non-residential structure fire; and two victims, or 3%, of fire burn injuries occurred in unclassified fires.



Young Adults Most Likely to Be Burned in Fires
Three (3), or 4%, of the victims burned in fire incidents were under five years old; one, or 1%, was between five and nine years of age; six, or 8%, were between 10 and 14; 18, or 23%, were between 15 and 24; 12, or 15%, were between 25 and 34; 16, or 20%, were between 35 and 44; 12, or 15%, were between the ages of 45 and 54; five, or 6%, were between the ages of 55 and 64; two, or 3%, were between the ages of 65 and 74; and four victims, or 5%, were between the ages of 75 and 84. No one over the age of 82 was reported to have received a burn injury from a fire in 2009. Young adults between the ages of 15 and 24 were the most likely (1.75 times) to be burned in fires.

Historically young adults between the ages of 15 and 24 are the most likely to be burned in a fire. In 2009, this age group had the most burns from fires; but in 2008, children under five were most likely to be burned in a fire, with a ratio of 2.4 to one.

The following chart illustrates the data mentioned in the above paragraph.



Reported Burns Are a Fraction of Injuries From Fires
Only burn injuries that extend to 5% or more of the body surface area and are treated by a medical professional are reported to the *Massachusetts Burn Injury Reporting System*. Consequently, the human cost of fires is under-reported in this analysis. Smoke inhalation, cuts, fractures and less severe burns incurred while fighting or fleeing the fire are not recorded here. Fire deaths are not recorded. Properly maintained smoke detectors and quick-response residential sprinklers could prevent many of the injuries caused by fires. Detectors sound an early warning to leave the area and quick-response sprinklers can control or possibly extinguish a fire in its earliest stages preventing injuries.

Refer to MFIRS Annual Report for More Information about Fires
For more information about the causes of fires and fire-related casualties, please refer to the *Massachusetts Fire Incident Reporting System – Annual Reports*. Using data collected by the Massachusetts Fire Incident Reporting System (MFIRS), these reports examine the causes of fires, fire deaths and fire injuries. Information is provided on fires in different occupancies and on special topics such as children and fire, fires caused by smoking, electrical fires, cooking fires and heating equipment fires.

4 Fire Deaths Recorded in M-BIRS
Four (4) of the victims that were reported to have received their burn injuries from fires died as a result of their injuries. All four were the result of residential structure fires. Of these victims, one victim died in a fire caused by electrical problems and the other three died in house fires of undetermined cause.

Two (2) of these seven victims were burned in Massachusetts. The other two fatalities were burned outside of Massachusetts but were transferred to a Massachusetts hospital for further treatment.

Here are some of the worst burn injuries from fires in 2009.

53-Year Old Man Severely Injured in House Fire
On April 20, 2009, a 53-year old man received burns to 50% of his body surface area in a house fire.

30-Year Old Man Survives Life-threatening Injuries from Camp Fire
On June 20, 2009, a 30-year old man received life-threatening burns to multiple areas of his body when he poured gasoline on a camp fire. The fire went back to the gasoline container and exploded causing the injuries.

46-Year Old Woman Survives Life-threatening Injuries in House Fire
On December 6, 2009, a 46-year old Shirley woman received life-threatening injuries in a fire inside of her home. The victim received burns to approximately 90% of her body surface area.

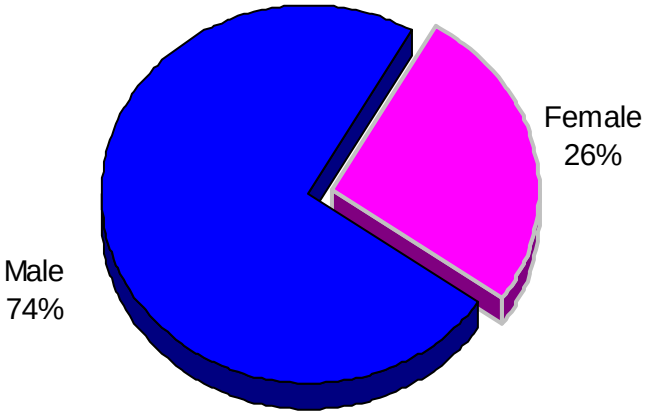
2 Sisters Injured in Electrical House Fire
On June 27, 2009, two sisters, an 11- and a 13-year old were injured when their home caught on fire due to an electrical problem.

Flame Burn Injuries

Flames Caused 17% of Reported Burn Injuries
There were 72 reported flame burn injuries. These 72 injuries accounted for 17% of the 418 burn injuries reported in 2009. A burn is said to result from flame when the fire is confined to the victim or the victim's clothing. When a wider area burns, the cause of the injury is considered a fire. Burns caused by self-immolation, smoking in bed or burning clothing usually result from flames.

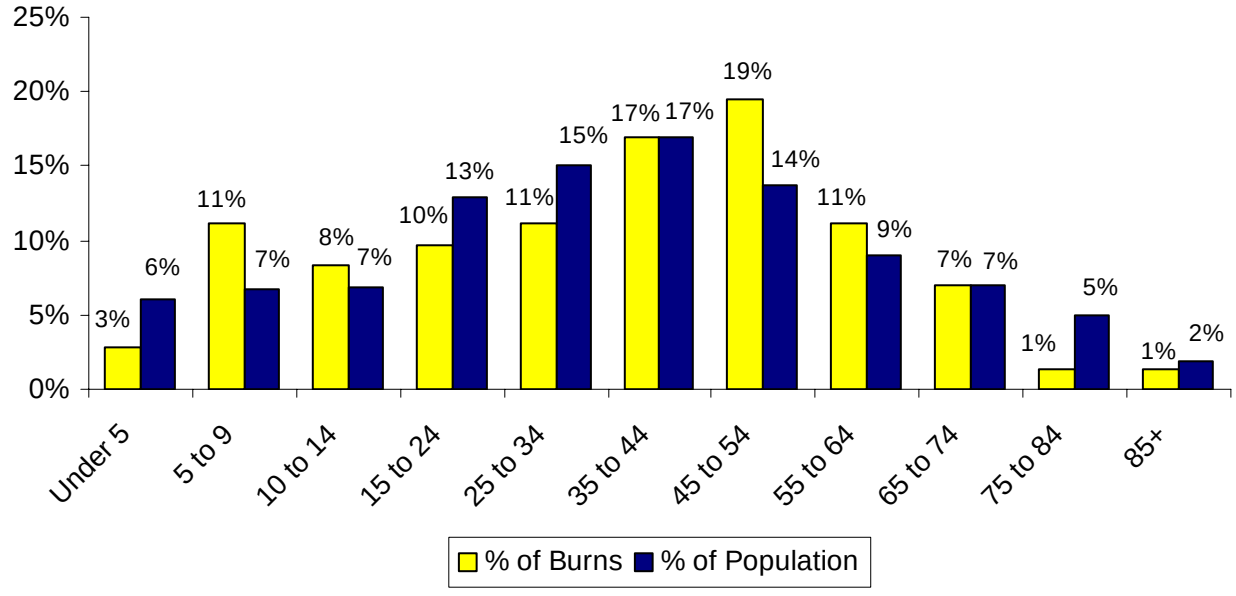
Seventy-four percent (74%) of the flame burn casualties were male and 26% were female. Six (6), or 8%, of the 72 flame burns occurred during work-related activities; all six were men.

Flame Burns by Gender



Children 5-9 & Adults 45 - 64 Faced Highest Risk of Flame Burns
Four (4) groups were at a higher risk for burns from flames. Children between the ages of five and nine were 1.6 times more likely to receive a flame burn injury. Adults between the ages of 45 and 54 were 1.4 times as likely to receive a flame burn injury. Young teens between 10 and 14 and adults 55 and 64 were both 1.2 times more likely to receive a flame burn injury.

Flame Burn Injuries by Age Group



Three percent (3%) of the 72 flame burn victims were children under the age of five; Eleven percent (11%) were between the ages of five and nine; 8% were between 10 and 14; 10% were

victims with ages 15 to 24; 11% were between 25 and 34; 17% were between 35 and 44; 19% were between 45 and 54; 11% were between 55 and 64; 7% were between the ages of 65 and 74; 1% were between 75 and 84; and 1% were over the age of 85. The youngest person to receive a flame burn injury was a two-year old boy, while the oldest was an 85-year old man.

Cooking Was the Leading Cause of Flame Burns
Cooking was the leading cause of flame burn injuries in 2009. Twenty (20), or 28%, of all flame burn victims received their injuries while cooking. These 20 cooking-related flame burn injuries included eight, or 11% of the victims, received their flame burn injuries from ignitions of hot cooking liquids, generally grease or oil. Six (6) clothing ignitions while cooking accounted for 8% of the total flame burn injuries. Four (4), or 5%, of the victims were burned while barbequing, one while using a gas grill. A stove and an oven were each involved in one, or 1%, of the cooking-related flame burns.

Ignitable Liquids Caused 19% of Flame Burn Injuries
In 2009, ignitable liquids caused 14, or 19%, of flame burn injuries. Gasoline caused nine, or 13%, of the flame burns. Ignitable liquids other than gasoline caused five, or 7% of flame burn injuries.

Children Misusing Items Caused 8% of Flame Burns
Six (6) children were burned while misusing various items causing 8% of all 2009 flame burn injuries. In four instances, or 6%, the child was playing with a lighter. A child using gasoline and another child misusing fire when her clothes ignited, each accounted for 1% of these burns.

Smoking Caused of 7% of Flame Burn Injuries
Smoking accounted for five, or 7%, of all flame burn injuries in 2009. Three (3) flame burns, or 4%, were from smoking while on oxygen. One (1), or 1%, was a clothing ignition while smoking. Another one, or 1%, of the flame burn injuries involved unspecified smoking acts.

Explosives Caused 6% of Flame Burns
Flame burn injuries from explosives accounted for four, or 6%, of all 2009 flame burns. Fireworks caused two, or 3%, while gunpowder and unspecified explosives each caused one, or 1% of these injuries.

Alcohol, Self-Immolation & Candles Each Caused 4% of Flame Burns
Alcohol igniting caused three, or 4%, of all 2009 flame burn injuries. Self-immolation attempts also caused three, or 3%. Candles were also the cause of three, or 3%, of these flame burn injuries; two, or 3% of these 3 flame burns involving candles, were caused by direct contact with the flame and the other one, or 1%, was caused when a candle ignited a victim's clothing.

Assault, Machine, Heating Equipment & Welding/Cutting Torch Each Caused 3%
Assaults and machines each caused two, or 3%, of all 2009 flame burn injuries. Heating equipment also caused two, or 3%; one burn was from a woodstove and the other was from a heater. Cutting torches and welding were also the cause of two, or 3%, of these flame burn injuries. A cutting torch and welding each caused one of these injuries.

Asphalt, a flammable material, a lighter, a match and propane, each accounted for one, or 1%, of these burns.

Clothing Ignitions

Clothing Ignitions Account for 24% of Flame Burn Injuries
There were 17 clothing ignitions resulting in flame burn injuries accounting for 24% of all flame burn injuries. Clothing ignitions while cooking caused six, or 8%, of these injuries. Four (4), or 6%, were caused by children misusing fire, and in three cases the child was misusing a lighter. One (1) victim's clothing ignited after coming into contact with smoking materials, accounting for 1% of all flame burn injuries in 2009. Another victim, or 1%, of flame burn clothing ignitions involved candles. A candle, a lighter, a heater, an ignitable liquid, and an unspecified clothing ignition each caused one, or 1% of all 2009 flame burn injuries.

Over 1/2 Clothing Flame Burn Injuries Were Men
Nine (9), or 53%, of clothing ignition victims were men and eight, or 47% were women.

29% of Flame Burn Injury Victims Due to Clothing Ignitions Were 5 - 9
One (1) child under the age of five, or 6%, received a flame burn due to a clothing ignition. Five (5) children between the ages of five and nine, or 29%, also received these burns. One (1) child between the ages of 10 and 14 received one of these injuries, accounting for another 6%. Another victim, or 6%, was in the age group 15 to 24. Two (2) victims, or 12%, were in the age group 25 to 34 years old. The age group 35 to 44 had two victims accounting for 12% of the clothing ignition flame burn injuries in 2009. Another two (2) victims, or 11% of flame burn injuries due to clothing ignitions, were between 55 and 64 years old. One (1) victim, or 6%, was between 65 and 74 years old. Another victim, or 6%, was between the ages of 75 and 84, and another victim, or 6%, of clothing burn injuries, was in the age group over 85 years old. The youngest person to receive a flame burn injury from a clothing ignition was a two-year old boy whose suffered an

unspecified clothing burn injury; the oldest victim from a clothing ignition flame burn injury was a 85-year old man who succumbed to his injuries when his clothes ignited when they came into contact with his stove.

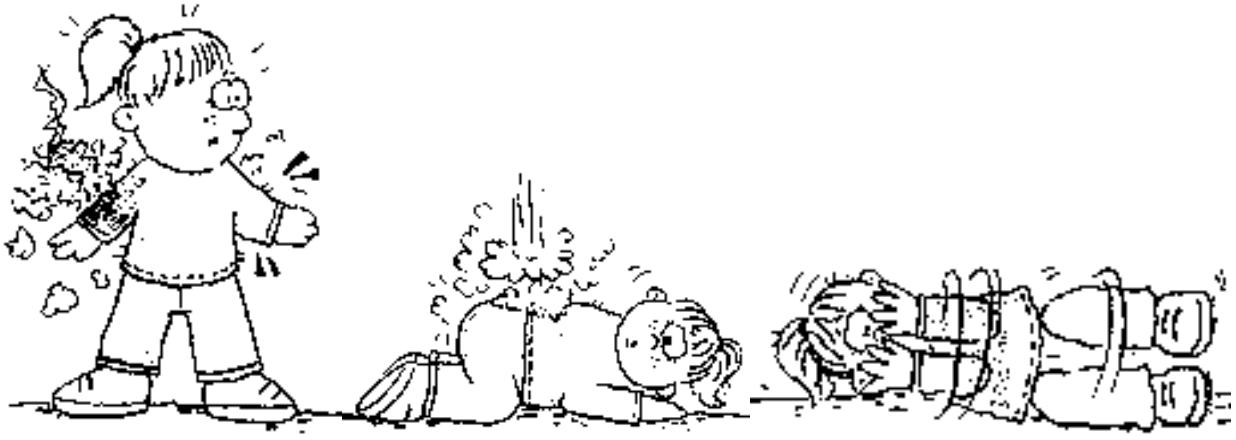
58-Year Old Man Injured in While Smoking on Home Oxygen
On December 10, 2009, a 58-year old Weymouth man was lighting a cigarette while using home oxygen when his nasal cannula ignited. He received second-degree burns to his face.

23-Year Old Man Tries to Commit Suicide
On September 17, 2009, a 23-year old man received life-threatening injuries in an unsuccessful attempt at self-immolation. He doused himself with gasoline and ignited it, causing burns to 63% of his body surface area.

42-Year Old Man Tries to Commit Suicide
On October 11, 2009, a 42-year old man received life-threatening injuries in an unsuccessful attempt at self-immolation. He lit himself on fire, causing burns to 65% of his body surface area.

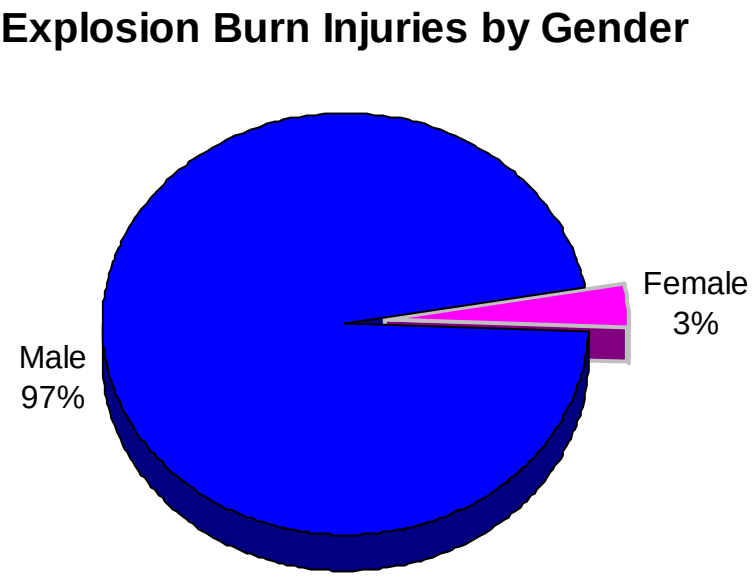
ALWAYS REMEMBER TO:

STOP DROP & ROLL



Burn Injuries Caused by Explosions

Explosions Caused 7% of Reported Burn Injuries
Thirty (30), or 7%, of the 418 burn injuries reported in 2009 were caused by explosions. Ninety-seven percent (97%) of the explosion burn victims were male and 3% were female.

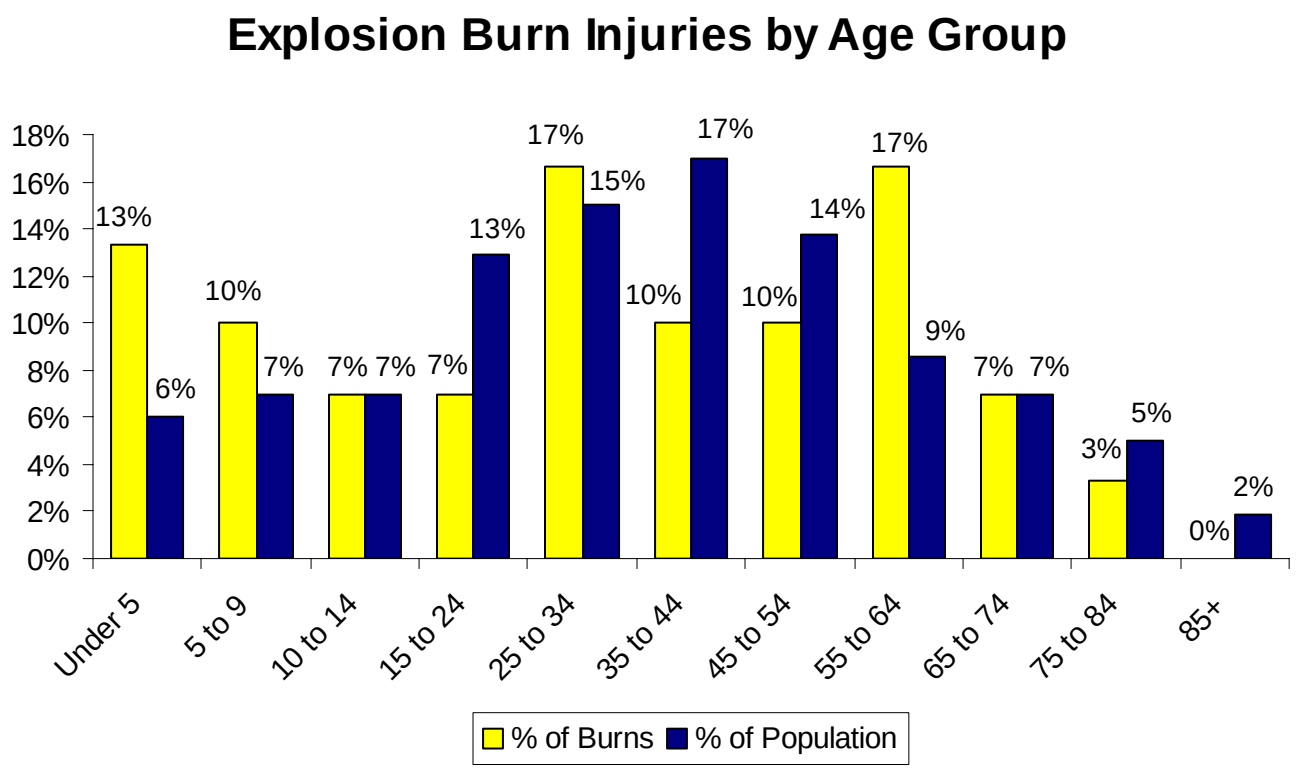


Eight (8) burns, or 27%, occurred during work-related activities. All eight of these work-related victims were male.

Out of these 30 injuries there were three explosions with two or more injuries. Seven (7) of these victims were male and one was a female. A 37-year old man and a 32-year old man, were injured in a natural gas explosion in Dracut, MA. An eight-year old girl and a two-year old boy were injured in a propane explosion in Edificio, Mexico. A 10-year old boy and a seven-year old boy were both injured in a bomb-making explosion in Bo El Centro, Honduras.

Adults Ages 55 to 64 Face Greatest Risk of Explosion Burns
There were four burns from explosions to children under the age of five in 2009, accounting for 13% of these burns; there were three victims, or 10%, in the age group five to nine years old; children between the ages of 10 to 14 accounted for two, or 7%, of these injuries; another two, or 7%, were between the ages of 15 to 24; adults between the ages of 25 and 34 received five, or 17%, of the explosion related burns; three, or 10%, were between 35 and 44; another three or 10%, were between 45 and 54 years of age; five, or 17%, were between 55 and 64 years old; two victims, or 7%, were between the ages of 65 and 74; and one victim, or 3%, was between 75 and 84-years old. No one over the age of 77 received a burn injury due to an explosion. The youngest victim to receive a burn injury from an explosion in 2009 was a six-month old boy; and the oldest person to receive one of these burns was a 77-year old man.

The following graph illustrates the data in the above paragraph.



Ignitable Gases Were the Leading Cause of Explosion Burn Injuries
Ignitable gases accounted for 13, or 43%, of the explosion-related burn injuries in 2009. Seven (7), or 23%, were from propane, and six, or 20%, were from natural gas.

Explosives caused six, or 20%, of these types of burn injuries. Three (3) of these injuries were due to fireworks, accounting for 10% of all explosion injuries; two, or 7%, were from attempting to make a bomb, and there was one injury, or 3%, attributed to an unspecified explosive.

Cooking caused four, or 13%, of these injuries. Two (2), or 7%, were from ovens, a gas grill and cooking liquids each caused one or 3%.

Two (2) victims, or 7%, were injured when water heaters exploded. Ignitable liquids also caused two, or 7%, of explosion burn injuries. One (1), or 3%, was caused by gasoline, and the other one (3%) was from an unspecified ignitable liquid.

A chemical, a model rocket and oxygen each accounted for one, or 3%, of the explosion-related burn injuries in 2009.

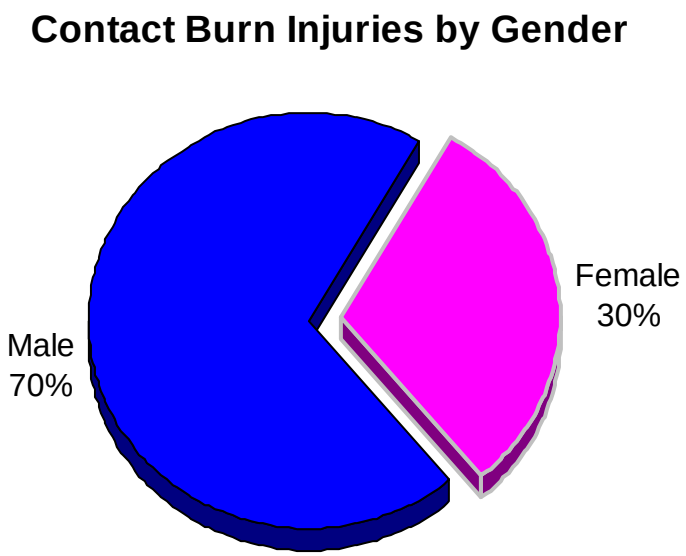
37-Year Old Man Injured in Gas Line Explosion
On April 16, 2009, a 37-year old KeySpan employee received burns to multiple parts of his body when the natural gas line he was working near exploded.

6-Month Old Man Injured by Fireworks
On July 3, 2009, a six-month old Rockland boy was injured when embers from some fireworks landed on him. He received burns to his head.

13-Year Old Teenage Boy Injured in Model Rocket Explosion
On March 31, 2009, a 13-year old teenage boy received burns to his right hand and leg when a model rocket motor exploded in his pocket.

Contact Burn Injuries

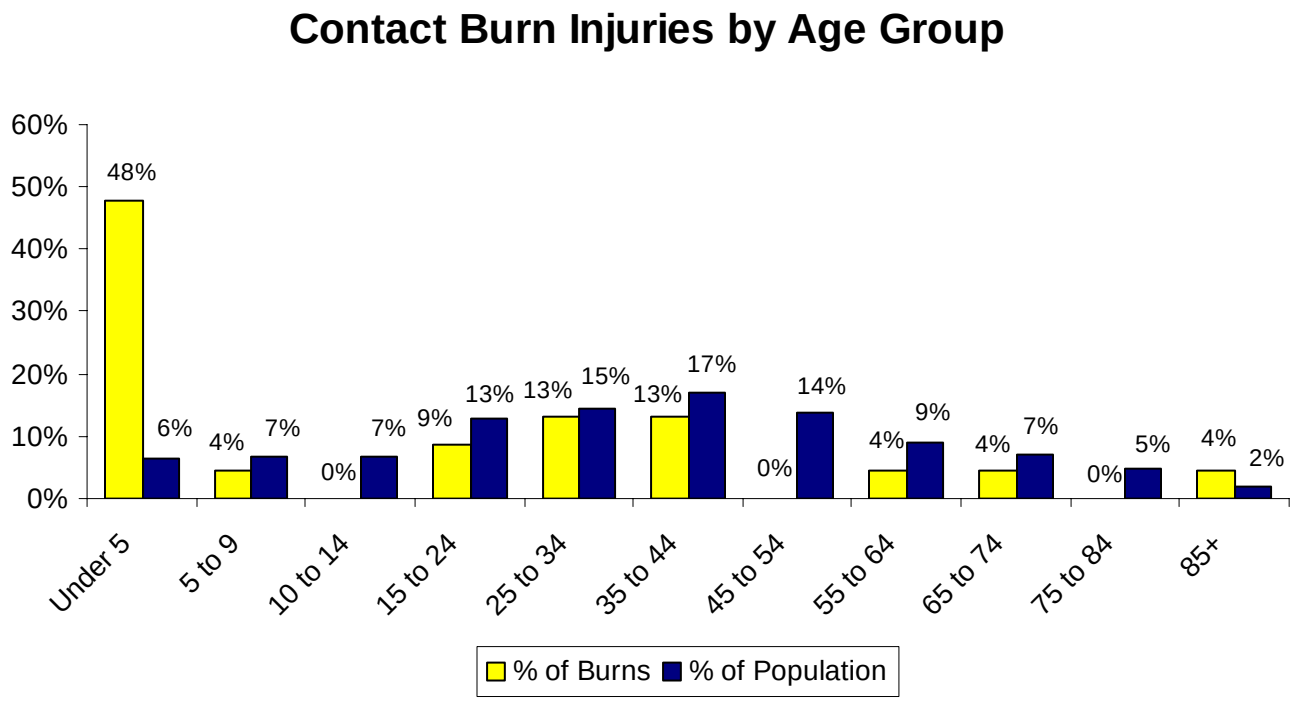
Contact with Hot Objects Caused 5% of Reported Burn Injuries
Twenty-three (23), or 5%, of the 418 burn injuries reported in 2009 were caused by contact with hot objects. Seventy percent (70%) of the burn victims were male and 30% were female. Two (2), or 9%, of contact burns occurred at work in 2009.



Almost 1/2 of Contact Burns Were to Children Under 5
Almost one-half of all the 23 contact burns reported in 2009 were to children under the age of five. This age group accounted for 11, or 48%, of all contact burns. Pre-schoolers faced slightly greater than seven and a half times the risk of contact burns. This disproportionate risk could be the result of young children exploring their environment and underscores the need for constant supervision of toddlers.

One (1), or 4%, of these burn victims were between the ages of 5 and 9; no one in the age group between 10 and 14 was reported to have received a contact burn injury in 2009; two young adults, or 9%, were between the ages of 15 and 24; three of the victims, or 13%, were between 25 and 34; the age group 35 to 44 also accounted for three victims, or 13%; there were no victims in the age group 45 to 54; one victim, or 4%, was between the ages of 55 and 64; one victim, or 4%, was between the ages of 65 and 74; no one in the age group 75 to 84 was reported to have received a contact burn injury. In 2009, one person over the age of 85, or 4%, received burns from contact with a hot object. The youngest person to receive a contact burn in 2009 was a one-year old girl, and the oldest person was an 87-year old man.

The following graph illustrates the data in the above paragraph.



Cooking & Heating Equipment Were Tied as the Leading Cause of Contact Burns
Contact with cooking equipment caused six, or 26%, of the contact burns in 2009. Contact with ovens, caused three, or 13%, touching stoves caused two, or 9% of contact burns; and coming into contact with a barbeque caused one, or 4%, of 2009 contact burn injuries.

Contact with heating equipment also caused six, or 26%, of these types of burns. Contact with heaters caused three, or 13%, touching radiators, caused two, or 9%, and touching a fireplace caused one, or 4% of 2009 contact burn injuries.

Clothes Irons & Curling Irons Were the Next Leading Causes of Contact Burns
Clothes irons and curling irons each caused two, or 9%, of these types of burn injuries.

An assault, contact with a chemical, a hair dryer, a hot piece of metal and hot wax each caused one, or 4%, of contact burns in 2009.

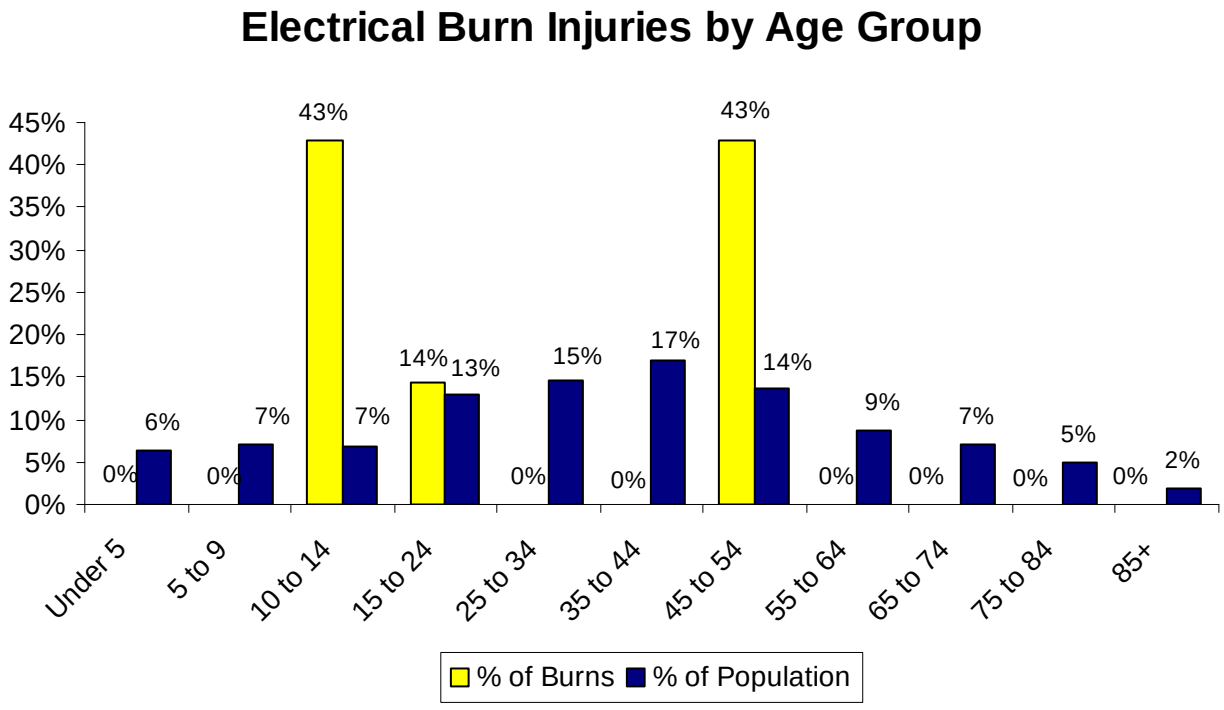
There were two work-related contact burn injuries in Massachusetts in 2009. Both of these work-related contact burn victims were men.

25-Year Old Man Burned by an Oven at Work
On June 17, 2009, a 25-year old man tripped and unintentionally fell into the oven at work. He received burn injuries to multiple parts of his body.

Electrical Burn Injuries

Electrical Incidents Caused 2% of Burn Injuries
Seven (7), or 2%, of the 418 burn injuries reported in 2009 were caused by electrical accidents. All seven of the electrical burn victims were men. Four (4), or 57%, occurred during work-related activities.

Only 3 Age Groups with Electrical Burn Victims
All of the electrical burn victims in 2009 were between the ages of 10 and 54-years old. Three (3) victims accounted for 43% of the electrical burn injuries in 2009 were between the ages of 10 and 14. One (1), or 14%, of the victims who received electrical burns in 2009 was between 15 and 24 years old; and the other three victims, or 43%, were between 45 and 54 years old. No one



under the age of five, between five and nine years old, between 25 and 44 years old, and over the age of 55 were reported to have received electrical burns in 2009. The youngest person to receive an electrical burn injury was a 10-year old boy, and the oldest victim was a 54-year old man.

29% of Electrical Burns Were Caused by Electrocutions
Two (2), or 29%, of the electrical burn injuries in 2009 were from electrocutions. Undefined electrical accidents caused five, or 71%, of these burns.

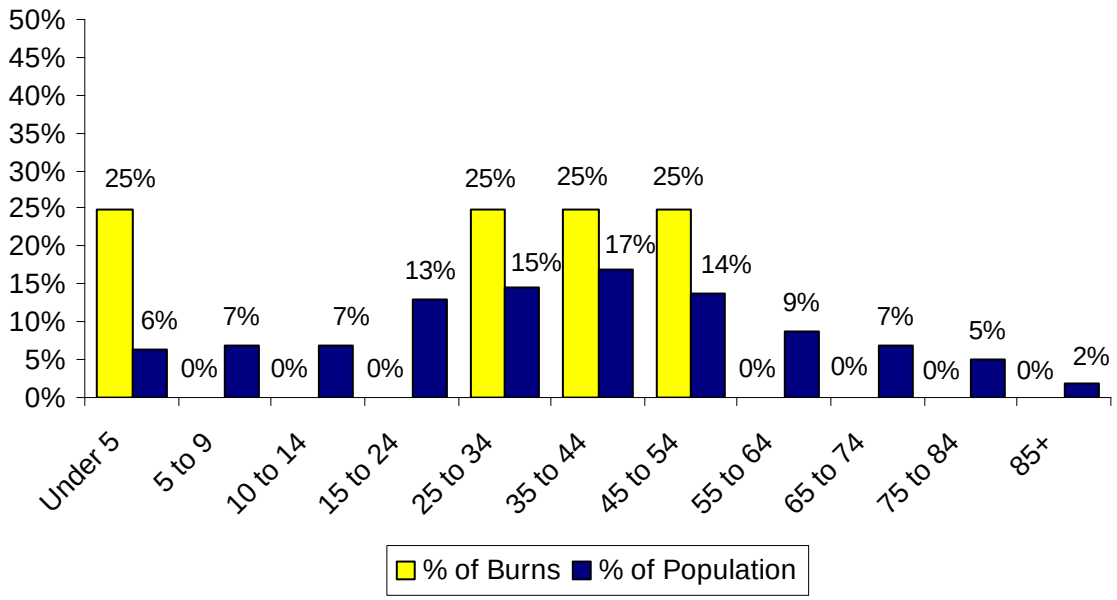
48-Year Old Man Burned Changing a Light Bulb
On October 25, 2009, a 48-year old man was changing a light bulb at work when he was electrocuted. He received burns to both hands.

Domestic Violence Burn Injuries

Domestic Violence Incidents Caused 1% of Burn Injuries
Four (4), or 1%, of the 418 burn injuries reported in 2009 were caused by domestic violence incidents. Three (3), or 75%, of these victims were women, and one, or 25%, was a man. None occurred during work-related activities.

Only 4 Age Groups with Domestic Violence Burn Victims
One (1) of the victims was under the five accounting for 25% of the domestic violence burn injuries in 2009. Another victim, or 25%, was between the ages of 10 and 14. The other two victims, both accounting for 25% of all 2009 domestic violence burn injuries, were between 35 and 44 years old and 45 and 54 years old. No one between five and 24 years old, or over the age of 55 were reported to have received a burn from a domestic violence assault in 2009. The youngest person to receive a domestic violence burn injury was a 2-year old girl, and the oldest victim was a 45-year old man.

Domestic Violence Burn Injuries by Age Group



2 of 4 Domestic Violence Burns Were Caused by Cooking Liquids
Two (2), or 50%, of the domestic violence burn injuries in 2009 were from cooking liquids. Being pushed against a hot car part, and being soaked in rubbing alcohol and having it ignited each caused one, or 25%, of these burns.

Mother & Daughter Assaulted at Home
On July 29, 2009, a 2-year old girl and her 28-year old mother received scald burns to over 20% of their body surface areas when someone threw a pot of cooking liquids at the mother in a domestic dispute.

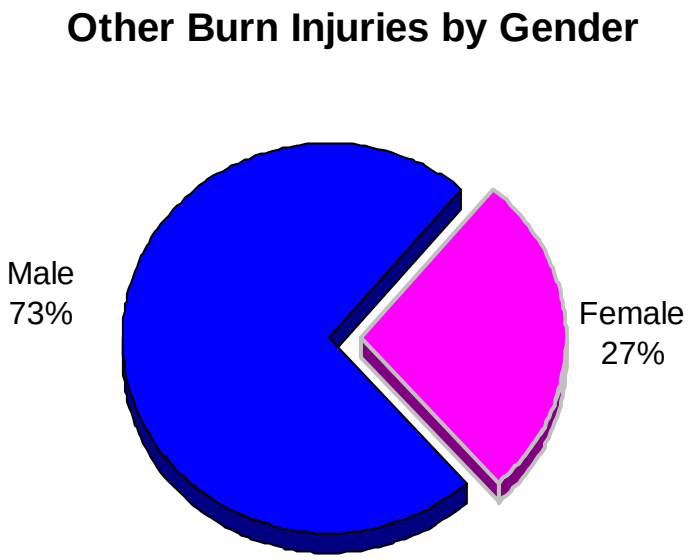
44-Year Old Woman Burned by Car Part
On July 9, 2009, a 44-year old woman was burned on her thighs when she was pushed against a motorcycle's tail pipes in a domestic dispute.

45-Year Old Man Burned in Domestic Dispute
On July 24, 2009, a 45-year old man was burned when his wife doused him with rubbing alcohol and ignited it with a match. He received burns to 15% of his body surface area.

Other Types of Burn Injuries

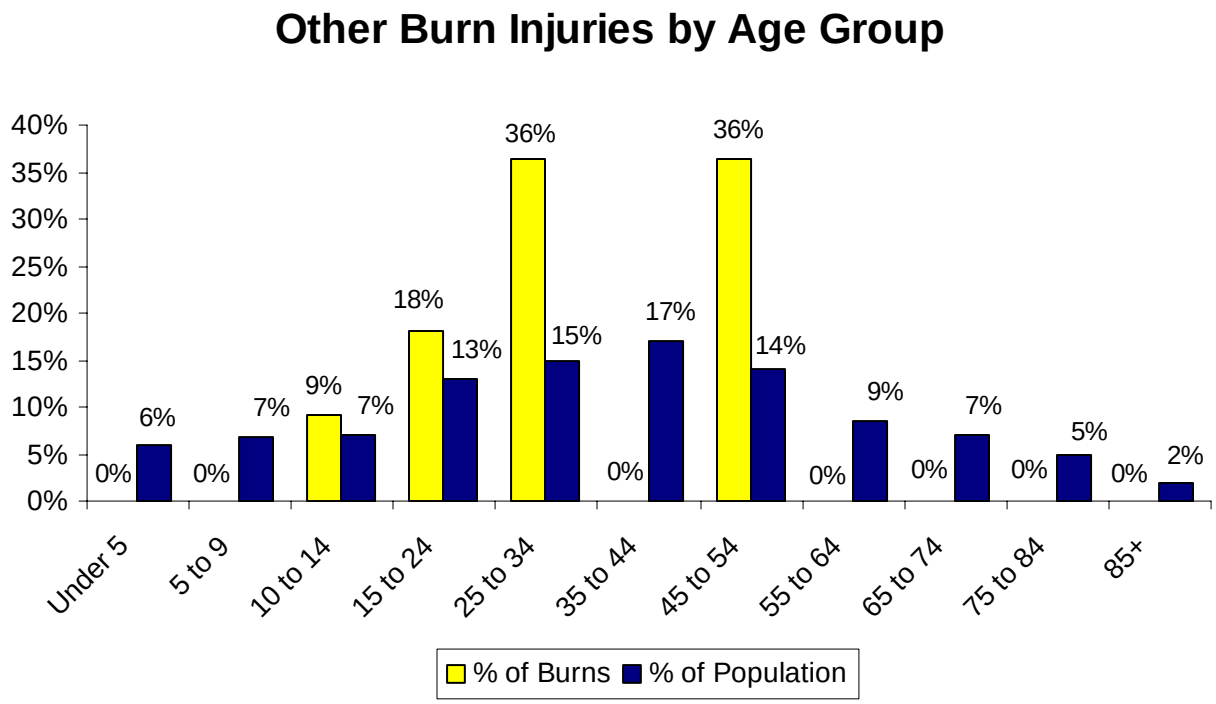
Other Type Burns Cause 11 Injuries
In 2009, there were 11 burn injuries that were characterized as *Other*. These include six burns, or 55%, caused by exposure to chemicals. Five (5) *Other* burns, or 45%, were attributed to severe sunburns.

Seventy-three percent (73%) of the 11 victims were male and 27% were female.



Health care facilities reported that four, or 36%, of the 11 *Other* burn victims were working when injured. Exposure to chemicals caused three of the four work-related injuries, while the other victim received a sunburn while working.

Almost 3/4 of _Other_ Burn Victims Were Between 25 & 54 Years Old
In 2009 there were no *Other* burn victims under 10-years old. One victim, or 9%, was between the ages of 10 and 14; two victims, or 18%, were between the ages of 15 and 24; three victims, or 36%, were between the ages of 25 and 34; and the other three victims, or 36%, were between 45 and 54 years old. No one between the ages of 35 and 44 and no one over the age of 54 suffered an *Other* type of burn injury. The youngest victim was a 14-year old girl and the oldest victim was a 54-year old man.



51-Year Old Man Received Chemical Burn
On September 14, 2009, a 51-year old man received burns to his face and airway when he mixed chlorine and Oxyclean with another chemical causing an explosion that blew out the windows of his house.

25-Year Old Woman Burned by Tanning Bed
On March 18, 2009, a 25-year old Chelsea woman received a sunburn to 80% of her body surface from a tanning bed.

32-Year Old Man Burned by Floor Chemical Cleaner at Work
On July 7, 2009 a 32-year old man received chemical burns to multiple body parts. He received his burns while he was using a chemical floor cleaner while at work.

Gasoline Related Burn Injuries

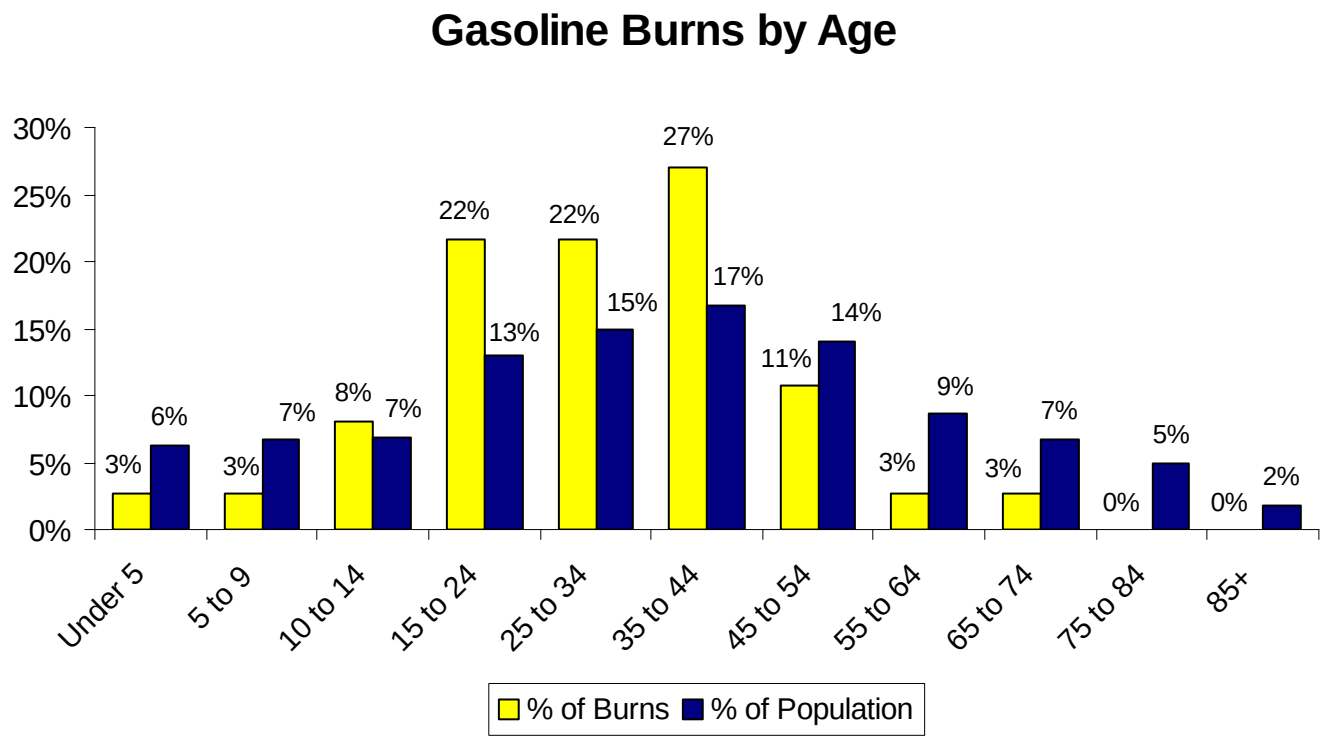
Gasoline Involved in 9% of Reported Burn Injuries
Gasoline was involved in 37, or 9%, of the 418 burns reported to M-BIRS in 2009. Gasoline was the primary cause of the injury in 36, or 97%, of these injuries. Because of more detailed descriptions as to how burn injuries occurred, it was determined that gasoline was also involved in one additional, or 3% of burn injuries that were coded with a different primary description, such as using it to start a barbeque.

Twenty-five (25), or 68%, of the gasoline related burn injuries were caused by fires. Eleven (11), or 30%, of the burn injuries involving gasoline were flame burn injuries. One (1), or 3%, of these injuries was caused by an explosion. Thirty-three (33), or 89%, of the 37 gasoline related burn victims in 2009 were men, and four, or 11% were women. None of the injuries occurred during work-related activities. Nine (9), or 24%, of the gasoline burn injuries in 2009 were to children; 28, or 76% of these injuries occurred to adults.

Over 1/4 of Gasoline-Related Burn Victims Were Between the Ages of 35 & 44

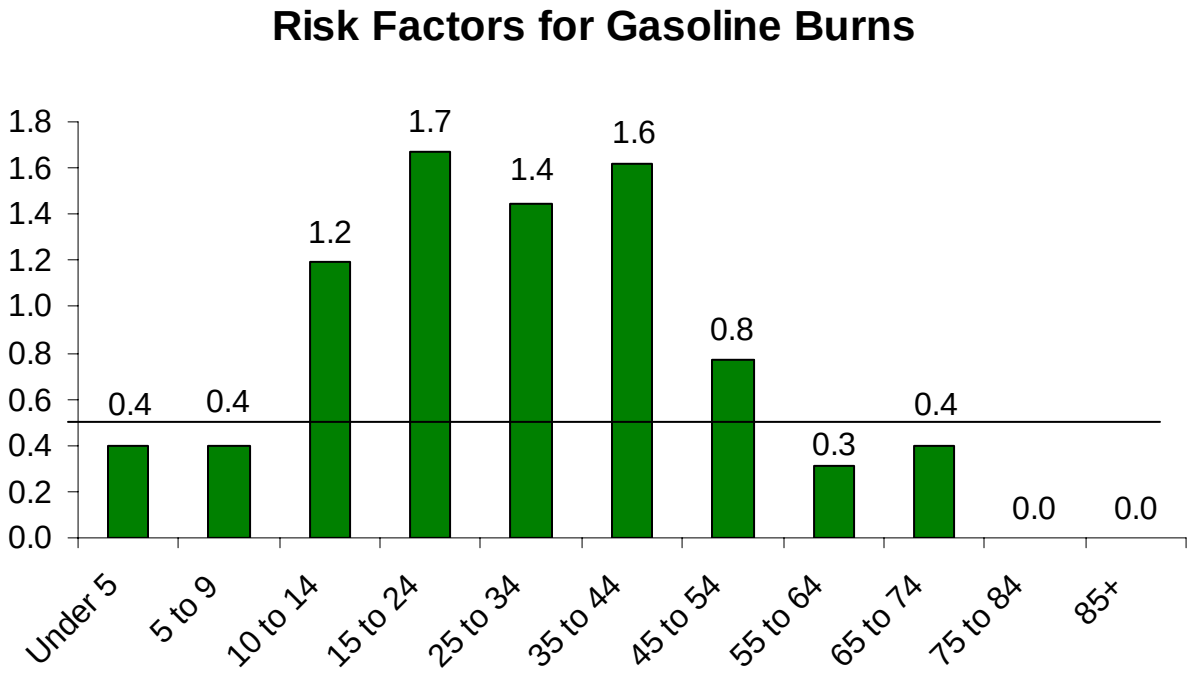
One (1) victim, or 3%, of all gasoline burn injuries was under the age of five in 2009. Another victim, or 3%, was between five and nine years of age. Three (3), or 8%, of the victims were between the ages of 10 and 14 years old. This age group has historically been the most at risk for these types of injuries, and this year this age group was 1.2 times at a greater risk of gasoline burn injuries. Eight (8), or 22%, of the victims were between 15 and 24; young adults in this age group were the most at risk to be burned while handling gasoline, 1.7 times more likely. Another eight, or 22%, were between 25 and 34; 10, or 27% were between 35 and 44; four victims, or 11%, were between the ages of 45 and 54; one victim, or 3%, was in the age group 55 to 64 years old; and another victim, or 3%, was between 65 and 74 years old. No one over the age of 71 received a burn injury involving gasoline. The youngest victim was a three-year old boy and the oldest victim was 71-year old man.

The following graph illustrates the above paragraph.



The following graph illustrates the risk factor for gasoline burns by age group. If an age group has a risk factor greater than one it is said that an individual in that age group has a greater risk of being burned by gasoline. If an age group has a risk factor less than one, then individuals in that age group have a lesser risk of receiving any burns involving gasoline. Historically, adolescents in the age group 10 to 14 had the greatest risk of getting a burn involving gasoline. In 2009 they had the fourth greatest risk of getting a burn involving gasoline.

It is actually gasoline vapors that burn, not the liquid itself. The vapors are generated at very low temperatures, are heavier than air and can travel a distance to find a spark or other ignition source. A spark or lit cigarette is enough to ignite the invisible fumes that may linger on clothing. Gasoline is a tool, but a dangerous one, and it demands respect.



29-Year Old Woman Burned at Camp Fire
On June 20, 2009, a 29-year old Rockland woman was received burns to over 20% of her body surface area when someone added gasoline to a camp fire

71-Year Old Man Burned by Gasoline While Burning Leaves
On April 25, 2009, a 71-year old man was burned when he added gasoline to a pile of leaves he was burning in his back yard. He received burns to approximately 15% of his body surface area.

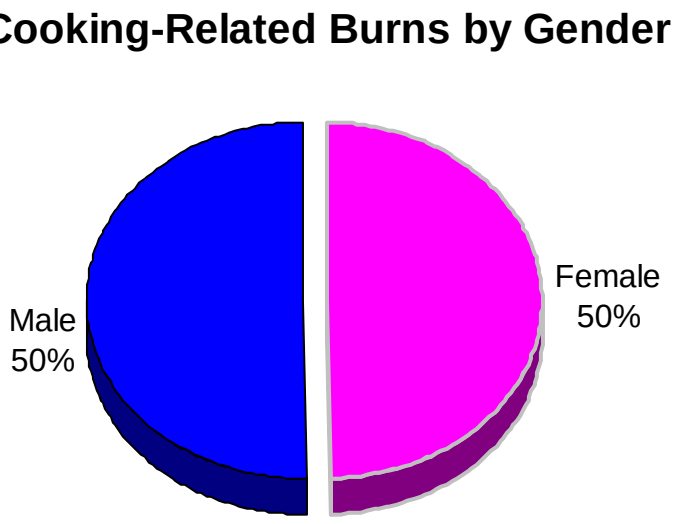
Some Safety Measures
- If you must store gasoline, store it outside the home in approved safety cans away from open flames (i.e. water heaters and pilot lights) and out of reach of children.
- Never regularly carry gasoline in your trunk.
- A one-gallon approved container could be carried empty to be used only for emergencies.

- Never add gasoline to any fire or smoldering embers, the vapors spread quickly and ignite explosively.
- Burning of leaves is illegal in Massachusetts even with a valid brush burning permit from the head of the local fire department.

Burns Caused by Cooking Activities

Cooking Activities Caused 29% of Reported Burn Injuries
Cooking activities caused 123, or 29%, of the 418 total burn injuries reported to the Massachusetts Burn Injury Reporting System in 2009. Cooking activities were the primary cause of the injury in 121, or 98%, of these injuries. Because of more detailed descriptions as to how burn injuries occurred, it was determined that cooking activities were also involved in two, or 2%, of other burn injuries that were coded with a different primary description such as 'ignitable liquids.'

Sixty-two (62), or 50%, of the 123 victims were male and the other 61, or 50%, were female. Fourteen (14), or 11%, of the 123 people burned by cooking activities were working when injured.



Scalds Cause 71% of Cooking-Related Burn Injuries
Eighty-seven (87), or 71%, of the 123 burn injuries caused by cooking were scalds. Fifty-six (56), or 64%, of these scald victims were injured by hot cooking liquids; hot food accounted for

28, or 32%, of these victims. One (1) victim, or 1% was scalded by a gas –fueled barbeque; and two victims, or 2%, were scalded by unspecified cooking injuries.

Twenty-two (22), or 18%, of all cooking-related burns were flame burn injuries. Eight (8), or 36%, were burned when cooking liquids started stovetop fires. Six (6), or 27% of the cooking-related flame burn victims, were burned when their clothing ignited while cooking. Four (4), or 18% involved barbeques; one, or 5%, was from a gas grill. Two, or 9%, were from ignitable liquids, one of which was alcohol, and an oven and stove also accounted for two, or 9% of cooking-related flame burn injuries in 2009.

Six (6), or 5% of all cooking-related burn victims, received contact burns while cooking. Two (2), or 50%, were burned when they touched a hot oven; one, or 25%, when they touched a hot barbeque; and one from coming into contact with a pan containing hot cooking liquids also accounting for 25% of contact burn injuries while cooking.

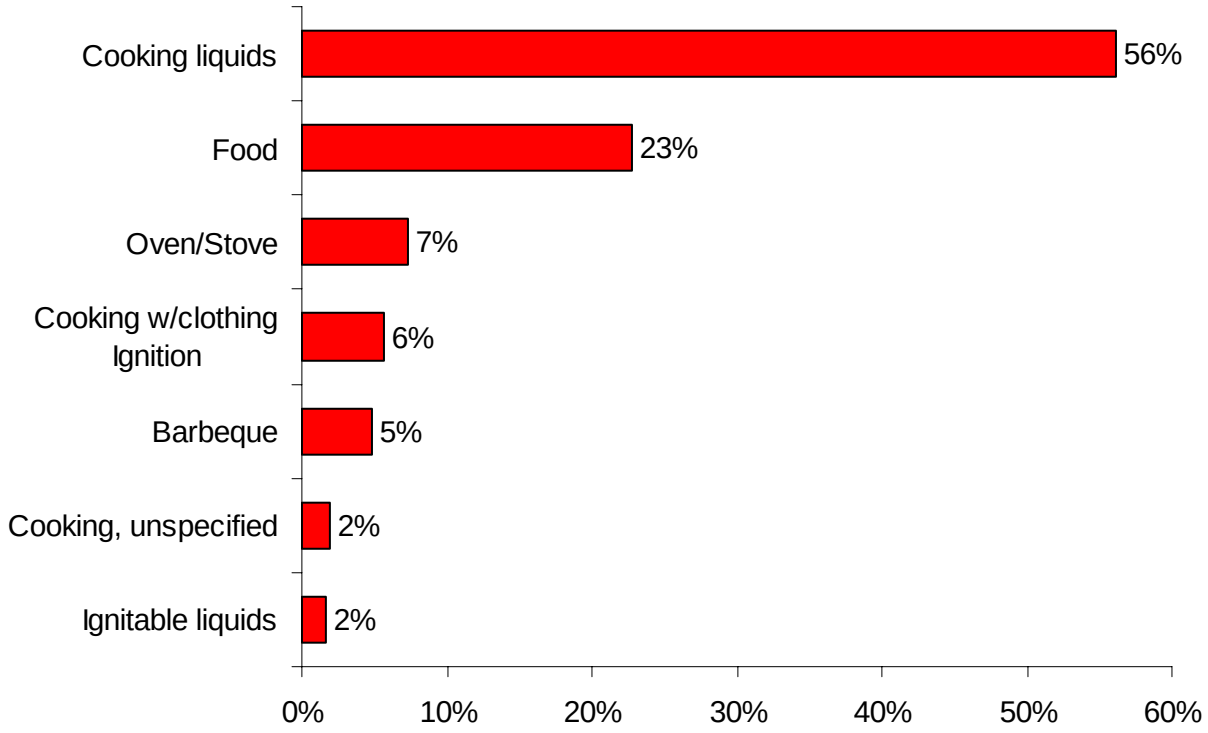
Four (4) victims received burn injuries in cooking-related explosions, accounting for 3% of cooking burn injuries in 2009. Three (3) injuries involved cooking appliance fueled by ignitable gases accounting for 75% of these injuries; one each, or 25%, for a gas oven, a propane oven and a gas barbeque. The other explosion victim was injured in an explosion while cooking using a pressure cooking device, accounting for 25% of the cooking-related explosion burn victims.

Two (2) of these cooking burn injury victims, or 2%, received their burn injuries from fires. Both fires were house fires started when cooking liquids ignited. Each of these victims accounted for 50% of all 2009 cooking burn injuries from fires. Another two victims, or 2% of all cooking-related burn injuries, were domestic violence victims. They received their injuries when someone intentionally threw hot cooking liquids at them.

Cooking Liquids Were the Leading Cause of Cooking-Related Burns

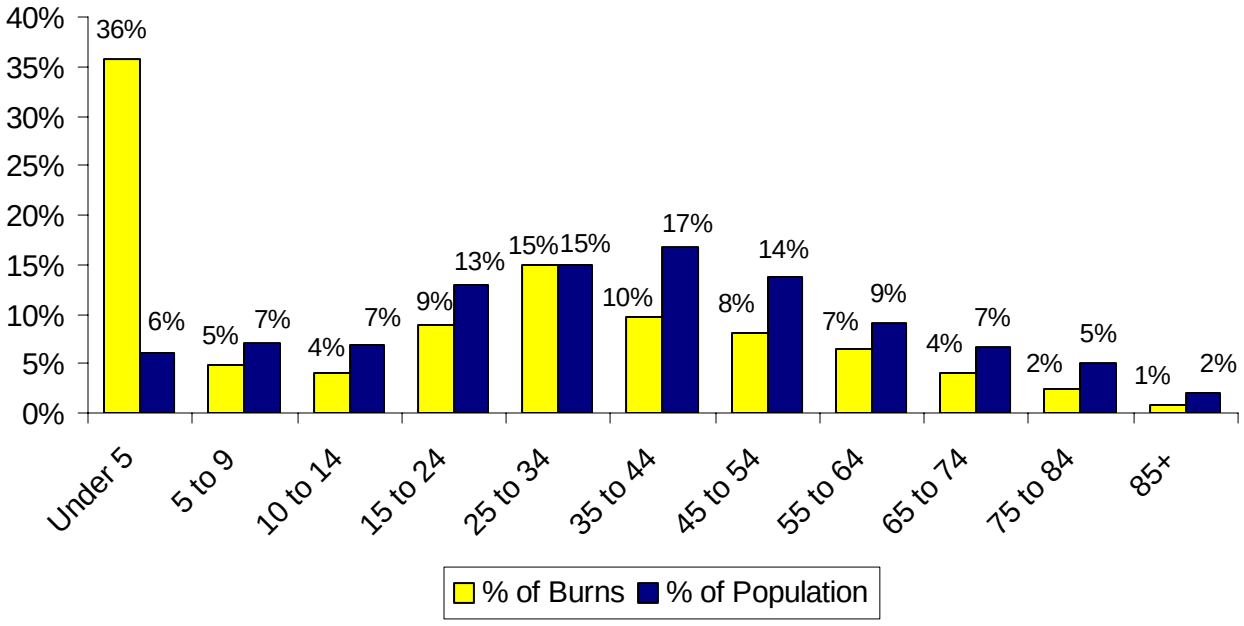
Burns from cooking liquids were the leading cause of all cooking-related burns in Massachusetts in 2009. These burns accounted for 69, or 56%, of all cooking-related burn injuries. Burns from hot food were the second leading cause of cooking-related injuries. They caused 28, or 23%, of these injuries. Burns from conventional ovens and stoves caused nine, or 7% of these burns. Clothing ignitions while cooking caused seven, or 6%. Burns received while barbequing accounted for six, or 5%, of all cooking burn injuries. Ignitable liquids caused two, or 2%, of the cooking burns, one of these burns involved alcohol being ignited; and unspecified cooking activities also caused two, or 2% of these burns in the Commonwealth in 2009.

Leading Causes of Cooking Burn Injuries



Children Under 5 More Than 6 Times as Likely to be Burned by Cooking Activities
Forty-four (44), or 36%, of the cooking-related burn victims were under age five. This age group was six times more likely to be burned by cooking related activities. Six (6), or 5%, were aged between five and nine years of age; five, or 4%, were between 10 and 14; 11, or 9%, were between 15 and 24 years old; 18, or 15%, were between 25 and 34; 12, or 10%, were between 35 and 44; 10, or 8%, were between 45 and 54; eight, or 7%, were between 55 and 64; five victims, or 4%, were between 65 and 74; three, or 2%, of the victims belong to the age group between 75 and 84 years of age, and one, or 1%, of the victims was over the age of 85 in 2009. The youngest victim of a cooking-related burn was a three-month old girl, while the oldest victim was an 85-year old man who received his burn injuries from a clothing ignition while cooking.

Cooking Burn Injuries by Age Group



The cause of burns varied with age. Pre-schoolers generally do not cook. They do, however, grab pot handles and sometimes get underfoot when adults are cooking. Cooking liquids or cooking grease frequently scalds them. Parents should keep young children away from the stove and food preparation areas while adults are cooking.

In 2009 Older Adults Not at a Higher Risk for Cooking-Related Burn Injuries
Historically, older adults over the age of 65 were more likely to be burned while cooking. However in 2009, nine older adults received burn injuries as a result of cooking in 2009. They represented 7% of the cooking burn injuries and 14% of the population and so were not injured by cooking at a disproportionate rate. Five (5), or 56%, of these victims were women and four, or 44%, were men. Three (3) of these older adults, had their clothing ignite while cooking; two, were burned by cooking liquids and one each was burned by a gas barbeque, food, a stove and an unspecified cooking activity.

Clothing Ignitions while Cooking
Loose-fitting sleeves can easily come into contact with burners and catch fire. In 2009, seven, or 6% of the victims with cooking-related burns, were injured when their clothing ignited while cooking. Five (5), or 71%, of the victims that had their clothing ignite while cooking were women and the other two, or 29% were men. Only one, or 14% of these victims, was 65 years old or older.

According to data collected by the Massachusetts Fire Incident Reporting System (MFIRS), unattended and other unsafe cooking practices caused 9,840 fires in 2008. These fires caused two

civilian deaths, 91 civilian injuries, 31 fire service injuries along with $9.5 million in losses. Many of these people also suffered from smoke inhalation[8].

Serious Burns from Cooking

- On January 12, 2009 a 66-year old Westford woman received burn injuries to 30% of her body surface area when her shirt ignited when she got too close to her stove.
- On February 13, 2009, a 68-year old Methuen man received burn injuries to 31% of his body surface area when he lit his gas-fueled barbeque and it exploded.
- On February 23, 2009 a 30-year old Milford woman burned 32% of her body surface area when she spilled a pot of boiling water.
- On March 21, 2009, an 85-year old Hopedale man received burns to over 20% of his body surface area when his clothing was ignited by a burner on a stove. He later succumbed to his injuries.
- On August 6, 2009, a 43-year old Leominster man received scald burns to 20% of his body surface area when a machine at work malfunctioned and sprayed boiling sugar on him.
- On December 10, 2009, a 27-year old Haverhill man received burns to 25% of his body surface area in a house fire that was started by cooking grease on the stove.

Safety Measures

- ✓ Never leave cooking food unattended.
- ✓ Put a lid on stovetop fires, never move the pan.
- ✓ Keep children at a safe distance from all hot items by using playpens, high chairs, etc.
- ✓ Create and enforce a **NO** zone around the stove. Do not let children play around the stove or barbeque.
- ✓ Test all heated food before giving it to young children.
- ✓ Keep pot handles turned in over the stove or countertop.
- ✓ Always use oven mitts or potholders.
- ✓ Secure loose sleeves or wear short sleeves while cooking.
- ✓ Keep a large pot lid handy to put out stovetop fires.
- 💣 Never use water on a stovetop grease fire.
- ✓ Read and follow directions when using microwave ovens and other cooking appliances.
- ✓ Children should not be allowed to use cooking or heating appliances until they are mature enough to understand safe-use procedures and tall enough to safely handle items and reach cooking surfaces.
- ✓ If cabinets exist over cooking surfaces use them to store only items that will not be needed during cooking.
- ✓ When barbequing, use only charcoal lighter fluid to start a fire. Once the coals have been ignited, never add more charcoal lighter fuel to the fire; the container may explode in your hand.
- ✓ Dispose of used coals in a proper metal container away from the house or porch.

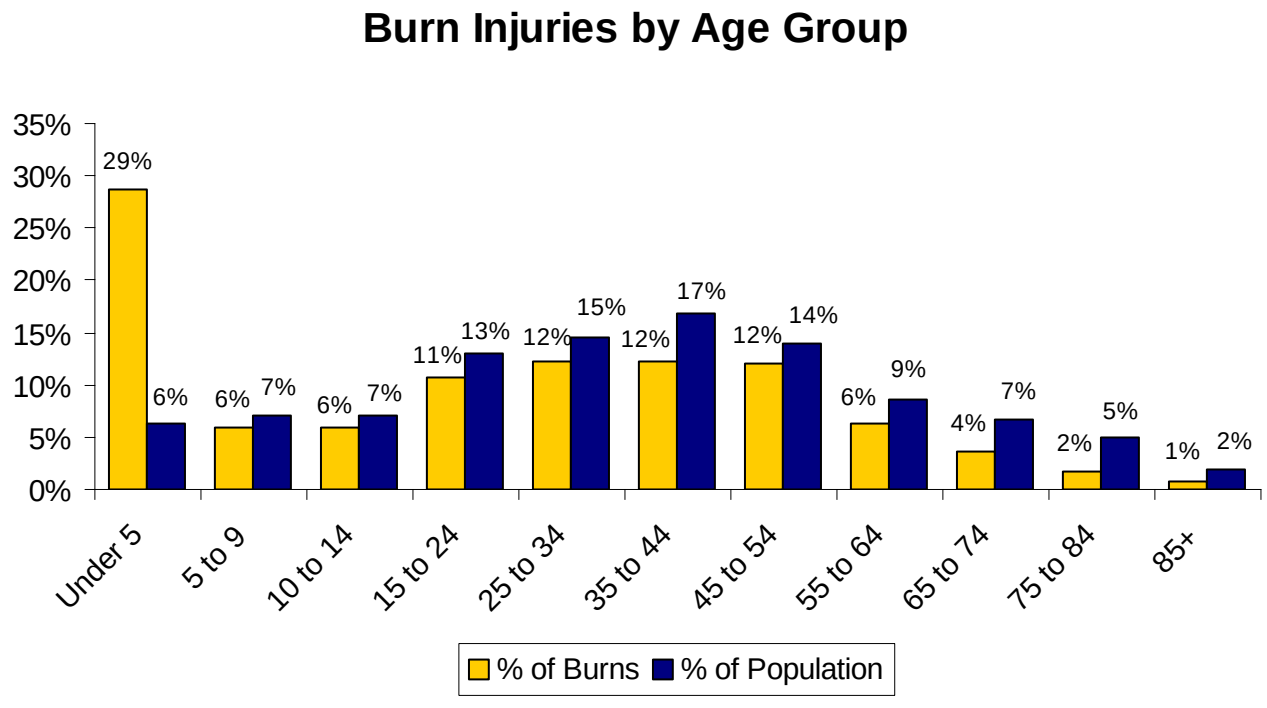
[8] 2008 Annual Report of the Massachusetts Fire Incident Reporting System; MA Dept. of Fire Services; pg. 134.

Burn Injuries by Age Group

One age group, the extremely young, were the only part of our population that was at a greater than average risk of a burn injury. Although burn injuries were reported in all age groups, very young children suffer more than their share and are more than four and a half times more likely to be burned. In 2009, older adults over the age of 65 were not burned at a disproportionate rate compared to their share of the total population; however their burns tended to be larger or more severe.

Twenty-nine percent (29%) of all burn victims were children under the age of five. One hundred and twenty (120) children under age five were seriously burned in 2009. Twenty-seven (27), or 6% of the burn injuries, occurred to children aged five to nine; 23, or 6%, were youths aged 10 to 14. Forty-five (45), or 11% of the burn victims, were young adults aged 15 to 24. Fifty-one (51), or 12% of the 2009 burn victims were adults aged 25 to 34. Another 51, or 12%, were people aged 35 to 44. Fifty (50), or 12% of the burn injuries, occurred to adults aged 45 to 54; 26, or 6% of people who were reported to have incurred burns were between 55 and 64; 15, or 4% of all burn victims, were older adults in the 65 to 74 age group; seven, or 2%, were in the 75 to 84 year old age group; and three adults over the age of 85, or 1% of all reported burn victims in 2009, received burns of more than 5% of their body surface area.

The following graph illustrates the figures in the previous paragraph.



Children Under 5 At Highest Risk of Burn Injuries
The above graph compares the percentage of burn injuries incurred by each age group with the percentage that age group represents in the general population. Only 6% of the population in Massachusetts is under the age of five (source: 2000 U.S. Census data). We would expect therefore that children under five would account for a maximum of 6% of the burn injuries. In fact, they accounted for 29% of the reported burn injuries in 2009, making them over four and a half times more likely to suffer burn injuries. Children of this age group are the most dependent on others to protect them and are the least able to move out of harm's way unassisted.

The threat of burns is most severe for children less than two-years old. Sixty-nine (69) babies and toddlers under the age of two, accounted for 17% of all burn victims, but all children under the age of five accounted for 6% of the Massachusetts population.

Scald Burns the Leading Type of Burn to Most Age Groups
While scalds remain the leading cause of burn injuries overall, they were also the leading cause or tied for the leading cause of burn injuries to six of the age groups. Scalds were the leading cause of burn injuries in the age groups of children under five, children between the ages of five and nine, adults between the ages of 25 and 34; tied with fire as the leading cause of burns to adults between the ages of 35 and 44; tied with flame burns to older adults between 65 and 74 years old; and tied with contact burns and burns from fire to older adults over the age of 85.

Flame burns were the leading cause of burn injuries to adults 45 to 54 and 55 to 64, tied with fire as the leading cause of burns to teens between 10 and 14-years old; and tied with scalds as the leading cause of burns to adults between the ages of 65 and 74.

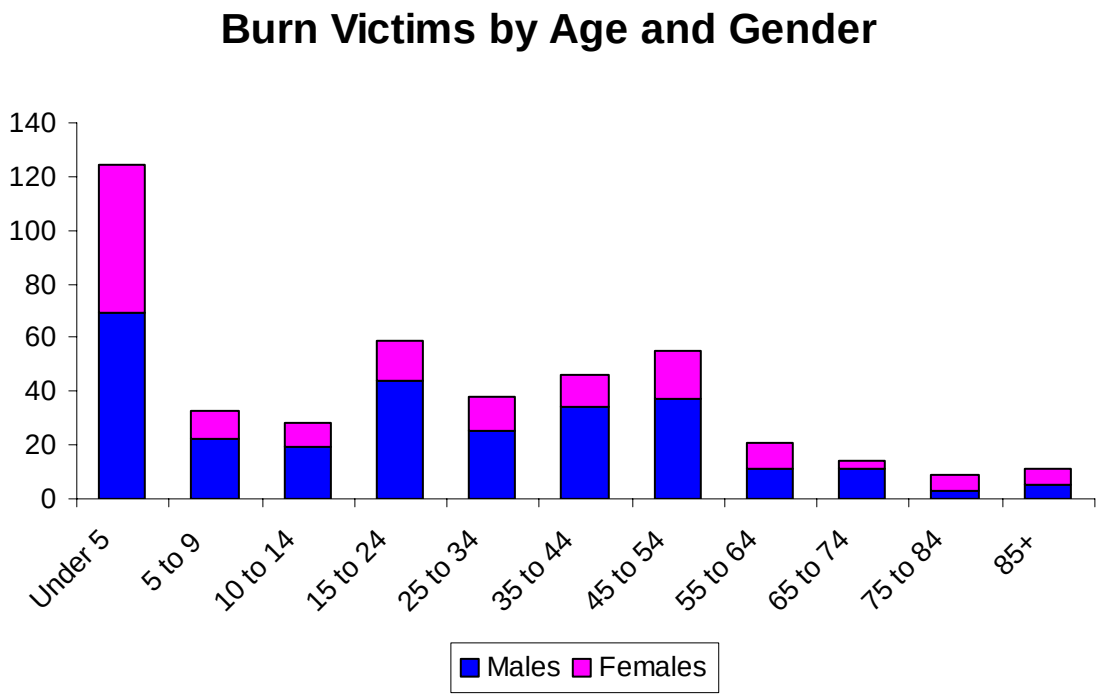
Burn injuries from fire, was the leading cause of burn injuries to young adults between the ages of 15 and 24 and older adults 75 to 84; tied with scalds for adults 35 and 44; and tied with scalds and contact burns as the leading cause of burn injuries to older adults over the age of 85.

To learn more about the specific causes for each age group, please look at the age specific sections within *Burn Injuries by Age Group*.

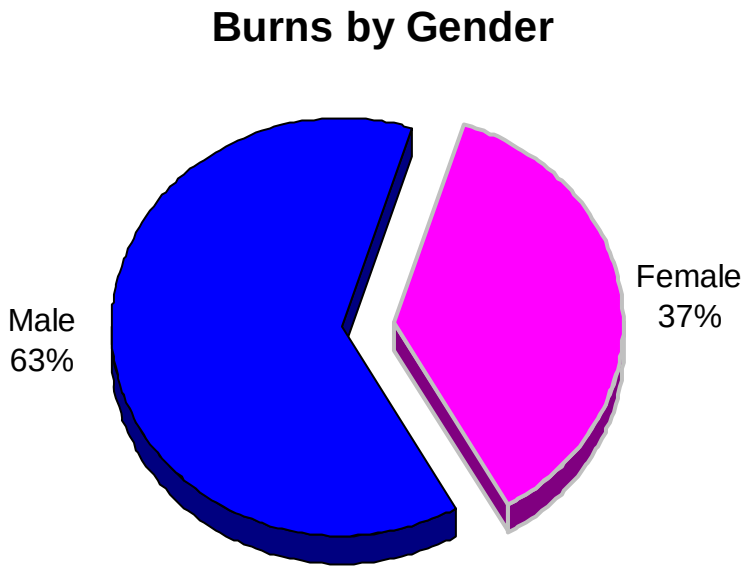
Causes of Burn Injuries by Age and Gender

The leading causes of burn injuries vary widely between age groups depending on the nature of activities in which people are involved. Children under five are busy exploring their environment and reaching for anything in their grasp. Thirty-three percent (33%) of the burns incurred by these young children were scalds caused by hot beverages, 18% were caused by cooking liquids and 15% were caused by scalds from hot tap water. Cooking liquid scalds, gasoline and other ignitable liquids were frequent causes of burn injuries to older teens and young adults.

Parents of young children must be educated about the danger of scalds from hot beverages, cooking liquids and tap water. Teens and young adults need information about cooking safely, procedures to follow when a car overheats and the correct uses of gasoline. To be effective, burn prevention educators must develop strategies that address the risk faced by each age group.



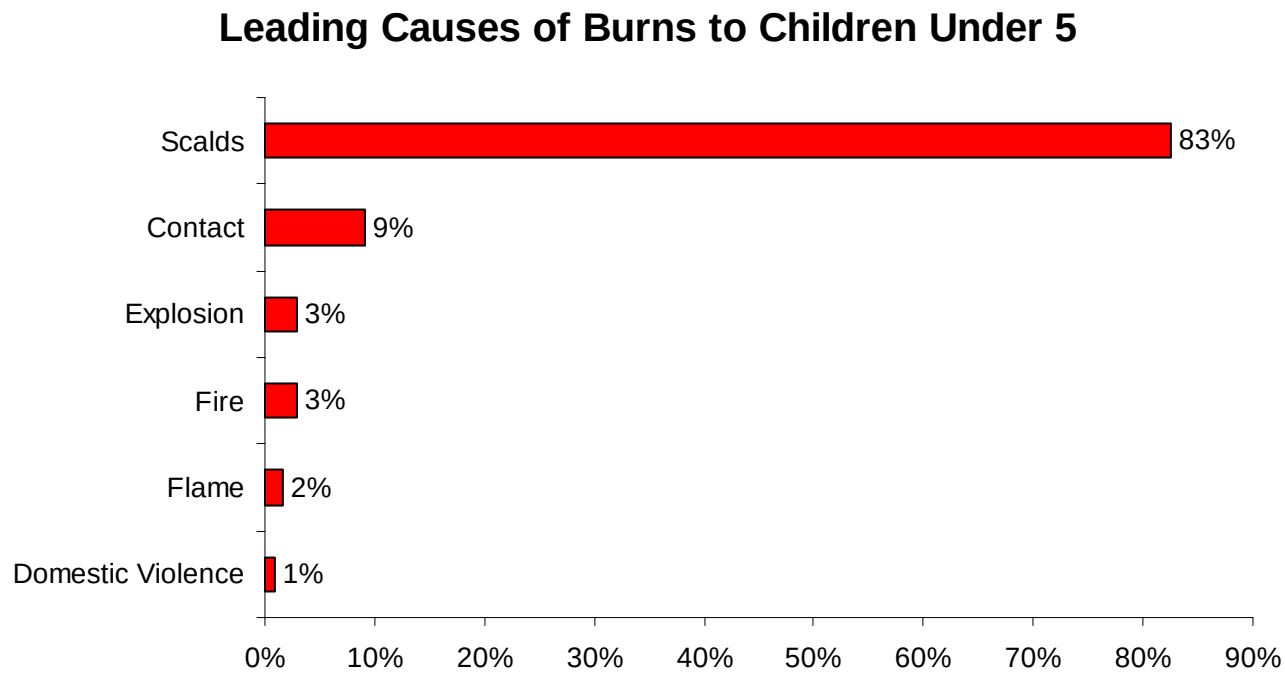
Except for the age group children five to nine where 12 boys and 15 girls were burned, males were burned more frequently than females. In 2009, 265, or 63%, of the 418 burn victims were male, and 153, or 37%, were female.



Children Under 5

29% of Reported Burns Incurred by Children Under 5
One hundred and twenty (120), or 29%, of the burn injuries reported to M-BIRS in 2009 were incurred by children under five years old. According to the 2000 U.S. Census, only 6% of Massachusetts residents are under the age of five. Children under five were over four and a half times as likely to be burned, as were members of the general population. No other age group faced a risk this high. Fifty-six percent (56%) of burned pre-schoolers were boys and 44% were girls.

Scalds Caused 83% of Burns to Pre-Schoolers
Scalds caused 99, or 84%, of the burn injuries incurred by children under five. Forty (40) were from hot beverages; 39 were from cooking activities; 22 were from cooking liquids, 16 burns were from hot food, and one was from a barbeque gas grill. Eighteen (18) burns to children under five were from hot tap water. An assault and steam each caused one burn injury to a child under five in 2009.



Contact burns accounted for 11, or 9%, of the injuries to children under the age of five. Four (4) children were burned by coming into contact with heating equipment; two children touched a heater, one touched a fireplace and the other a hot radiator. Three (3) were burned during cooking activities; two from touching a hot stove and one from touching a barbeque. Two children were burned when they touched curling irons. Contact with a clothes iron and a hair dryer each caused one burn injury to this age group.

Four (4) children under the age of five received their burns from explosions causing 3% of the burn injuries to children under five in 2009. Propane was responsible for two of these burns; and fireworks and gasoline each caused one of these burns.

Fires caused three, or 3%, of the injuries to this age group. A house fire, a camp or bon fire, and a motor vehicle fire each caused a single burn injury to a child in this age group.

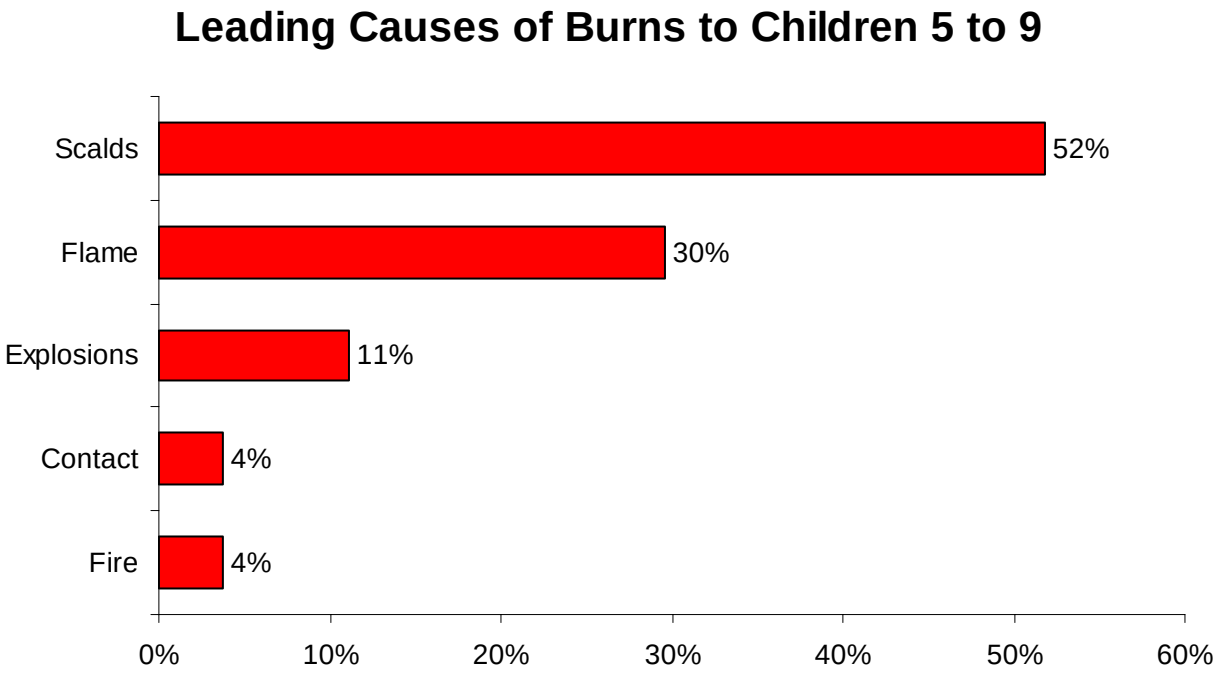
Flame burns caused two, or 2%, of burns to this age group. A clothing ignition and an ignitable liquid each caused one of these burn injuries.

One (1) child, or 1% of burn injuries to children under five, was burned by cooking liquids in an instance of domestic violence.

Children Ages 5 to 9

6% of Reported Burn Injuries Incurred by Children 5-9
Twenty-seven (27), or 6%, of the burn injuries reported in 2009 were incurred by children between five and nine years of age. Twelve (12), or 56%, of the burn victims were boys, and 15, or 56%, were girls. This is the only age group where more females were burned than males. Children in this age bracket accounted for 7% of the population of Massachusetts and 7% of the burn injuries in 2009.

Burns From Scalds and Fires Were the Leading Causes to Children 5-9
The leading causes of burn injuries to children aged five to nine were scalds. Scalds caused 14, or 52%, of the burn injuries incurred by children aged five to nine in 2009. The scald burn



injuries included six from hot beverages; six from cooking activities; three from cooking liquids and three from hot food. Two (2) of these burns were also from hot tap water.

Flame burns accounted for eight, or 30%, of the burn injuries to this age group. Two injuries came from children using with lighters. Alcohol, a clothing ignition from a candle, an unspecified clothing ignition, fireworks, flammable materials and a gasoline each caused one of these flame burn injuries.

In 2009 explosions accounted for three burn injuries, or 11%, to this age group. Two (2) were from explosives, one from attempting to make a bomb, the other from fireworks. The other burn injury from an explosion was from a propane explosion.

Contact burns accounted for one, or 4% of these burns. This injury came from contact with a heater.

One child in this age group was burned in a house fire, accounting for 4% of the total burns to children between five and nine.

Children Ages 10 to 14

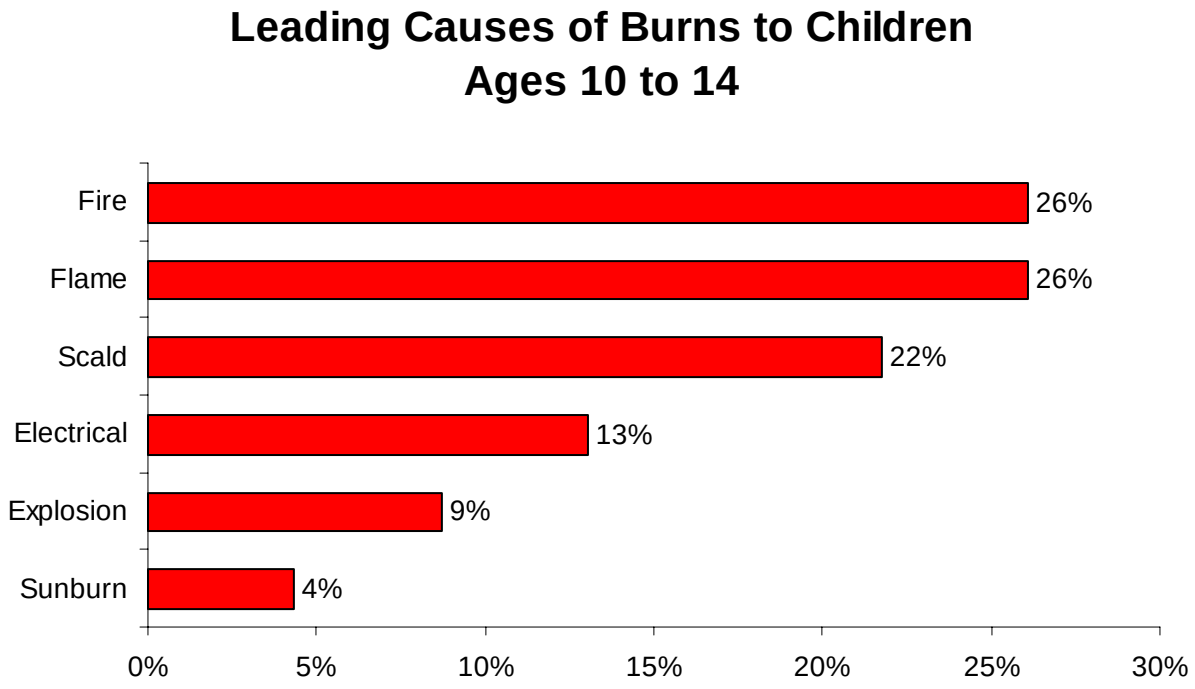
6% of Reported Burns Incurred by Children 10-14
Children between the ages of 10 and 14 suffered 23, or 6%, of the burn injuries reported in 2009. Fourteen (14), or 61%, were boys and nine, or 39%, were girls. Children in this age bracket accounted for 7% of the population in the Commonwealth of Massachusetts and 6% of the total reported burn injuries. At this age, children are exploring their environment more on their own, but often without the maturity or experience to reason out cause and effect.

Flame Burns & Burns from Fire Were the Leading Cause of Burns to Children 10-14
Six (6) pre-teens, or 26%, were injured by flame burn injuries. Children playing with lighters and gasoline caused three of these injuries; two children were playing with lighters, and one child was playing with gasoline. Cooking liquids, ignitable liquids and a woodstove each caused one of these injuries. For the first time in three years, flame burns were once again the leading cause of burns to this age group.

Six (6) other pre-teens, or 26% of the burn injuries to this age group, were due to fires; three pre-teens were injured in house fires, two were injured in camp or bon fires, and one was injured in a brush fire.

Scalds caused five, or 22%, of the burns incurred by children aged 10 to 14. Cooking activities caused four of these burns; cooking liquids were responsible for three and hot food for one. Hot beverages caused one scald burn to a child between the ages of 10 and 14.

Electrical burns accounted for three, or 13%, of the burn injuries to this age group. Two (2) children were electrocuted and one child received injuries from an unspecified electrical accident.



Explosions caused two, or 9%, of the 23 burn injuries to children ages 10 to 14. One (1) child was burned when the bomb he was making exploded. Another child was injured when his model rocket motor exploded in his pocket.

One pre-teen, or 4% of the burns to this age group, was sunburned.

Ignitable Liquids & Fireworks Caused Almost 1/3 of Pre-teen Burns
Overall, gasoline, other ignitable liquids, attempting to make a bomb and a model rocket were a factor in seven, or 30%, of the burn injuries to pre-teens; these included three fires, two flame burn injuries, and two explosion injuries. Gasoline was involved in three, or 13%, of these injuries; other ignitable liquids were a factor in two, or 9%; bomb making and a model rocket each accounted for one, or 4%, of these injuries.

Ages 15 to 24

11% of Reported Burn Victims Between 15-24
Teens and young adults between the ages of 15 and 24 incurred 45, or 11%, of the burn injuries reported in 2009. Thirty-two (32), or 71%, were male and 13, or 29%, were female. Young adults aged 15 to 24 account for 13% of the population of Massachusetts and 11% of the burn

injuries in 2009. Six (6), or 13%, of the burn injuries incurred by this age group were work-related, five were male and one was a female.

40% of Burns Were From Fires

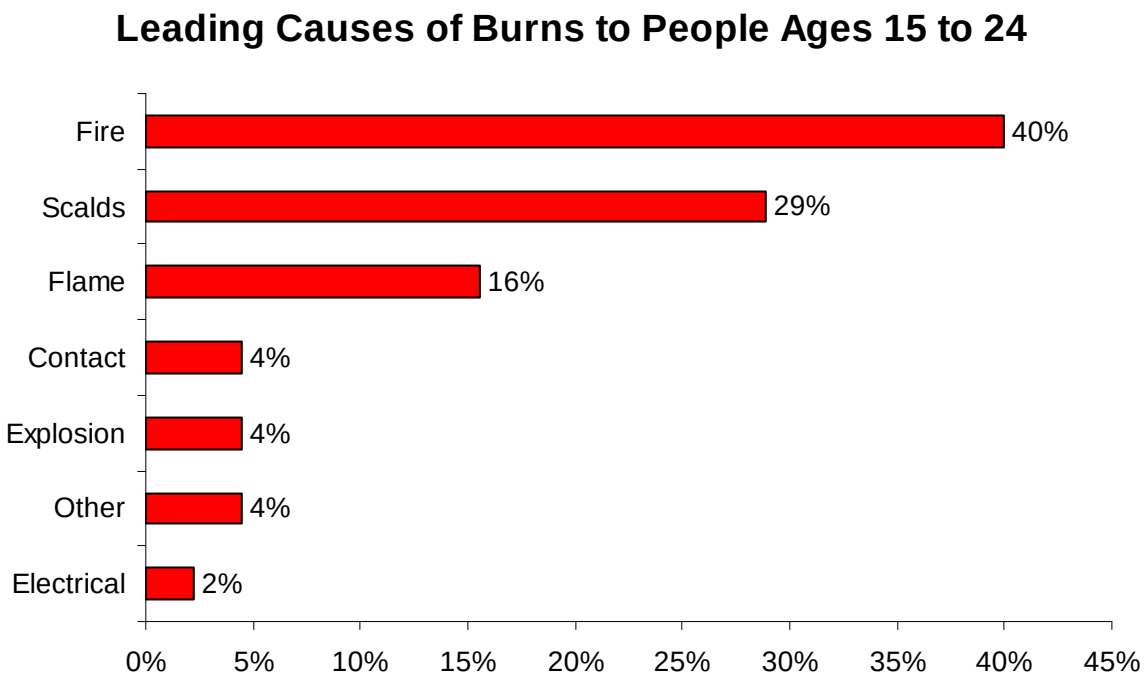
The leading cause of burn injuries to this age group were burn injuries from fires. Forty percent (40%), or 18, of the burn injuries incurred by people aged 15 to 24 were from fires. Twelve (12) victims received burns from camp or bonfires, two victims were injured in brush fires, one in a house fire, one in a tent fire and one person was burned in a motor vehicle fire.

Scalds were the second leading cause of burn injuries to this age group. Thirteen (13), or 29%, of the burn injuries to people 15 to 24 years of age were caused by scalds. Seven (7) were caused by cooking activities; six from cooking liquids and one from hot food. Four (4) of these injuries were from hot beverages. A car radiator and hot tap water each caused one of these burns.

Seven (7), or 16%, of the burn injuries to this age group were caused by flames. Flame burns from cooking caused four of these injuries; two from cooking liquids, one from a barbeque grill and another from a clothing ignition while cooking. Explosives caused two of these burn injuries; one from fireworks and the other from gunpowder. Gasoline accounted for one flame burn injury to this age group.

Contact with hot objects caused two of these burn injuries, or 4%, of the burns to this age group. A car part and a chemical each caused one burn injury to this age group.

Explosions also injured two, or 4%, of people in this age category. Ignitable liquids and natural gas each caused one explosion burn injury.



There was one unspecified electrical burn to this age group, accounting for 2% of their injuries.

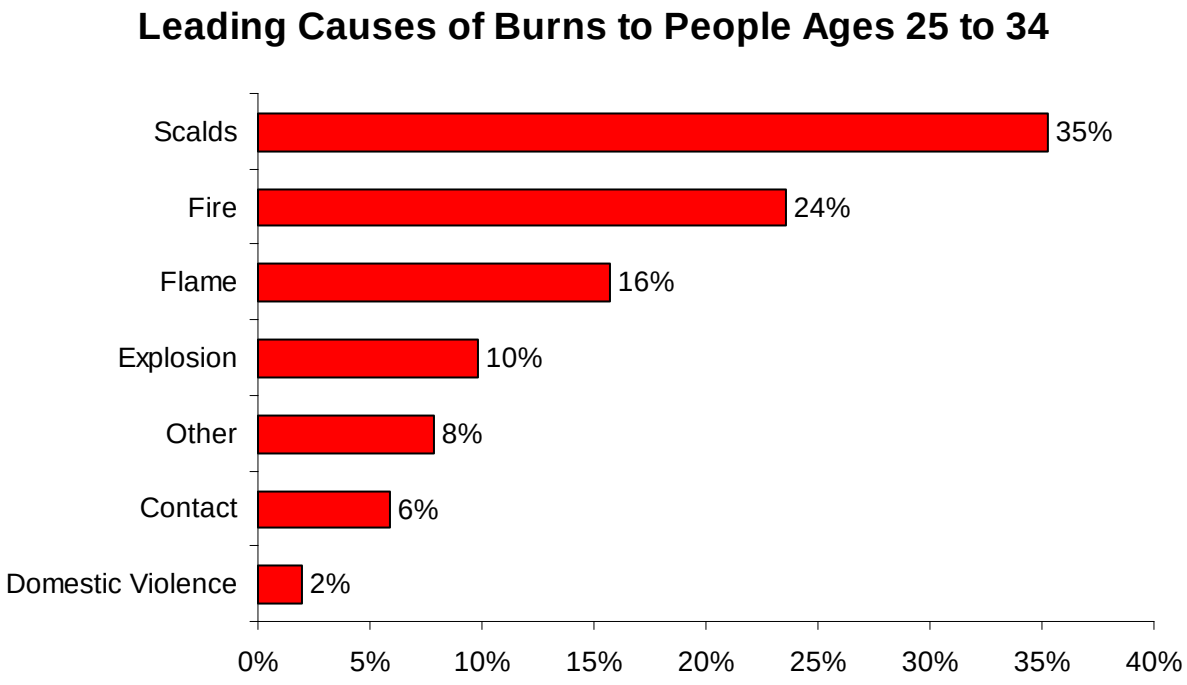
There were two *'Other'* burns in this age group causing 4% of the burn injuries. One of these was a chemical burn and the other was a sunburn.

Ages 25 to 34

12% of Burn Victims Were Between 25 and 34
Fifty-one (51), or 12%, of the burn injuries reported in 2009 were incurred by people between 25 and 34 years of age. Thirty-seven (37), or 73%, of the victims were men and 14, or 27%, were women. Fifteen (15), or 29%, of the burn injuries suffered by this age group were work-related; 13 were men and two were women. People between the ages of 25 and 34 accounted for 15% of the population of Massachusetts while accounting for 12% of the total number of burn injuries reported in 2009.

Scalds Caused 35% of Burn Injuries
Scalds accounted for 18 burns, or 35% of the burn injuries for this age group. Thirteen (13) of the scalds were from cooking: 10 were from cooking liquids and three were from hot food. Hot tap water caused three of these burns. Beverages and steam were each responsible for one scald burn injury to this age group.

Burns from fires caused 12 burns and accounted for 24% of the burn injuries to this age group. These fire-related burns included eight from camp or bon fires, two from house fires and one victim each of a brush fire and a boat fire.



Flame burns caused eight, or 16%, of the injuries to 25-34 year olds. Gasoline caused two, or 4%, of these burns. Cooking activities accounted for two of these burn injuries; a barbeque and an oven each accounted for one. A heater, a clothing ignition while smoking, and a cutting torch each caused one flame burn injury to someone in this age group.

Five, or 10%, of the burns to 25 to 34 year olds were caused by an explosion. Ignitable gases caused three of these burns; two were from propane and the other was caused by natural gas. Fireworks and a water heater each injured one person in this age group.

Four (4) people, or 8%, between the ages of 25 and 34 received *Other* type burns. Two (2) people each received chemical burns and sunburns.

Contact burns caused three, or 6%, of the burns to this age group. Contact with a clothes iron, an oven and hot wax each caused one of these burns.

Throwing boiling cooking liquids on someone in an act of domestic violence accounted for one, or 2%, of the burn injuries to this age group.

Ages 35 to 44

12% of Reported Burn Victims Were Between 35 and 44 Years of Age
Fifty-one (51), or 12%, of the burn injuries reported in 2009 occurred to people between the ages of 35 and 44. Thirty-four (34), or 67%, of the victims were men and 17, or 33%, of the victims were women. Adults between the ages of 35 and 44 accounted for 17% of the Massachusetts population but only 12% of the reported burns in 2009.

Almost 1/4 of Burn Injuries Were Work-Related
Eleven (11), or 22%, of the burn injuries incurred by this age group were work-related. Ten (10) of these work-related burn victims were men, and one was a woman.

Scalds & Burns from Fires Were Tied as the Leading Cause of Injuries to 35-44-Year Olds
In 2009, scalds and burns from fires tied as the leading cause of burns to people between 35 and 44 years of age, with each accounting for 16, or 31%, of burn injuries to this age group. Scalds caused 16, or 31%, of the burn injuries to this age group. Eight (8) of these injuries were from cooking; six were from cooking liquids and two were from hot food. Beverages, heaters and hot tap water each caused two of these burns. A hot water bottle and steam each caused one scald burn to this age group.

Fires also inflected burn injuries to 16, or 31%, of the victims in this age group. Nine (9) were from camp or bon fires, three were from house fires, two were from brush fires, one was from a motor vehicle fires, and one injury was from an unclassified fire.

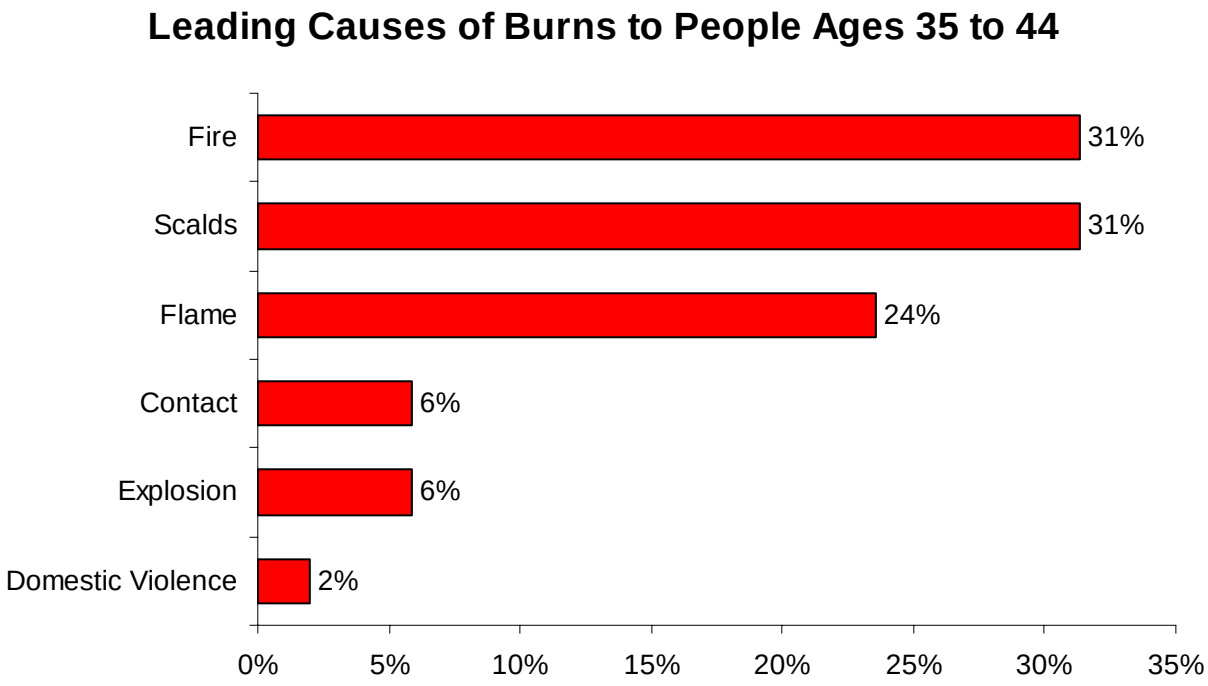
Flame burns caused 12, or 24%, of burn injuries to adults between the ages of 35 and 44. Ignitable liquids caused four of these burns; three from gasoline and one from another ignitable liquid. Unsuccessful attempts at self-immolation caused two of these burns. Barbeques also

caused two burns to this age group; one of the two barbeques was gas fueled. Alcohol, an assault, a lighter and a match each caused one flame burn injury in this age group.

Contact burns accounted for three, or 6%, of the burns to this group. An assault, contact with a hot piece of metal and contact with an oven each caused one of these burns.

Explosions also accounted for three, or 6%, of the total burn injuries to this age group. Ignitable gases caused two of these injuries; propane and natural gas each caused one of these injuries. A chemical explosion was responsible for one of these burns.

Burns from domestic violence accounted for one, or 2% of these burn injuries. One victim was burned by a hot car part.



Ages 45 to 54

12% of Reported Burn Injuries Were Between 45 and 54 Years of Age
People between the ages of 45 and 54 incurred 50, or 12%, of the reported burns in 2009. Thirty-six (36) or 72%, of the victims were male, and 14, or 28%, were female. Eleven (11) of the 55 burn victims aged 45 to 54, or 22%, were burned while at work; all of them were men. This age group represents 14% of the population of Massachusetts while it received only 12% of the burn injuries in 2009.

Flame Burns Caused Over 1/4 of the Burn Injuries
Flame burns were incurred by 14, or 28%, of the burn victims between the ages of 45 and 54. Cooking liquids caused four of these injuries. Ignitable liquids caused three of these flame burn injuries; two were from ignitable liquids and one was from gasoline. Alcohol, asphalt, an assault, a candle, explosives, a machine and an unsuccessful attempt at self-immolation each caused one of the burns to this age group.

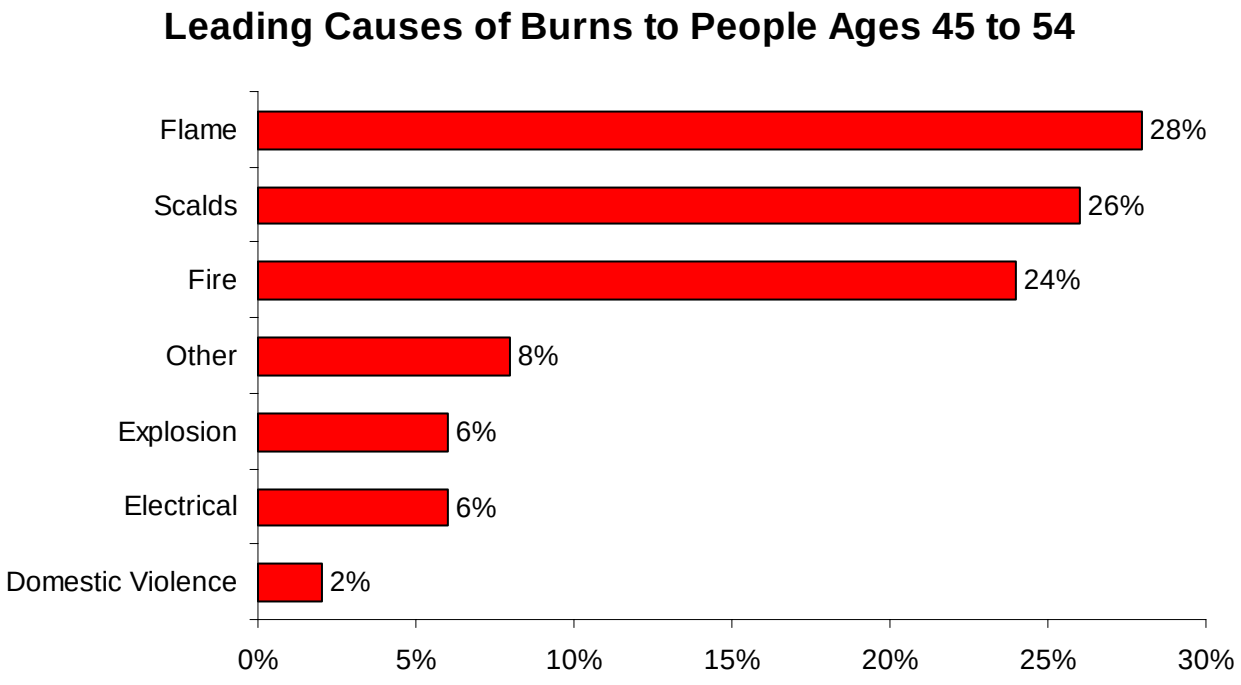
Scalds caused 13, or 26% of the burn injuries to this age group. Hot tap water was responsible for four injuries to this age group. Cooking activities also caused four of these injuries; cooking liquids caused three and an unspecified cooking activity caused one of these injuries. Beverages caused three of these injuries. Steam and an unspecified scald injury each caused one of these burns.

Burns from fires caused 12, or 24%, of the burn injuries to victims 45 to 54 years old. Seven (7) burns were caused by house fires; and five injuries were caused by camp or bon fires.

There were four *Other* type burn injuries to this age group, accounting for 8% of the burn injuries. Three (3) victims were burned by chemicals and one was from a sunburn.

Three (3) members of this age group were victims of explosions. They accounted for 6% of the burn injuries to this age group. An oven, oxygen and propane were each involved in one of these burn injuries.

Electrical burns were also responsible for three, or 6%, of the burns to this age group. All three people were burned in unspecified electrical accidents.



There was one domestic violence burn caused by alcohol being ignited, accounting for 2%, of the burns to victims between the ages of 45 to 54.

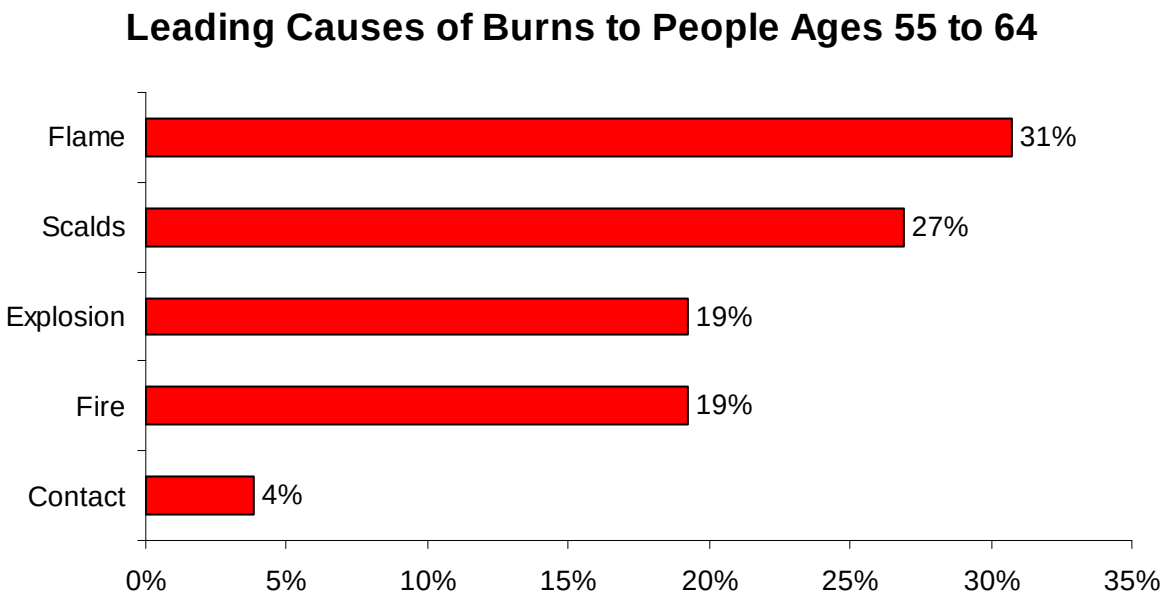
Ages 55 to 64

6% of Burn Victims Were Between 55 and 64 Years Old
Twenty-six (26), or 6%, of the burns reported in 2009 were incurred by people between the ages of 55 and 64. Twenty (20), or 77%, of the victims were men, and six, or 23% were women. One (1), or 4%, of the 26 burn injuries incurred by people between 55 and 64 years old were reported to be work-related, and he was a man. People of this age group represent 9% of the total population of Massachusetts but only received 6% of the burns in 2009.

Almost 1/3 of Burn Injuries Were Flame Burns
Flame burns accounted for eight (8), or 31%, of the injuries to this age group. Cooking activities accounted for three, of these flame burn injuries; two were clothing ignitions while cooking and one was caused by cooking liquids. Smoking caused two of these burns; one person was injured while smoking on home oxygen, and another from an unspecified smoking incident. Gasoline, propane and welding each caused one flame burn injury to someone in this age group.

Scalds caused seven, or 27%, of the burn injuries to people between the ages of 55 and 64. Cooking caused three of these burns; two were attributed to cooking liquids and the other to hot food. Alcohol, a beverage, a car radiator, and hot tap water were each the cause of one scald burn injury to this age group in 2009.

Explosions caused five, or 19%, of burn injuries to adults 55 to 64. Natural gas caused three of these injuries. An oven and a water heater each caused one burn injury to members of this age group.



Burns from fires tied as the third leading cause of burn injuries to adults between the ages of 55 and 64 years of age in 2009. Fires also caused five burn injuries, or 19% of all burn injuries to this age group. Four (4) of these injuries were incurred in house fires, and one was a camp fire.

Contact with an oven caused one, or 4% of the injuries to adults between the ages of 55 and 64.

Over 65 – Older Adults

25 Burn Victims Over 65
Twenty-five (25), or 6%, of the burn victims in 2009 were over 65 years old. Fifteen (15) were between 65 and 74; seven were between 75 and 84; and three were 85 years old or older. Fifteen (15), or 60% of the victims were men, and 10, or 40%, were women. Older adults represent 14% of the total Massachusetts population but only 6% of the burn injuries in 2009 which means that in 2009 they were less likely to receive a burn injury.

Historically older adults account for 7% of the total number of burn injuries during the year. Since 1984 there have been 12,629 reported burn injuries to M-BIRS, 884 have been incurred by people over the age of 65. In 2001, they accounted for 11% of the total number of burn injuries, the highest percentage of any year since the inception of M-BIRS in 1984. In 2006, older adults accounted for the smallest percentage of total burn injuries since 1984, 3%.

Scalds & Flame Burns Tied as the Leading Cause of Burns to Older Adults
In 2009, scalds and flame burn injuries were tied as the leading cause of burns to older adults.

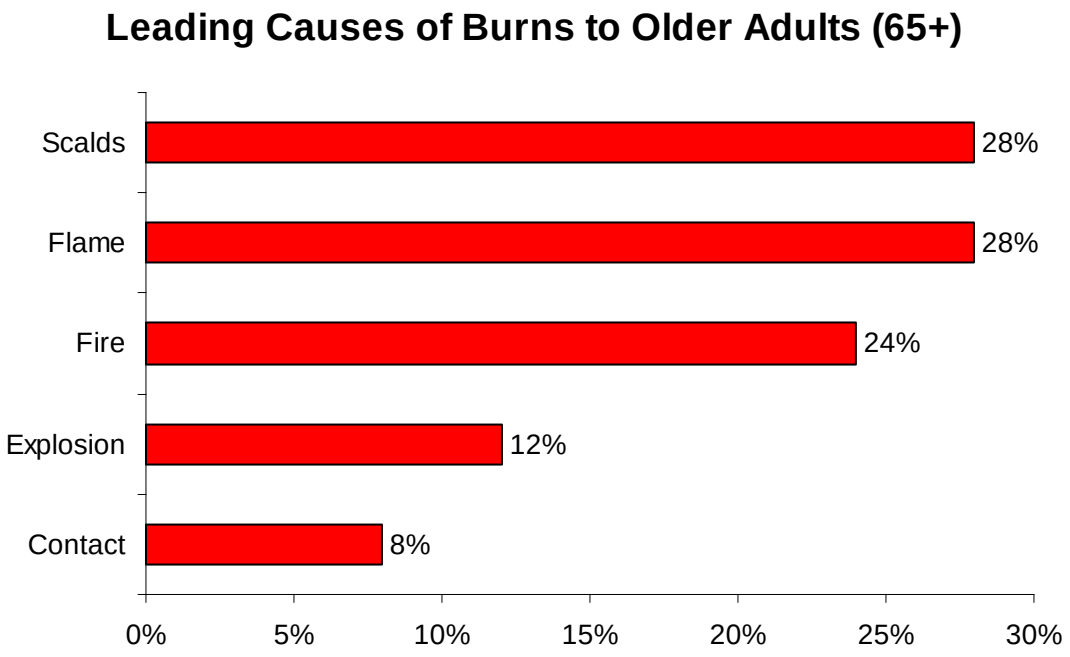
Scalds caused seven, or 28%, of the burn injuries to this age group. Three (3) were from cooking activities; one each from cooking liquids, hot food and an unspecified cooking act. Beverages caused two scalds, and steam and hot tap water each caused one injury to this age group.

Flame burns also caused seven, or 28%, of the burn injuries to people over the age of 65. Clothing ignitions while cooking caused three of these injuries. Smoking while using oxygen caused two of these injuries; a candle and a stove each caused one flame burn injury to this age group.

Burns from fires caused six, or 24%, of burn injuries to adults over the age of 65. Brush fires caused three of these burn injuries; two injuries were the result of house fires and one injury was from a camp fire.

Three victims, or 12%, of this age group were burned by explosions. A gas-fueled barbeque, over pressured cooking liquids and explosives each caused one of these burn injuries to older adults over the age of 65.

Contact with hot objects caused two, or 8%, of the burn injuries to older adults in 2009. A car part and a radiator each caused one of the injuries to this group



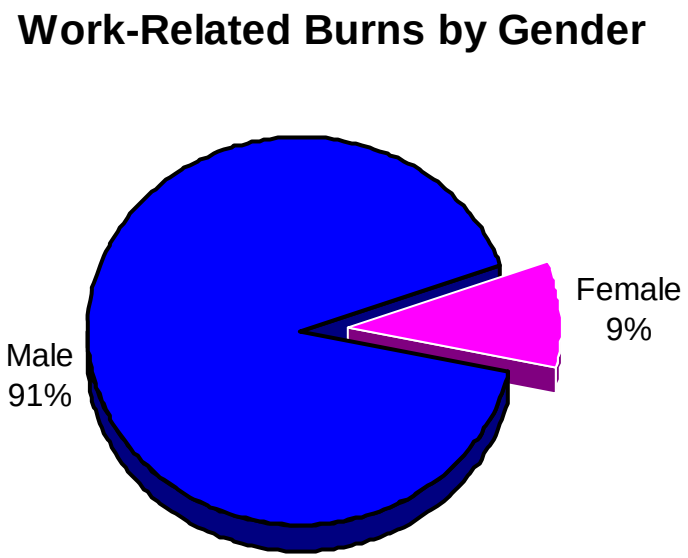
According to the Burn Awareness Coalition, the following scenarios increase the chance of a burn injury for older adults; smoking when tired, drinking alcohol or taking medications which can cause drowsiness, wearing loose fitting clothing while cooking, kitchen fires from unattended cooking, and grease fires on the stove top. During 2009, cooking accounted for nine, or 36% of the reported burn injuries in Massachusetts incurred by older adults. Clothing ignitions caused 12% and smoking accounted for 8% of the burn injuries to older adults.

Safety Tips for Older Adults

- Do not smoke when you are tired, drinking alcohol or taking medications, which make you drowsy. If you must smoke, make sure there are working smoke detectors in the immediate vicinity.
- Wear clothes with short or tight fitting sleeves and watch for clothes touching elements on the stove.
- Do not use a cooking stove for heating purposes or for drying clothes.
- Never leave boiling, broiling or frying food unattended.
- Keep stove surfaces clean of built up grease.
- Do not attempt to lift or carry heavy pots of hot liquid or food.
- Cook with the pot and pan handles turned in.
- Remember “Stop, Drop, & Roll” – It just may save your life.

Work-Related Burn Injuries

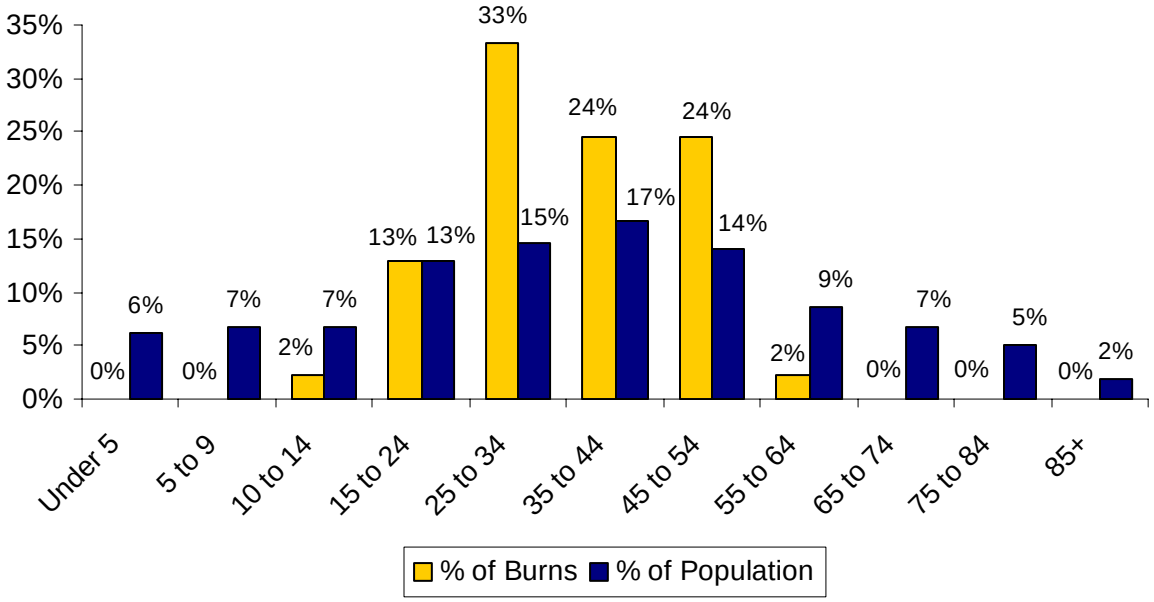
10% of Reported Burns Occurred at Work
Massachusetts hospitals indicated that 45, or 10%, of the 418 burn injuries reported in 2009 occurred while the victim was at work. Men were much more likely to be burned while working than women. Forty-one (41) men, 91%, and four women, 9%, were burned at work in 2009. In 2009, no one died from a work-related burn injury.



96% of Work-Related Burns Incurred by People Between 19 and 54
No one under the age of 13 received a work-related burn in 2009. One (1) or 2%, were between 10 and 14-years old. Six (6), or 13%, were between 15 and 24 years of age. Fifteen (15), or 33%, of the victims were between 25 and 34 years of age; 11, or 24%, belonged to the 35 to 44 age group. Another 11, or 24%, of work-related burn injuries were victims 45 to 54 years old. One (1), or 2% of work-related burns occurred in the 55 to 64 age group, which was the oldest age group to have any. The youngest person to receive treatment for a work-related burn in Massachusetts in 2009 was a 13-year old boy who received an electrical burn. The oldest victim to receive a work-related burn was a 58-year old man who received a burn from a water heater.

The following graph illustrates the above paragraph.

Work-Related Burns by Age Group



Scalds Were Almost 1/2 of Work-Related Burns
Scalds were the leading cause of work-related burns in 2009. These 21 burn injuries accounted for 47% of work-related burns. Eleven (11) involved cooking; nine of these burns were the result of cooking liquids and two were from hot food. Three (3) were from hot tap water. Beverages, heaters and steam each accounted for two of these burns. A car radiator was responsible for one of the work-related scald burns in 2009.

Eight (8), or 18%, of the 45 work-related burns were from explosions in 2009. Three (3) of the work-related injuries caused by explosions involving ignitable gases; natural gas caused two and propane caused one explosion. A chemical, ignitable liquids, an oven, oxygen, and a water heater caused one work-related explosion burn injury in 2009.

Flame burns accounted for six, or 13%, of these work-related burns. Asphalt, a heater, ignitable liquids, a machine, an oven and a cutting torch each caused one of the work-related flame burn injuries in 2009.

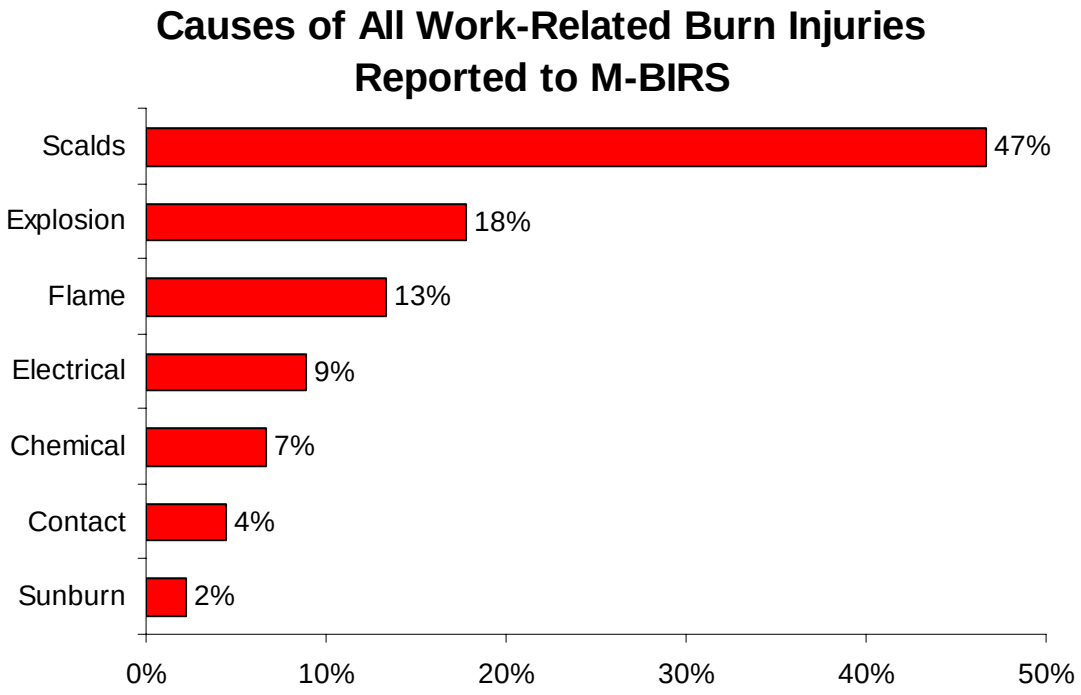
Electrical burns accounted for four, or 9%, of work-related burns in 2009. One (1) victim was electrocuted and three were from unspecified electrical accidents.

Chemicals were responsible for three, or 7% of work-related burns in 2009.

Contact burns caused two, or 4%, of work-related burn injuries in 2009. Contact with a car part and an oven each caused one of these burn injuries.

One (1) person, or 2% of these burns, was sunburned while working.

The following chart shows the breakdown of the causes of all work-related burn injuries reported to M-BIRS regardless of whether they occurred in Massachusetts or not.



89% of Work-Related Burns Reported to M-BIRS Occurred in MA
Most, but not all of the work-related burn injuries treated in Massachusetts occurred in Massachusetts. Forty (40), or 89% of the 45 work-related burns reported to M-BIRS in 2009 occurred in Massachusetts. Scalds caused 19, or 48%, of the Massachusetts work-related burns. Burns from explosions caused seven, or 18%. Flame burns caused five, or 13% of these burns. Three (3), or 8% of work-related burns in Massachusetts were electrical burn injuries. Chemical burns also accounted for three, or 8% of these burns. Contact burns caused two, or 5% these burns; and a sunburn caused one, or 3%, of the work-related burns that occurred in the Commonwealth in 2009.

Two (2) of the work-related burns reported M-BIRS occurred in New Hampshire. There was one reported injury where the victim lived in Massachusetts but the address where the burn occurred was not reported.

No Work-Related Injuries Resulted in Death or Life-Threatening Injuries
In 2009, there were no reported work-related injuries that resulted in a life-threatening injury or death.

Intervention and Prevention Efforts
The Massachusetts Department of Public Health (MDPH) tracks work-related burn injuries as part of ongoing sentinel surveillance of work-related injuries and illnesses in Massachusetts.

MDPH refers select burn injuries to OSHA for inspection to ensure that that hazardous conditions associated with the burn injuries among employees in the private sector have been corrected.[9] MDPH contacted OSHA regarding 17 workplaces with burn injuries in 2009. OSHA was already investigating three of these workplaces, in which explosions occurred. One incident involved two seriously injured workers; OSHA referred that case to the Department of Public Utilities, which has jurisdiction, since it involved electricity transmission. OSHA investigated the remaining 14 workplaces referred by MDPH. OSHA provided guidance to five employers through nonformal mechanisms. These procedures require the employer to provide documentation about how they corrected hazards without an onsite OSHA inspection. Among the nine workplaces inspected by OSHA, hazardous conditions resulting in citations and fines were noted in four. The violations included: failures to conduct hazard assessments to identify burn risks, failure to provide personal protective equipment to prevent burns, absence of a lockout/tagout program, electrical ground too near water, blocking of circuit breakers, and failure to properly record work-related burn injuries on the OSHA 300 log. Two investigations remained open in March 2010, one of which involved combustible dust, absence of ventilation in locations where blenders released dust, with six pending serious citations; the other was an explosion that occurred in December 2009.

Three additional cases that occurred among public sector employees were referred to the Massachusetts Division of Occupational Safety for investigation. Two of these were scalds, and the third involved skin contact with hydrofluosilicic acid, which may contain trace hydrofluoric acid an extremely dangerous acid. This investigation led to a comprehensive review of guidance and directions provided to cities and towns by the MDPH Office of Oral Health, Occupational Health Surveillance Program, along with the Massachusetts Department of Environmental Protection and Massachusetts Division of Occupational Safety. Together they are updating model Standard Operating Procedures to ensure appropriate precautions are taken in maintenance and repair activities in water treatment. Attention to the proper treatment of hydrofluoric acid burns is included.

MDPH Burns at Work Report 2003 - 2004

MDPH's Occupational Health Surveillance Program released in January 2010, a report entitled "Injuries Due to Fires, Flames and Hot Substances at Work." See http://www.mass.gov/Eeohhs2/docs/dph/occupational_health/burns_at_work.pdf. This report analyzed injuries associated with fires, flames and hot substances (FFHS) occurring at work that resulted in death, hospitalization or treatment in an emergency department during 2003-2004. These data overlap, but do not exactly duplicate the data collected by MBIRS, since the injuries are described by the cause, rather than the type of injury and include non-burn injuries such as smoke inhalation and organ damage. Nor are the injuries restricted to 5% or more of body surface area.

In the two-year period, in Massachusetts workplaces, there were 5 deaths, 78 hospitalizations and 4,413 ED treated FFHS injuries. The 11-page report documents the burden of work-related burn injuries. The severity of these FFHS injuries are revealed by the high hospital costs for hospitalized persons, twice as high as the next most costly injuries (internal organ and

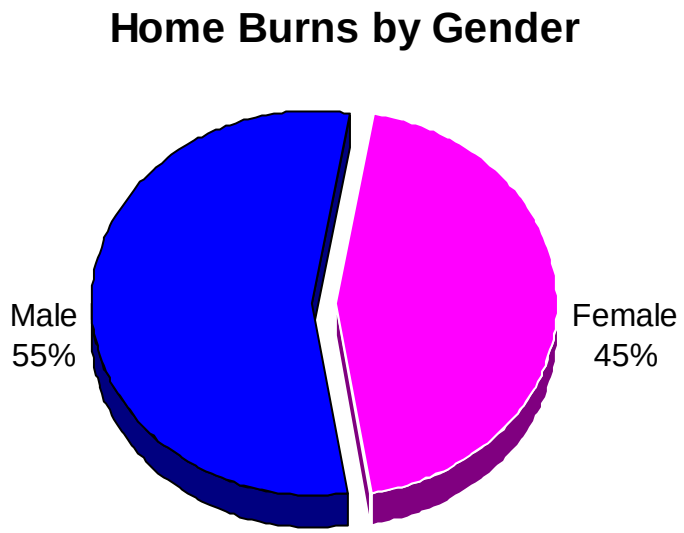
[9] Those injuries caused by explosions, chemical exposures, electricity, or that appeared to indicate likely violations of the OSHA standards, are referred to OSHA.

amputations). Among the hospitalized FFHS injuries, thermal burns to the lower extremities were most common, with 39% documented as third degree. Among those treated in the emergency department, thermal burns to the upper extremity were most common, with 55% documented as second-degree burn injuries. An important finding is that the risk of FFHS injuries was not born equally across workers of all nationalities. Black workers were three times more likely than white workers to be hospitalized and Hispanic workers were two times more likely to be treated in an emergency department compared to white workers. Males were much more likely than females, to be hospitalized or treated in emergency departments for work-related FFHS injuries. Young workers aged 15-24 years consistently had higher rates of ED treated injuries, across both sex and all racial/ethnic groups compared to older workers (25-74 years).

Burn Injuries in the Home

Almost 3/4 of Burn Injuries Occur in the Home

The home is the most common place for burn injuries to occur. In 2009, 305 people, almost three-quarters, or 73%, of all the reported burn injuries took place in the victim's home or surrounding yard. More men were burned in their homes than women. One hundred and sixty-nine (169) men, or 55%, and 136 women, or 45%, were burned in their homes in 2009.



Over 1/2 of All Home Burns Are Scalds

One hundred and fifty-eight (158), or 52%, of the burn injuries that occurred in the home in 2009 were scalds. Cooking caused 69 of these home burn injuries; cooking liquids caused 43, hot foods caused 23, unspecified cooking activities caused two, and a gas-fueled barbeque caused one of these injuries. Hot beverages caused 53 of burns at home. Scalds from hot tap water

accounted for 29 of these burns. Steam caused three of these burns. Alcohol, an assault, a hot water bottle and an unspecified scald burn each accounted for one of the home burn injuries in 2009.

Flame Burns Account for 18% of All Burns at Home

Flame burns were the second leading cause of burn injuries in the home. Flame burns accounted for 54, or 18%, of all home-related burn injuries.

Cooking activities accounted for 17, or 6%, of all home flame burn injuries; cooking liquids caused seven injuries, clothing ignitions while cooking caused six, barbeques caused three (one was a gas barbeque), and one of these injuries was caused by stove.

Nine (9), or 3%, were caused by ignitable liquids; six were from gasoline and three were from other ignitable liquids.

Smoking caused five, or 2%, of these flame burn injuries; three were caused by smoking while on oxygen, one was a clothing ignition while smoking and the other one was an unspecified smoking activity.

Explosives were the cause for four, or 1%, of the home flame burns; two were caused by fireworks, and one each involved gunpowder and unspecified explosives.

Three (3), or 1%, were from children misusing lighters. Two (2), or 1%, of these injuries were from candles with one candle igniting the victim's clothing.

Asphalt, an assault, a child's clothing igniting, an unspecified clothing ignition, flammable materials, a lighter, a machine, a match, propane, an unsuccessful attempt at self-immolation, and a woodstove each caused one home-related flame burn injury, accounting for less than 1% of all home burn injuries in 2009.

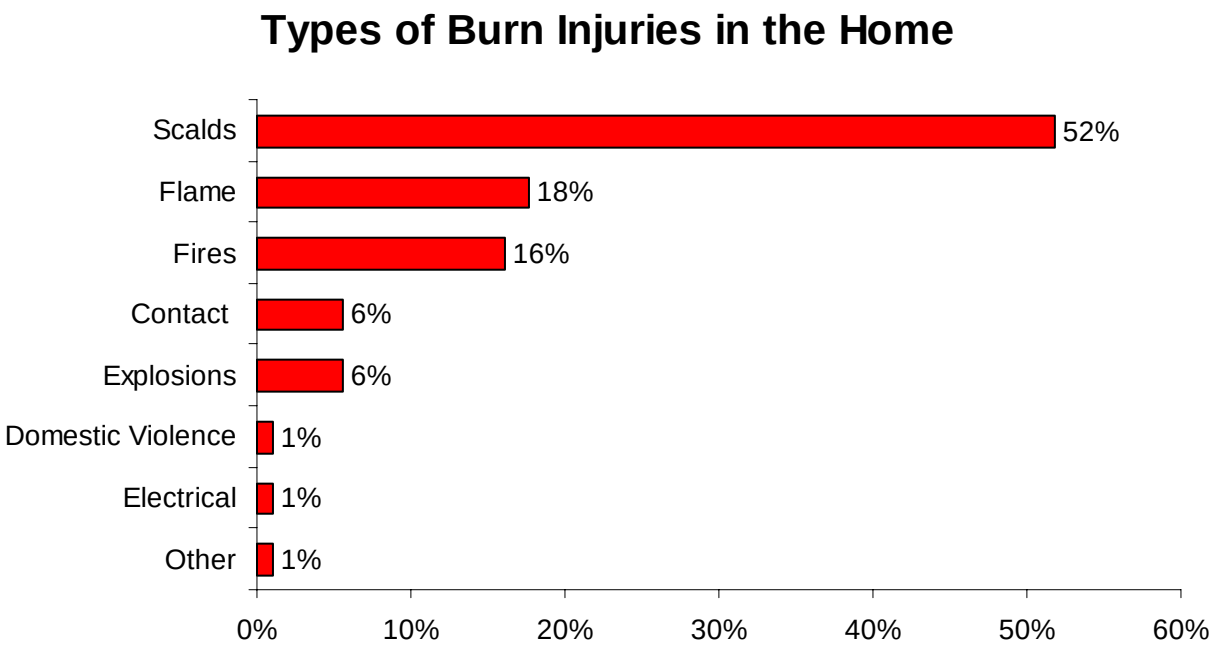
Burn injuries from fires accounted for 49, or 16% of all burn injuries in homes. Twenty-three (23) injuries were from house fires accounting for 8% of all home burn injuries. Many of these fires were caused by electrical problems, smoking, cooking and arson. There were 18 injuries, or 6%, caused by camp or bon fires in the victim's yards. Eight (8), or 3%, of these injuries were caused by brush fires.

Contact burn injuries accounted for 17, or 6%, of all the burn injuries that occurred in homes in 2009. Heating equipment was the leading cause of contact burns in the home in 2009. Contact with heating equipment caused six, or 2%, of all the at-home burn injuries in 2009; three were from contact with heaters, two were from radiators and the other from contact with a fireplace. Cooking activities caused four, or 1%, of these burns; two each from contact with an oven and a stove. Two (2) people were burned by clothes irons in their own home, accounting for 1% of these burn injuries. Contact with a hot curling iron also caused two, or 1%, of these injuries. Contact with a car part, a hair dryer and hot wax each caused one, or less than 1%, of the reported contact burn injuries that occurred in homes in 2009.

Explosions also caused 17, or 6%, of all reported burn injuries in homes in 2009. Ignitable gases caused nine, or 3%, of these injuries; five were caused by propane and four by natural gas. Explosives were responsible for three, or 1%, of home burn injuries; two of these injuries involved attempting to make a bomb, and the other an unspecified explosive. Cooking activities also caused three, or 1%, of these injuries, a gas-fueled barbeque, over pressured cooking liquids and an oven each caused one of these injuries. Gasoline and a water heater were each involved in one, or less than 1%, of the 2009 home burn injuries.

Four (4) people received burns from domestic violence incidents at home in 2009. These four burns accounted for 1% of all home burns. Two (2) people were assaulted with cooking liquids, causing 1% of the home-related burn injuries in 2009. Alcohol and a hot car part was each used in an attack on one person, accounting for less than 1% of these burns.

Three (3) people received electrical burns at home in 2009. These three electrical burns accounted for 1% of all home burns. Two (2) victims, or 1%, received unspecified electrical burns at home in 2009; and one person was electrocuted accounting for less than 1% of these burns.

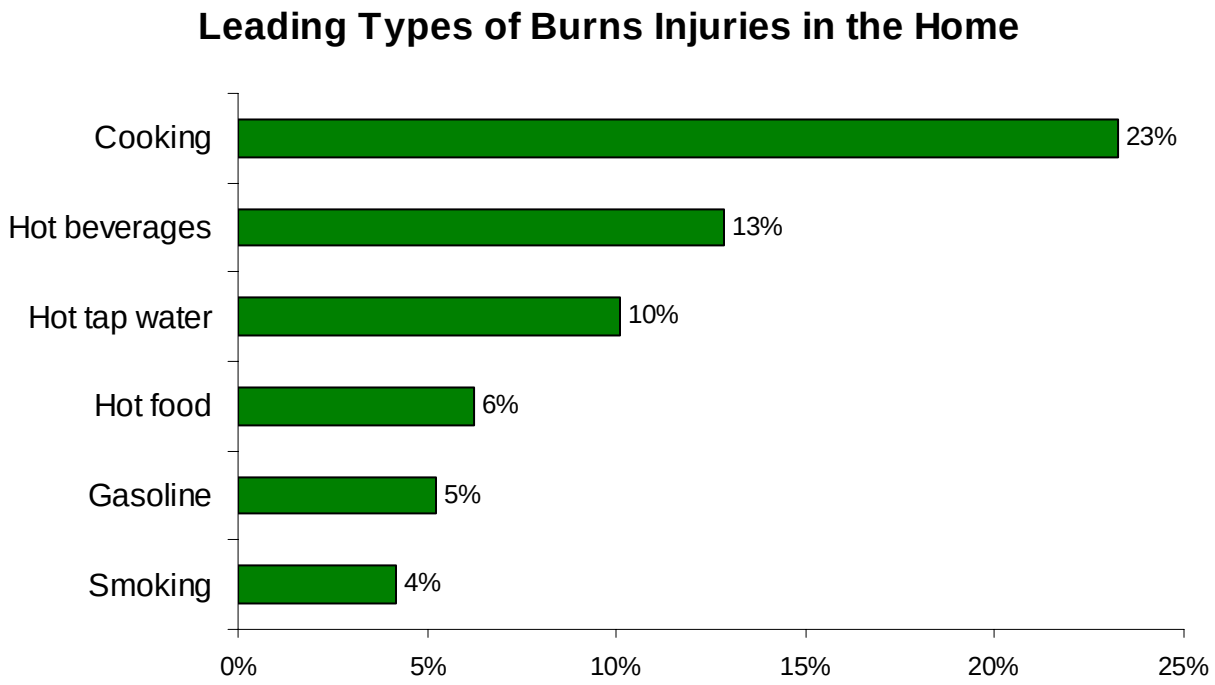


There were three (3) *Other* type of burn injuries were reported occurring to victims in their homes in 2009. All three of these three injuries involved chemicals and accounted for 1% of the home burn injuries.

Cooking Caused Almost 1/4 of Burn in Homes

In 2009 cooking activities caused the most overall burns regardless of burn type. Burns from cooking caused 73, or 24%, of burns in Massachusetts' homes. Hot beverages were the cause of 53, or 17%, of home burns in 2009. Hot tap water accounted for 29, or 10%, of these burns. Gasoline, including children misusing with gasoline, and hot food were each the cause of 23, or

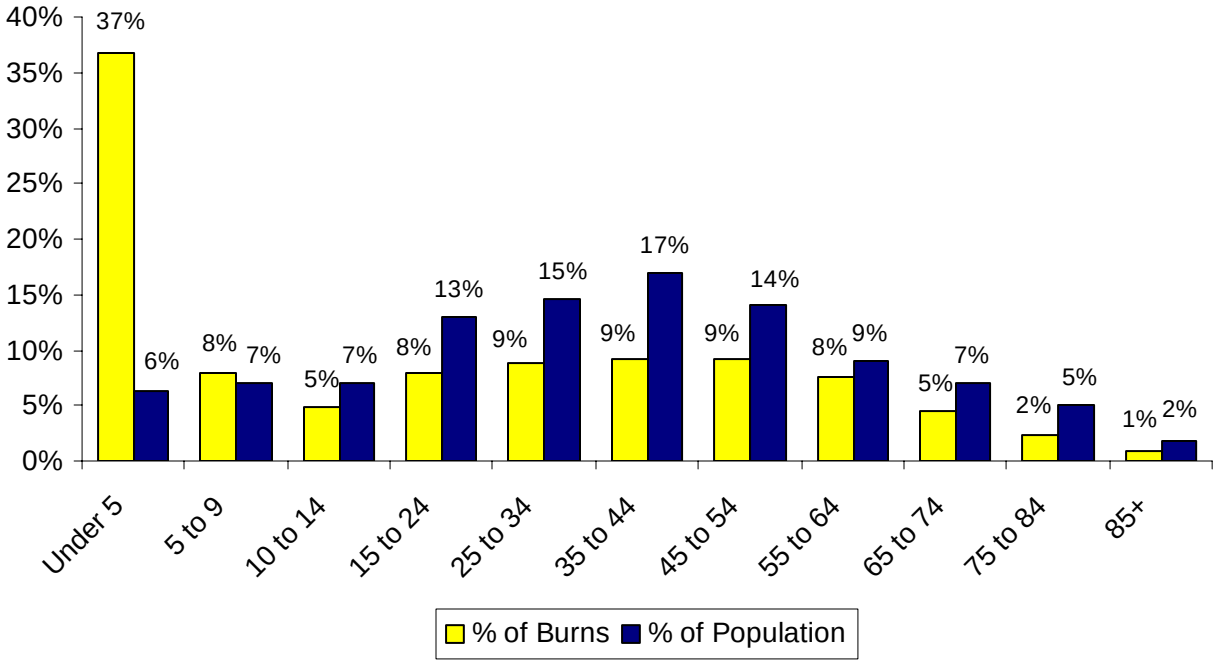
8%, of home burns in 2009. Heating equipment caused eight, or 3%, of these burns that were reported to have occurred in homes in 2009.



37% of Home Burns Were to Children Under 5

Thirty-seven percent (37%) of the 305 victims that received their burns at home were less than five years old. They were almost six times more likely to suffer a burn at home. Children between the ages of five and nine received 8% of the burn injuries that occurred in people's homes, while children aged 10 to 14 accounted for 5% of these injuries. Young adults between the ages of 15 and 24 accounted for 8% of these burns; 9% were between 25 and 34; 9% were between 35 and 44; 9% were between 45 and 54; 8% were between 55 and 64; 5% were between 65 and 74; 2% were between 75 and 84; and 1% were also over the age of 85-years old.

Home Burn Injuries by Age Group



Hot Beverage Scalds Youngest Victim & Oldest Victim Scalded by Steam
A three-month old girl, who received scald burns to her 7% of her body surface area from hot food, was the youngest victim to receive an at-home burn injury. The oldest victim to receive a burn at home was a 91-year old woman who received a scald to 5% of her body surface area from steam.

3% of Home Burns Resulted in Death
Seven (7), or 3%, of the 305 reported burn injuries that occurred in homes in 2009 resulted in death for the victim. Four (4), or 57% of these deaths, were women; and three, or 43%, were men. The youngest victim to die from burns at home was a 12-year old girl who died in a house fire. The oldest victim to succumb to her injuries was an 85-year old man who received burns to 20% of his body surface when his clothes ignited while cooking. Four (4), or 57%, of the fatal burn victims received their injuries in house fires, two, or 29%, received their burn injuries from flame burns, and the other victim, or 14%, died from injuries sustained in a home explosion.

For more information on all residential fire deaths please refer to the annual reports of the Massachusetts Fire Incident Reporting System (MFIRS).

Burn Injury Reports by Hospital

Forty-six (46) out of the 97 acute care health care facilities in Massachusetts submitted a total of 454 burn injury reports for 418 victims to the Massachusetts Burn Injury Reporting System (M-BIRS). Some individuals were treated at more than one hospital, resulting in more burn reports than total victims. For information on the number of burn reports submitted by each hospital, please refer to the table *Number of Reported Burn Injuries Per Hospital* in the Appendix.

Law Requires Hospitals to Report Burn Injuries Over 5% of the Body
Massachusetts General Law (MGL) Chapter 112, Section 12A requires all physicians and medical treatment facilities to immediately report treatment of every burn injury extending to 5% or more of a person's body surface area to the State Fire Marshal and to the police department in the community in which the burn occurred.

Hospitals May Fax Reports or Call and Submit Written Reports
Health care facilities have a choice about how to report burn injuries. Health care providers may fax their burn injury reports to the State Fire Marshal at the Department of Fire Services, (978) 567-3199. A completed transmission will satisfy both the telephone and written notification provisions of the law. Hospitals not opting for the fax report method must report burn injuries by telephone at (800) 475-3443 and submit a written report.

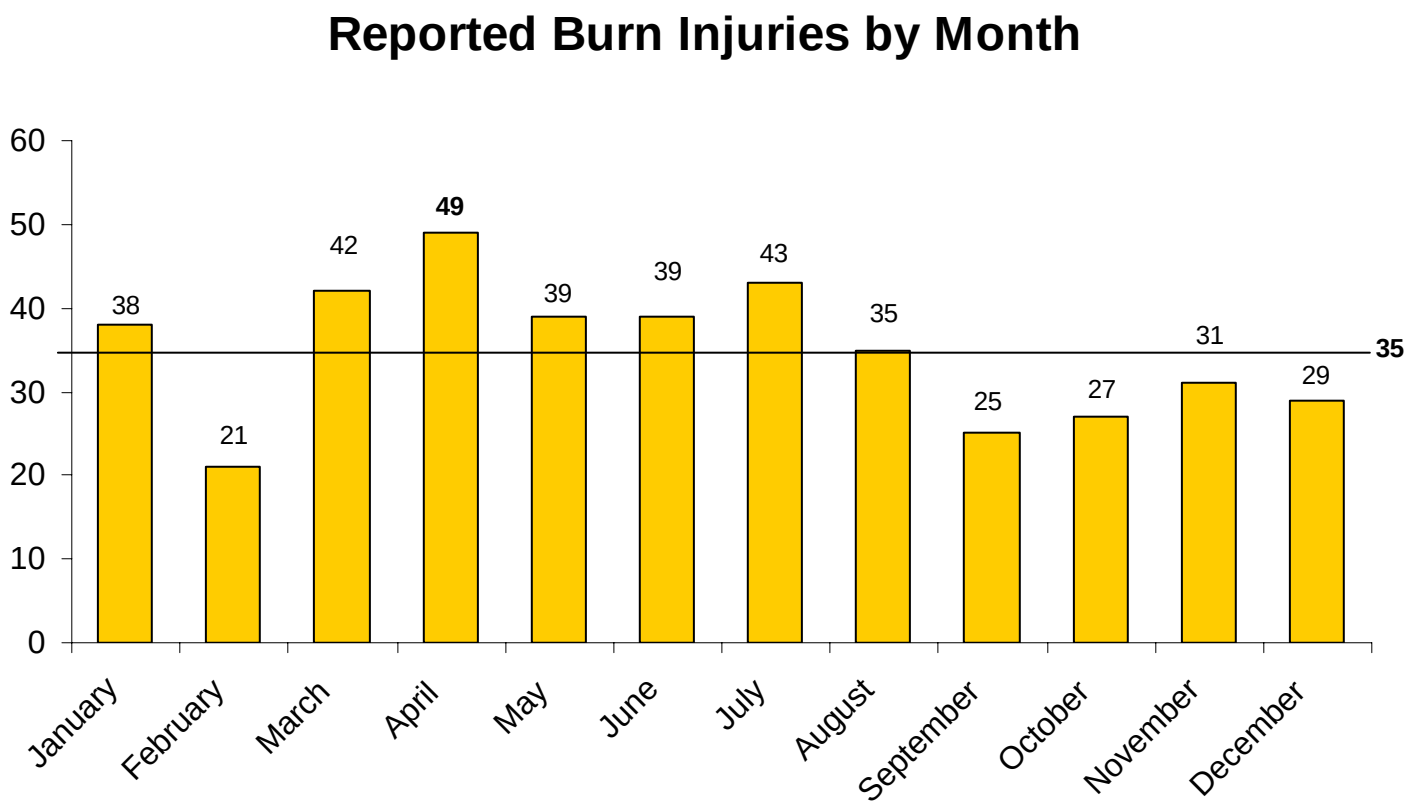
Although M-BIRS was instituted under the Department of Public Safety in June of 1984, Massachusetts hospitals have been required to report burn injuries to a government agency since 1973. M-BIRS, along with the Office of the State Fire Marshal, was carried over to the newly created Department of Fire Services in 1996. It remains a joint program of the state Department of Fire Services and the Massachusetts Department of Public Health.

M-BIRS Has Two Main Purposes — Identifying Arsonists and Burn Prevention
Data collected by the Massachusetts Burn Injury Reporting System is used in several ways. Investigators use the data to determine if an arsonist was treated for a burn that resulted from an attempt to illegally burn a building or vehicle. If these burns are not reported promptly, arsonists may continue to light fires that threaten life and property. Our data has also been used to identify problems that need to be addressed by public education or regulation and to develop appropriate strategies. We need to know what type of activity injures whom, if the injuries are seasonal, and how old the victims are, to develop and implement effective prevention programs. We appreciate the efforts of the many dedicated doctors, nurses and clerical personnel who report the burn injuries promptly and completely. They make the program work.

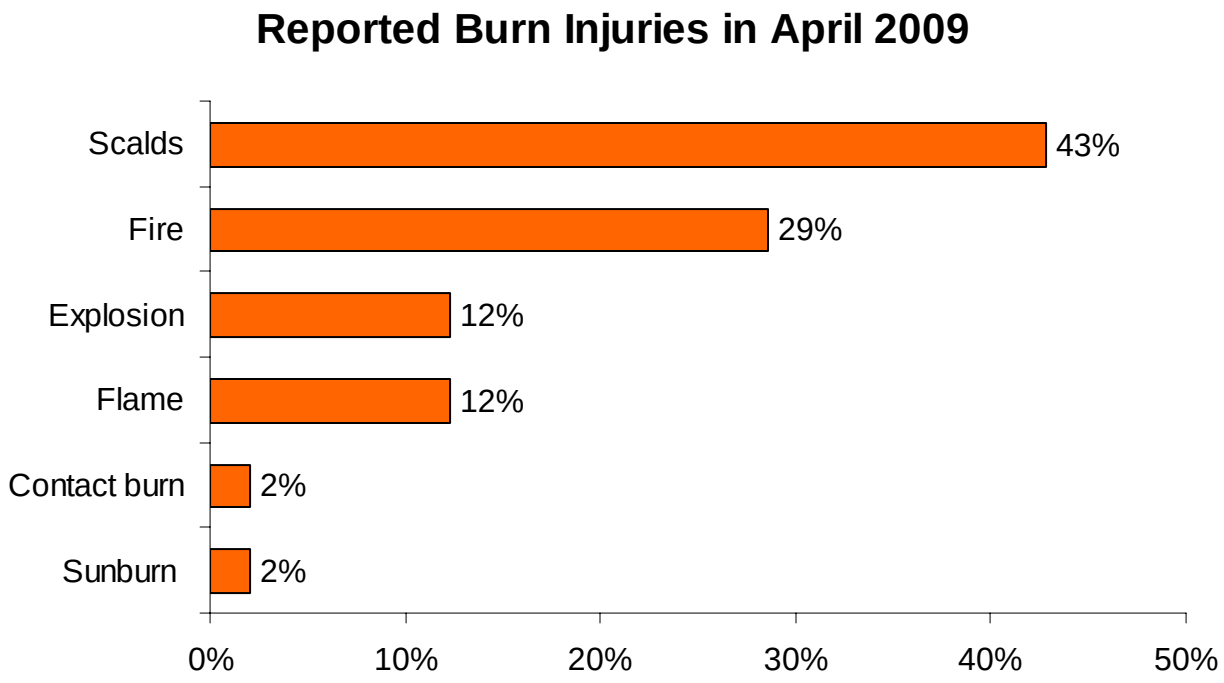
Burn Injuries by Month

Average of 35 Burns a Month
An average of 35 burns was reported during each month of 2009, from a low of 21 in February to a high of 49 in April. It is slightly above the 5-year (2005-2009) average of 33 burns per month and also above the 10-year (2000-2009) average of 33 burns per month.

Scalds caused the most burn injuries during all 12 months of the year.



April Was the Peak Month for Burns
April was the peak month for burns in 2009. Forty-nine (49) burn injuries were reported to M-BIRS during July. In April, scalds accounted for 21, or 43%, of these burns. Burns from fires accounted for 14, or 29% of July's burn injuries. Flame burn injuries and burns from explosions each caused six, or 12%, of these burns. Contact burns and a sunburn each accounted for one, or 2%, of the burn injuries in April 2009 in Massachusetts.

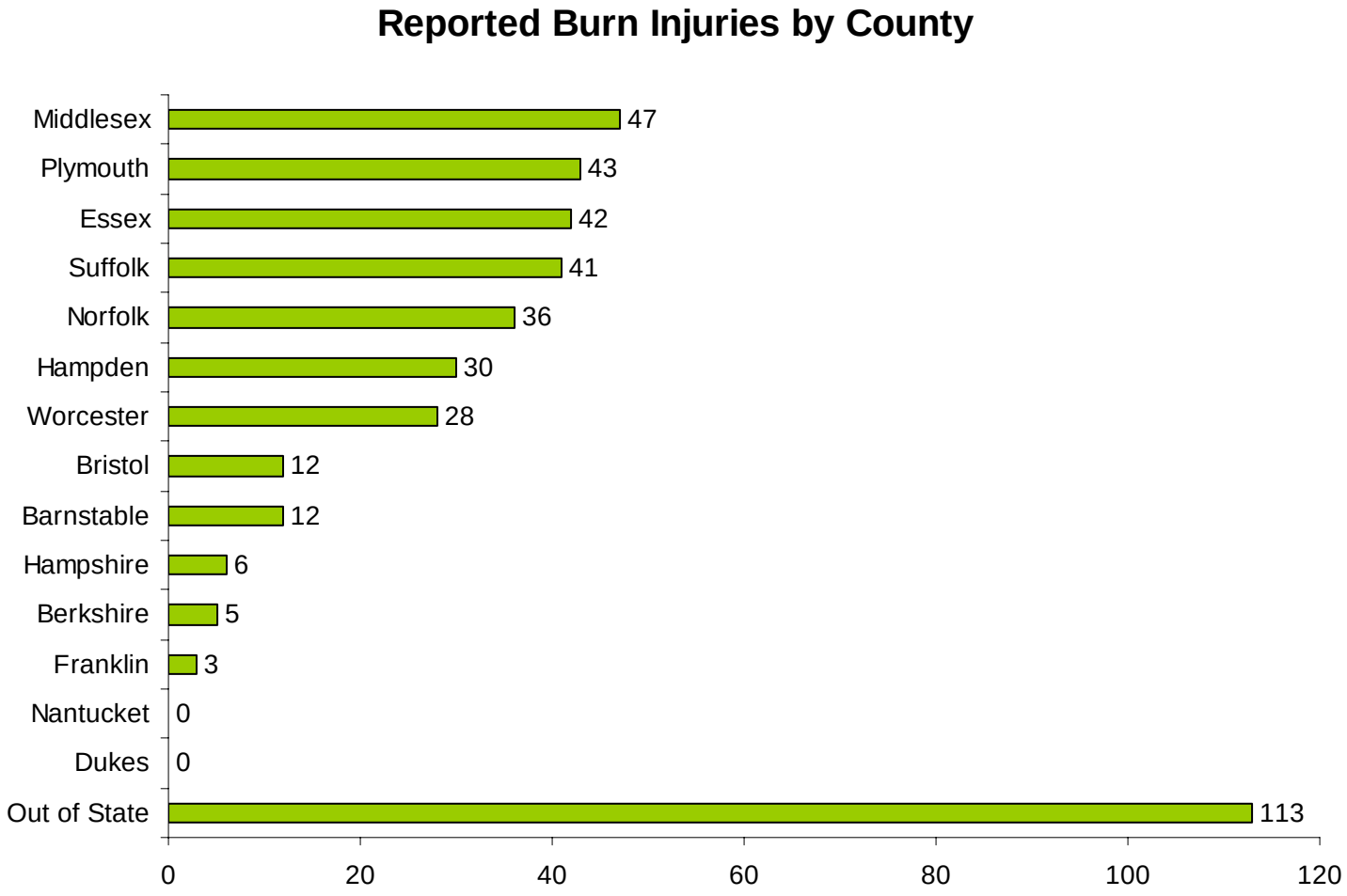


For more information, please refer to the table *Causes of Burn Injuries by Month* in the Appendix.

Geographical Demographics

Massachusetts Burn Victims from 129 Cities and Towns
Massachusetts medical facilities treated 305 residents of 129 Massachusetts cities and towns. Burn victims came from every county in the Commonwealth. The largest numbers of reported burn injuries were incurred by residents of Middlesex, Plymouth and Essex counties. It appears that some large Boston hospitals (Suffolk County) may have under reported the burns they treated.

One hundred and thirteen (113) burn victims from out-of-state received treatment at Massachusetts facilities. Some of the people were injured while vacationing here; others came to Massachusetts specifically for the specialized treatment of burn injuries that is available in the Commonwealth.



For information on the number of burn victims from each Massachusetts community, please refer to the table *Burn Injuries by Victim's Community* in the Appendix.

Boston & Springfield had the Most Reported Burn Injuries

Boston was home to the most burn injury victims with 33 of its residents reported to have a burn injury in 2009, this is down from the 50 reported in 2008. Springfield had the second largest number of victims with 19. Lawrence had 14 injury reports, Brockton and Lowell each had 10 residents receive burn injuries. Weymouth and Quincy each had eight residents burned; Lynn had seven, Worcester six, and New Bedford and Chelsea each had five reported burn injuries in 2009.

Burns Per 10,000 Population

However the map on page 65, *2009 Burns by 10K Population*, displays the number of burns reported by community per 10,000 of its residents. The darker the community is shaded the more burns per 10,000 population were reported from that municipality. Cities and towns that are white did not have a reported burn injury in 2009.

If we look at the number of burn injuries compared to the total population of the individual community we get a different picture. One would expect the bigger cities and towns to have more burn injuries because of their populations. When we calculate the rate of reported burn injuries for every 10,000 people in a given municipality, the ranking changes. The top six communities in terms of the total number of reported injuries fall towards the bottom of the rankings. Communities with one, two or three reported burns take over the top spots because of the very small populations. These communities may have a rate that far exceeds the actual number of burns that were reported. The legend symbols are consistent in both maps.

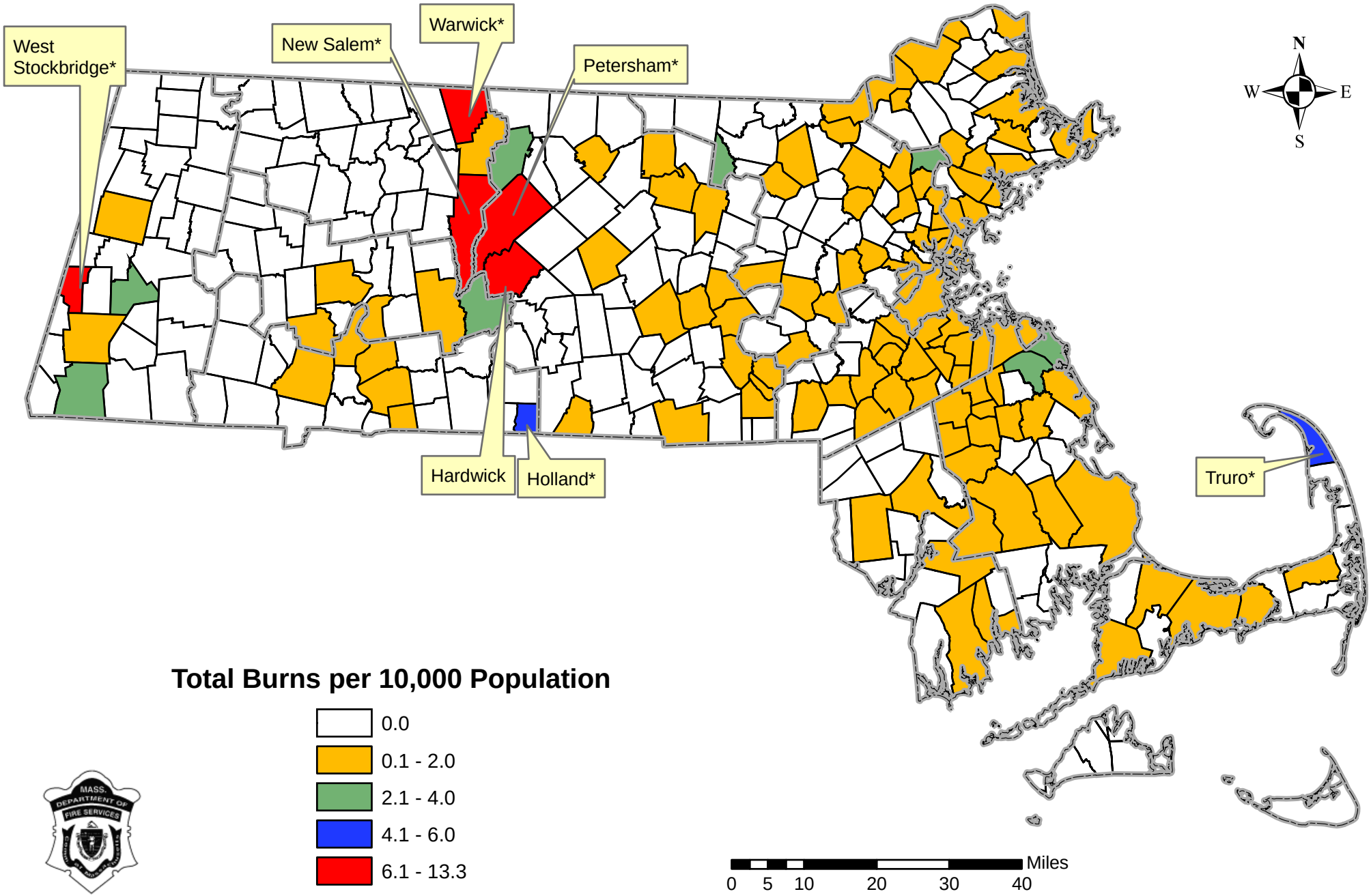
Warwick had the highest rate of 13.33 burn injuries per 10,000 population. Next highest was New Salem with 10.76 burn injuries per 10,000 population; Petersham had 8.47; Hardwick had 7.63; West Stockbridge had 7.06; and Truro had 4.79 burn injuries per 10,000 population.

Scalds Per 10,000 Population

The map on page 66, *2009 Scalds per 10K Population*, displays the rate of reported scald burn injuries by the victim's home community for every 10,000 of that community's population. The darker the community is shaded the more burn injuries per 10,000 people were reported from that municipality. Cities and towns that are white did not have a reported burn injury in 2009.

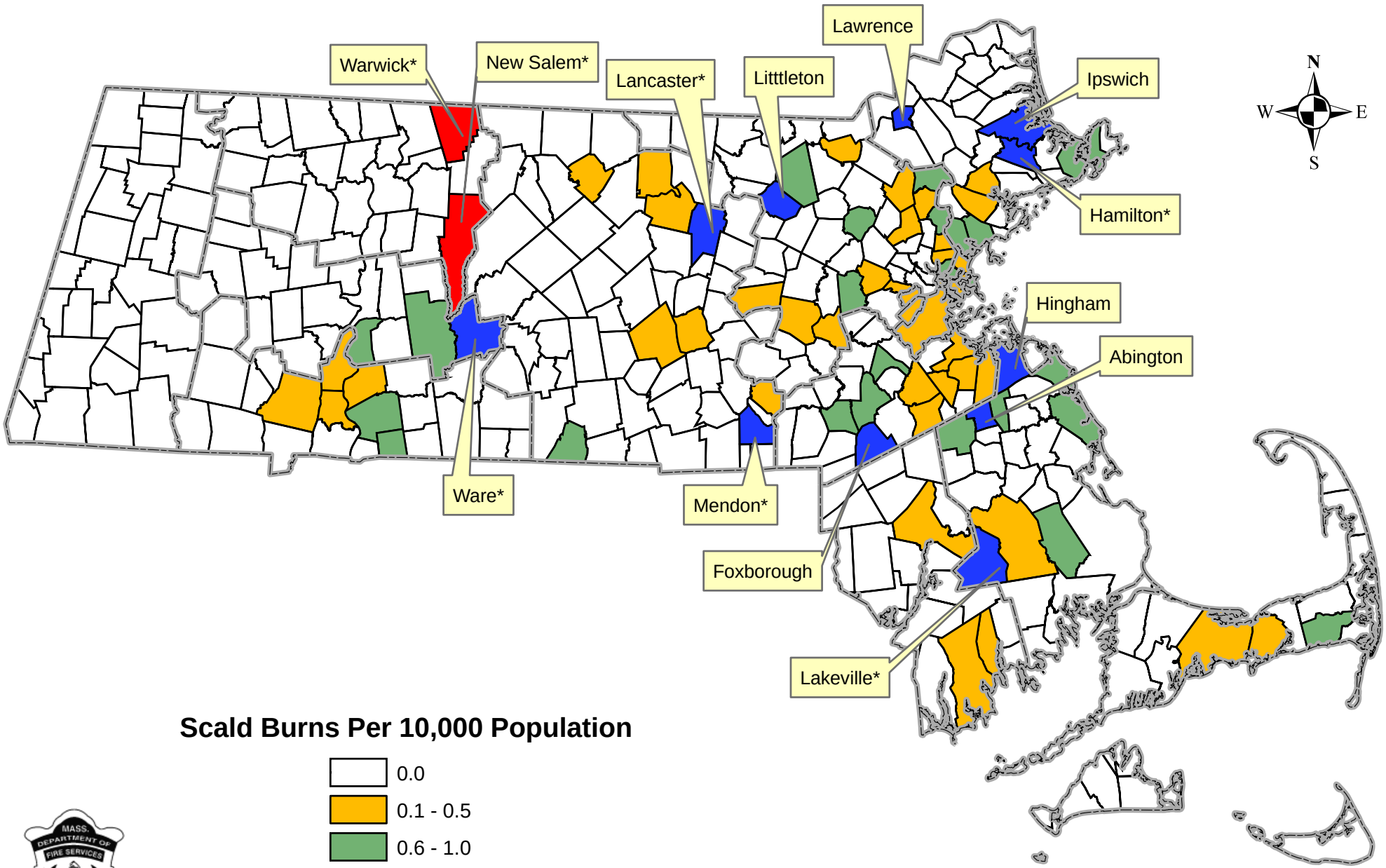
Warwick had the highest rate of 13.33 scald burn injuries per 10,000 population. Next highest was New Salem with 10.76 scald burn injuries per 10,000 population; Mendon had 1.89; Ipswich had 1.54; and Abington had 1.37 scald burn injuries per 10,000 population.

2009 Burns Per 10K Population



*Only 1 burn reported in this community

2009 Scalds Per 10K Population



* Only 1 reported scald in that community

2009 Appendix

* Italicized names are sub-categories for the headings listed above them.

Specific Causes of Burn Injuries

Cause	# of Burns	% of Burns
Scalds	**192**	**45.9%**
Cooking	87	21.1%
Cooking Liquids	*56*	*13.4%*
Food	*28*	*6.7%*
Cooking	*2*	*0.5%*
Barbeque (gas)	*1*	*0.2%*
Beverages	60	14.4%
Hot Tap Water	32	7.7%
Steam	5	1.2%
Car Radiator	2	0.5%
Heater	2	0.5%
Alcohol	1	0.2%
Assault	1	0.2%
Hot Water Bottle	1	0.2%
Unknown	1	0.2%
Fires	**79**	**18.9%**
Camp or Bon Fires	39	9.3%
Gasoline	*15*	*3.6%*
Camp Fire	*10*	*2.4%*
Bon Fire	*4*	*1.0%*
Ignitable Liquids	*4*	*1.0%*
Embers	*3*	*0.7%*
Assault	*1*	*0.2%*
Brush Fire	*1*	*0.2%*
Clothing	*1*	*0.2%*
House Fires	24	5.7%
House Fire (Unspec.)	*12*	*2.9%*
Electrical	*3*	*0.7%*
Cooking Liquids	*2*	*0.5%*
Gasoline	*2*	*0.5%*
Smoking	*2*	*0.5%*
Arson	*1*	*0.2%*
Fire Control	*1*	*0.2%*
Lightning	*1*	*0.2%*
Brush Fires	9	2.2%
Gasoline	*5*	*1.2%*
Brush Fire	*3*	*0.7%*
Clothing	*1*	*0.2%*
Motor Vehicle Fires	4	1.0%
MV Crash	*2*	*0.5%*
Boat Fire	*1*	*0.2%*
Gasoline	*1*	*0.2%*

Cause	# of Burns	% of Burns
Fire (con't)		
Structure Fires	1	0.2%
Tent Fire	*1*	*0.2%*
Fires, Unspecified	2	0.5%
Gasoline	*2*	*0.5%*
Flame Burns	**72**	**17.2%**
Cooking	20	3.3%
Cooking Liquids	*8*	*1.9%*
Cooking/Clothes	*6*	*1.4%*
Barbeque	*3*	*0.7%*
Barbeque (gas)	*1*	*0.2%*
Oven	*1*	*0.2%*
Stove	*1*	*0.2%*
Ignitable Liquids	14	3.3%
Gasoline	*9*	*2.2%*
Ignitable Liquids	*5*	*1.2%*
Child Playing	6	1.4%
Child w/Lighter	*4*	*1.0%*
Child Clothes	*1*	*0.2%*
Child w/gasoline	*1*	*0.2%*
Smoking	5	1.2%
Smoking on Oxygen	*3*	*0.7%*
Smoking/Clothes	*1*	*0.2%*
Smoking (Unspec.)	*1*	*0.2%*
Explosives	4	1.0%
Fireworks	*2*	*0.5%*
Explosivies (Unspec.)	*1*	*0.5%*
Gun Powder	*1*	*0.5%*
Alcohol	3	0.7%
Self-immolation	3	0.7%
Candle	3	0.7%
Candle	*2*	*0.5%*
Candle/Clothes	*1*	*0.2%*
Assault	2	0.5%
Machine	2	0.5%
Heating Equipment	2	0.5%
Heater (Unspec.)	*1*	*0.2%*
Woodstove	*1*	*0.2%*
Welding & Cut. Torch	2	0.5%
Cutting Torch	*1*	*0.2%*
Welding	*1*	*0.2%*

Cause	# of Burns	% of Burns
Flame Burns (con't)		
Asphalt	1	0.2%
Flammables	1	0.2%
Lighter	1	0.2%
Match	1	0.2%
Propane	1	0.2%
Explosions	**30**	**7.2%**
Ignitable Gases	13	3.1%
Propane	*7*	*1.7%*
Natural Gas	*6*	*1.4%*
Explosives	6	1.4%
Fireworks	*3*	*0.7%*
Bomb Making	*2*	*0.5%*
Explosives (Unspec.)	*1*	*0.2%*
Cooking	4	1.0%
Oven	*2*	*0.5%*
Barbeque (Gas)	*1*	*0.2%*
Cooking Liquids)	*1*	*0.2%*
Water Heater	2	0.5%
Ignitable Liquids	2	0.5%
Gasoline	*1*	*0.2%*
Ignitable Liquids	*1*	*0.2%*
Chemical	1	0.2%
Model Rocket	1	0.2%
Oxygen	1	0.2%
Contact Burns	**23**	**5.5%**
Cooking	6	1.4%
Oven	*3*	*0.7%*
Stove	*2*	*0.5%*
Barbeque	*1*	*0.2%*

Cause	# of Burns	% of Burns
Contact Burns (con't)		
Heating Equipment	6	1.4%
Heater(Unspec.)	*3*	*0.7%*
Radiator	*2*	*0.5%*
Fireplace	*1*	*0.2%*
Car Part	2	0.5%
Clothes Iron	2	0.5%
Curling Iron	2	0.5%
Assault	1	0.2%
Chemical	1	0.2%
Asphalt	1	0.2%
Hair Dryer	1	0.2%
Metal	1	0.2%
Wax	1	0.2%
Other Burn Injuries	**11**	**2.6%**
Chemical	6	1.4%
Sunburn	5	1.2%
Electrical	**7**	**1.7%**
Electrical (Unspec.)	5	1.2%
Electrocution	2	0.5%
Domestic Violence	**4**	**1.0%**
Cooking Liquids	2	0.5%
Alcohol	1	0.2%
Car Part	1	0.2%

Causes of Burn Injuries by Age

UNDER 5	120	28.7%
Cause	**# of Burns**	**% By Age**
Scalds	**99**	**82.5%**
Beverages	40	33.3%
Cooking	39	32.5%
Cooking Liquids	*22*	*18.3%*
Food	*16*	*13.3%*
Barbeque (Gas)	*1*	*0.8%*
Hot Tap Water	18	15.0%
Assault	1	0.8%
Steam	1	0.8%
Contact	**11**	**9.2%**
Heating	4	3.3%
Heater (Unspec.)	*2*	*1.7%*
Fireplace	*1*	*0.8%*
Radiator	*1*	*0.8%*
Cooking	3	2.5%
Stove	*2*	*1.7%*
Barbeque	*1*	*0.8%*
Curling Iron	2	1.7%
Clothes Iron	1	0.8%
Hair Dryer	1	0.8%
Fire	**3**	**2.5%**
House Fires	1	0.8%
House Fire (Unspec.)	*1*	*0.8%*
Camp or Bon Fires	1	0.8%
Camp Fire	*1*	*0.8%*
Motor Vehicle Fire	1	0.8%
MV Accident	*1*	*0.8%*
Flame	**2**	**1.7%**
Child/Clothes	1	0.8%
Ignitable Liquids	1	0.8%
Explosion	**4**	**3.3%**
Propane	2	1.7%
Fireworks	1	0.8%
Gasoline	1	0.8%
Domestic Violence	**1**	**0.8%**
Cooking Liquids	1	0.8%

AGES 5 TO 9	27	6.5%
Cause	**# of Burns**	**% By Age**
Scalds	**14**	**51.9%**
Beverages	6	22.2%
Cooking	6	22.2%
Cooking Liquids	*3*	*11.1%*
Food	*3*	*11.1%*
Hot Tap Water	2	7.4%
Flame	**8**	**29.6%**
Child w/Lighter	2	7.4%
Alcohol	1	3.7%
Candle/Clothes	1	3.7%
Clothing	1	3.7%
Fireworks	1	3.7%
Flammables	1	3.7%
Gasoline	1	3.7%
Explosions	**3**	**11.1%**
Explosives	2	7.4%
Bomb Making	*1*	*3.7%*
Fireworks	*1*	*3.7%*
Propane	1	3.7%
Contact	**1**	**3.7%**
Heater	1	3.7%
Fires	**1**	**3.7%**
House Fires	1	3.7%
House Fire (Unspec.)	*1*	*3.7%*

AGES 10 TO 14	**28**	**6.4%**
Cause	**# of Burns**	**% By Age**
Fire	**6**	**26.1%**
House Fires	3	13.0%
Electrical	*2*	*8.7%*
House Fire (Unspec.)	*1*	*4.3%*
Camp or Bon Fires	2	8.7%%
Ignitable Liquds	*1*	*4.3%*
Gasoline	*1*	*4.3%*
Brush Fires	1	4.3%
Gasoline	*1*	*4.3%*
Flame	**6**	**26.1%**
Child Misuse	3	13.0%
Child w/Lighter	*2*	*8.7%*
Child w/Gasoline	*1*	*4.3%*
Cooking Liquids	1	4.3%
Ignitable Liquids	1	4.3%
Woodstove	1	4.3%
Scalds	**5**	**21.7%**
Cooking Liquids	4	17.4%
Cooking Liquids	*3*	*13.0%*
Food	*1*	*4.3%*
Beverages	1	4.3%
Electrical	**2**	**8.7%**
Electrical (Unspec.)	1	4.3%
Electrocution	1	4.3%
Explosion	**2**	**8.7%**
Bomb Making	1	4.3%
Model Rocket	1	4.3%
Other	**1**	**4.3%**
Sunburn	1	4.3%

AGES 15 TO 24	**45**	**10.8%**
Cause	**# of Burns**	**% By Age**
Fire	**18**	**40.0%**
Camp or Bon Fires	12	26.7%
Camp Fire	*5*	*11.1%*
Gasoline	*3*	*6.77%*
Ignitable Liquids	*2*	*4.4%*
Assault	*1*	*2.2%*
Bon Fire	*2*	*2.2%*
Brush Fires	2	4.4%
Gasoline	*2*	*4.4%*
House Fires	1	2.2%
Gasoline	*1*	*2.2%*
Structure Fires	1	2.2%
Tent Fire	*1*	*2.2%*
Vehicle Fires	1	1.4%
MV Crash	*1*	*1.4%*
Fire, Unspecified	1	2.2%
Gasoline	*1*	*2.2%*
Scalds	**13**	**28.9%**
Cooking	7	15.6%
Cooking Liquids	*6*	*13.3%*
Food	*1*	*2.2%*
Beverages	4	8.9%
Car Radiator	1	2.2%
Hot Tap Water	1	2.2%
Flame	**7**	**15.6%**
Cooking	4	8.9%
Cooking Liquids	*2*	*4.4%*
Barbeque	*1*	*2.2%*
Cooking/Clothes	*1*	*2.2%*
Explosives	2	4.4%
Fireworks	*1*	*2.2%*
Gunpowder	*1*	*2.2%*
Gasoline	1	2.2%
Contact	**2**	**4.4%**
Car Part	1	2.2%
Chemical	1	2.2%
Explosion	**2**	**4.4%**
Ignitable Liquids	1	2.2%
Natural Gas	1	2.2%
Other	**2**	**4.4%**
Chemical	1	2.2%
Sundburn	1	2.2%
Electrical	**2**	**3.4%**
Electrical (Unspec.)	1	2.2%

AGES 25 TO 34	**51**	**12.2%**
Cause	**# of Burns**	**% By Age**
Scalds	**18**	**35.3%**
Cooking	13	25.5%
Cooking Liquids	*10*	*19.6%*
Food	*3*	*5.9%*
Hot Tap Water	3	5.9%
Beverages	1	2.0%
Steam	1	2.0%
Fire	**12**	**23.5%**
Camp or Bon Fires	8	15.7%
Gasoline	*5*	*9.8%*
Camp Fire (Unspec.)	*2*	*3.9%*
Bon Fire (Unspec.)	*1*	*2.0%*
House Fires	2	3.9%
Cooking Liquids	*1*	*2.0%*
Unspecified	*1*	*2.0%*
Brush Fires	1	2.0%
Unspecified	*1*	*2.0%*
Motor Vehicle Fires	1	2.0%
Boat Fire	*1*	*2.0%*

Cause	**# of Burns**	**% By Age**
Flame	**8**	**15.7%**
Gasoline	2	3.9%
Cooking	2	3.9%
Barbeque	*1*	*2.0%*
Oven	*1*	*2.0%*
Heater	1	2.0%
Machine	1	2.0%
Smoking/Clothes	1	2.0%
Cutting Torch	1	2.0%
Explosions	**5**	**9.8%**
Ignitable Gases	3	5.9%
Propane	*2*	*3.9%*
Natural Gas	*1*	*2.0%*
Fireworks	1	2.0%
Water Heater	1	2.0%
Other	**1**	**7.8%**
Chemical	2	3.9%
Sunburn	2	3.9%
Contact	**3**	**5.9%**
Clothes Iron	1	2.0%
Oven	1	2.0%
Wax	1	2.0%
Domestic Violence	**1**	**2.0%**
Cooking Liquids	1	2.0%

AGES 35 TO 44	**51**	**12.2%**
Cause	**# of Burns**	**% By Age**
Fire	**16**	**31.4%**
Camp or Bon Fires	9	17.6%
Gasoline	*4*	*7.8%*
Bon Fires (Unspec.)	*2*	*3.9%*
Brush Fire	*1*	*2.0%*
Camp Fire (Unspec.)	*1*	*2.0%*
Ignitable Liquids	*1*	*2.0%*
House Fires	3	5.9%
Arson	*1*	*2.0%*
Cooking Liquids	*1*	*2.0%*
Unspecified	*1*	*2.0%*
Brush Fires	2	6.5%
Clothing	*1*	*2.0%*
Gasoline	*1*	*2.0%*
Motor Vehicle Fires	1	2.0%
Gasoline	*1*	*2.0%*
Fires, Unspecified	1	2.0%
Gasoline	*1*	*2.0%*
Scalds	**16**	**31.4%**
Cooking	8	15.7%
Cooking Liquids	*6*	*11.8%*
Food	*2*	*3.9%*
Beverages	2	3.9%
Heater	2	3.9%
Hot Tap Water	2	3.9%
Hot Water Bottle	1	2.0%
Steam	1	2.0%

Cause	**# of Burns**	**% By Age**
Flame	**12**	**23.5%**
Ignitable Liquids	4	7.8%
Gasoline	*3*	*5.9%*
Ignitable Liquids	*1*	*2.0%*
Self-immolation	2	3.9%
Cooking	2	3.9%
Barbeque	*1*	*2.0%*
Barbeque (Gas)	*1*	*2.0%*
Alcohol	1	2.0%
Assault	1	2.0%
Lighter	1	2.0%
Match	1	2.0%
Contact	**1**	**2.2%**
Barbeque	1	2.2%
Explosions	**3**	**5.9%**
Ignitable Gases	2	3.9%
Natural Gas	*1*	*2.0%*
Propane	*1*	*2.0%*
Chemical	1	2.0%
Domestic Violence	**1**	**2.0%**
Car Part	1	2.0%

AGES 45 TO 54	**50**	**12.0%**
Cause	**# of Burns**	**% By Age**
Flame	**14**	**28.0 %**
Cooking Liquids	4	8.0%
Ignitable Liquids	3	6.0%
Ignitable Liquids	*2*	*4.0%*
Gasoline	*1*	*2.0%*
Alcohol	1	2.0%
Assault	1	2.0%
Candle	1	2.0%
Explosives	1	2.0%
Machine	1	2.0%
Machine	1	2.0%
Self-immolation	1	2.0%
Scalds	**13**	**26.0%**
Hot Tap Water	4	8.0%
Cooking	4	8.0%
Cooking Liquids	*3*	*6.0%*
Cooking (Unspec.)	*1*	*2.0%*
Beverages	3	6.0%
Steam	1	2.0%
Unknown	1	2.0%
Fire	**12**	**24.0%**
House Fires	7	14.0%
Unspecified	*6*	*12.0%*
Gasoline	*1*	*2.0%*
Camp or Bon Fires	5	10.0%
Embers	*2*	*4.0%*
Gasoline	*2*	*4.0%*
Camp Fire (Unspec.)	*1*	*2.0%*

Cause	**# of Burns**	**% By Age**
Other	**4**	**8.0%**
Chemical	3	6.0%
Sunburn	1	2.0%
Explosions	**3**	**6.0%**
Oven	1	2.0%
Oxygen	1	2.0%
Propane	1	2.0%
Electrical	**3**	**6.0%**
Electrical (Unspec.)	3	6.0%
Domestic Violence	**1**	**2.0%**
Alcohol	1	2.0%

AGES 55 TO 64	**26**	**6.2%**
Cause	**# of Burns**	**% By Age**
Flame	**8**	**30.8%**
Cooking	3	11.5%
Cooking/Clothes	*2*	*7.7%*
Cooking Liquids	*1*	*3.8%*
Smoking	2	7.7%
Smoking on Oxygen	*1*	*3.8%*
Smoking (Unspec.)	*1*	*3.8%*
Gasoline	1	3.8%
Propane	1	3.8%
Welding	1	3.8%
Scalds	**7**	**26.9%**
Cooking	3	11.5%
Cooking Liquids	*2*	*7.7%*
Food	*1*	*3.8%*
Alcohol	1	3.8%
Beverages	1	3.8%
Car Radiator	1	3.8%
Hot Tap Water	1	3.8%
Explosion	**5**	**19.2%**
Gas	3	11.5%
Oven	1	3.8%
Water Heater	1	3.8%
Fire	**5**	**14.3%**
House Fires	4	15.4%
Smoking	*2*	*7.7%*
Lightning	*1*	*3.8%*
Unspecified	*1*	*3.8%*
Camp or Bon Fires	1	3.8%
Camp Fire (Unspec.)	*1*	*3.8%*
Contact	**1**	**3.8%**
Oven	1	3.8%

AGES 65+	**25**	**6.0%**
Cause	**# of Burns**	**% By Age**
Flame	**7**	**28.0%**
Cooking/Clothes	3	12.0%
Smoking on Oxygen	2	8.0%
Candle	1	4.0%
Stove	1	4.0%
Scalds	**7**	**28.0 %**
Cooking	3	12.0%
Cooking (Unspec.)	*1*	*4.0%*
Cooking Liquids	*3*	*4.0%*
Food	*1*	*4.0%*
Beverages	2	8.0%
Steam	1	4.0%
Hot Tap Water	1	4.0%
Fire	**6**	**24.0%**
Brush Fires	3	12.0%
Unspecified	*2*	*8.0%*
Gasoline	*1*	*4.0%*
House Fires	2	8.0%
Electrical	*1*	*4.0%*
Fire Control	*1*	*4.0%*
Camp or Bon Fires	1	4.0%
Embers	*1*	*4.0%*
Explosion	**3**	**12.0%**
Cooking	2	8.0%
Barbeque (Gas)	*1*	*4.0%*
Cooking Liquids	*1*	*4.0%*
Explosives	1	4.0%
Contact	**2**	**8.0%**
Car Part	1	4.0%
Radiator	1	4.0%

Causes of Work-Related Burns

Cause	# of Burns	% of Total
Scalds	**21**	**47%**
Cooking	11	24%
Cooking Liquids	*9*	*20%*
Food	*2*	*4%*
Tap	3	7%
Beverages	2	4%
Heater (Unspec.)	2	4%
Steam	2	4%
Car Radiator	1	2%
Flame	**6**	**13%**
Asphalt	1	2%
Heater (Unspec.)	1	2%
Cutting Torch	1	2%
Ignitable Liquids	1	2%
Oven	1	2%
Machine	1	2%

Cause	# of Burns	% of Total
Explosions	**8**	**18%**
Ignitable Gases	3	7%
Natural Gas	*2*	*4%*
Propane	*1*	*2%*
Chemical	1	2%
Ignitable Liquids	1	2%
Oven	1	2%
Oxygen	1	2%
Water Heater	1	2%
Electrical	**4**	**9%**
Unspecified	3	7%
Electrocution	1	2%
Other	**4**	**9%**
Chemical	3	7%
Sunburn	1	2%
Contact	**2**	**4%**
Car Part	1	2%
Oven	1	2%
Total	**45**	**100%**

Number of Reported Burns Per Hospital

Addison Gilbert Hospital	3
Anna Jacques Hospital	2
Athol Memorial Hospital	7
Baystate Medical Center	21
Berkshire Medical Center	2
Boston Medical Center	2
Brockton Hospital	7
Brigham & Women's Hospital	34
Cape Cod Hospital	6
Carney Hospital	1
Charlton Memorial Hospital	2
Children's Hospital	16
Clinton Hospital	1
Emerson Hospital	3
Fairview Hospital	3
Falmouth Hospital	2
Good Samaritan Medical Center	2
Harrington Memorial Hospital	4
Henry Heywood Hospital	1
Holy Family Hospital	1
Holyoke Hospital	2
Hubbard Regional Hospital	1
Jordan Hospital	4
Lawrence General Hospital	6
Leominster Hospital	3
Lowell General Hospital	4
Marlboro Hospital	2
Massachusetts General Hospital	124
Mercy Hospital	1
Metro West Medical Center	4
Milton Whitinsville Hospital	3
Nantucket Hospital	1
North Shore Children's Hospital	1
North Shore Medical Center	1
Norwood Hospital	8
Quincy City Hospital	1
St. Luke's Hospital	6
Saints. Medical Center	1
St. Vincent's Hospital	1
Salem Hospital	1
South Shore Hospital	36
Shriners Burns Hospital	123
Tobey Hospital	3
UMass Medical Center, University	11
Winchester Hospital	7
Wing Memorial Hospital	1

Causes of Burn Injuries by Month

JANUARY	**38**	**9.1%**
Cause	**# of Burns**	**% By Month**
Scalds	**14**	**36.8%**
Beverages	5	13.2%
Cooking Liquids	4	10.5%
Hot Tap Water	4	10.5%
Boiler	1	2.6%
Flame	**9**	**23.7%**
Cooking/Clothes	3	7.9%
Asphalt	1	2.6%
Child w/lighter	1	2.6%
Cutting Torch	1	2.6%
Heater	1	2.6%
Ignitable Liquids	1	2.6%
Machine	1	2.6%
Fire	**7**	**18.4%**
House Fires	7	18.4%
House Fire (Unspec.)	*4*	*10.5%*
Smoking	*2*	*5.3%*
Gasoline	*1*	*2.6%*
Contact	**3**	**7.9%**
Heater	1	2.6%
Stove	1	2.6%
Wax	1	2.6%
Electrical	**3**	**7.9%**
Electrical (Unspec.)	2	5.3%
Electrocution	1	2.6%
Explosion	**2**	**5.3%**
Natural Gas	2	5.3%

4 Deaths

FEBRUARY	**21**	**5.0%**
Cause	**# of Burns**	**% By Month**
Scalds	**10**	**47.6%**
Cooking Liquids	6	28.6%
Beverages	3	14.3%
Hot Tap Water	1	4.8%
Flame	**6**	**28.6%**
Assault	1	4.8%
Candle	1	4.8%
Child/Clothes	1	4.8%
Cooking Liquids	1	4.8%
Fireworks	1	4.8%
Smoking	1	4.8%
Fire	**2**	**9.5%**
House Fires	2	9.5 %
Electrical	*1*	*4.8%*
House Fire (Unspec.)	*1*	*4.8%*
Contact	**1**	**4.8%**
Metal	1	4.8%
Electrical	**1**	**4.8%**
Electrical (Unspec.)	1	4.8%
Explosion	**1**	**4.8%**
Barbeque (Gas)	1	4.8%

1 Death

MARCH	**42**	**10.0%**
Cause	**# of Burns**	**% By Month**
Scalds	**19**	**45.2%**
Cooking	9	21.4%
Food	*5*	*11.9%*
Cooking Liquids	*4*	*9.5%*
Beverages	5	11.9%
Hot Tap Water	3	7.1%
Hot Water Bottle	1	2.4%
Unknown	1	2.4%
Fire	**10**	**23.8%**
Camp or Bon Fires	7	16.7%
Gasoline	*3*	*7.1%*
Assault	*1*	*2.4%*
Brush Fire	*1*	*2.4%*
Camp Fire	*1*	*2.4%*
Clothing Ignition	*1*	*2.4%*
House Fires	3	7.1%
Fire Control	*1*	*2.4%*
House Fire (Unspec.)	*1*	*2.4%*
Lightning	*1*	*2.4%*
Contact	**6**	**14.3%**
Radiator	2	4.8%
Clothes Iron	1	2.4%
Hair Dryer	1	2.4%
Iron	1	2.4%
Oven	1	2.4%
Flame	**4**	**9.5%**
Ignitable Liquids	2	4.8%
Gasoline	*1*	*2.4%*
Ignitable Liquids	*1*	*2.4%*
Cooking/Clothes	1	2.4%
Match	1	2.4%
Explosion	**2**	**4.8%**
Model Rocket	1	2.4%
Oxygen	1	2.4%
Other	**1**	**2.4%**
Sunburn	1	2.4%
1 Death		

APRIL	**49**	**11.7%**
Cause	**# of Burns**	**% By Month**
Scalds	**21**	**42.9%**
Cooking	13	26.5%
Cooking Liquids	*8*	*16.3%*
Food	*5*	*10.2%*
Beverages	4	8.2%
Hot Tap Water	3	6.1%
Steam	1	2.0%
Fire	**14**	**28.6%**
Brush Fires	7	14.3%
Brush Fires (Unspec.)	*3*	*6.1%*
Gasoline	*3*	*6.1%*
Clothing Ignition	*1*	*2.0%*
Camp or Bon Fires	3	6.1%
Bon Fire	*1*	*3.0%*
Camp Fire	*1*	*2.0%*
Ignitable Liquids	*1*	*2.0%*
MV Fires	2	4.1%
MV Accident	*2*	*4.1%*
House Fires	1	2.0%
House Fire (Unspec.)	*1*	*2.0%*
Structure Fires	1	2.0%
Tent Fire	*1*	*2.0%*
Flame	**6**	**12.2%**
Cooking	2	4.1%
Cooking/Clothes	*1*	*2.0%*
Cooking Liquids	*1*	*2.0%*
Assault	1	2.0%
Child w/Lighter	1	2.0%
Ignitable Liquids	1	2.0%
Smoking/Clothes	1	2.0%
Explosion	**6**	**12.2%**
Ignitable Gases	5	10.2%
Propane	*3*	*6.1%*
Natural Gas	*2*	*4.1%*
Cooking Liquids	1	2.0%
Contact	**1**	**2.0%**
Heater (Unspec.)	1	2.0%
Other	**1**	**2.0%**
Sunburn	1	2.0%
1 Death		

MAY	**39**	**9.3%**
Cause	**# of Burns**	**% By Month**
Scalds	**14**	**35.9%**
Cooking	6	15.4%
Cooking Liquids	*4*	*10.3%*
Food	*2*	*5.1%*
Beverages	4	10.3%
Hot Tap Water	4	10.3%
Flame	**12**	**30.8%**
Smoking/Oxygen	2	5.1%
Candles	2	5.1%
Candle	*1*	*2.6%*
Candle/Clothes	*1*	*2.6%*
Cooking	2	5.1%
Cooking/Clothes	*1*	*2.6%*
Cooking Liquids	*1*	*2.6%*
Explosives	2	5.1%
Explosives (Unspec.)	*1*	*2.6%*
Gunpowder	*1*	*2.6%*
Flammables	1	2.6%
Gasoline	1	2.6%
Lighter	1	2.6%
Fire	**6**	**15.4%**
Camp or Bon Fires	5	12.8%
Embers	*2*	*5.1%*
Bon Fire	*1*	*2.6%*
Ignitable Liquids	*1*	*2.6%*
Gasoline	*1*	*2.6%*
Fire, Other	1	2.6%
Gasoline	*1*	*2.6%*
Explosion	**3**	**7.7%**
Ignitable Gases	2	5.1%
Natural Gas	*1*	*2.6%*
Propane	*1*	*2.6%*
Explosives (Unspec.)	1	2.6%
Contact	**2**	**5.1%**
Assault	1	2.6%
Heater (Unspec.)	1	2.6%
Electrical	**1**	**2.6%**
Electrical (Unspec.)	1	2.6%
Other	**1**	**2.6%**
Chemical	1	2.6%

JUNE	**39**	**9.3%**
Cause	**# of Burns**	**% By Month**
Scalds	**22**	**56.4%**
Cooking	10	25.6%
Cooking Liquids	*5*	*12.8%*
Food	*5*	*12.8%*
Beverages	4	10.3%
Hot Tap Water	4	10.3%
Assault	1	2.6%
Car Radiator	1	2.6%
Heater (Unspec.)	1	2.6%
Steam	1	2.6%
Fire	**8**	**20.5%**
Camp or Bon Fires	5	12.8%
Gasoline	*3*	*7.7%*
Camp Fire	*1*	*2.6%*
Ignitable Liquids	*1*	*2.6%*
House Fires	2	5.1%
Electrical	*2*	*5.1%*
MV Fires	1	2.6%
Gasoline	*1*	*2.6%*
Flame	**5**	**12.8%**
Cooking	2	5.1%
Barbeque	*1*	*2.6%*
Cooking Liquids	*1*	*2.6%*
Child w/Lighter	2	6.1%
Gasoline	1	2.6%
Welding	1	2.6%
Contact	**2**	**5.1%**
Car Part	1	2.6%
Oven	1	2.6%
Explosion	**1**	**2.6%**
Propane	1	2.6%
Other	**1**	**2.6%**
Chemical	1	2.6%

JULY	**43**	**10.3%**
Cause	**# of Burns**	**% By Month**
Scalds	**12**	**27.9%**
Beverages	6	14.0%
Cooking Liquids	5	11.6%
Car Radiator	1	2.3%
Fire	**10**	**23.3%**
Camp or Bon Fires	5	11.6%
Camp Fire (Unspec,)	*2*	*4.7%*
Gasoline	*1*	*2.3%*
Ignitable Liquids	*1*	*2.3%*
Brush Fires	2	4.7%
Gasoline	*2*	*4.7%*
House Fires	2	4.7%
Gasoline	*1*	*2.3%*
House Fire (Unspec.)	*1*	*2.3%*
Fire, Other	1	2.3%
Gasoline	*1*	*2.3%*
Flame	**8**	**18.6%**
Barbeque	2	4.7%
Ignitable Liquids	2	4.7%
Child w/Gasoline	*1*	*2.3%*
Ignitable Liquids	*1*	*2.3%*
Clothing Ignition	1	2.3%
Fireworks	1	2.3%
Propane	1	2.3%
Stove	1	2.3%
Domestic Violence	**4**	**9.3%**
Cooking Liquids	2	4.7%
Alcohol	1	2.3%
Car Part	1	2.3%
Explosion	**4**	**9.3%**
Chemical	1	2.3%
Fireworks	1	2.3%
Ignitable Liquids	1	2.3%
Propane	1	2.3%
Other	**4**	**5.2%**
Chemical	2	4.7%
Sunburn	2	4.7%
Contact	**1**	**2.3%**
Barbeque	1	2.3%

AUGUST	**35**	**8.4%**
Cause	**# of Burns**	**% By Month**
Scalds	**16**	**45.7%**
Cooking	6	17.1%
Cooking Liquids	*4*	*11.4%*
Food	*2*	*5.7%*
Beverages	5	14.3**%**
Hot Tap Water	4	11.4%
Alcohol	1	2.9%
Fire	**9**	**25.7%**
Camp or Bonfires	7	20.0%
Gasoline	*5*	*14.3%*
Camp Fire (Unspec.)	*1*	*2.9%*
Bon Fire (Unspec.)	*1*	*2.9%*
House Fires	1	2.9%
House Fire (Unspec.)	*1*	*2.9%*
MV Fires	1	2.9%
Boat Fire	*1*	*2.9%*
Flame	**6**	**17.1%**
Cooking	3	8.6%
Barbeque (Gas)	*1*	*2.9%*
Cooking Liquids	*1*	*2.9%*
Oven	*1*	*2.9%*
Alcohol	1	2.9%
Gasoline	1	2.9%
Self-immolation	1	2.9%
Contact	**2**	**5.7%**
Car Part	1	2.9%
Clothes Iron	1	2.9%
Explosion	**2**	**5.7%**
Gasoline	1	2.9%
Water Heater	1	2.9%

SEPTEMBER	**25**	**6.0%**
Cause	**# of Burns**	**% By Month**
Scalds	**11**	**44.0%**
Cooking	7	28.0%
Food	*4*	*16.0%*
Cooking Liquids	*3*	*12.0%*
Beverages	2	8.0%
Steam	1	8.0%
Hot Tap Water	1	4.0%
Fire	**6**	**24.0%**
Camp or Bon Fires	5	20.0%
Camp Fires (Unspec.)	*2*	*8.0%*
Gasoline	*2*	*8.0%*
Bon Fire (Unspec.)	*1*	*4.0%*
House Fires	1	4.0%
Cooking Liquids	*1*	*4.0%*
Flame	**4**	**16.0%**
Ignitable Liquids	3	12.0%
Gasoline	*2*	*8.0%*
Ignitable Liquids	*1*	*4.0%*
Machine	1	4.0%
Explosion	**2**	**8.0%**
Fireworks	2	8.0%
Contact	**1**	**4.0%**
Fireplace	1	4.0%
Other	**1**	**4.0%**
Chemical	1	4.0%

OCTOBER	**27**	**6.5%**
Cause	**# of Burns**	**% By Month**
Scalds	**16**	**59.3%**
Cooking	9	33.3%
Cooking Liquids	*4*	*14.8%*
Food	*4*	*14.8%*
Cooking (Unsped.)	*1*	*3.7%*
Beverages	6	22.2%
Heater	1	3.7%
Flame	**7**	**25.9%**
Alcohol	2	7.4%
Gasoline	2	7.4%
Self-immolation	1	7.4%
Cooking Liquids	1	3.7%
Contact	**2**	**7.4%**
Clothes Iron	1	3.7%
Oven	1	3.7%
Electrical	**1**	**3.7%**
Electrical (Unspec.)	1	3.7%
Explosion	**1**	**3.7%**
Propane	1	3.7%

NOVEMBER	**31**	**7.4%**
Cause	**# of Burns**	**% By Month**
Scalds	**18**	**58.1%**
Beverages	8	25.8%
Cooking	7	22.6%
Cooking Liquids	*5*	*16.1%*
Barbeque (Gas)	*1*	*3.2%*
Cooking (Unspec.)	*1*	*3.2%*
Hot Tap Water	3	9.7%
Fire	**4**	**12.9%**
House Fires	2	6.5%
Arson	*2*	*3.2%*
House Fire (Unspec.)	*1*	*3.2%*
Camp or Bon Fires	2	6.5%
Camp Fires (Unspec.)	*2*	*6.5%*
Flame	**3**	**9.7%**
Cooking Liquids	1	3.2%
Gasoline	1	3.2%
Woodstove	1	3.2%
Contact	**2**	**6.5%**
Chemical	1	3.2%
Stove	1	3.2%
Explosion	**2**	**6.5%**
Natural Gas	1	3.2%
Oven	1	3.2%
Electrical	**1**	**3.2%**
Electrocution	1	3.2%
Other	**1**	**3.2%**
Chemical	1	3.2%

DECEMBER	**29**	**6.9%**
Cause	**# of Burns**	**% By Month**
Scalds	**19**	**65.5%**
Beverages	8	27.6%
Hot Tap Water	5	17.2%
Cooking	5	17.2%
Cooking Liquids	*4*	*13.8%*
Food	*1*	*3.4%*
Steam	1	3.4%
Explosion	**4**	**13.8%**
Bomb Making	2	6.9%
Oven	1	3.4%
Water Heater	1	3.4%
Fire	**3**	**10.3%**
House Fires	3	10.%
House Fire (Unspec.)	*2*	*6.9%*
Cooking Liquids	*1*	*3.4%*
Flame	**2**	**6.9%**
Cooking Liquids	1	3.4%
Smoking on Oxygen	1	3.4%
Other	**1**	**3.4%**
Sunburn	1	3.4%

Burn Injuries by Victim's Community

County	# of Burns
Barnstable	**12**
Barnstable	3
Brewster	1
Falmouth	1
Harwich	2
Sandwich	2
Truro	1
Yarmouth	3
Berkshire	**5**
Great Barrington	1
Lee	2
Pittsfield	1
Sheffield	1
Bristol	**12**
Dartmouth	2
Fairhaven	1
Freetown	1
New Bedford	5
Rehoboth	1
Taunton	2
Dukes	**0**
Essex	**42**
Beverly	1
Danvers	2
Gloucester	3
Hamilton	1
Haverhill	2
Ipswich	2
Lawrence	14
Lynn	7
Merrimac	1
Methuen	1
Middleton	1
Newbury	1
Peabody	2
Salem	1
Salisbury	1
Saugus	2

County	# of Burns
Franklin	**3**
New Salem	1
Orange	1
Warwick	1
Hampden	**30**
Chicopee	2
East Longmeadow	1
Holland	1
Holyoke	3
Springfield	19
West Springfield	1
Westfield	3
Hampshire	**6**
Belchertown	1
Northampton	1
South Hadley	1
Southampton	1
Ware	2
Middlesex	**47**
Bedford	1
Billerica	1
Cambridge	1
Dracut	1
Everett	3
Framingham	3
Holliston	1
Littleton	1
Lowell	10
Malden	1
Marlborough	1
Medford	1
Natick	2
North Reading	3
Reading	1
Shirley	2
Wakefield	1
Waltham	2
Watertown	2
Westford	3
Weston	1

County	# of Burns
Middlesex (con't)	
Wilmington	2
Woburn	1
Nantucket	**0**
Norfolk	**36**
Braintree	1
Brookline	1
Canton	1
Cohasset	1
Dedham	1
Foxborough	2
Franklin	1
Holbrook	1
Milton	1
Norfolk	2
Norwood	1
Quincy	8
Randolph	1
Sharon	1
Stoughton	2
Walpole	2
Westwood	1
Weymouth	8
Plymouth	**43**
Abington	2
Bridgewater	2
Brockton	10
Carver	1
East Bridgewater	1
Hanson	1
Hingham	2
Hull	1
Lakeville	1
Marshfield	3
Middleborough	1
Norwell	2
Pembroke	2
Plymouth	4
Rockland	3
Scituate	4
West Bridgewater	1
Whitman	2

County	# of Burns
Suffolk	**41**
Boston	33
Chelsea	5
Revere	2
Winthrop	1
Worcester	**28**
Athol	3
Douglas	1
Fitchburg	3
Gardner	1
Hopedale	1
Lancaster	1
Leominster	1
Mendon	1
Milford	1
Northborough	1
Petersham	1
Rutland	1
Shrewsbury	1
Southbridge	3
Upton	1
Westbrough	1
Worcester	6
Out of State	**113**

FP-84F
(Rev. 04-2010)

The Commonwealth of Massachusetts
Department of Fire Services
Division of Fire Safety

Post Office Box 1025 – Stow, Massachusetts 01775

TO: Massachusetts Burn Injury Reporting System

FROM: _____

Name of Hospital and Attending Physician

RE: Burn Injury Extending to 5% or More of Body Surface Area

To fax burn injury reports, dial (978) 567-3199.

When you fax the burn report, you satisfy both the telephone and written reporting notification requirements for the State Fire Marshal. You still need to notify the police chief in the community where the burn occurred.

-OR-

Call 1-800-475-3443 anytime to report burns over the phone AND mail this sheet to the above address.

Victim's Name _____
Last *First* *M.*

Victim's Home Address _____
Street Address (No PO Boxes) **City / Town** **State** **Zip**

Victim's Age _____ Gender _____ Local Police Department Notified? ❑ Yes ❑ No

Was the Victim at Work When Burned? ❑ Yes ❑ No

Date of Burn _____ If Yes: Employer _____

Address Where Burn Occurred _____
Street Address (No PO Boxes) **City / Town** **State** **Zip**

Part of Body Injured or %BSA: _____

Cause of Burn (e.g. spilled coffee, tap water, clothing ignited while cooking): _____

_____

Type of Burn: *(check one)*

☐ Flame ☐ Scald ☐ Domestic Violence

☐ Fire ☐ Electrical ☐ Other
☐ Sunburn
☐ Chemical

☐ Explosion ☐ Contact

Severity: *(check one)*

☐ Minor ☐ Life-threatening

☐ Moderate ☐ Dead

☐ Severe

If you have any questions about the Massachusetts Burn Injury Reporting System, call the Fire Data and Public Education Unit at (978) 567-3380 or leave a message at 1-800-475-3443.

NEW
Burn Hotline
1-800-475-3443

FAX Reporting Number
1-978-567-3199

Massachusetts General Law Chapter 112, Section 12A, Amended by the Acts of 1986 and 1996 (Excerpted)

"Every physician ... examining or treating a person with a burn injury affecting five per cent or more of the surface area of his body, or, whenever any such case is treated in a hospital, sanitarium or other institution, the manager, superintendent or other person in charge thereof, shall report such case... at once to the state fire marhsal and to the police in the community where the burn occurred...Whoever violates any provision of this section shall be punished by a fine of not less than fifty nor more than one hundred dollars."