

Massachusetts Burn Injury Reporting System

2010 Annual Report



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Massachusetts Burn Injury Reporting System

2010 Annual Report

25 YEARS

Helping Prevent Burn Injuries

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Table of Contents

Executive Summary	1
Causes Of Burn Injuries.....	3
Type Of Incidents Causing Burn Injuries	4
Burn Injuries Caused By Scalds.....	5
Hot Beverages.....	7
Hot Cooking Liquids	7
Hot Tap Water	10
Hot Food	12
Burn Injuries Caused By Fires	13
Flame Burn Injuries	13
Clothing Ignitions.....	15
Burn Injuries Caused By Explosions	21
Contact Burn Injuries.....	24
Electrical Burn Injuries.....	26
<i>Other</i> Types Of Burn Injuries.....	27
Gasoline Related Burn Injuries	29
Burns Caused By Cooking Activities	31
Burn Injuries By Age Group	36
Causes Of Burn Injuries By Age And Gender	37
Children Under 5	39
Children Ages 5 To 9	40
Children Ages 10 To 14	41
Ages 15 To 24.....	42
Ages 25 To 34.....	44
Ages 35 To 44.....	45
Ages 45 To 54.....	47
Ages 55 To 64.....	48
Over 65 – Older Adults.....	49
Work-Related Burn Injuries.....	51

Burn Injuries in the Home	56
Burn Injury Reports by Hospital	60
Burn Injuries by Month	61
Geographical Demographics.....	63

Maps

2010 Burns Per 10K Population.....	66
2010 Scald Burns Per 10K Population.....	67

Appendices.....

Specific Causes of Burn Injuries.....	70
Causes of Burn Injuries By Age.....	72
Causes of Work-Related Burns.....	78
Number of Reported Burns Per Hospital.....	79
Causes of Burns by Month.....	80
Burn Injuries by Victim’s Communities.....	87
M-BIRS Reporting Form – FP-84F (Revised 4/10).....	89

Executive Summary

In 2010, the twenty-fifth full year of the Massachusetts Burn Injury Reporting System (M-BIRS), 54 acute care hospitals and other health care facilities reported 525 victims of burns. Forty-nine (49) of these 525 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 led 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. Fifteen (15) burn injuries were referred to OSHA in 2010 for cases that met the criteria.

Scalds Caused 41% of Reported Burn Injuries

Scalds have been the leading cause of burn injuries for the past 23 years. In 2010, scalds caused 195, or 41%, 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 2010, young children were the most frequent victims of scald burns. Fifty-three percent (53%) of the 195 scald victims were under five years old, and most were less than one year old. Children under five years of age were 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. The Department of Fire Services is developing a public awareness campaign focused on cooking fire safety as it is the leading cause of home fires and injuries.

Flame Burns Cause the 2nd Most Burns

Flame burn injuries were the second highest cause of burn injuries in 2010 accounting for 19% of the burn injuries. Clothing ignitions caused 24% of flame burn injuries. Burn injuries from fires caused 17% of the 2010 burn injuries. Camp and bon fires caused 42% of burn the injuries from fires in 2010.

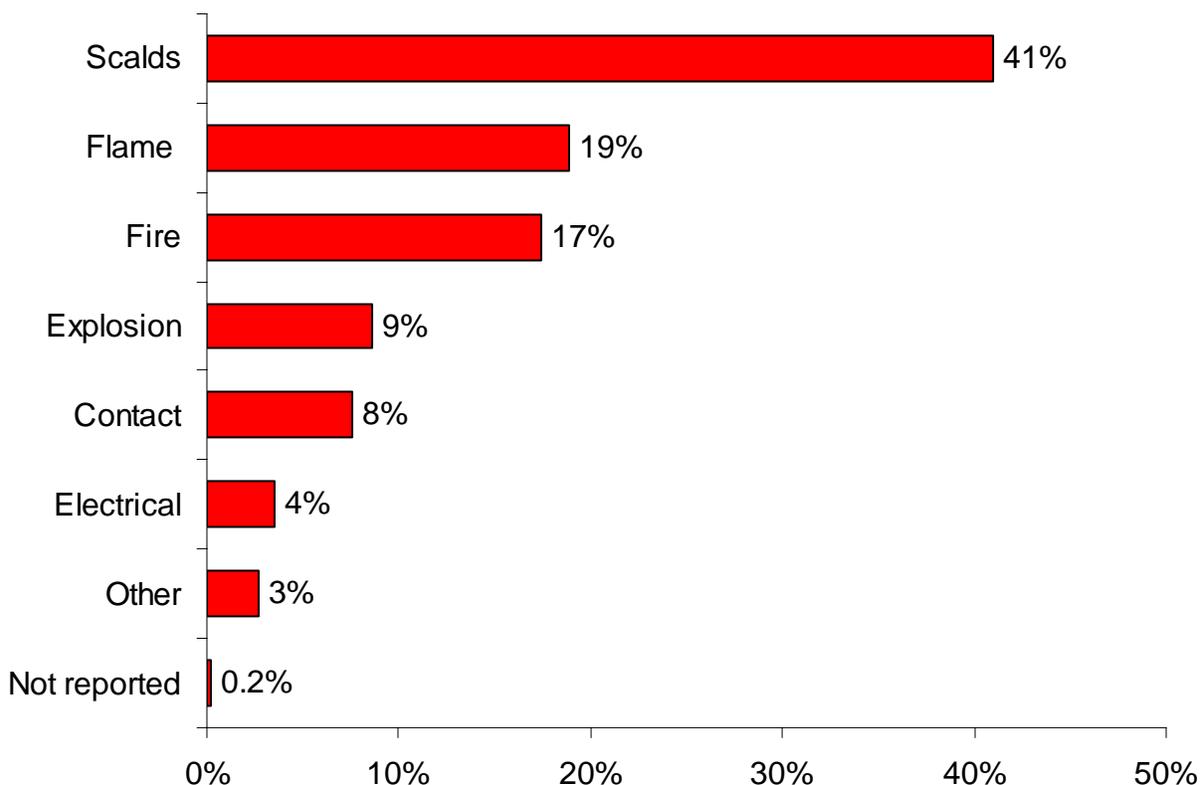
2/3 of Burns Occurred in the Victim's Home

Of the 476 burn injuries reported to M-BIRS in 2010, 319, or 67%, occurred in the victim's home or surrounding yard. Half (50%) of these burn injuries were scalds. Three (3), or 1%, 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 flame³, 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.

Categories of Burn Injuries



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 41% of the 476 burn injuries reported in 2010. Flames from burning clothing, bedding or similar objects caused 19% of the burns. Seventeen percent (17%) were caused by fires. Explosions and flasburns⁴ caused 9% of these burns; 8% were caused by contact with hot objects while electrical incidents such as electrocutions caused 4% of the burns. Three percent (3%) of the reported burns in 2010 had other causes, such as chemical burns or sunburns; and less than 1% of the burns did not have a known cause listed.

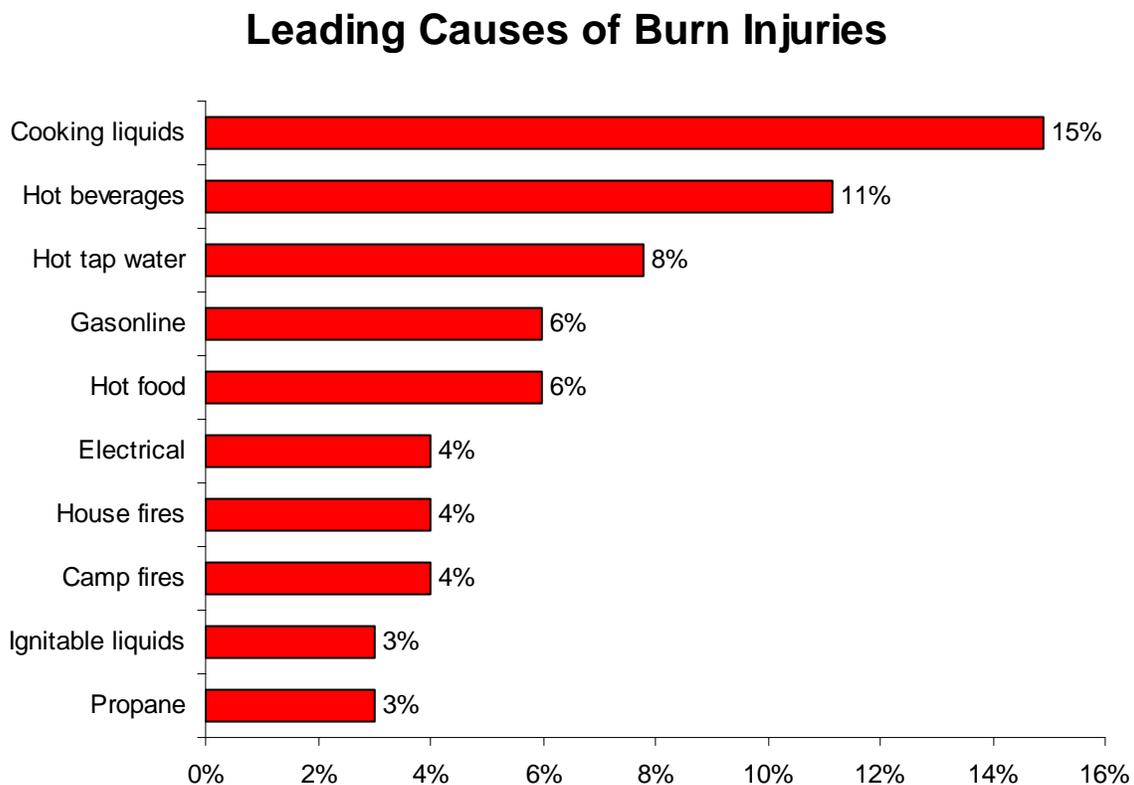
³ A burn is said to result from a flame when the fire is confined to the victim or the victim's clothing. When a wider area burns, the injury is considered to result from fire.

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. Fifteen percent (15%) of the 476 burn injuries reported in 2010 were scalds from cooking liquids. Eleven percent (11%) of the burns were caused by hot beverages. Hot tap water caused 8% of total burns. Hot food and gasoline use by adults were each also involved in 6% of the burn injuries in 2010. Electrical burns, house fires and camp fires each caused 4%. Ignitable liquids other than gasoline, and propane each caused 3% of the total burn injuries in Massachusetts in 2010. For more information, please refer to the table *Specific Causes of Burn Injuries* in the Appendix.



Burn Injuries Caused by Scalds

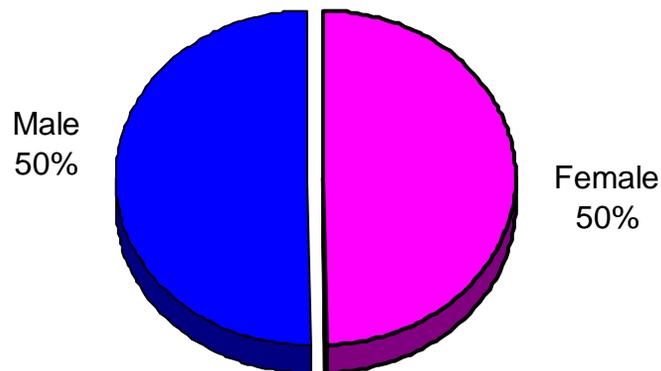
Scalds Have Been the Leading Cause of Burn Injuries Every Year

Scalds have been the leading cause of burn injuries every year since the inception of M-BIRS. The percentage of total burns has declined from a high of 46% in 2009 to a low of 35% in 2005. The 10-year average from 2001 through 2010 is 39%⁵ of total annual reported burns.

Scalds Caused 41% of All Burns

One hundred ninety-five (195), or 41%, of the 476 reported burns were hot scalds. Twelve (12), or 6%, of the 195 scalds occurred while the victim was working. Ninety-eight (98), or 50%, of the 195 scald victims were male and 97, or 50%, were female.

Scald Burns by Gender



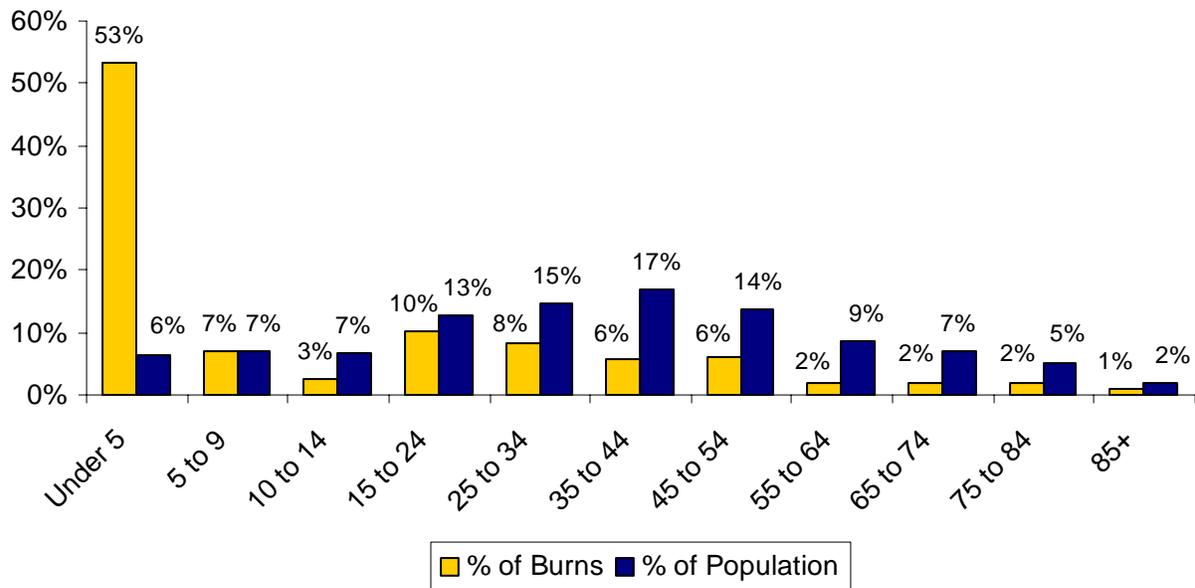
Children Under 5 Years Old Were Most at Risk for Scald Burns

Young children were the most frequent victims of scald burns. According to the 2000 U.S. Census⁶, children under the age of five comprised 6% of the Massachusetts population. However that same age group accounted for over half, 53% of all scald burns in 2010. Sixty-eight (68), or 35%, 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.

⁶ At the time of writing this report, the 2010 U.S. Census population figures for MA by Age Groups was not available so 2000 figures were used throughout the report.

Scalds by Age Group



Pre-schoolers 8 1/2 Times More Likely to Suffer Scald Burns

Many adults also suffered burns from scalds. Ten percent (10%) of scald burn victims were between 15 and 24 years old; 8% were between 25 and 34; 6% were between 35 and 44 years of age; another 6% were between 45 and 54; 2% were between 55 and 64; another 2% were between 65 and 74; 2% were between 75 and 84; and 1% were over the age of 84. A one-month old girl was the youngest scald burn victim, while the oldest victim was a 92-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 eight and a half times more likely to suffer a scald burn.

Cooking Liquids Caused Almost 1/3 of All Scald Burns

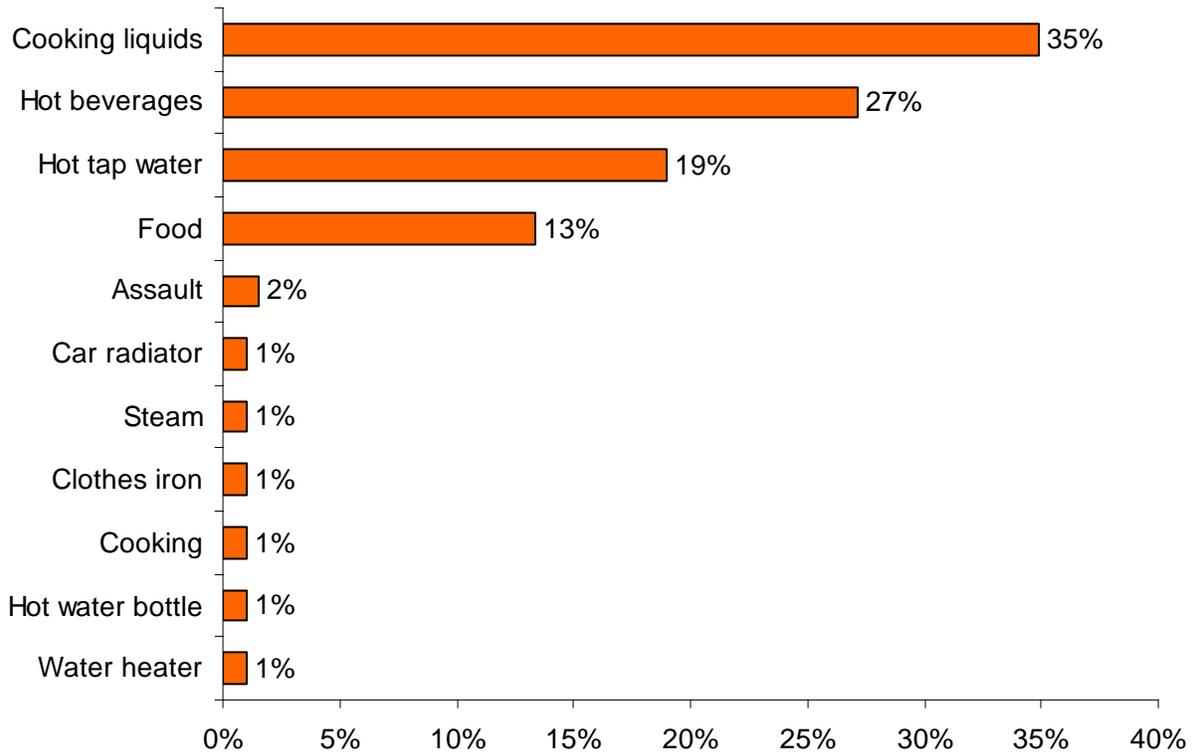
Cooking liquids were the leading cause of scald burns, accounting for 35% of all scald burns in 2010. Scald burns from hot beverages were the second leading cause of scald burns, causing 27%, of the 195 scald burns. Nineteen percent (19%) were caused by hot tap water. Thirteen percent (13%) were caused by hot foods. Two percent (2%) were caused by assaults. Car radiators, steam, clothes irons, unspecified cooking acts, hot water bottles and a water heater each caused 1% of these scald burn injuries in 2010.

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 2008⁷.¹ Recently cooking liquids and hot beverages have been jockeying back and forth as the leading cause of scalds. In 1999

¹In 1999, and from 2005 – 2008 and 2010, cooking liquids were the leading cause of scald burns. From 1984 – 1998, 2000 – 2004 and in 2009, hot beverage scalds were the leading cause.

scald burns from cooking liquids were one percentage point higher than scald burns from hot beverages.

Causes of Scalds



46-Year Old Man Scalded by Steam in Sauna

On September 25, 2010, a 46-year old Framingham man received scald burns to his face, ears, knees and toes when he passed out in a sauna.

18-Year Old Man Receives Scald from Car Radiator

On March 7, 2010, a 19-year old Attleboro man received scald burns to his chest, face and arm when he opened his car radiator and anti-freeze exploded on him.

Hot Cooking Liquids

Hot Cooking Liquids Caused 35% of Scalds, 14% of All Burns

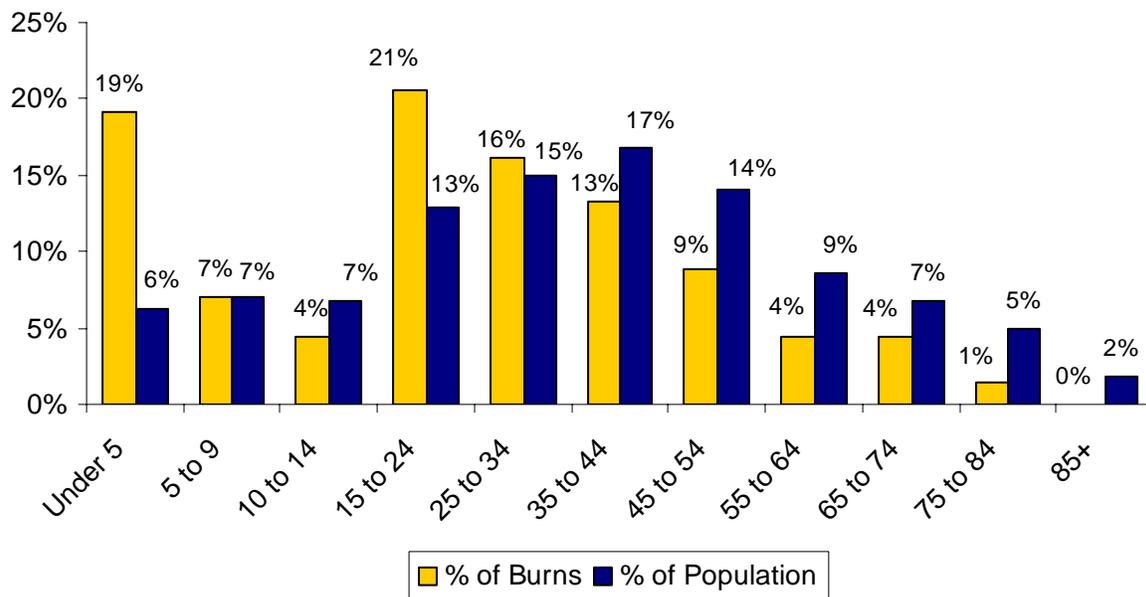
Scald burns from hot cooking liquids were the leading cause of all burn injuries. Hot cooking liquids which includes boiling water, grease and oil, caused 68, or 35%, of the 195 scald burns and 14% of the 476 total burn injuries reported in 2010. Fifty-four percent (54%) of the victims

were female and 46% were male. Hot cooking liquids scalded seven people while they were at work, four were women and three victims were men.

21% of Cooking Liquid Scald Victims Were Between 15 and 24

Those most likely to be under foot in the kitchen were most at risk to be burned by hot liquids on the stovetop. In 2010, 19% of the cooking liquid scald victims were under five years old. They were over three times more likely to be victims of a hot cooking liquid scald. This risk is most likely attributed to children getting in the way of adults as they prepare meals. Establish a “No Zone” in the kitchen and putting toddlers safely in high chairs or playpens during meal preparation can reduce these injuries.

Hot Cooking Liquid Scalds by Age Group



Seven percent (7%) were children between the ages of five and nine. Four (4%) of the victims were within the age group between 10 and 14; members of the age group between 15 and 24 accounted for 21%, the most of any single age group; 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. Sixteen percent (16%) were between 25 and 34, this is one of only three age groups that were more likely to get a scald burn. Thirteen percent (13%) were between 35 and 44; 9% were between 45 and 54; 4% were between 55 and 64; 4% were between 65 and 74; and 1% were between 75 and 84; no one over the age of 81 received a scald burn injury from hot cooking liquids. The youngest hot cooking liquid scald burn victim was a nine-month old boy, while the oldest person to have one of these burns was an 81-year old man.

4-Year Old Scalded by Cooking Liquids

On June 2, 2010 a 4-year old Waltham girl bumped into her mother while her mother was cooking on the stove. The boiling water splashed out of the pot onto the little girl. She received scald burns to her face.

18-Year Old Woman Scalded by Cooking Liquids at Work

On May 4, 2010, an 18-year old Fall River woman was accidentally splashed boiling water on herself while at work. She received scald burns to her chest, arm and flank.

Hot Beverages

Hot Beverages Caused Over 1/4 of All Scalds

Fifty-three (53), or 27%, of the 195 scald burns were caused by hot beverages. They account for 11% of the 476 total burn injuries. In 2009, hot beverages accounted for 60 burns, or 14% of the 418 burn injuries reported. Since the inception of M-BIRS in 1984, hot beverages have historically been the leading cause of scald burns except for 1999, 2005 to 2008, and now in 2010.

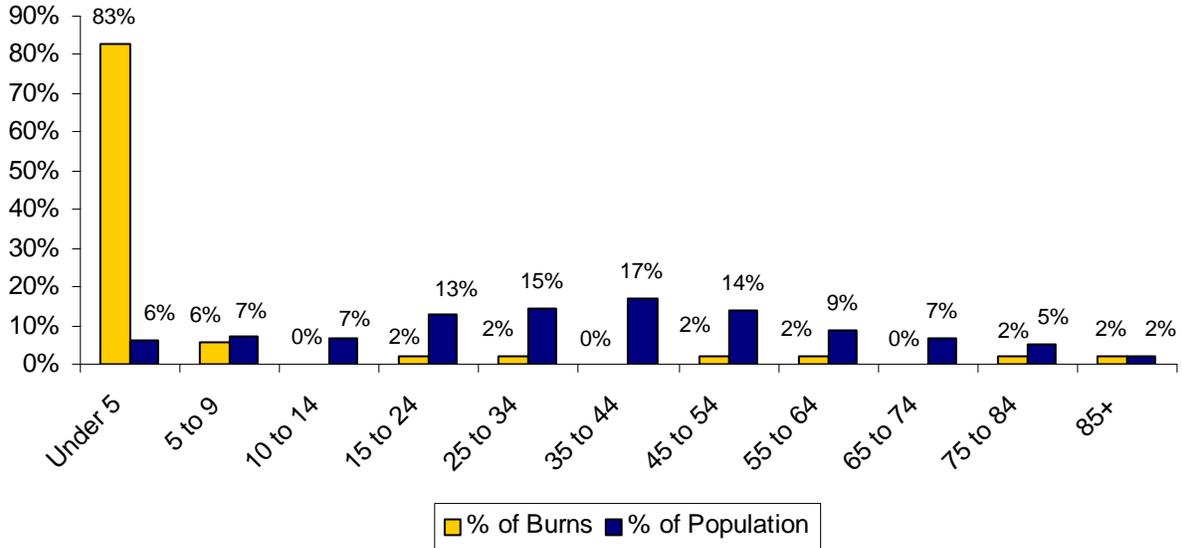
Fifty-eight percent (58%) of the 53 hot beverage scald victims were male and 42% were female. In 2010, only one woman was reported to have received a hot beverage scald while working.

83% of the Hot Beverage Scald Victims Were Under 5

Eighty-three percent (83%) of the 53 hot beverage scald victims were less than five years of age. Children under five years old were 13 times more likely to be scalded by a hot beverage. Thirty-two (32), or 60%, of the victims who were scalded were one-year old or younger. Another eight, or 15%, were two-year old toddlers. Last year, 67% of the victims of hot beverage scalds were also less than five years old.

Six percent (6%) of the hot beverage scald victims were between five and nine years old; no one between the ages of 10 and 14 received a hot beverage scald; 2% were between the ages of 15 and 24; 2% were also between 25 and 34; no one between 35 and 44 was reported to receive a scald from a hot beverage; 2% were between 45 to 54 years old; 2% of these victims were between 55 and 64 years old; no one between the ages of 65 and 74 were burned by a hot beverage; and 2% were between 75 and 84 years old in 2010. A four-month old boy was the youngest person to be scalded by a hot beverage in 2010, while the oldest person was a 92-year old woman.

Hot Beverage Scalds by Age Group



5-Month Old Scalded by Beverage

On July 5, 2010 a five-month old boy unintentionally spilled a cup of hot coffee on himself. He received scald burns to his lower extremities, feet and ankle.

Hot Tap Water

Hot Tap Water Caused 19% of All Scalds

Excessively hot tap water caused 37, or 19%, of the 195 scald burns and 8% of the 476 total burn injuries reported to M-BIRS in 2010. Hot water heaters should be set to temperatures of 125° Fahrenheit or less. Massachusetts law states that the temperature must be set between 110° and 130° 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 155° F it takes only one second to sustain a third degree burn. At 130° F it takes thirty seconds. At 120° 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 2010, 57% of the victims were male while the other 43% were female. Two (2), or 5%, of the 37 victims were scalded during work-related activities.

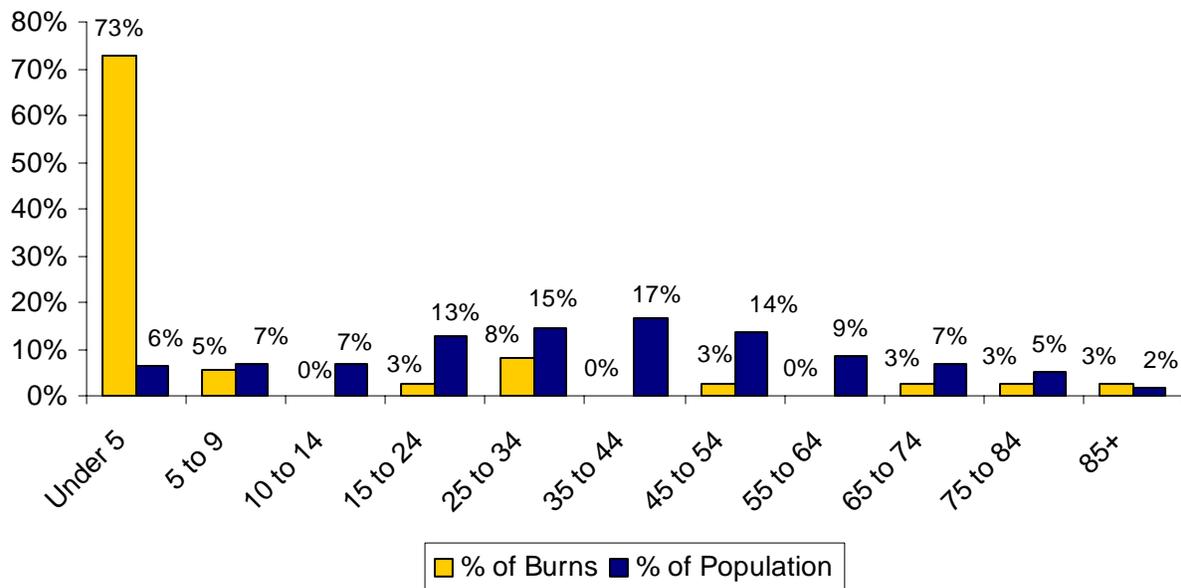
² Source: Knapp Burn Foundation

Almost 3/4 of Tap Water Scald Victims Were Under the Age of 5

Seventy-three percent (73%), or 27 of the 37 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 2009, 18, or 56%, of the hot tap water scald burn victims were under the age of five.

Five percent (5%) 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; 8% were between the ages of 25 and 34; no one between 35 and 44 was a victim of this injury; 3% were between the ages of 45 and 54; no one between 55 and 64 years was reported to have been scalded by tap water; 3% were between the ages of 65 and 74; another 3% were between 75 and 84 years old; and 3% were over the age of 85 in 2010. The youngest hot tap water scald burn victim was a one-month old girl, while the oldest person to have one of these burns was an 86-year old woman.

Hot Tap Water Scalds by Age Group



11-Month Old Scalded While Taking a Bath

On August 4, 2010, an 11-month old Lowell boy was scalded while taking a bath. He received severe scald burns to 60% of his body surface area.

1-Year Old Scalded While Taking a Bath

On March 14, 2010, a one-year old Brockton girl was scalded while taking a bath. She received burns to 36% of her body.

Hot Food

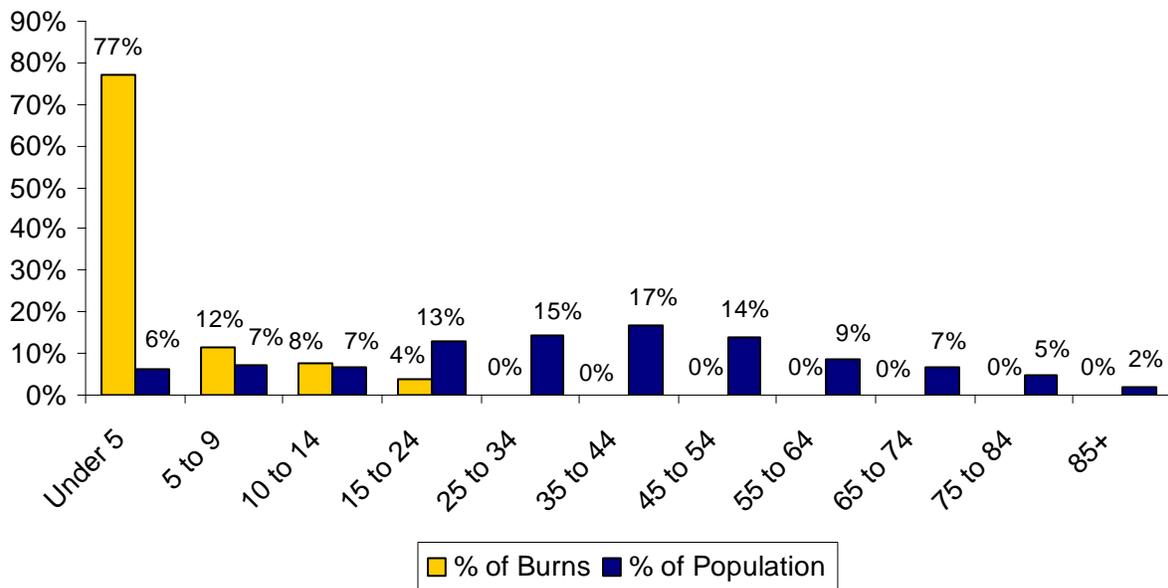
Hot Food Caused 13% of Scalds, 5% of All Burns

Hot food caused 26, or 13%, of the 195 scald burns and 5% of the 476 total burn injuries reported in 2010. Fifty-four percent (54%) of the victims were male and 46% were female. There were no work-related hot food scalds reported in 2010.

Over 3/4 of Hot Food Scald Victims Were Under 5

Of the 26 reported scald victims from hot food in 2010, 20, or 77%, were under five years old; three victims, or 12%, were between five and nine; two victims, or 8%, was between the age of 10 and 14; and another victim, or 4%, was between 15 and 24. No one over the age of 15 was reported to have received a scald burn injury from hot food in 2010. The youngest hot food scald burn victim was a seven-month old girl, while the oldest person to have one of these burns was a 15-year old boy.

Hot Food Scalds by Age Group



2-Year Old Girl Receives Scald Burns from Food

On November 22, 2010, a two-year old Kingston girl received scald burns to her feet, buttocks and pelvis when a bowl of hot soup was accidentally spilled on her.

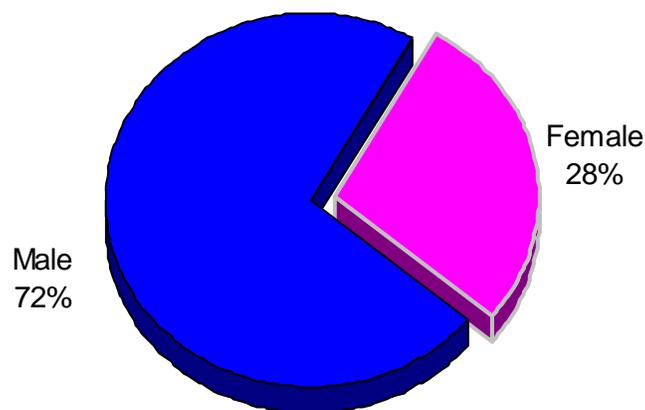
Flame Burn Injuries

Flames Caused 19% of Reported Burn Injuries

There were 90 reported flame burn injuries. These 90 injuries accounted for 19% of the 476 burn injuries reported in 2010. 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-two percent (72%) of the flame burn casualties were male and 28% were female. Seven (7), or 8%, of the 90 flame burns occurred during work-related activities; six were men and one was a woman.

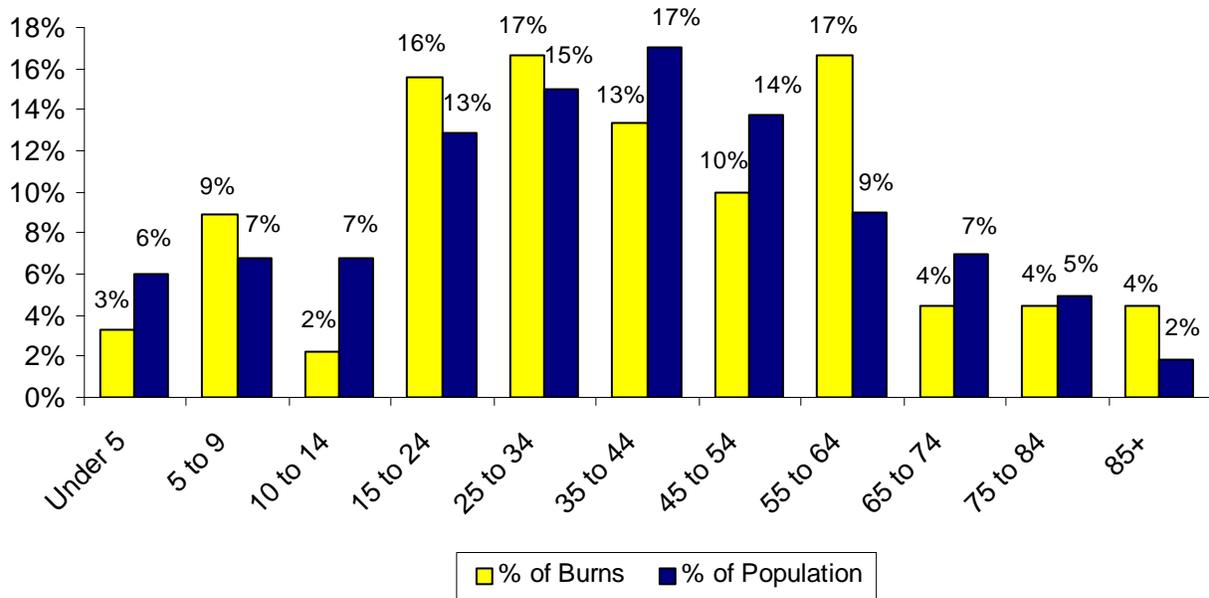
Flame Burns by Gender



Adults 55 to 64 & Older Adults Over 85 Faced Highest Risk of Flame Burns

Five (5) groups were at a higher risk for burns from flames. Children between the ages of five and nine were 1.3 times more likely to receive a flame burn injury. Young adults between the ages of 15 and 24 were 1.2 times as likely to receive a flame burn injury. Adults between 25 and 34 were 1.1 times and adults 55 and 64 were 1.9 times more likely to receive a flame burn injury. Older adults over the age of 85 were 2.4 times as likely to receive a flame burn injury in 2010.

Flame Burn Injuries by Age Group



Three percent (3%) of the 90 flame burn victims were children under the age of five; Nine percent (9%) were between the ages of five and nine; 2% were between 10 and 14; 16% were victims with ages 15 to 24; 17% were between 25 and 34; 13% were between 35 and 44; 10% were between 45 and 54; 17% were between 55 and 64; 4% were between the ages of 65 and 74; 4% were between 75 and 84; and 4% were over the age of 85. The youngest person to receive a flame burn injury was a one-year old girl, while the oldest was an 94-year old man.

Cooking Was the Leading Cause of Flame Burns

Cooking was the leading cause of flame burn injuries in 2010. Eighteen (18), or 20%, of all flame burn victims received their injuries while cooking. Ten percent (10%) of the victims, were burned while barbecuing; one while cooking on a gas grill. Five (5) clothing ignitions while cooking accounted for 6% of the total flame burn injuries. Three (3), or 3%, received their flame burn injuries from ignitions of hot cooking liquids, generally grease or oil. Flaming food, a stove, an oven and an unspecified cooking act were each involved in one, or 1%, of the cooking-related flame burns.

Ignitable Liquids Caused 18% of Flame Burn Injuries

In 2010, ignitable liquids caused 16, or 18%, of flame burn injuries. Gasoline and ignitable liquids other than gasoline each caused eight, or 9%, of the flame burns.

Smoking Caused of 11% of Flame Burn Injuries

Smoking accounted for 10, or 11%, of all flame burn injuries in 2010. Five (5) flame burns, or 4%, were from smoking while on oxygen. Two burn injuries, or 2% were from cigarettes. One (1), or 1%, was a clothing ignition while smoking, and another person, or 1%, was burned while

smoking in bed. Another one, or 1%, of the flame burn injuries involved unspecified smoking acts.

Candles Caused 8% of Flame Burns

Candles were involved in seven, or 8%, of flame burn injuries in 2010. Five (5), or 6%, were clothing ignitions from candles; and two, or 2%, were burns directly from candles

Heating Equipment Caused 8% of Flame Burns

Heating equipment was involved in seven, or 8%, of flame burn injuries in 2010. Three (3), or 36%, were burn injuries from woodstoves; two, or 2%, were burns from heaters; one burn, or 1% was from a fireplace, and the other was from a water heater.

Children Misusing Items Caused 7% of Flame Burns

Six (6) children were burned while misusing various items causing 7% of all 2010 flame burn injuries. In four instances, or 4%, the child was misusing lighter, in one of these instances the child ignited his clothes. A child using gasoline and another child misusing matches each accounted for 1% of these burns.

Flammables & Self-immolation Each Caused 4% of Flame Burns

Flammable materials and self-immolation attempts were each responsible for four, or 4%, of the flame burn injuries in 2010.

Ignitable Gases Caused 4% of Flame Burns

Ignitable gases were responsible for four, or 4% of flame burn injuries. Three (3), or 3%, of these injuries were caused by propane and one was caused by natural gas.

Car Parts Caused 2% of Flame Burns

Flame burn injuries from car parts accounted for two, or 2%, of all 2010 flame burns.

Alcohol, Assault, Chemical, Electrical & Welding Each Caused 1%

Alcohol, assaults, a chemical, an electrical fire and welding were each the cause of one, or 1%, of these flame burn injuries.

Clothing Ignitions

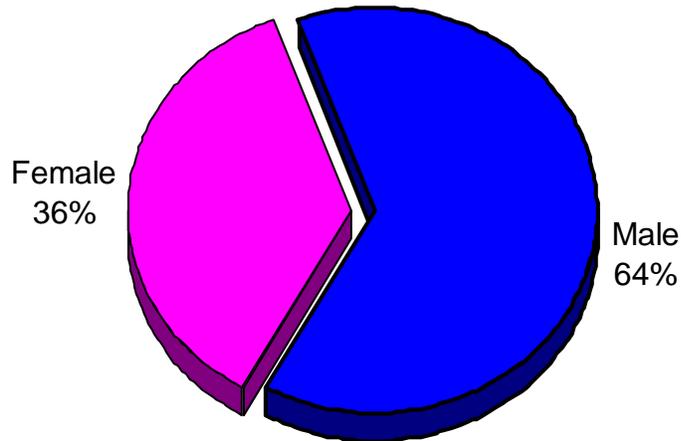
Clothing Ignitions Account for Nearly 1/4 of Flame Burn Injuries

There were 22 clothing ignitions resulting in flame burn injuries accounting for 24% of all flame burn injuries. Clothing ignitions while cooking caused six, or 7%, of these injuries. Five (5) victims, or 6%, of flame burn clothing ignitions involved candles, one of these also involved an ignitable liquid other than gasoline. Four (4), or 4%, were caused by children misusing fire, and in all four cases the child was misusing a lighter. Two victim's clothing ignitions involved gasoline accounting for 2% of all flame burn ignitions. One (1) victim's clothing ignited after coming into contact with smoking materials, accounting for 1% of all flame burn injuries in 2010. A fireplace caused one, or 1%, of flame burn injuries. There were three unspecified clothing ignitions accounting for 3% of all 2010 flame burn injuries.

Almost 2/3 Clothing Flame Burn Injuries Were Men

Fourteen (14), or 64%, of clothing ignition victims were men and eight, or 36% were women.

Clothing Ignitions by Gender



27% of Flame Burn Injury Victims Due to Clothing Ignitions Were 5 - 9

Three (3) children under the age of five, or 14%, received a flame burn due to a clothing ignition. Six (6) children between the ages of five and nine, or 27%, also received these burns. No one between the ages of 10 and 14 received one of these injuries. One (1) victim, or 5%, was in the age group 15 to 24. No victims were in the age group 25 to 34 years old. The age group 35 to 44 had one victim accounting for 5% of the clothing ignition flame burn injuries in 2010. Three (3) victims, or 14% of flame burn injuries due to clothing ignitions, were between 45 and 54 years old. Another three victims, or 14% were between 55 and 64 years old. There were no victims between 65 and 74 years old. Two (2) victims, or 9%, were between the ages of 75 and 84, and three victims, or 14%, 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 one-year old girl whose clothing was ignited by a candle; and the oldest victim of a clothing ignition flame burn injury was an 88-year old woman whose clothes were ignited by her stove.

60-Year Old Man Injured in While Grilling

On December 8, 2010, a 60-year old Rockland man was injured as he was using his grill on his deck. He received burns to his face, neck and hands.

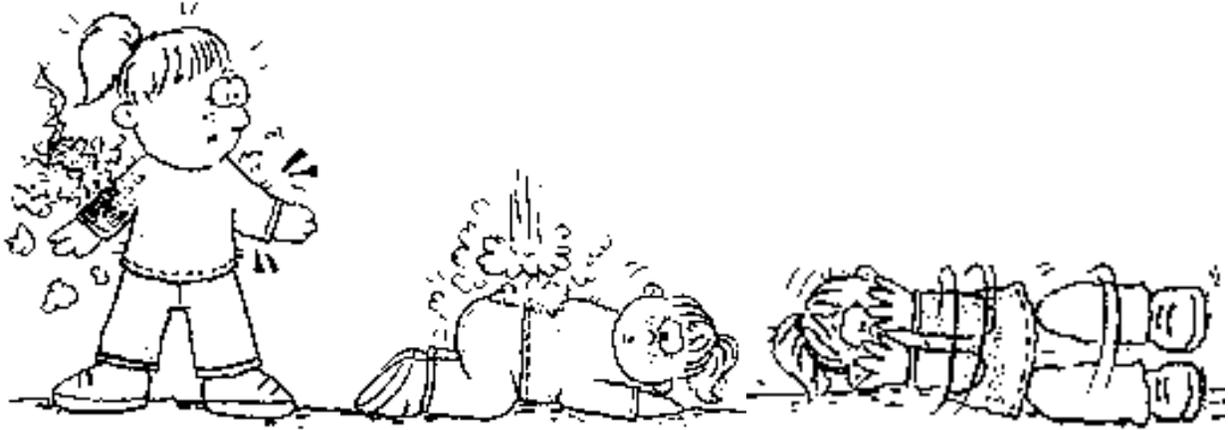
50-Year Old Man Commits Suicide

On June 6, 2010, a 50-year old man doused himself with gasoline and ignited it, causing burns to 70% of his body surface area in a successful attempt at self-immolation.

60-Year Old Man Burned While Smoking

On December 21, 2010, a 60-year old man lit himself on fire while he was smoking a cigarette. He was burned on his face and scalp.

ALWAYS REMEMBER TO: STOP DROP & ROLL

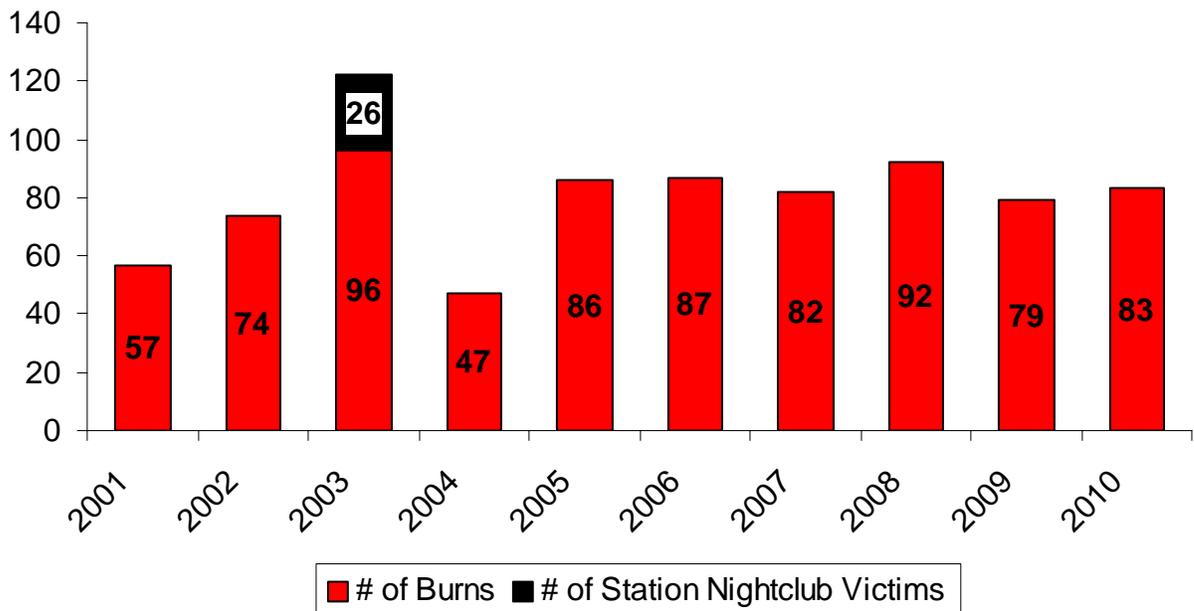


Burn Injuries Caused by Fires

Fires Caused 17% of All Burn Injuries

Eighty-three (83), or 17% of the 476 burn injuries reported in 2010 were caused by fires. This is a 5% increase from the 79 fire burns reported the previous year. The highest number of burn

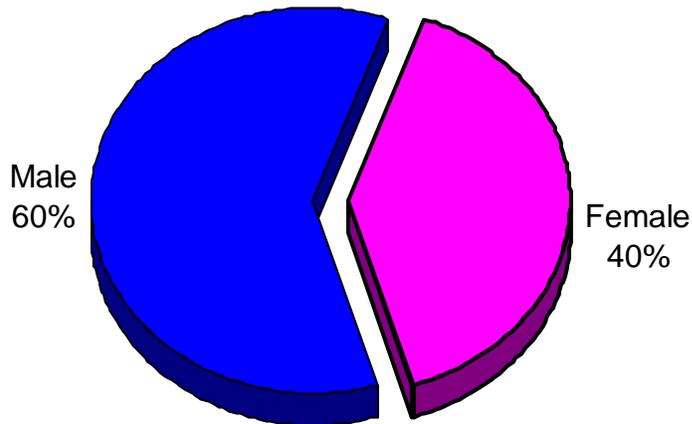
of Reported Burns by Fire



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 2010.

Sixty percent (60%) of the 83 victims were male and 40% 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 injured⁸.

Fire Burn Victims by Gender

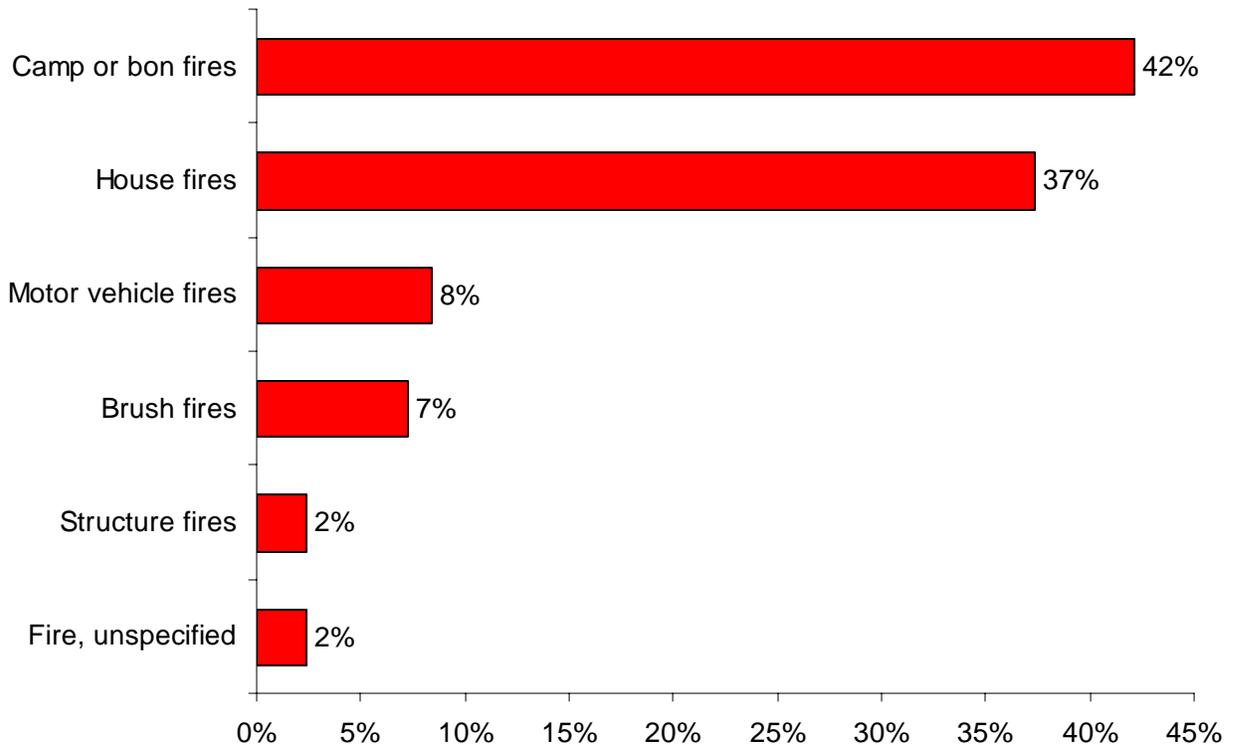


42% of Fire Burn Injuries Occurred at Camp or Bon Fires

Camp or bon fires caused 35, or 42% of the 83 fire burn injuries reported in 2010. House fires caused 31, or 37%. Seven (7), or 8%, were due to motor vehicle fires; six (6), or 7%, of the victims received their burns at brush fires; two victims, or 2%, were burned in non-residential structure fires; and another two victims, or 2%, of fire burn injuries occurred in unclassified fires.

⁸ 2009 Annual Report of the Massachusetts Fire Incident Reporting System, MA Dept. of Fire Services, pg. 111.

Types of Fires Causing Burns



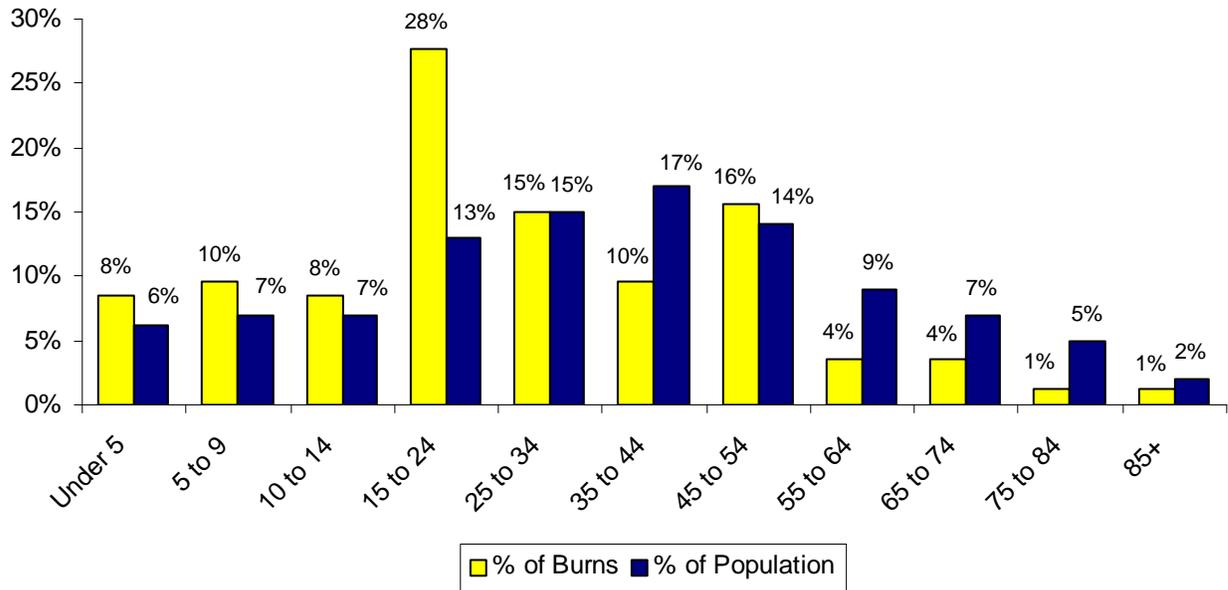
Young Adults Most Likely to Be Burned in Fires

Seven (7), or 8%, of the victims burned in fire incidents were under five years old; eight, or 10%, were between five and nine years of age; seven, or 8%, were between 10 and 14; 23, or 28%, were between 15 and 24; nine, or 15%, were between 25 and 34; eight, or 10%, were between 35 and 44; 13, or 16%, were between the ages of 45 and 54; three, or 4%, were between the ages of 55 and 64; another three, or 4%, were between the ages of 65 and 74; one victim, or 1%, was between the ages of 75 and 84; and another victim, or 1%, was over the age of 85. No one over the age of 91 was reported to have received a burn injury from a fire in 2010. Young adults between the ages of 15 and 24 were the most likely (2.15 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.

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

Fire Burn Injuries by Age Group



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. Most fire deaths are not recorded in M-BIRS; only the severely burned who survive for some time first and die later in a hospital. 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.

2 Fire Deaths Recorded in M-BIRS

Two (2) of the victims that were reported to have received their burn injuries from fires died as a result of their injuries. Both of these victims were Massachusetts residents. Of these victims, one

victim died in a residential fire caused by smoking and the other person died in a brush fire fueled by gasoline.

53-Year Old Woman Severely Injured in Brush Fire

On March 7, 2010, a 53-year old New Bedford woman received life-threatening burns to 90% of her body surface area when she was using gasoline to burn brush in her chiminea.

11-Year Old Girl Injured at Camp Fire

On June 6, 2010, an 11-year old girl received burns to her leg while sitting near a camp fire. It is believed that sparks from the camp fire ignited her pajamas causing the injuries.

76-Year Old Man Dies in House Fire

On March 10, 2010, a 76-year old Everett man received burn injuries in a fire inside of his home started by smoking. The victim received burns to approximately 50% of his body surface area. He was transported to a local hospital where he died hours later. His 82-year old sister was trapped and died during the fire.

91-Year-Old Dies in Barn Fire

On July 11, 2010, a 91-year old Chesterfield man was working with a cutting torch in his barn and accidentally set his clothes on fire. He received third degree burns to 60% of his body. While en route to a Boston hospital he succumbed to his injuries.

45-Year Old Man Falls into Camp Fire

On May 31, 2010, a 45-year old Holyoke man received second and third degree burns to his forearm, hand and knee when he fell into a camp fire.

67-Year Old Burned in Helicopter Crash

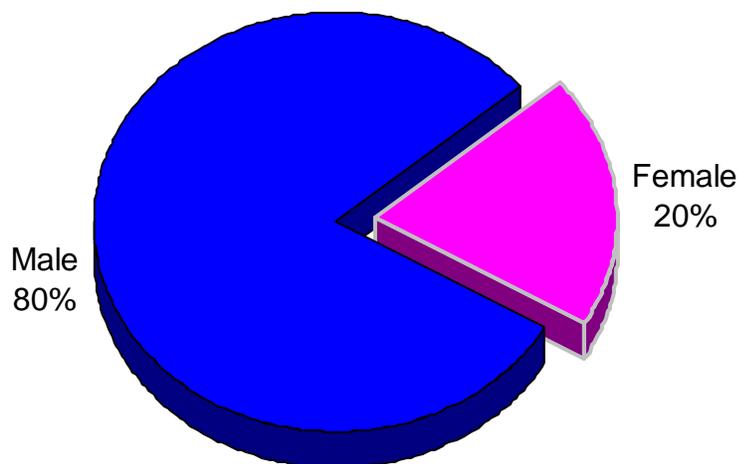
On September 19, 2010, the 67-year old male pilot of a helicopter received severe burns to 53% of his body surface area when his helicopter crashed in a wooded area in Halifax.

Burn Injuries Caused by Explosions

Explosions Caused 9% of Reported Burn Injuries

Forty-one (41), or 9%, of the 476 burn injuries reported in 2010 were caused by explosions. Eighty percent (80%) of the explosion burn victims were male and 20% were female.

Explosion Burn Injuries by Gender



Twelve (8) burns, or 29%, occurred during work-related activities. All 12 of these work-related victims were male.

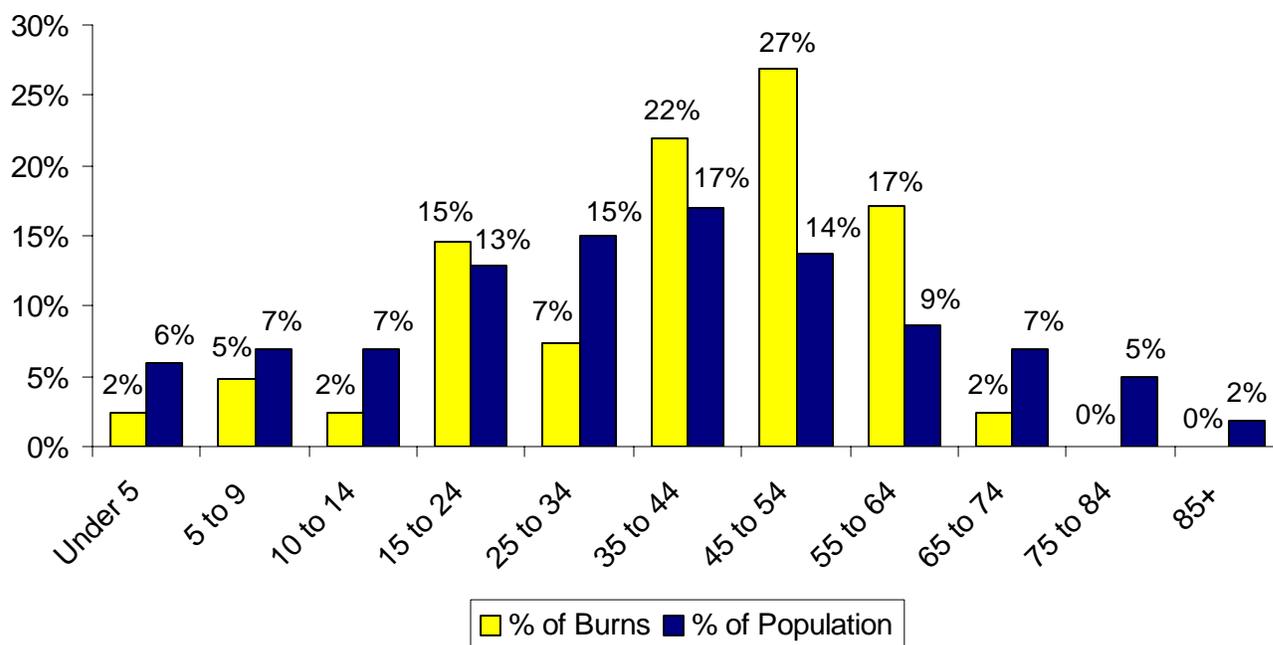
Out of these 41 injuries there were four explosions with two or more injuries. Seven (7) of these victims were male and two were female. A 22-year old man and a 46-year old man, were injured in an explosion in the rear of their freight truck in Tyngsboro, MA. A six-year old girl and a four-year old boy were injured in a propane explosion while camping in Norway. A 19-year old man, a 43-year old man and a 48-year old man were all burned in a propane explosion in Norfolk, MA. A 55-year old woman and a 60-year old man were both injured in a propane explosion in Acton, MA.

Adults Ages 45 to 64 Face Greatest Risk of Explosion Burns

There was one burn from an explosion to a child under the age of five in 2010, accounting for 2% of these burns; there were two victims, or 5%, in the age group five to nine years old; children between the ages of 10 to 14 accounted for one, or 2%, of these injuries; six, or 15%, were between the ages of 15 to 24; adults between the ages of 25 and 34 received three, or 7%, of the explosion related burns; nine, or 22%, were between 35 and 44; 11 or 27%, were between 45 and 54 years of age; seven, or 17%, were between 55 and 64 years old; and one victim, or 2%, was between the ages of 65 and 74. No one over the age of 67 received a burn injury due to an explosion. The youngest victim to receive a burn injury from an explosion in 2010 was a four-year old boy; and the oldest person to receive one of these burns was a 67-year old woman.

The following graph illustrates the data in the above paragraph.

Explosion Burn Injuries by Age Group



Ignitable Gases & Liquids Were the Leading Cause of Explosion Burn Injuries

Ignitable gases accounted for 11, or 27%, of the explosion-related burn injuries in 2010. Ten (10), or 24%, were from propane, and one, or 2%, was from natural gas. Ignitable liquids also caused 11, or 27%, of the explosion-related burn injuries. Eight (8), or 20%, were from gasoline, and three, or 7% were from ignitable liquids other than gasoline.

Explosives caused six, or 15%, of these types of burn injuries. Four (4) of these injuries were due to fireworks, accounting for 10% of all explosion injuries. Gunpowder and unspecified explosive each caused one, or 2%, of explosion related burn injuries in 2010.

Cooking caused three, or 7%, of these injuries. Gas grills caused two, or 5%, and another barbeque caused one, or 1%.

Electrical equipment, water craft and welding each caused two, or 5% of these burn injuries. Smoking also caused two, or 5%, of these injuries; one, or 1% was from a cigarette, and the other was from smoking while on oxygen.

A woodstove and an unspecified explosion each accounted for one, or 2%, of the explosion-related burn injuries in 2010.

Propane Explosion Kills 1 & Injures 2 Other Workers

On July 30, 2010, a propane explosion in a two-family condominium townhouse killed one worker and seriously burned two other workers. One side was occupied and the other side was

still under construction. A 48-year old man died from burn injuries to 90% of his body, while a 19-year old man received life-threatening burns to 50% of his body. Their co-worker, a 43-year old man received burns to 6% of his body surface area.

67-Year Old Woman Injured While Smoking on Home Oxygen

On November 11, 2010, a 67-year old Quincy woman received life-threatening burns to 60% of her body surface when there was an explosion while she was smoking using home oxygen.

41-Year Old Man Injured in Fireworks Explosion

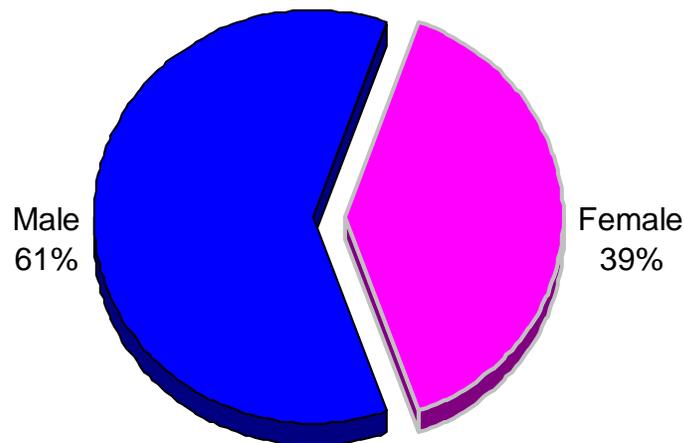
On July 3, 2010, a 41-year old Marshfield man received burns to his his face and arm when the fireworks he was watching exploded directly in front of him.

Contact Burn Injuries

Contact with Hot Objects Caused 8% of Reported Burn Injuries

Thirty-six (36), or 8%, of the 476 burn injuries reported in 2010 were caused by contact with hot objects. Sixty-one percent (61%) of the burn victims were male and 39% were female. Two (2), or 6%, of contact burns occurred at work in 2010.

Contact Burn Injuries by Gender



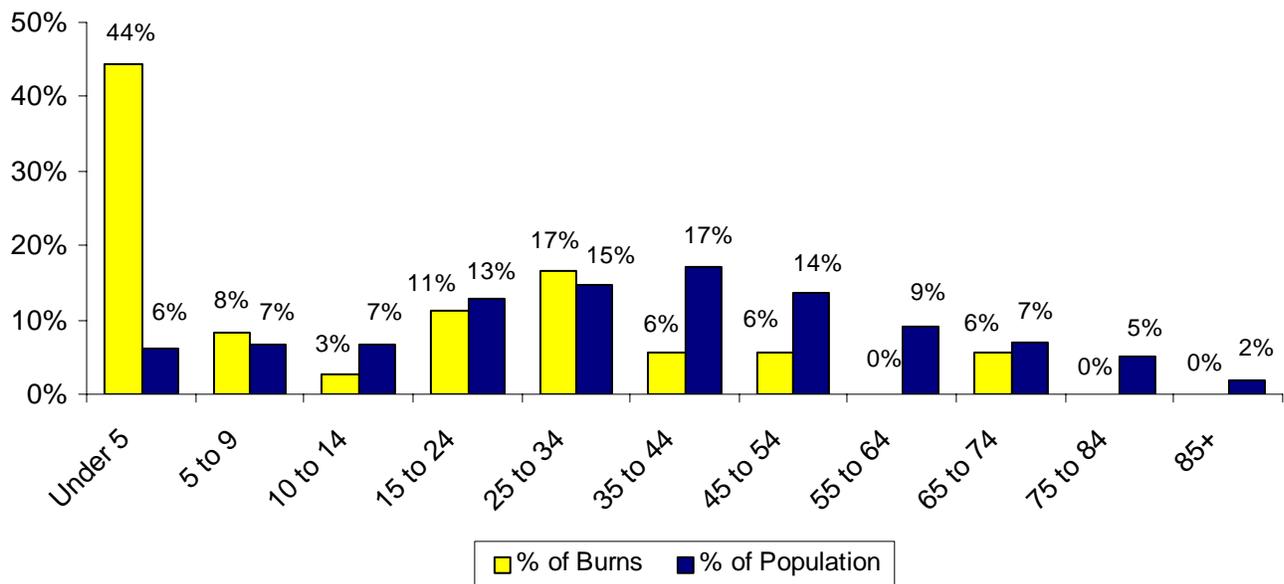
44% of Contact Burns Were to Children Under 5

Children under the age of five accounted for 16, or 44%, of all contact burns. Pre-schoolers faced slightly greater than seven 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.

Three (3), or 8%, of these burn victims were between the ages of 5 and 9; one victim, or 3%, was in the age group between 10 and 14; four young adults, or 11%, were between the ages of 15 and 24; six of the victims, or 17%, were between 25 and 34; the age group 35 to 44 accounted for two victims, or 6%; another two victims, or 6%, belonged to the age group 45 to 54; there were no victims between the ages of 55 and 64; and two victims, or 6%, was between the ages of 65 and 74; no one over the age of 66 received burns from contact with a hot object. The youngest person to receive a contact burn in 2010 was a four-month old boy, and the oldest person was a 66-year old man.

The following graph illustrates the data in the above paragraph.

Contact Burn Injuries by Age Group



Cooking Was the Leading Cause of Contact Burns

Contact with cooking equipment caused nine, or 25%, of the contact burns in 2010. Contact with ovens and stoves each caused three, or 8%, unspecified cooking acts caused two, or 6%, and coming into contact with a barbeque caused one, or 3%, of 2010 contact burn injuries.

Contact with heating equipment caused seven, or 19%, of these types of burns. Contact with heaters caused three, or 8%, touching radiators caused two, or 6%, and touching a space heater and a woodstove each caused one, or 3% of 2010 contact burn injuries.

Clothes Irons & Heating Pads Were the Next Leading Causes of Contact Burns

Clothes irons caused five, or 14%, and heating pads caused three, or 8%, of these types of burn injuries. Heating pad technology where a user must hold a button to keep it on can avert burn injuries from people falling asleep on a heating pad.

Contact with a curling iron and a machine each caused two, or 6%, of contact burns in 2010.

Asphalt, an assault, a candle, a car part, a firefighter during overhaul, a lawnmower, a hot piece of metal and motor oil each caused one, or 3%, of contact burns in 2010.

There were two work-related contact burn injuries in Massachusetts in 2010. Both of these work-related contact burn victims were men.

1-Year Old Burned by Clothes Iron

On May 29, 2010, a one-year old Brockton boy received first and second degree burns to both hands when he grabbed a hot clothes iron.

21-Year Old Man Burned by an Oven

On August 31, 2010, a 21-year old Boston man accidentally touched the inside of a hot oven with his arm. He received burn injuries to his right arm and hand.

Electrical Burn Injuries

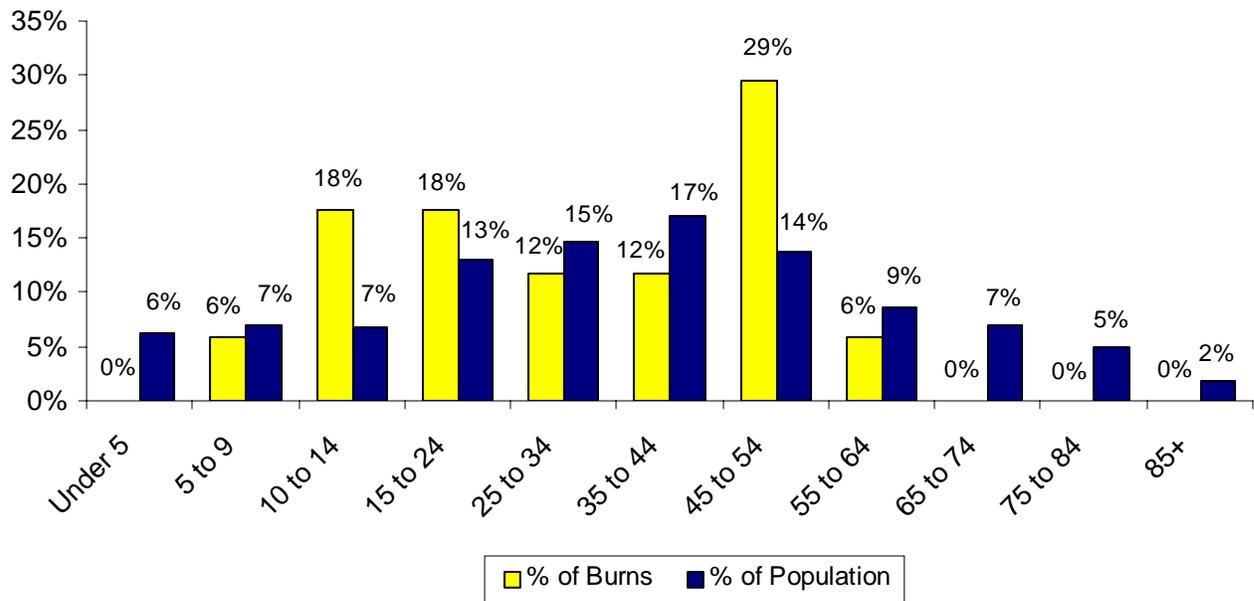
Electrical Incidents Caused 4% of Burn Injuries

Seventeen (17), or 4%, of the 476 burn injuries reported in 2010 were caused by electrical accidents. Eighty-eight percent (88%) of the electrical burn victims were men and 12% were women. Two (2), or 12%, occurred during work-related activities, both of these victims were men.

45 to 54 Year Olds Received 29% of Electrical Burns

All of the electrical burn victims in 2010 were between the ages of eight and 59-years old. One (1), or 6% of electrical burn victims was between five and nine; three (3) victims accounted for 18%, were between the ages of 10 and 14; another three victims, or 18%, were between 15 and 24 years old; two victims, or 12%, were between 25 and 34 years old; another two victims, or 12%, were between 35 and 44 years old; five, or 29%, of the electrical burns occurred to people between the ages of 45 and 54; and one electrical burn, or 6%, happened to someone between the ages of 55 and 64 years old. No one under the age of five, or over the age of 59 were reported to have received electrical burns in 2010. The youngest person to receive an electrical burn injury was an eight-year old boy, and the oldest victim was a 59-year old man.

Electrical Burn Injuries by Age Group



24% of Electrical Burns Were Caused by Electrocutions

Four (4), or 24%, of the electrical burn injuries in 2010 were from electrocutions. Undefined electrical accidents caused 13, or 76%, of these burns.

25-Year Old Man Burned by Electrical Line

On October 12, 2010, a 25-year old man was working on a scissor lift platform under power lines outside. He received third degree burns to 55% of his body surface area from the power line.

22-Year Old Man Electrocutted While Working

On April 28, 2010, a 22-year old man was working when he was electrocuted through his hands. He received burns to both of his hands.

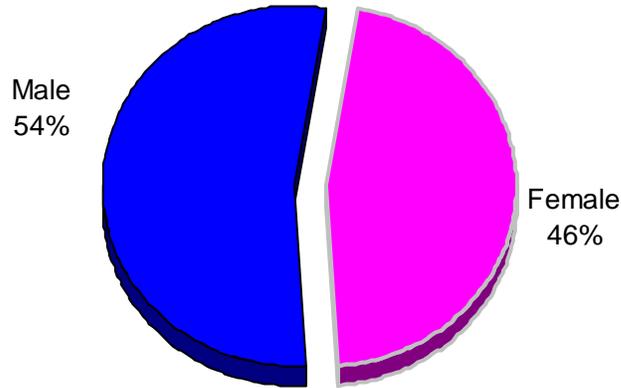
Other Types of Burn Injuries

Other Type Burns Cause 11 Injuries

In 2010, there were 13 burn injuries that were characterized as *Other*. These include seven burns, or 54%, caused by severe sunburns. Six (6) *Other* burns, or 46%, were attributed to exposure to chemicals.

Fifty-four percent (54%) of the 13 victims were male and 46% were female.

Other Burn Injuries by Gender

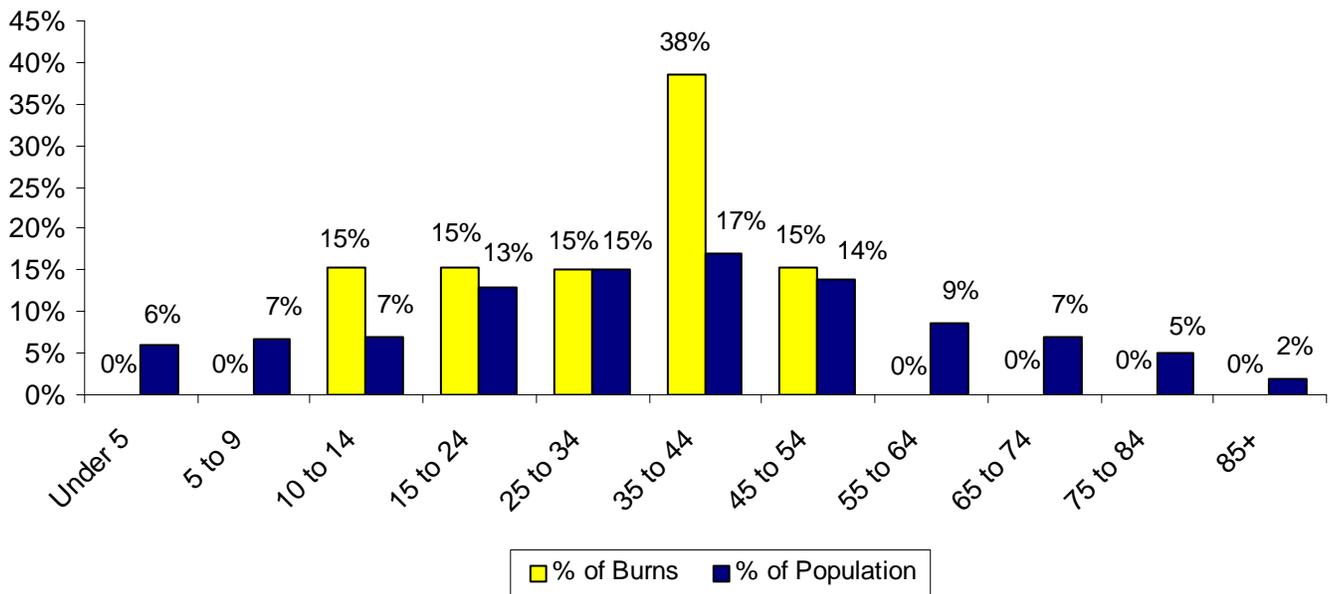


Health care facilities reported that four, or 31%, of the 16 *Other* burn victims were working when injured. Exposure to chemicals caused all four work-related injuries.

38% of *Other* Burn Victims Were Between 35 & 44 Years Old

In 2010 there were no *Other* burn victims under 10-years old. Two (2) victims, or 15%, were between the ages of 10 and 14; two victims, or 15%, were between the ages of 15 and 24; another two victims, or 15%, were between the ages of 25 and 34; five victims, or 38%, were between 45 and 54 years old; and two victims, or 15%, were between 45 and 54 years old. No

Other Burn Injuries by Age Group



one over the age of 48 suffered an *Other* type of burn injury. The youngest victim was a 12-year old girl and the oldest victim was a 48-year old man.

34-Year Old Man Received Chemical Burn

On May 27, 2010, a 34-year old Boston man received burns to his face and airway when sulfuric acid he was working with exploded.

17-Year Old Woman Burned at the Beach

On July 19, 2010, a 17-year old Weymouth woman received a first and second degree sunburn to her chest, legs and abdomen.

27-Year Old Man Burned by Floor Chemical Cleaner at Work

On July 25, 2010 a 27-year old man received chemical burns to 25% of his body surface area. He received his burns while he was using a chemical cleaner while at work.

Gasoline Related Burn Injuries

Gasoline Involved in 8% of Reported Burn Injuries

Gasoline was involved in 36, or 8%, of the 476 burns reported to M-BIRS in 2010. Gasoline was the primary cause of the injury in 29, or 81%, of these injuries. Because of more detailed descriptions as to how burn injuries occurred, it was determined that gasoline was also involved in seven additional, or 19% of burn injuries that were coded with a different primary description, such as using it to start a barbeque.

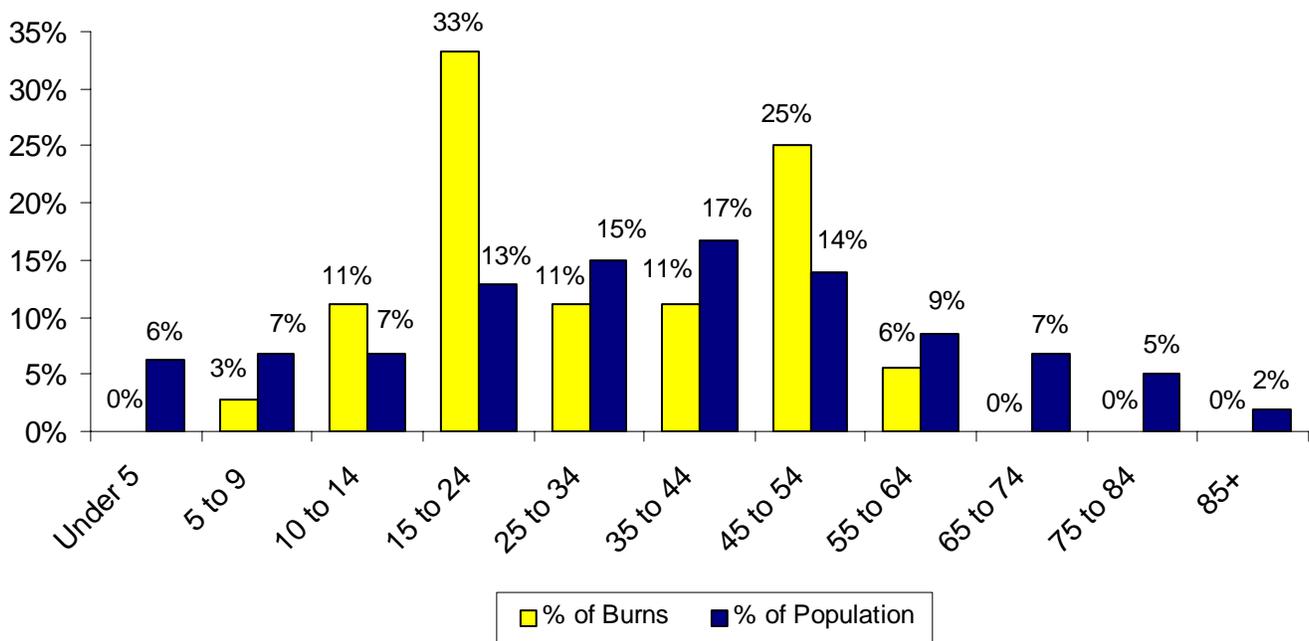
Sixteen (16), or 44%, of the burn injuries involving gasoline were flame burn injuries. Twelve (12), or 33%, of the gasoline related burn injuries were caused by fires. Eight (8), or 22%, of these injuries were caused by explosions. Thirty-three (33), or 92%, of the 37 gasoline related burn victims in 2010 were men, and three, or 8% were women. Three (3), or 8%, of the injuries occurred during work-related activities. Nine (9), or 25%, of the gasoline burn injuries in 2010 were to children; 27, or 75% of these injuries occurred to adults.

1/3 of Gasoline-Related Burn Victims Were Between the Ages of 15 & 24

No one under the age of five in 2010 was the victim of a burn injury involving gasoline. One (1) victim, or 3%, was between five and nine years of age. Four (4), or 11%, 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 1.6 times at a greater risk of gasoline burn injuries. Twelve (12), or 33%, 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, 2.6 times more likely. Four (4), or 11%, were between 25 and 34; another 4, or 11% were between 35 and 44; nine victims, or 25%, were between the ages of 45 and 54; and two victims, or 6%, were in the age group 55 to 64 years old. No one over the age of 63 received a burn injury involving gasoline. The youngest victim was a six-year old girl and the oldest victim was 63-year old man.

The following graph illustrates the above paragraph.

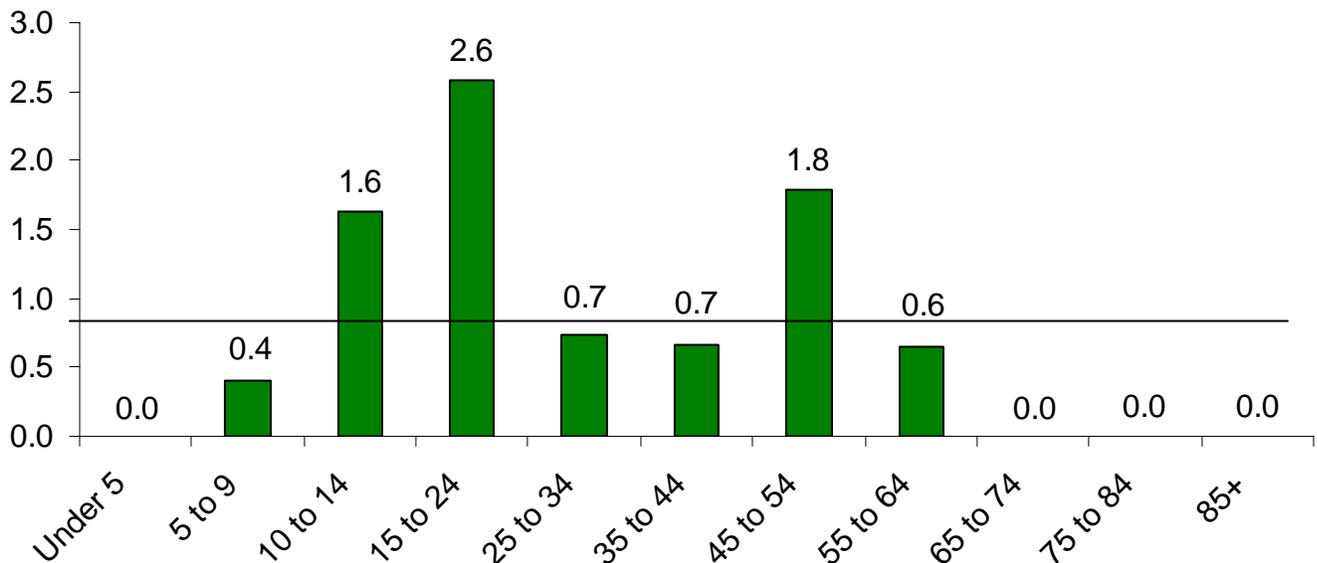
Gasoline Burns by Age



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. In 2010, people between the ages of 15 and 24 had the highest risk of getting a burn involving gasoline. Members of the age group 45 to 54 had the second highest risk of getting a gasoline burn. Historically, adolescents in the age group 10 to 14 have had the greatest risk of getting a burn involving gasoline. In 2010 they had the third 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.

Risk Factors for Gasoline Burns



21-Year Old Man Burned Working on Car

On February 26, 2010, a 21-year old Yarmouth man received burns to his lower extremities when he was trying to start a fire in a fire pit with gasoline. The fire flashed and ignited his jeans.

25-Year Old Man Burned by Gasoline While Grilling

On July 29, 2010, a 25-year old man was burned when he added gasoline to charcoal in his barbeque grill. He received burns to his face and arm when the fire flashed up at him.

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

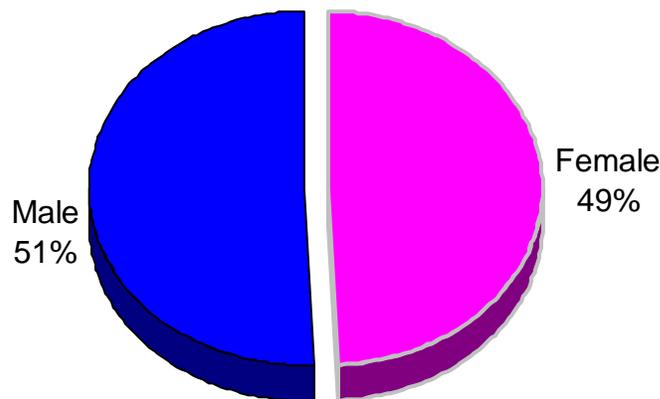
Cooking Activities Caused 28% of Reported Burn Injuries

Cooking activities caused 132, or 28%, of the 476 total burn injuries reported to the Massachusetts Burn Injury Reporting System in 2010. Cooking activities were the primary cause

of the injury in 128, or 97%, of these injuries. Because of more detailed descriptions as to how burn injuries occurred, it was determined that cooking activities were also involved in five, or 4%, of other burn injuries that were coded with a different primary description such as 'ignitable liquids.'

Sixty-seven (67), or 51%, of the 132 victims were male and the 65, or 49%, were female. Ten (10), or 8%, of the 132 people burned by cooking activities were working when injured.

Cooking-Related Burns by Gender



Scalds Cause 73% of Cooking-Related Burn Injuries

Ninety-seven (97), or 73%, of the 132 burn injuries caused by cooking were scalds. Sixty-eight (68), or 52%, of these scald victims were injured by hot cooking liquids; hot food accounted for 26, or 20%, of these victims. Two (2) victims, or 2%, were scalded in assaults; and another victim, or 1%, was scalded by unspecified cooking injuries.

Nineteen (19), or 14%, of all cooking-related burns were flame burn injuries. Seven (7), or 5% involved barbeques; one, or 1%, was from a gas grill. Six (6), or 5% of the cooking-related flame burn victims, were burned when their clothing ignited while cooking. Three (3), or 2%, were burned when cooking liquids started stovetop fires. Flaming food, an oven and a stove were each responsible for one, or 1%, of cooking-related flame burn injuries in 2010.

Nine (9), or 7% of all cooking-related burn victims, received contact burns while cooking. Contact with a hot oven and hot stove each caused three, or 2%; unspecified cooking acts caused two, or 2%, and touching a hot barbeque accounted for one, or 1%, of burn injuries while cooking.

Five (5) victims received burn injuries in cooking-related explosions, accounting for 4% of cooking burn injuries in 2010. Three (3) injuries involved barbeques accounting for 3% of these

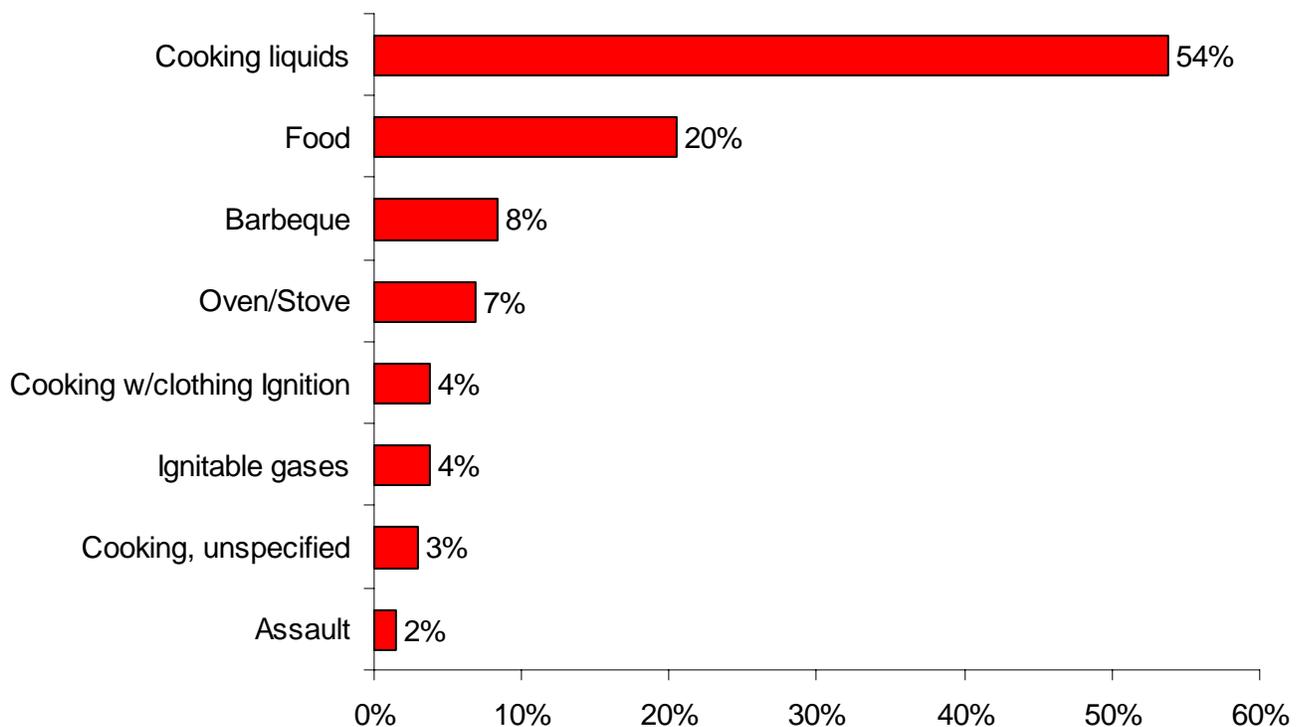
injuries. The other two explosion victims were injured in explosion while cooking using propane stoves, accounting for 2% of the cooking-related explosion burn victims.

Two (2) of these cooking burn injury victims, or 2%, received their burn injuries from fires. Both fires were house fires; one started from a stove and the other was an unspecified cooking act.

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 2010. These burns accounted for 71, or 54%, of all cooking-related burn injuries. Burns from hot food were the second leading cause of cooking-related injuries. They caused 27, or 20%, of these injuries. Burns received while barbequing accounted for 11, or 8%, of all cooking burn injuries. Burns from conventional ovens and stoves caused nine, or 7% of these burns. Clothing ignitions while cooking caused five, or 4%. Ignitable gases also caused five, or 4%, of the cooking burns; unspecified cooking activities caused four, or 2% of these burns; and assaults caused two, or 2%, of the cooking related burns in the Commonwealth in 2010.

Leading Causes of Cooking Burn Injuries

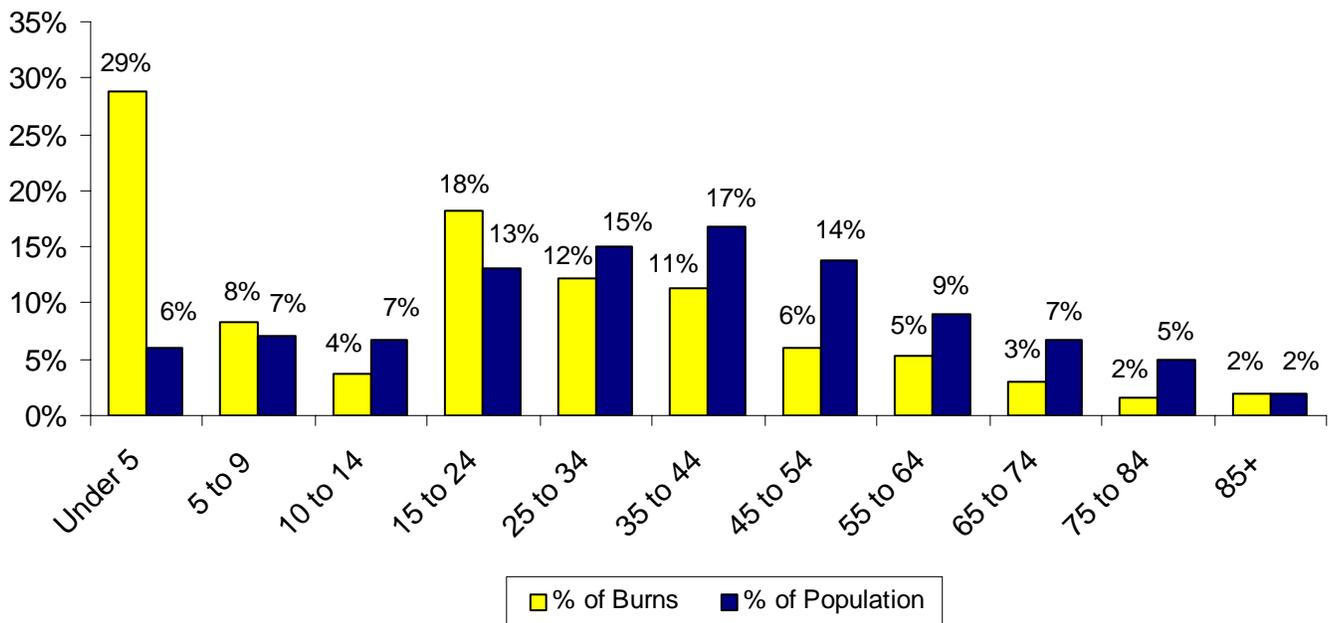


Children Under 5 Almost 5 Times as Likely to be Burned by Cooking Activities

Thirty-eight (38), or 29%, of the cooking-related burn victims were under age five. This age group was 4.8 times more likely to be burned by cooking related activities. Eleven (11), or 8%, were aged between five and nine years of age; five, or 4%, were between 10 and 14; 24, or 18%, were between 15 and 24 years old; 16, or 12%, were between 25 and 34; 15, or 11%, were

between 35 and 44; eight, or 6%, were between 45 and 54; seven, or 5%, were between 55 and 64; four victims, or 3%, were between 65 and 74; two, or 2%, of the victims belong to the age group between 75 and 84 years of age, and another two, or 2%, of the victims was over the age of 85 in 2010. The youngest victim of a cooking-related burn was a seven-month old girl, while the oldest victim was an 88-year old woman who received her 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 safely away from the stove and food preparation areas while adults are cooking.

In 2010 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 2010, eight older adults received burn injuries as a result of cooking in 2010. 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 63%, of these victims were men and three, or 38%, were women. Four (4) of these older adults were burned by cooking liquids, three had their clothing ignite while cooking; and one was burned by an oven.

Clothing Ignitions while Cooking

Loose-fitting sleeves can easily come into contact with burners and catch fire. In 2010, six, or 5% of the victims with cooking-related burns, were injured when their clothing ignited while

cooking. All six of the victims that had their clothing ignite while cooking were female. Three (3), or 50% of these burn 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 11,238 fires in 2009. These fires caused four civilian deaths, 79 civilian injuries, 25 fire service injuries along with \$10.4 million in losses. Many of these people also suffered from smoke inhalation⁹.

Serious Burns from Cooking

- On March 3, 2010 an 88-year old Lowell man received burn injuries to 20% of his body surface area when his shirt ignited when he got too close to his stove.
- On May 4, 2010 a 19-year old Fall River woman burned multiple body parts when she spilled a pot of boiling water on herself while she was at work.
- On April 13, 2010, a 19-year old Lowell man received second degree burns to over 12% of his body surface area while cooking when cooking liquids ignited and burned him.
- On August 29, 2010, a 24-year old Holden woman received burns to her hands and feet during a house fire started by something left on the stove.
- On October 23, 2010, a 43-year old Clinton woman received burns to 18% of her body surface area when her clothes ignited as she reached over 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.



⁹ 2009 Annual Report of the Massachusetts Fire Incident Reporting System; MA Dept. of Fire Services; pg. 134.

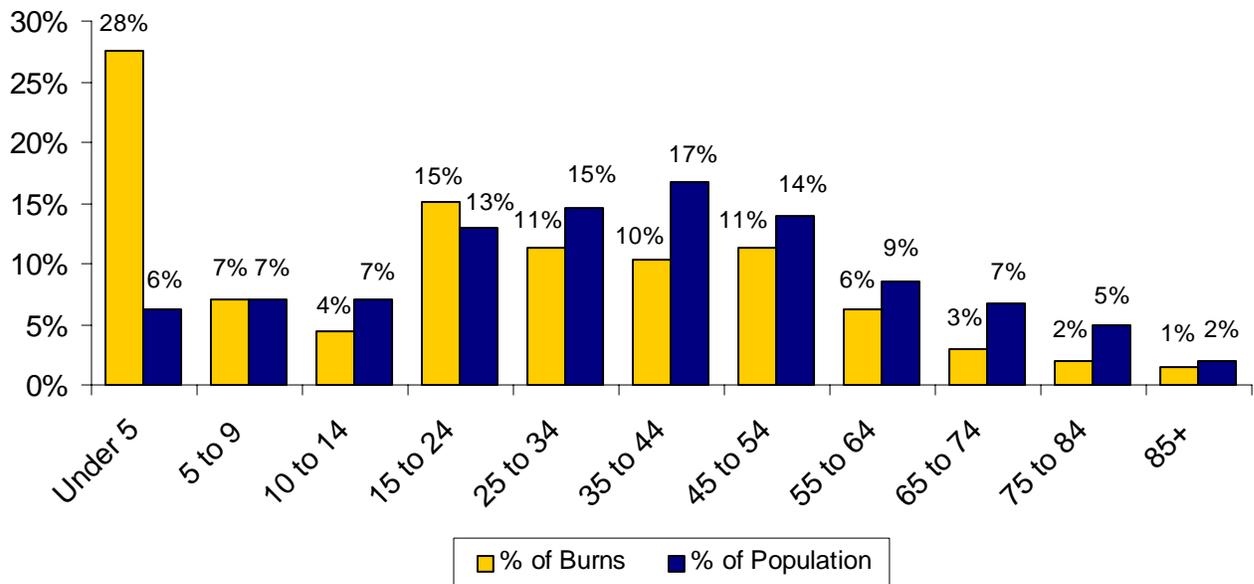
Burn Injuries by Age Group

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 almost four and a half times more likely to be burned. In 2010, 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-eight percent (28%) of all burn victims were children under the age of five. One hundred and thirty-one (131) children under age five were seriously burned in 2010. Thirty-five (35), or 7% of the burn injuries, occurred to children aged five to nine; 21, or 4%, were youths aged 10 to 14. Seventy-two (72), or 15% of the burn victims, were young adults aged 15 to 24. Fifty-four (54), or 11% of the 2010 burn victims were adults aged 25 to 34. Forty-nine (49), or 10%, were people aged 35 to 44. Fifty-four (54), or 11% of the burn injuries, occurred to adults aged 45 to 54; 30, or 6% of people who were reported to have incurred burns were between 55 and 64; 14, or 3% of all burn victims, were older adults in the 65 to 74 age group; nine, or 2%, were in the 75 to 84 year old age group; and seven adults over the age of 85, or 1% of all reported burn victims in 2010, received burns of more than 5% of their body surface area.

The following graph illustrates the figures in the previous paragraph.

Burn Injuries by Age Group



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 28% of the reported burn injuries in 2010, making them almost 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. Eighty-two (82) 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 only 6% of the Massachusetts population.

Scald & Flame 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 five 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 flame burns as the leading cause of burns to older adults between the ages of 65 and 74 and 75 and 84 years old.

Flame burns were also the leading cause or tied for the leading cause to five age groups. Flame burns were the leading cause of burn injuries to adults 35 to 44 and 55 to 64, and to older adults over the age of 85; and tied with scalds as the leading cause of burns to older adults between the ages of 65 and 74 and 75 and 84 years old.

Burn injuries from fire, was the leading cause of burn injuries to young adults between the ages of 10 and 14, 15 and 24 and adults 45 to 54.

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

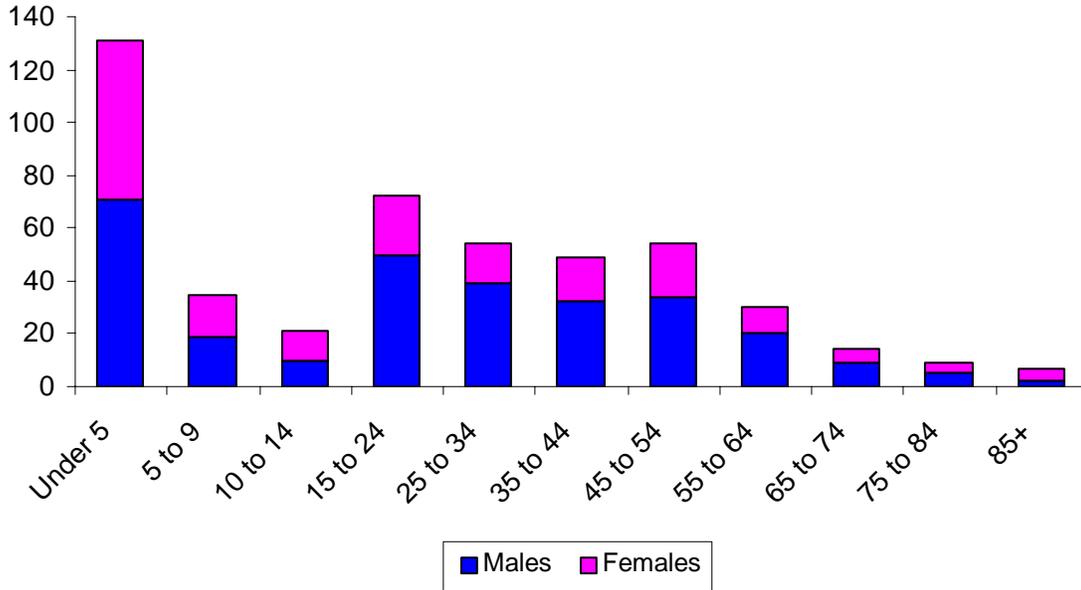
Causes of Burn Injuries by Age and Gender

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-four percent (34%) of the burns incurred by these young children were scalds caused by hot beverages, 21% were caused by scalds from hot tap water, and 10% were caused by cooking liquids. 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,

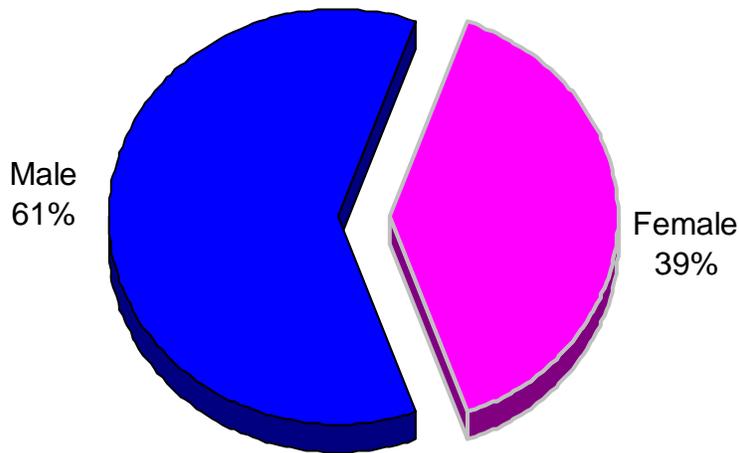
procedures to follow when a car overheats and the correct uses of gasoline. To be effective, burn prevention educators must develop strategies that address the risk faced by each age group.

Burn Victims by Age and Gender



Except for the age group adolescents 10 to 14 where 10 boys and 11 girls were burned, and older adults over the age of 85 where five men and seven women were burned, males were burned more frequently than females. In 2010, 291, or 61%, of the 476 burn victims were male, and 185, or 39%, were female.

Burns by Gender



Children Under 5

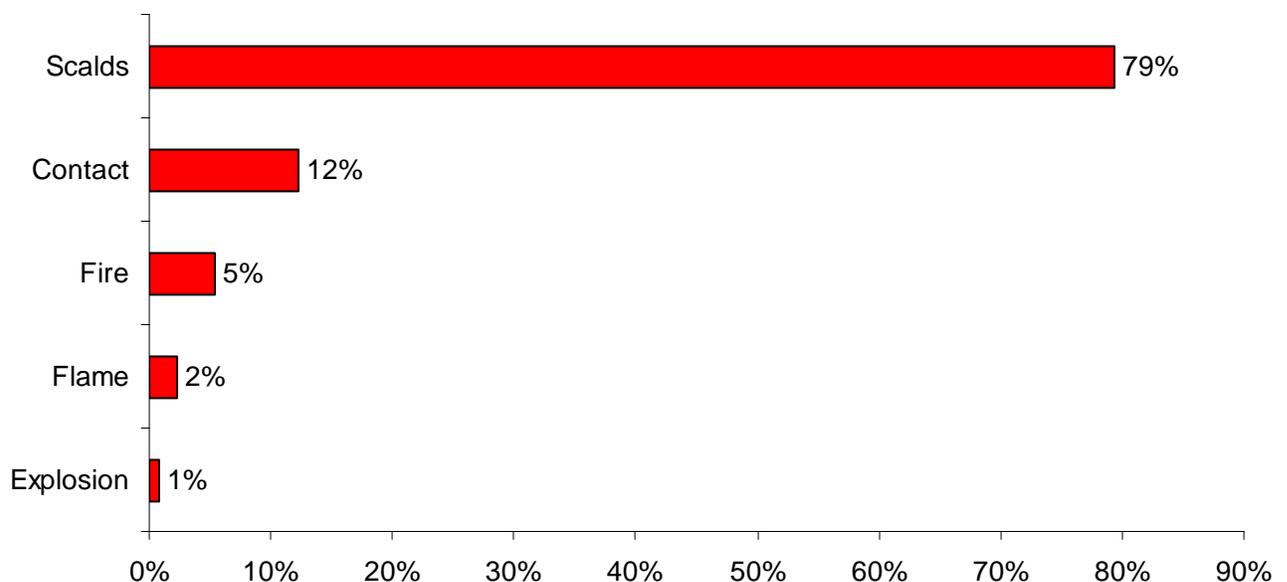
28% of Reported Burns Incurred by Children Under 5

One hundred and thirty-one (131), or 28%, of the burn injuries reported to M-BIRS in 2010 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-four percent (54%) of burned pre-schoolers were boys and 46% were girls.

Scalds Caused 79% of Burns to Pre-Schoolers

Scalds caused 104, or 79%, of the burn injuries incurred by children under five. Forty-four (44) were from hot beverages; 33 were from cooking activities; 20 burns were from hot food, and 13 were from cooking liquids. Twenty-seven (27) burns to children under five were from hot tap water in 2010.

Leading Causes of Burns to Children Under 5



Contact burns accounted for 16, or 12%, of the injuries to children under the age of five. Five (5) children were burned when they touched clothes irons. Four (4) children were burned by coming into contact with heating equipment; three children touched a heater and the other a hot radiator. Four (4) were burned during cooking activities; one each from touching a barbeque, an oven, a stove and an unspecified cooking act. Two (2) burns were the result of contact with a hot machine. Contact with a curling iron caused one burn injury to this age group.

Fires caused seven, or 5%, of the injuries to this age group. Five (5) house fires, one camp fire, and one bon fire caused injuries to a child in this age group.

Flame burns caused three, or 2%, of burns to this age group. Two (2) clothing ignitions from candles and a clothing ignition from cooking caused these burn injuries.

One (1) child under the age of five received a burn from an explosion causing 1% of the burn injuries to children under five in 2010. Propane was responsible for this burn.

Children Ages 5 to 9

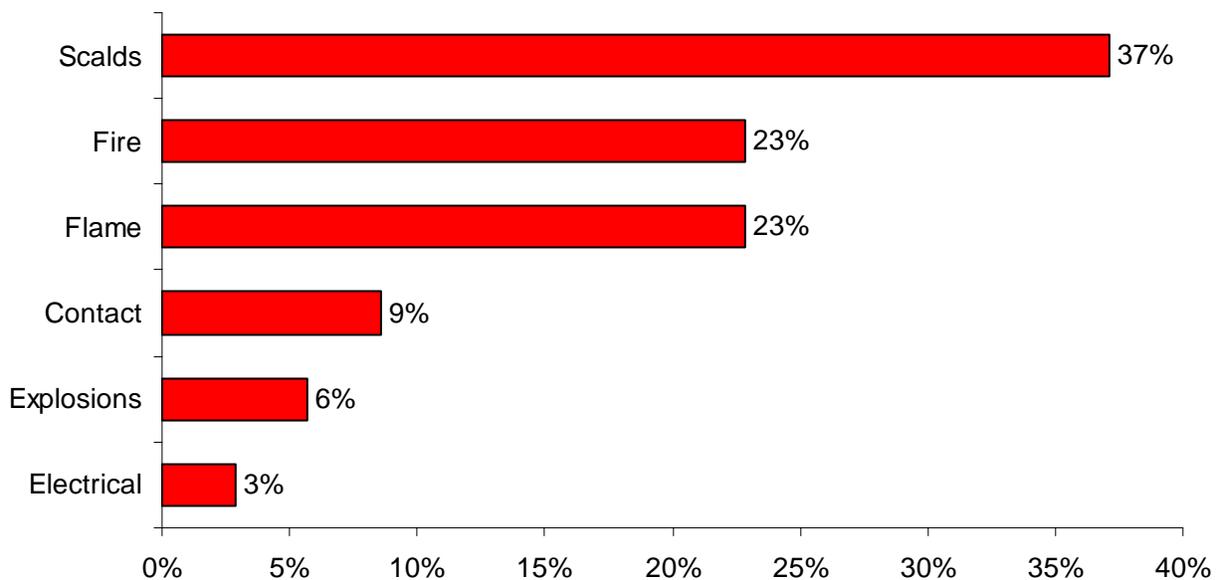
7% of Reported Burn Injuries Incurred by Children 5-9

Thirty-five (35), or 7%, of the burn injuries reported in 2010 were incurred by children between five and nine years of age. Nineteen (19), or 54%, of the burn victims were boys, and 16, or 46%, were girls. Children in this age bracket accounted for 7% of the population of Massachusetts and 7% of the burn injuries in 2010.

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 13, or 37%, of the burn injuries incurred by children aged five to nine in 2010. The scald burn injuries included eight from cooking activities; five from cooking liquids and three from hot food; three were from hot beverages. Two (2) of these burns were also from hot tap water.

Leading Causes of Burns to Children 5 to 9



Eight (8) children in this age group was burned in fires, accounting for 23% of the total burns to children between five and nine. Four (4) children were burned in house fires, three in camp or bon fires, and one child was burned in a motor vehicle fire.

Flame burns also accounted for eight, or 23%, of the burn injuries to this age group. Four (4) injuries came from children misusing lighters, one of them igniting his clothes. A clothing ignition from cooking, an unspecified clothing ignition, a stove, and a child misusing matches each caused one of these flame burn injuries.

Contact burns accounted for three, or 9% of these burns. Contact with a curling iron, a radiator and an unspecified cooking object each caused one of these burns.

In 2010 explosions accounted for two burn injuries, or 6%, to this age group. Fireworks and propane each caused one of these injuries.

An unspecified electrical burn injury caused one, or 3%, of the burn injuries to children between the ages of five and nine.

Children Ages 10 to 14

4% of Reported Burns Incurred by Children 10-14

Children between the ages of 10 and 14 suffered 21, or 4%, of the burn injuries reported in 2010. Eleven (11), or 52%, were girls and ten, or 48%, were boys. Children in this age bracket accounted for 7% of the population in the Commonwealth of Massachusetts and 4% 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.

Burns from Fire Were the Leading Cause of Burns to Children 10-14

Seven (7) pre-teens, or 33% of the burn injuries to this age group, were due to fires; five were injured in camp or bon fires, and two pre-teens were injured in house fires.

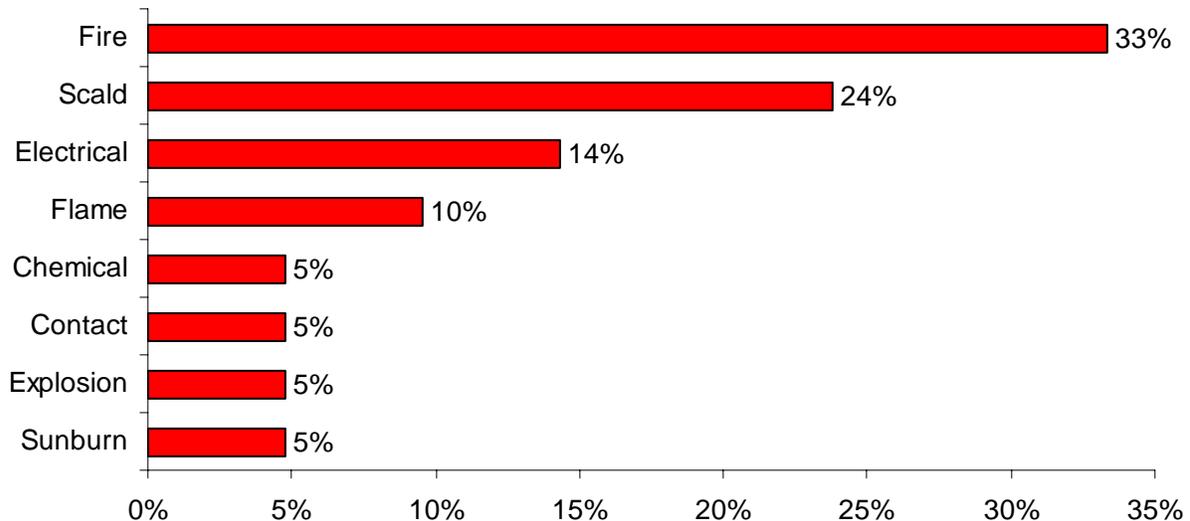
Scalds caused five, or 24%, of the burns incurred by children aged 10 to 14. Cooking activities caused all five of these burns; cooking liquids were responsible for three and hot food for two.

Electrical burns accounted for three, or 14%, of the burn injuries to this age group. All three children received injuries from unspecified electrical accidents.

Two (2) pre-teens, or 10%, were injured by flame burn injuries. Both of these injuries involved gasoline, with one child 'playing' with the gasoline.

One (1) pre-teen received a chemical burn; another received a contact burn by touching a hot car part; another was burned by an explosion from fireworks and another was sunburned. Each of these burns were responsible for 5% of the burns to this age group.

Leading Causes of Burns to Children Ages 10 to 14



Ignitable Liquids & Fireworks Caused Over 1/4 of Pre-teen Burns

Overall, gasoline, other ignitable liquids, and fireworks were a factor in six, or 29%, of the burn injuries to pre-teens; these included three fires, two flame burn injuries, and one explosion injury. Gasoline was involved in four, or 19%, of these injuries; other ignitable liquids were a factor in one, or 5%; and fireworks accounted for one, or 5%, of these injuries.

Ages 15 to 24

15% of Reported Burn Victims Between 15-24

Teens and young adults between the ages of 15 and 24 incurred 72, or 15%, of the burn injuries reported in 2010. Fifty (50), or 69%, were male and 22, or 31%, were female. Young adults aged 15 to 24 account for 13% of the population of Massachusetts and 15% of the burn injuries in 2010. Ten (10), or 14%, of the burn injuries incurred by this age group were work-related, eight were male and two were female.

32% of Burns Were From Fires

The leading cause of burn injuries to this age group were burn injuries from fires. Thirty-two percent (32%), or 23, of the burn injuries incurred by people aged 15 to 24 were from fires.

Twelve (12) victims received burns from camp or bonfires, five in house fires, two victims were injured in brush fires, two in motor vehicle fires and one in fire started by fireworks.

Scalds were the second leading cause of burn injuries to this age group. Twenty (20), or 28%, of the burn injuries to people 15 to 24 years of age were caused by scalds. Fifteen (15) were caused by cooking activities; 14 from cooking liquids and one from hot food. An assault, a hot beverage, a car radiator, a clothes iron and hot tap water each caused one of these burns.

Fourteen (14), or 19%, of the burn injuries to this age group were caused by flames. Gasoline was involved in three of these burn injuries. Flame burns from cooking caused three of these injuries; two from cooking liquids, and one from an oven. Flammables caused two of these injuries. An assault, a candle, a clothing ignition, an attempt at self-immolation, smoking in bed and a woodstove each accounted for one flame burn injury to this age group.

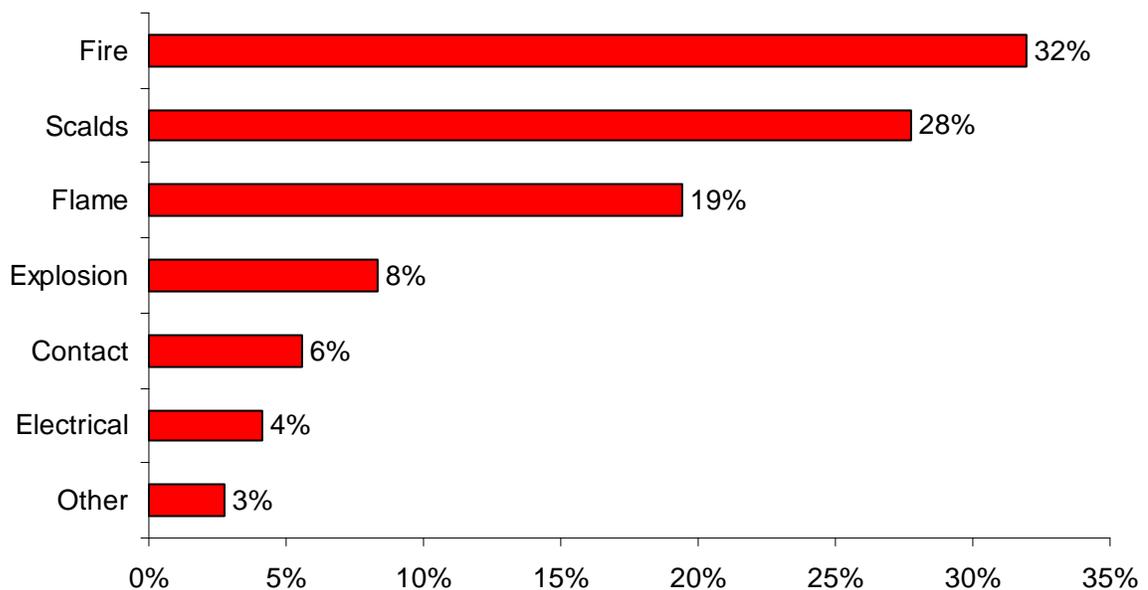
Explosions injured six, or 8%, of people in this age category. Gasoline was involved in three of these injuries. A barbecue, a cigarette and propane each caused one explosion burn injury.

Contact with hot objects caused four of these burn injuries, or 6%, of the burns to this age group. Cooking activities caused two of these injuries; an oven and a stove each caused one burn apiece. A candle and motor oil each caused one burn injury to this age group.

There were three electrical burn injuries to this age group. Two (2) were unspecified electrical burns and one was an electrocution. These three burns accounted for 4% of their injuries.

There were two 'Other' burns in this age group causing 3% of the burn injuries. Both of these were sunburns.

Leading Causes of Burns to People Ages 15 to 24



Ages 25 to 34

11% of Burn Victims Were Between 25 and 34

Fifty-four (54), or 11%, of the burn injuries reported in 2010 were incurred by people between 25 and 34 years of age. Thirty-nine (39), or 72%, of the victims were men and 15, or 28%, were women. Ten (10), or 19%, of the burn injuries suffered by this age group were work-related; nine were men and one was a woman. People between the ages of 25 and 34 accounted for 15% of the population of Massachusetts while accounting for 11% of the total number of burn injuries reported in 2010.

Scalds Caused 30% of Burn Injuries

Scalds accounted for 16 burns, or 30% of the burn injuries for this age group. Eleven (11) of the scalds were from cooking liquids. Hot tap water caused three of these burns. Beverages and a car radiator were each responsible for one scald burn injury to this age group.

Flame burns caused 15, or 28%, of the injuries to 25-34 year olds. Ignitable liquids caused five of these burns; three were from ignitable liquids other than gasoline, and two were from gasoline. Cooking activities accounted for four of these burn injuries; three involved barbeques and cooking liquids accounted for one. Ignitable gases were responsible for three of these burns; two involved propane and the other natural gas. Alcohol, a candle and a heater each caused one flame burn injury to someone in this age group.

Burns from fires caused nine injuries and accounted for 17% of the burn injuries to this age group. These fire-related burns included five from camp or bon fires and four from house fires.

Contact burns caused six, or 11%, of the burns to this age group. Contact with hot asphalt, an assault, a firefighter during overhaul, a heating pad, a lawnmower and a hot piece of metal each caused one of these burns.

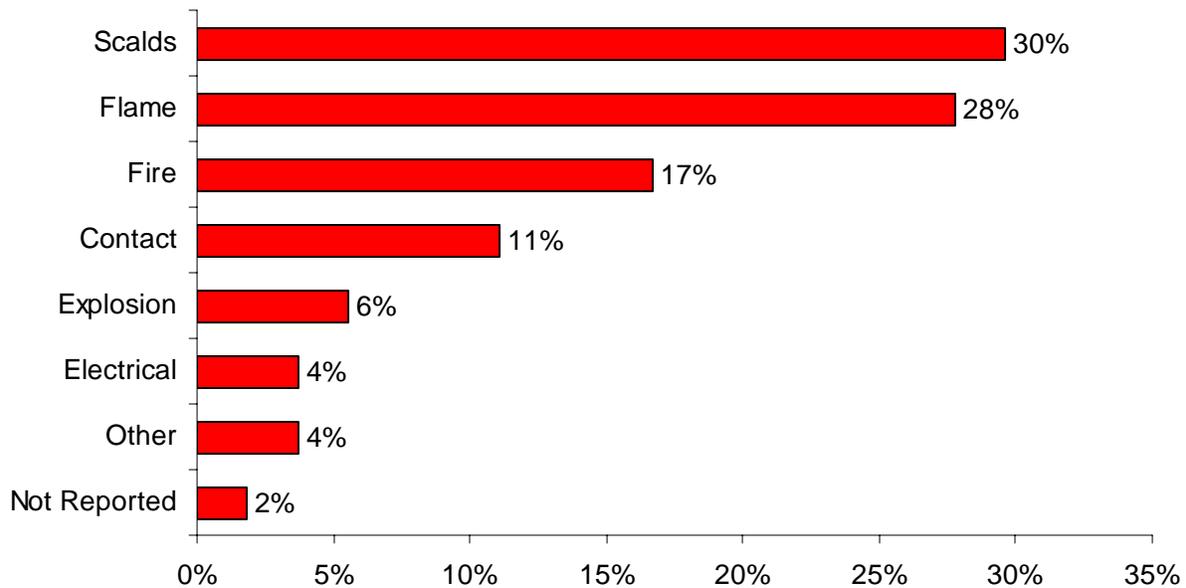
Three (3), or 6%, of the burns to 25 to 34 year olds were caused by an explosion. An explosion involving a gas barbeque grill, gasoline and a watercraft each injured one person in this age group.

Two (2) people, or 4%, received electrical burns. One of these burns was from an electrocution and the other was an unspecified electrical burn.

Two (2) people, or 4%, between the ages of 25 and 34 received *Other* type burns. Both of these burns were chemical burns.

The type and description of the burn injury to one member in this age group was not reported. This accounted for 2% of the burn injuries to people between the ages of 25 to 34.

Leading Causes of Burns to People Ages 25 to 34



Ages 35 to 44

10% of Reported Burn Victims Were Between 35 and 44 Years of Age

Forty-nine (49), or 10%, of the burn injuries reported in 2010 occurred to people between the ages of 35 and 44. Thirty-two (32), or 65%, of the victims were men and 17, or 35%, of the victims were women. Adults between the ages of 35 and 44 accounted for 17% of the Massachusetts population but only 10% of the reported burns in 2010.

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.

Flame Burns Were the Leading Cause of Injuries to 35-44-Year Olds

In 2010, flame burns were the leading cause of burns to 35 to 44 year olds. They 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 ignitable liquids other than gasoline and one from gasoline. Cooking activities also caused four flame burn injuries; two from barbeques and one each from a clothing ignition from cooking and another from flaming food. A car part, a flaming chemical fire, a water heater and welding each caused one flame burn injury in this age group.

Scalds caused 11, or 22%, of the burn injuries to this age group. Nine (9) of these injuries were from cooking liquids. An assault and a hot water bottle each caused one scald burn to this age group.

Explosions accounted for nine, or 18%, of the total burn injuries to this age group. Ignitable gases caused four of these injuries; two involved propane and natural gas and a gas fueled barbeque each caused one of these injuries. Fireworks, ignitable liquids, a water vehicle, a woodstove and an unidentified explosion were each responsible for one of these burns.

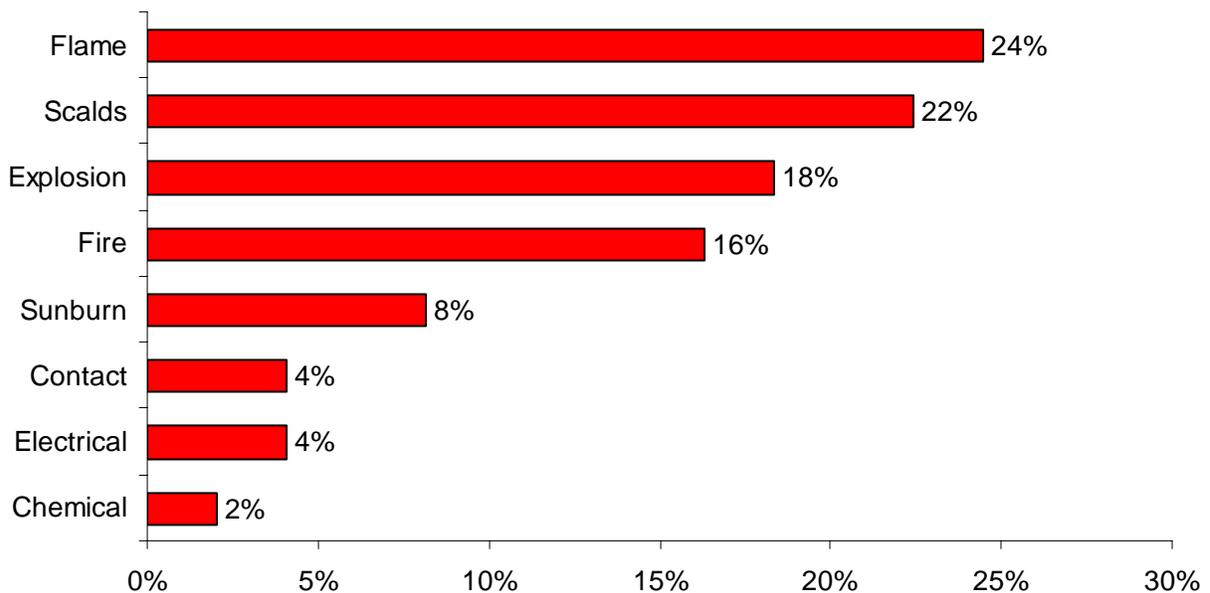
Burns from fires accounted for eight, or 16%, of the burn injuries to this age group. Four (4) were from house fires, two were from brush fires, one was from a motor vehicle fire, and one injury was from a camp fire.

Contact burns accounted for two, or 4%, of the burns to this group. A heating pad and a space heater each caused one of these burns.

Electrical burns also caused two, or 4%, of these burns. One person was electrocuted and the other received an unspecified electrical burn.

Other type burns accounted for five, or 10% of burns to this age group. Four (4) were from sunburns and one was a chemical burn.

Leading Causes of Burns to People Ages 35 to 44



Ages 45 to 54

11% of Reported Burn Injuries Were Between 45 and 54 Years of Age

People between the ages of 45 and 54 incurred 54, or 11%, of the reported burns in 2010.

Thirty-four (34) or 63%, of the victims were male, and 20, or 37%, were female. Seventeen (17) of the 54 burn victims aged 45 to 54, or 33%, were burned while at work; 15 of them were men and two were women. This age group represents 14% of the population of Massachusetts while it received only 11% of the burn injuries in 2010.

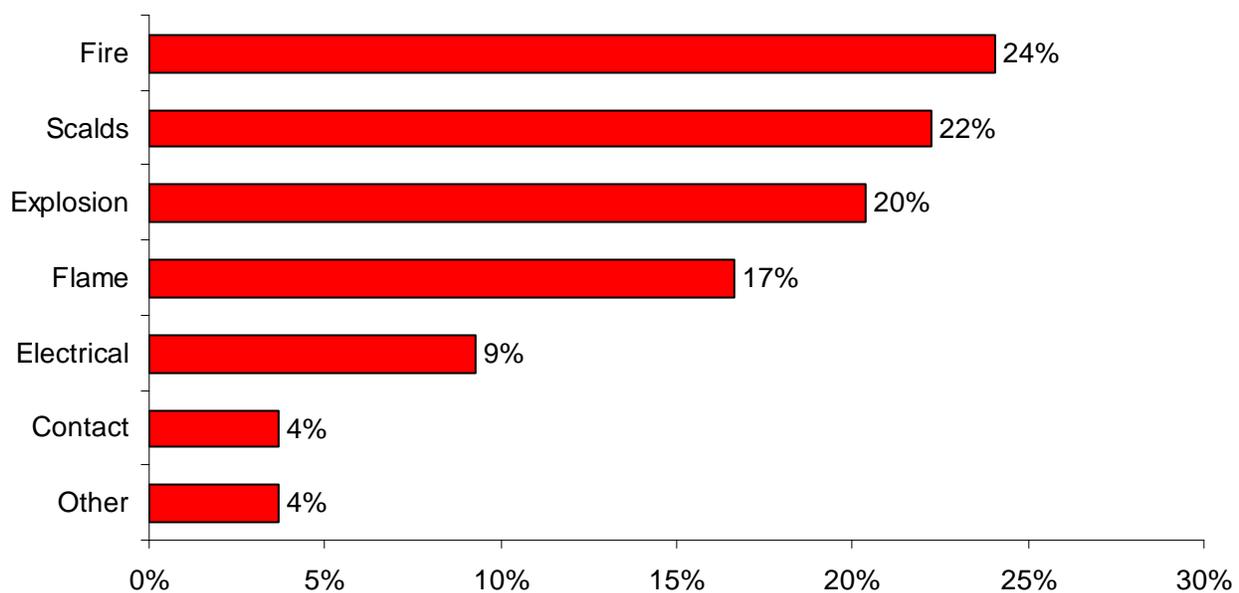
Burns from Fires Caused Almost 1/4 of the Burn Injuries

Burns from fires caused 13, or 24%, of the burn injuries to victims 45 to 54 years old. Six (6) burns were caused by camp or bon fires; three injuries were caused by house fires; two were from brush fires, one was from a motor vehicle fire and the type of fire was not reported for one burn victim.

Scalds caused 12, or 22% of the burn injuries to this age group. Cooking activities caused seven of these injuries; cooking liquids caused six and an unspecified cooking activity caused one of these injuries. Steam caused two of these injuries. An assault, a hot beverage and hot tap water each caused one of these burns.

Eleven (1) members of this age group were victims of explosions. They accounted for 20% of the burn injuries to this age group. Six (6) involved ignitable liquids; four involved gasoline and the other two involved an ignitable liquid other than gasoline. Two (2) of these injuries were caused by an electrical explosion. Two more injuries involved explosives; one was caused by fireworks and the other by gunpowder. Propane caused one of these burn injuries.

Leading Causes of Burns to People Ages 45 to 54



Flame burns were incurred by nine, or 17%, of the burn victims between the ages of 45 and 54. Clothing ignitions and attempts at self-immolation each caused three of these injuries. A flaming electrical problem, gasoline and a woodstove each caused one of the burns to this age group.

Electrical burns were responsible for five, or 9%, of the burns to this age group. Four people were burned in unspecified electrical accidents and one person was electrocuted.

Contact burns caused two, or 4%, of the burns to victims between the ages of 45 to 54. Contact with a heating pad and a stove each caused one of these burns.

There were two *Other* type burn injuries to this age group, accounting for 4% of the burn injuries. Both victims were burned by chemicals.

Ages 55 to 64

6% of Burn Victims Were Between 55 and 64 Years Old

Thirty (30), or 6%, of the burns reported in 2010 were incurred by people between the ages of 55 and 64. Twenty (20), or 67%, of the victims were men, and ten, or 33% were women. Three (3), or 10%, of the 30 burn injuries incurred by people between 55 and 64 years old were reported to be work-related, and all three were men. People of this age group represent 9% of the total population of Massachusetts but only received 6% of the burns in 2010.

1/2 of Burn Injuries Were Flame Burns

Flame burns accounted for 15, or 50%, of the injuries to this age group. Smoking caused four of these burns; two people were injured smoking cigarettes, one while smoking on home oxygen, and another from an unspecified smoking incident. Clothing ignitions from candles caused two of these burns. Barbequing accounted for two, of these flame burn injuries; one involved a gas fueled grill. Heating appliance also caused two of these burns; one was from a heater and the other from a woodstove. An unspecified clothing ignition, flammables and propane each caused one flame burn injury to someone in this age group.

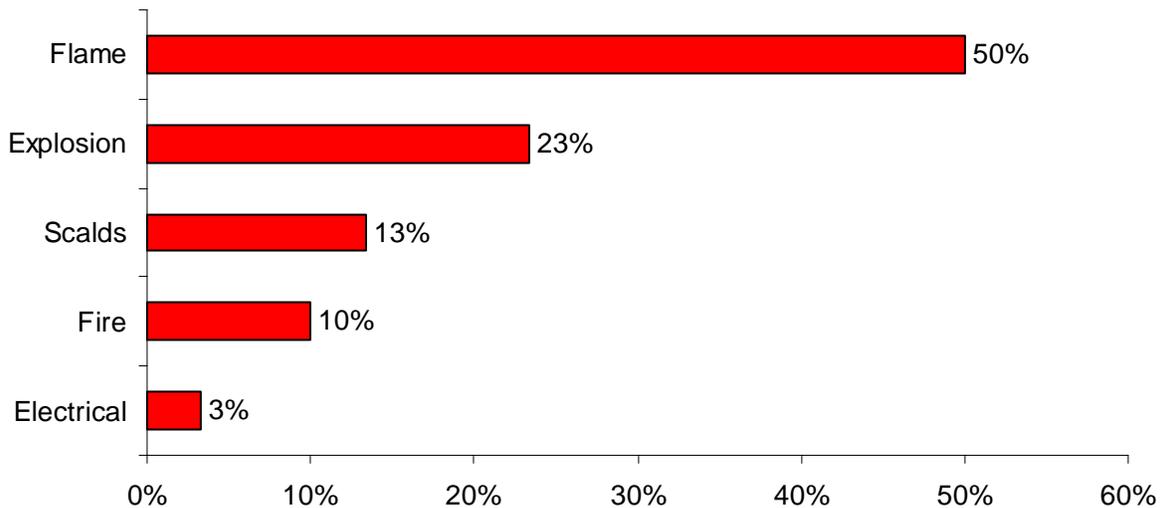
Explosions caused seven, or 23%, of burn injuries to adults 55 to 64. Propane caused three of these injuries and welding activities caused two. Explosives caused one burn injury to members of this age group.

Scalds caused four, or 13%, of the burn injuries to people between the ages of 55 and 64. Cooking liquids caused three of these burns and a hot beverage caused one scald burn injury to this age group in 2010.

Burns from fires caused three injuries to people between the ages of 55 and 64 years of age in 2010, accounting for 10% of these injuries. A house fire, a motor vehicle fire and a structure fire each caused one of these injuries.

An unspecified electrical burn injury caused one, or 3% of the injuries to adults between the ages of 55 and 64.

Leading Causes of Burns to People Ages 55 to 64



Over 65 – Older Adults

30 Burn Victims Over 65

Thirty (30), or 6%, of the burn victims in 2010 were over 65 years old. Fourteen (14) were between 65 and 74; nine were between 75 and 84; and seven were 85 years old or older. Sixteen (16), or 53% of the victims were women, and 14, or 47%, were men. Older adults represent 14% of the total Massachusetts population but only 6% of the burn injuries in 2010 which means that in 2010 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 13,105 reported burn injuries to M-BIRS, 914 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%.

Flame Burns Were the Leading Cause of Burns to Older Adults

In 2010, flame burn injuries were the leading cause of burns to older adults. Flame burns caused 12, or 40%, of the burn injuries to people over the age of 65. Smoking caused five of these injuries; smoking on home oxygen accounted for four and a clothing ignition while smoking caused one injury. Cooking activities accounted for three of these injuries; clothing ignitions

while cooking caused two of these injuries and an unspecified cooking act caused one. A car part, flammables and a fireplace each caused one flame burn injury to this age group.

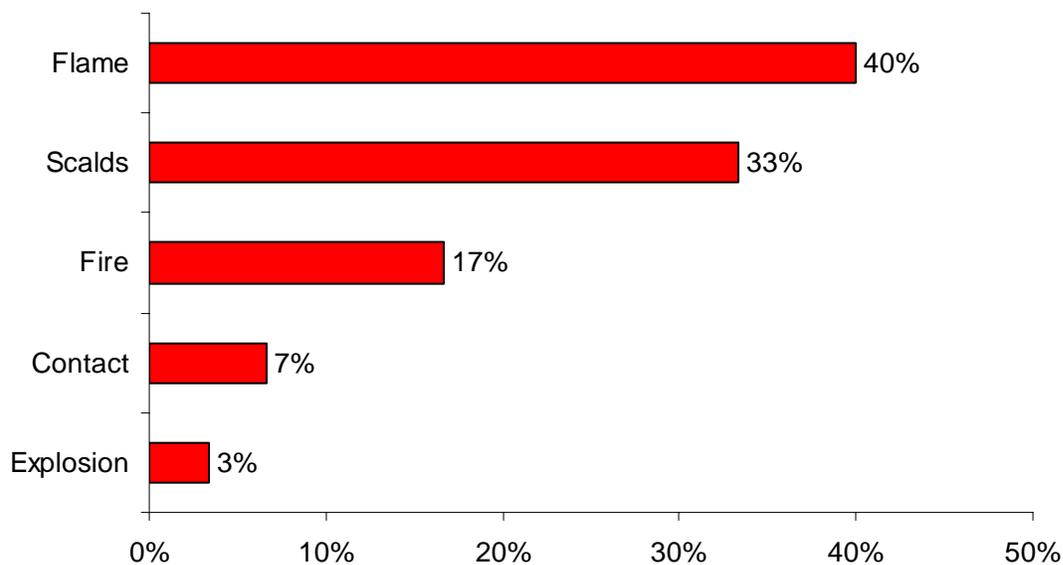
Scalds caused 10, or 33%, of the burn injuries to this age group. Four (4) were from cooking liquids. Hot tap water caused three scalds, hot beverages caused two, and a water heater caused one injury to this age group.

Burns from fires caused five, or 17%, of burn injuries to adults over the age of 65. House fires caused three of these burn injuries; a motor vehicle fire and a structure fire each caused one of these injuries.

Contact with hot objects caused two, or 7%, of the burn injuries to older adults in 2010. An oven and a woodstove each caused one of the injuries to this group

One victim, or 3%, of this age group was burned during an explosion caused by smoking on home oxygen.

Leading Causes of Burns to Older Adults (65+)



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 2010, cooking accounted for eight, or 27% of the reported burn injuries in Massachusetts incurred by older adults. Clothing ignitions caused 13% and smoking accounted for 23% of the burn injuries to older adults.

Safety Tips for Older Adults

- Cook with the pot and pan handles turned in.
- Wear clothes with short or tight fitting sleeves and watch for clothes touching elements on the stove.
- 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.
- Do not use a cooking stove for heating purposes or for drying clothes.
- Remember “Stop, Drop, & Roll” – It just may save your life.
- Do not smoke when you are tired, drinking alcohol or taking medications that make you drowsy. If you must smoke, make sure there are working smoke detectors in the immediate vicinity.

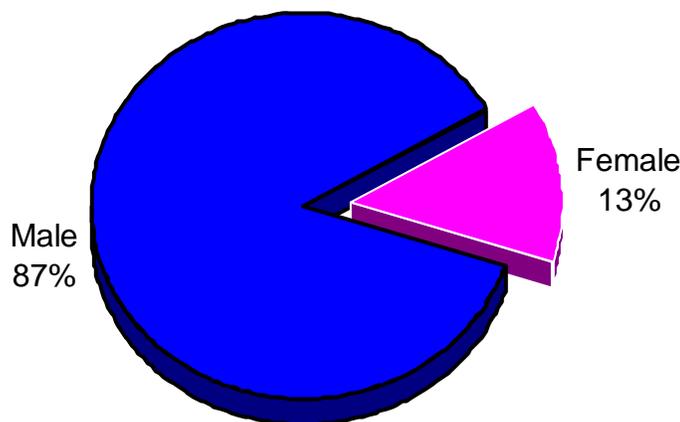


Work-Related Burn Injuries

11% of Reported Burns Occurred at Work

Massachusetts hospitals indicated that 52, or 11%, of the 476 burn injuries reported in 2010 occurred while the victim was at work. Men were much more likely to be burned while working than women. Forty-five (45) men, 87%, and seven women, 13%, were burned at work in 2010. In 2010, no one died from a work-related burn injury.

Work-Related Burns by Gender

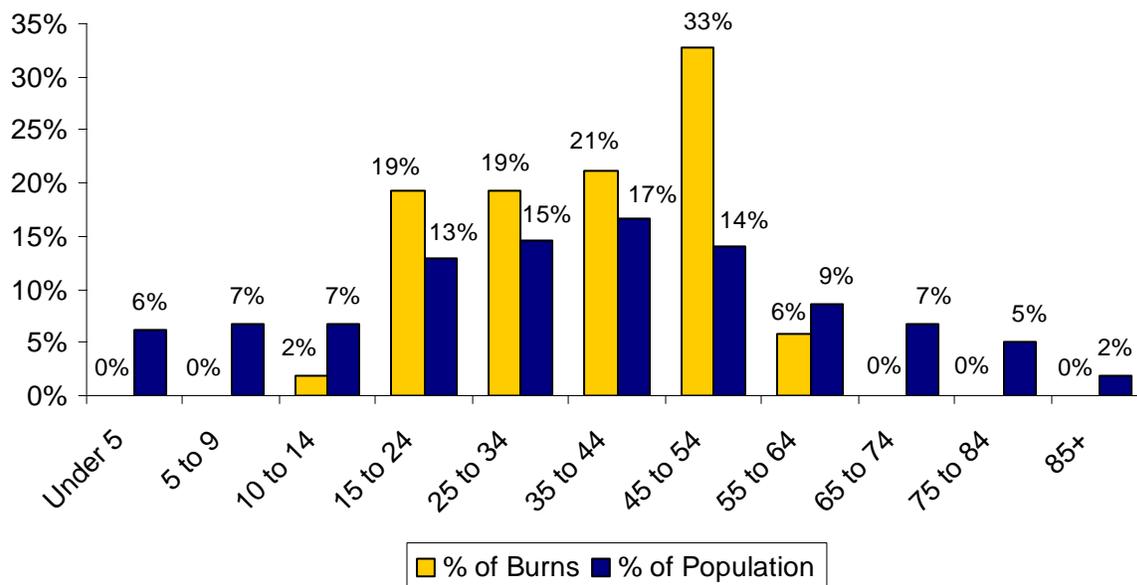


1/3 of Work-Related Burns Incurred by People Between 45 and 54

No one under the age of 12 received a work-related burn in 2010. One (1) or 2%, was between 10 and 14-years old. Ten (10), or 19%, were between 15 and 24 years of age. Another 10, or 19%, of the victims were between 25 and 34 years of age; 11, or 21%, belonged to the 35 to 44 age group. Seventeen (17), or 33%, of work-related burn injuries were victims 45 to 54 years old. Three (3), or 6% 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 2010 was a 12-year old boy who received a scald burn from cooking liquids. The oldest victim to receive a work-related burn was a 60-year old man who received a burn from an explosion caused by welding.

The following graph illustrates the above paragraph.

Work-Related Burns by Age Group



Explosions Were 1/4 of Work-Related Burns

Explosions were the leading cause of work-related burns in 2010. Thirteen (13), or 25%, of the 52 work-related burns were from explosions in 2010. Four (4) victims were injured in explosions caused by propane. Three (3) of the work-related injuries caused by explosions involving ignitable liquids; gasoline caused two and another ignitable caused one explosion. Explosions from electrical failures and welding each caused two work-related injuries. Gunpowder and an unidentified explosion each caused one work-related explosion burn injury in 2010.

Scalds were the second leading cause of work-related burns in 2010. These 12 burn injuries accounted for 23% of work-related burns. Seven (7) involved cooking liquids. Two (2) were from hot tap water. Hot beverages, a car radiator and steam each accounted for one of the work-related scald burns in 2010.

Electrical burns accounted for 11, or 21%, of work-related burns in 2010. Four (4) victims were electrocuted and seven were from unspecified electrical accidents.

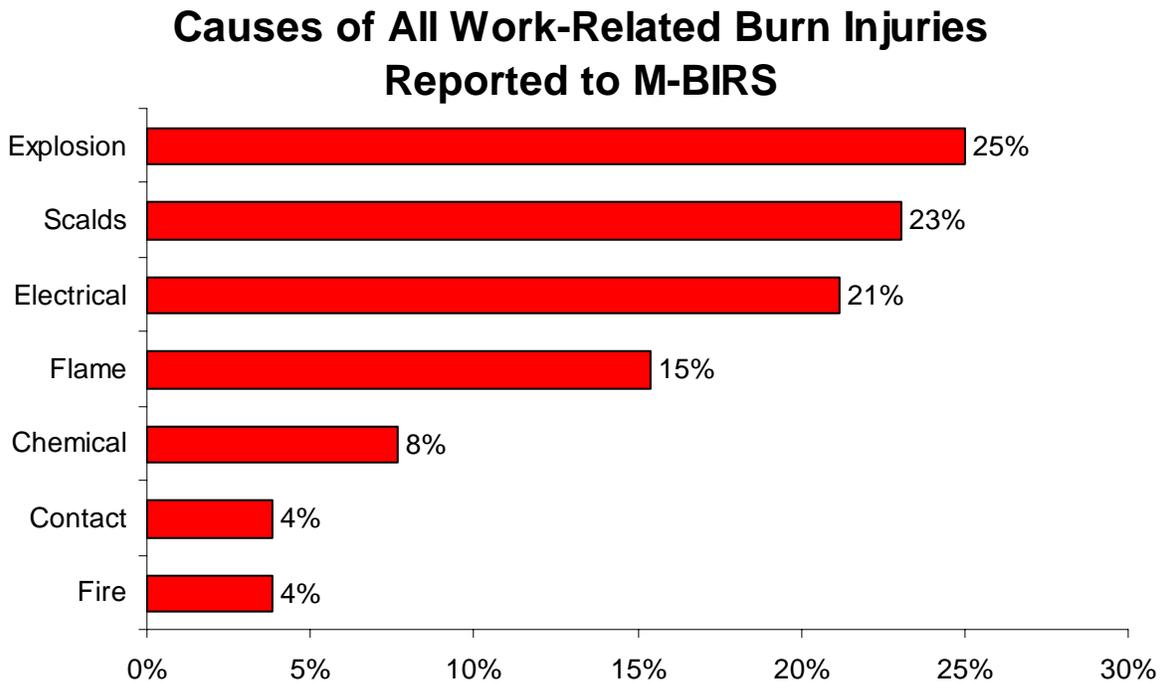
Flame burns accounted for eight, or 15%, of these work-related burns. Ignitable liquids caused three of these burns; two were from unidentified ignitable liquids and one involved gasoline. Another three flame burns involved cooking; a barbeque, flaming food and an oven were each responsible for a single burn injury. A chemical and a small electrical fire each caused one of the work-related flame burn injuries in 2010.

Chemicals were responsible for four, or 8% of work-related burns in 2010.

Contact burns caused two, or 4%, of work-related burn injuries in 2010. Contact with hot asphalt and a firefighter coming into contact with a hot object each caused one of these burn injuries.

Another two people, or 4% of these burns, were burned in fires while working. One victim as burned in a motor vehicle fire caused by a car part while the other was burned by a camp fire.

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.



63% 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. Thirty-three (33), or 63% of the 52 work-related burns reported to M-BIRS in 2010 occurred in Massachusetts. Scalds caused 10, or 30%, of the Massachusetts work-related

burns. Burns from explosions caused nine, or 27%. Flame burns caused six, or 18% of these burns. Five (5), or 15% of work-related burns in Massachusetts were electrical burn injuries. Chemical burns accounted for two, or 6% of these burns, and contact burns caused one, or 3%, of the work-related burns that occurred in the Commonwealth in 2010.

Ten (10) of the work-related burns reported M-BIRS occurred in New Hampshire, four occurred in Maine, one occurred in Connecticut, and two other work-related burns happened outside the United States. There were two reported injuries where the victims lived in Massachusetts but the address where the burn occurred was not reported.

2 Work-Related Injury Resulted in Death or Life-Threatening Injuries

In 2010, there was one reported work-related burn that resulted in a life-threatening injury or death. The worker was killed in a propane explosion in Norfolk. A colleague of his received life-threatening burn injuries in the same explosion.

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 the Occupational Safety and Health Administration (OSHA), Region I, for inspection to ensure that the hazardous conditions associated with the burn injuries among employees in the private sector have been corrected and to ensure that workers are no longer at risk from hazardous conditions.¹⁰ MDPH requested that OSHA investigate 15 workplaces where burn injuries occurred in 2010. OSHA had already been informed about six of the incidents and was investigating four of these workplaces, three of which were electrical burn injuries. Among the six, one incident was being investigated by the Department of Transportation instead of OSHA, since it involved a truck explosion and fire that injured two employees, and another was a public sector workplace, which is exempt from OSHA jurisdiction.

Seven companies were inspected by OSHA based solely on the MDPH referrals. OSHA identified hazards in five of the seven investigated; the hazards that were identified included absence of personal protective equipment (such as a face shield for an acid operation), failure to protect employees against ignition of flammable liquids, failure to provide training to employees about the hazards, lack of preparation for emergency response, and electrical hazards.

A 48-year old male employee died as a result of a propane explosion and fire in a condominium complex that was under construction. Another seven people, including four other workers, two firefighters and a neighbor were treated as a result of the explosion, including a teen employee. The probable cause was a leaking propane connection. The Department of Fire Services investigated whether the propane had sufficient odorant that provides a warning about leaks.

A previous chemical burn injury in 2009 resulted in action this year; a public sector employee had skin contact with hydrofluosilicic acid, which may contain trace hydrofluoric acid. This incident triggered review of safe operating procedures used by cities and towns in handling this

¹⁰ Those injuries caused by explosions, chemical exposures, electricity, or that appeared to indicate likely violations of the OSHA standards, are referred to OSHA.

acid. A new poster was issued by the Massachusetts Departments of Environmental Protection and Public Health, reaffirming the steps to prevent burn injuries.

A previous fire fatality in 2008 in Falmouth, Massachusetts, led to action in 2010. A man was fatally injured while working as a subcontractor, part of a 4-man team installing spray polyurethane foam in the renovation of an attic of a single-family home. This tragic incident led to a case study by OSHA and the Spray Polyurethane Foam Alliance in 2009. They wrote that this case study was important because it occurred in a small business that was part of a “green career” path. They noted that the employees were often immigrants, and that the work entailed severe health and safety hazards. The spray polyurethane foam products likely ignited from contact with damaged electrical wiring. Doing this job correctly entails attention to electrical wiring, compressors and filters, confined space entry procedures, respiratory and skin protection. Other issues in this industry include ladders, scaffolding, aerial lifts and fall hazards

This year marks the 100th anniversary of the Triangle Shirtwaist Fire. On March 25, 1911, 146 workers, mostly young immigrant women, died when a fire broke out in a crowded garment factory in New York City. The carnage was intensified because the exit doors were locked, the fire escape was flimsy and collapsed, and the pumper trucks and ladders couldn’t reach the upper floors where the young women were working. In the aftermath of the fire, a number of innovations improved fire safety—including sprinkler systems; marked, unlocked exits, with doors that opened outwards; maximum occupancy limits; wider aisles for egress and worker rights for safer conditions.



Frances Perkins was a witness to the fire, which motivated her to work for reform in working conditions for women and children; she became the first female Secretary of Labor. OSHA was later established in 1971; this year marks forty years of OSHA’s influence, with declining workplace injury, illness and death rates.

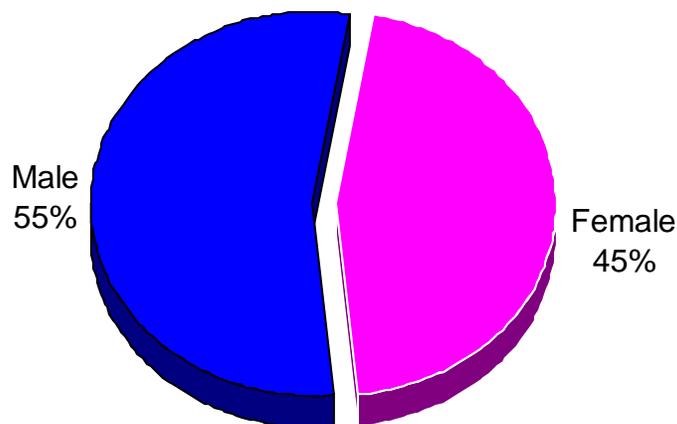
The relationship between the Department of Fire Services, Department of Public Health and OSHA serves as a model for how state and federal agencies can collaborate around the country. Based on this model, MDPH has also initiated referrals for amputation injuries, and is working on a guide for health departments to learn about OSHA and enhance communication and action on serious work-related cases.

Burn Injuries in the Home

2/3 of Burn Injuries Occur in the Home

The home is the most common place for burn injuries to occur. In 2010, 319 people, 67%, 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 seventy-four (174) men, or 55%, and 145 women, or 45%, were burned in their homes in 2010.

Home Burns by Gender



1/2 of All Home Burns Are Scalds

One hundred and sixty-one (161), or 50%, of the burn injuries that occurred in the home in 2010 were scalds. Cooking activities caused 79 of these home burn injuries; cooking liquids caused 54, hot foods caused 33 and unspecified cooking activities caused one of these injuries. Hot beverages caused 44 of burns at home. Scalds from hot tap water accounted for 33 of these burns. Assaults caused two of these burns. A clothes iron, a hot water bottle and a water heater each accounted for one of the home burn injuries in 2010.

Flame Burns Account for 1/5 of All Burns at Home

Flame burns were the second leading cause of burn injuries in the home. Flame burns accounted for 65, or 20%, of all home-related burn injuries.

Cooking activities accounted for 12, or 4%, of all home flame burn injuries; clothing ignitions while cooking caused five injuries, barbecues also caused five (one was a gas barbecue), cooking liquids caused three, a stove and an unspecified cooking act each caused one of these injuries.

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

Smoking also caused nine, or 3%, of these flame burn injuries; five were caused by smoking while on oxygen, two were from cigarettes, one was from smoking in bed and the other one was an unspecified smoking activity.

Six (6), or 2%, were from children misusing various items. Four children were misusing lighters and one of these led to a clothing ignition, one child was misusing gasoline and another child was misusing matches.

There were five unspecified clothing ignitions, accounting for 2% of home burns in 2010.

Five (5), or 2%, of these injuries were from candles with four causing clothing ignitions. Another five, or 2%, of home burn injuries were from heating equipment. Three (3) were from woodstoves and two were from heaters

Ignitable gases were responsible for three, or 1%, of these burns. Two (2) involved propane and one was caused by natural gas.

Car parts, flammables and attempts at self-immolation each caused two, or 1%, of home burns.

Alcohol, and welding each caused one home-related flame burn injury, accounting for less than 1% of all home burn injuries in 2010.

Burns from Fires Cause 13% of Home Burns

Burn injuries from fires accounted for 42, or 13% of all burn injuries in homes. Twenty-two (22) injuries were from house fires accounting for 7% of all home burn injuries. Many of these fires were caused by electrical problems, smoking, cooking and arson. There were 10 injuries, or 3%, caused by camp or bon fires in the victim's yards. Brush fires and motor vehicle fires each caused three, or 1%, of these injuries; and structure fires and fires where the fire type was not reported were each responsible for two, or 1%, of home burn injuries.

9% of Home Burns Come from Touching Hot Items

Contact burn injuries accounted for 29, or 9%, of all the burn injuries that occurred in homes in 2010. Cooking activities caused eight, or 3%, of these burns; three from contact with an oven, two from unspecified cooking activities, another two from a stove and one injury involved a barbeque. Contact with heating equipment caused seven, or 2%, of all the at-home burn injuries in 2010; three were from contact with heaters, two were from radiators and one each from a space heater and a woodstove. Four (4) people were burned by clothes irons in their own home, accounting for 1% of these burn injuries. Heating pads caused three, or 1%, of these injuries. Machines and curling irons were each involved in two, or 1%, of home burns. Contact with a candle, a car part, and a lawnmower each caused one, or less than 1%, of the reported burn injuries that occurred in homes in 2010.

Explosions Responsible for 4% of Burns in Homes

Explosions caused 14, or 4%, of all reported burn injuries in homes in 2010. Ignitable gases caused four, or 4%, of these injuries; three were caused by propane and one by natural gas. Ignitable liquids were involved in three, or 1%; two involved gasoline and one involved another

ignitable liquid. Barbeques also caused three, or 1%, of these injuries, two involved gas-fueled barbeques. Smoking caused two explosions; one involved a cigarette and the other smoking on home oxygen. A water vehicle and a woodstove were each involved in one, or less than 1%, of the 2010 home burn injuries.

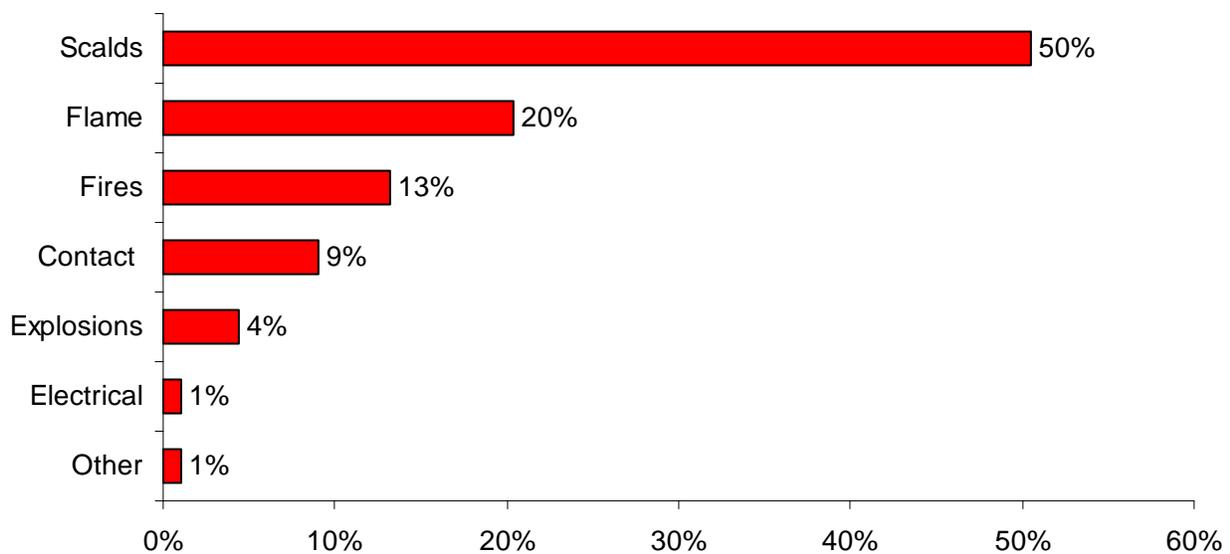
1% of Home Burns Caused by Electricity

Four (4) people received electrical burns at home in 2010. These four unspecified electrical burns accounted for 1% of all home burns.

Other Types of Burns Cause 1% of Home Burns

Four (4) *Other* type of burn injuries were reported occurring to victims in their homes in 2010 accounting for 1% of home burn injuries in 2010. Two (2) of these three injuries involved chemicals and the other two involved sunburns.

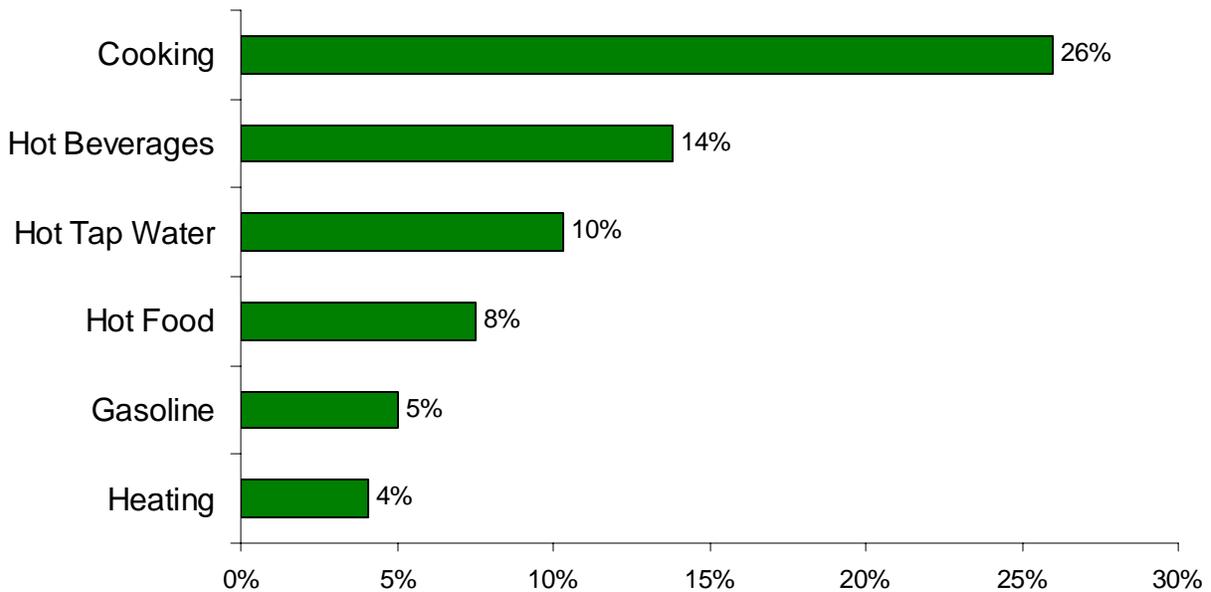
Types of Burn Injuries in the Home



Cooking Caused Almost 1/4 of Burn in Homes

In 2010 cooking activities caused the most overall burns regardless of burn type. Burns from cooking caused 83, or 26%, of burns in Massachusetts' homes. Hot beverages were the cause of 44, or 14%, of home burns in 2010. Hot tap water accounted for 33, or 10%, of these burns. Hot food was the cause of 24, or 8%, of home burns in 2010. Gasoline, including children misusing gasoline was involved in 16, or 5%, of home burn injuries. Heating equipment caused 13, or 4%, of these burns that were reported to have occurred in homes in 2010.

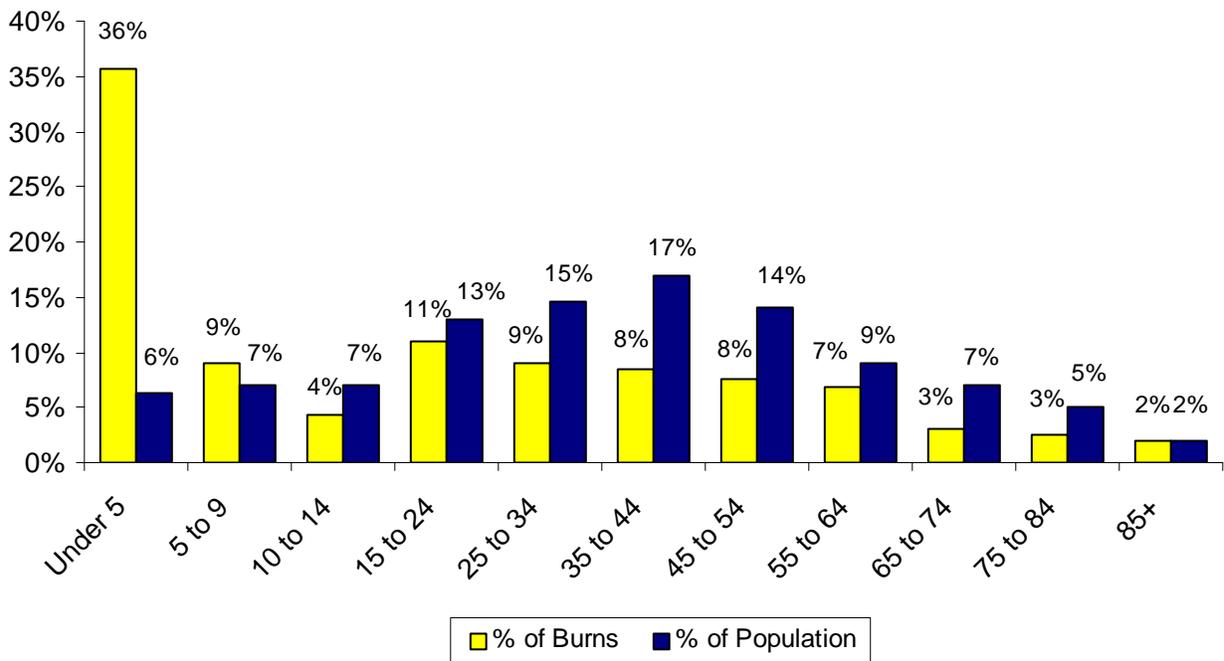
Leading Types of Burns Injuries in the Home



36% of Home Burns Were to Children Under 5

Thirty-six percent (36%) of the 319 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

Home Burn Injuries by Age Group



ages of five and nine received 9% of the burn injuries that occurred in people's homes, while children aged 10 to 14 accounted for 4% of these injuries. Young adults between the ages of 15 and 24 accounted for 11% of these burns; 9% were between 25 and 34; 8% were between 35 and 44; 8% were between 45 and 54; 7% were between 55 and 64; 3% were between 65 and 74; 3% were between 75 and 84; and 2% were over the age of 85.

Hot Beverage Scalds Youngest Victim & Oldest Victim Scalded by Steam

A one-month old girl, who received scald burns to 8% of her body surface area from hot tap water, was the youngest victim to receive an at-home burn injury. The oldest victim to receive a burn at home was a 94-year old man who received a scald to 8% of his body surface area from a car part.

1% of Home Burns Resulted in Death

Three (3), or 1%, of the 319 reported burn injuries that occurred in homes in 2010 resulted in death for the victim. Two (2), or 67% of these deaths, were men; and one, or 23%, was a woman. The youngest victim was a 53-year old woman who died from burns from a brush fire. The oldest victim to succumb to his injuries was an 83-year old man who received burns to 12% of his body surface when he was smoking while using home oxygen. A house fire, a brush fire and a flame burn injury each accounted for one home burn fatality.

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

Fifty-five (54) out of the 97 acute care health care facilities in Massachusetts submitted a total of 525 burn injury reports for 476 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.

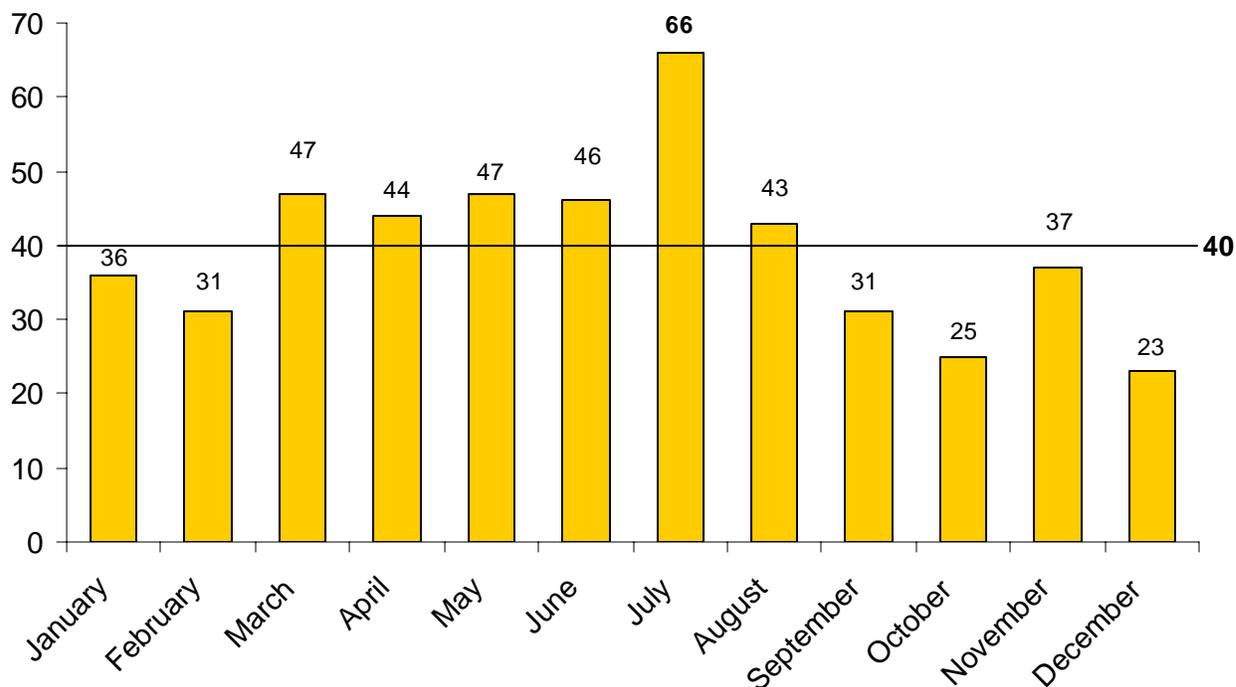
Burn Injuries by Month

Average of 40 Burns a Month

An average of 40 burns was reported during each month of 2010, from a low of 23 in December to a high of 66 in July. It is above the 5-year (2006-2010) average of 35 burns per month and also above the 10-year (2001-2010) average of 33 burns per month.

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

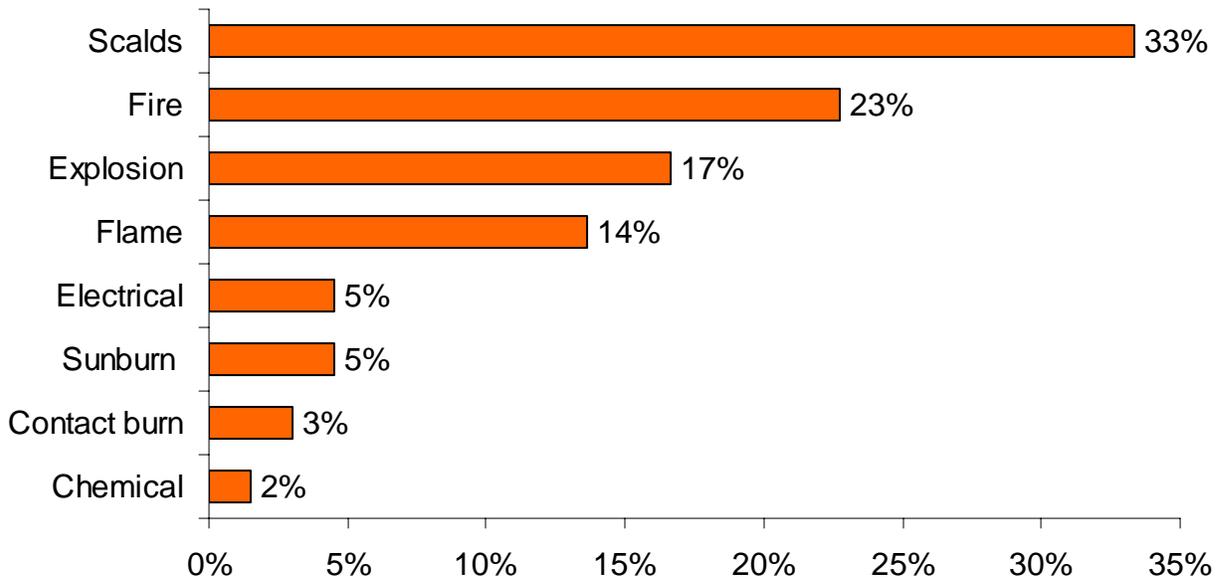
Reported Burn Injuries by Month



July Was the Peak Month for Burns

July was the peak month for burns in 2010. Sixty-six (66) burn injuries were reported to M-BIRS during July. In July, scalds accounted for 22, or 33%, of these burns. Burns from fires accounted for 15, or 23% of July's burn injuries. Burns from explosions caused 11, or 17%, of these burns. Flame burn injuries caused nine, or 14%, of these burns. Electrical burns and sunburns each accounted for three, or 5% of these injuries. Contact burns causes two, or 3%, of these injuries, and a chemical was responsible for one of the burn injuries in July 2010 in Massachusetts.

Reported Burn Injuries in July 2010



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

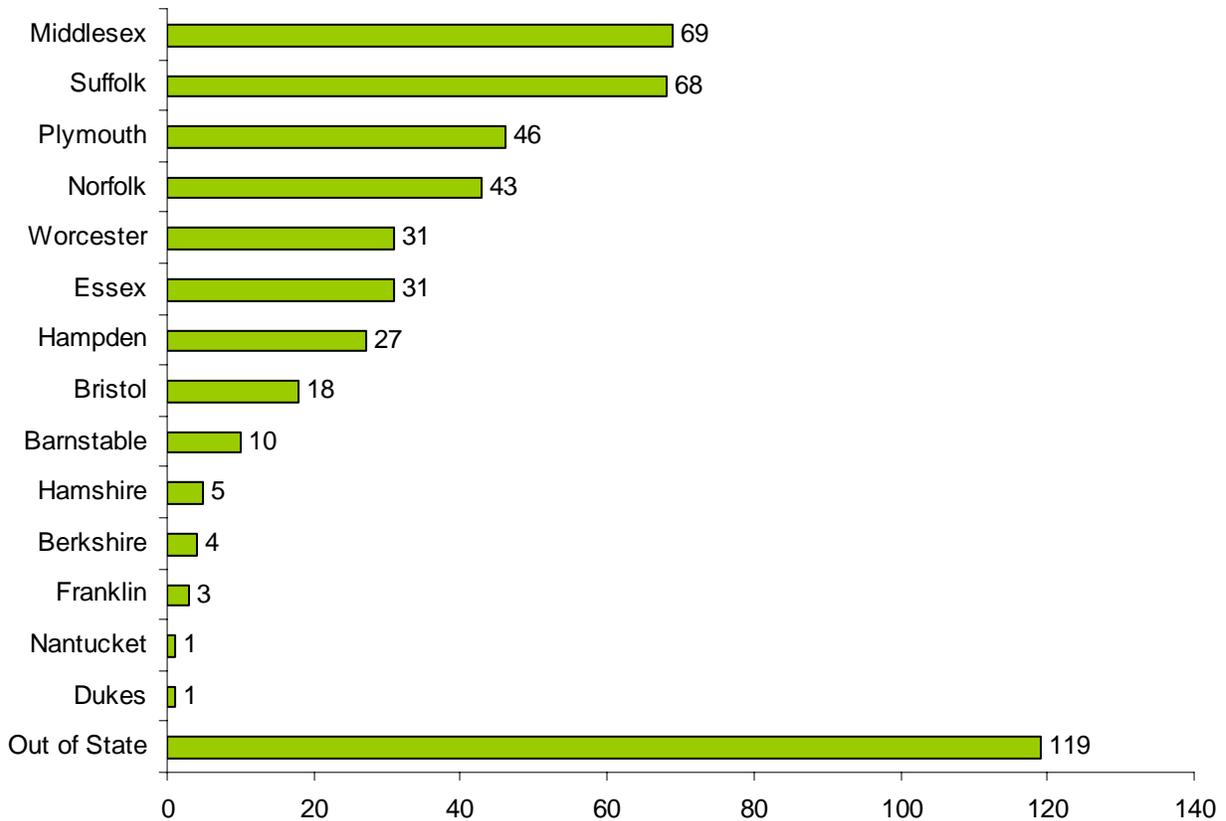
Geographical Demographics

Massachusetts Burn Victims from 129 Cities and Towns

Massachusetts medical facilities treated 357 residents of 131 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, Suffolk and Plymouth counties. It appears that some large Boston hospitals (Suffolk County) may have under reported the burns they treated.

One hundred and nineteen (119) 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.

Reported Burn Injuries by County



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 & Brockton had the Most Reported Burn Injuries

Boston was home to the most burn injury victims with 61 of its residents reported to have a burn injury in 2010, this is up from the 33 reported in 2009. Brockton had the second largest number of victims with 15. Springfield had 11 injury reports, Quincy and Worcester each had 10 residents receive burn injuries. Weymouth had nine residents; Lynn had seven, and Holyoke and New Bedford each had six reported burn injuries in 2010.

Burns Per 10,000 Population

However the map on page 65, *2010 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 2010.

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.

Monroe had the highest rate of burn injuries per 10,000 population at 107.53. Next highest was Washington with 55.15 burn injuries per 10,000 population; Tolland had 23.47; Chesterfield had 8.33; Manchester had 7.65; and Pelham had 7.13 burn injuries per 10,000 population¹¹.

Scalds Per 10,000 Population

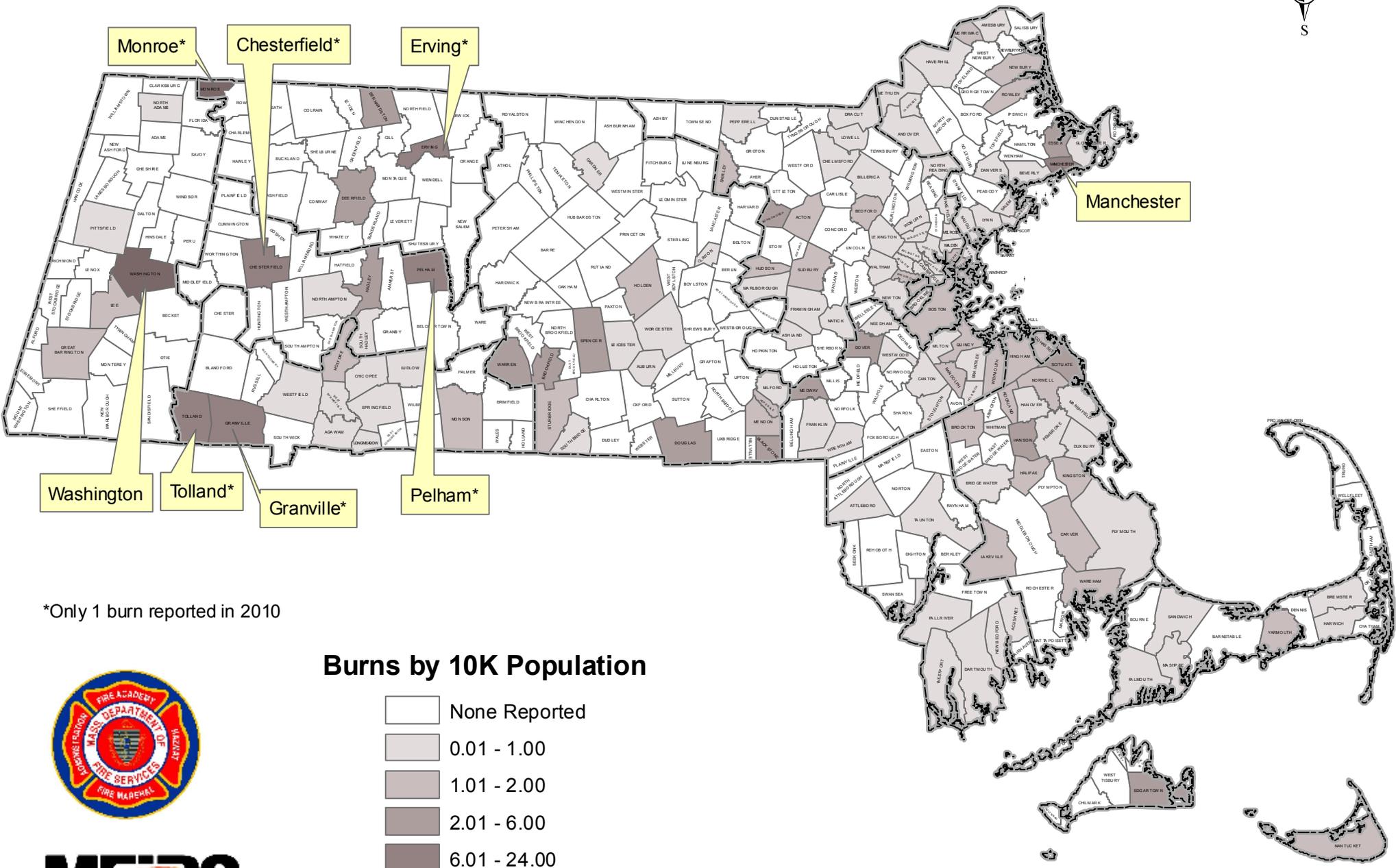
The map on page 66, *2010 Scalds per 10K Population*, displays the rate of reported scald burn injuries by the victim's home community for every 10,000 of that community's population. The darker the community is shaded the more burn injuries per 10,000 people were reported from that municipality. Cities and towns that are white did not have a reported burn injury in 2010.

Tolland had the highest rate of 23.47 scald burn injuries per 10,000 population. Next highest was Washington with 18.38 scald burn injuries per 10,000 population; Boxborough had 2.05; Manchester had 1.91; and Mendon had 1.89 scald burn injuries per 10,000 population¹².

¹¹ Monroe, Tolland, Chesterfield & Pelham each only had 1 burn injury reported in 2010. Washington had 3 reported burn injuries and Manchester had 4 in 2010.

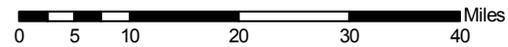
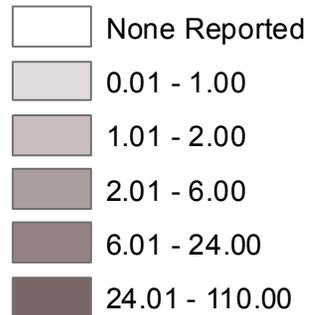
¹² Each of these communities only had one scald burn reported in 2010.

2010 MA Burns by 10K Population

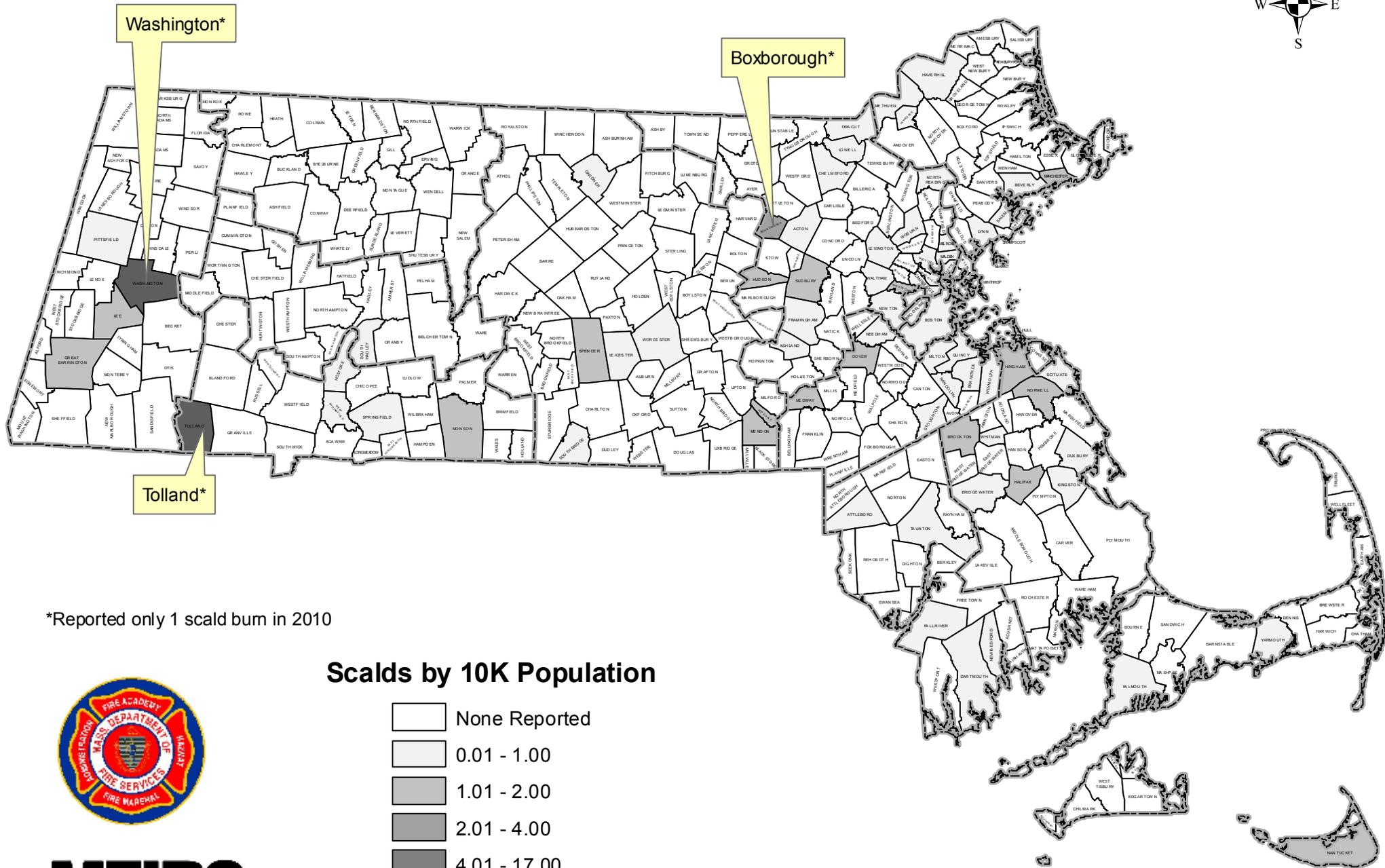


*Only 1 burn reported in 2010

Burns by 10K Population

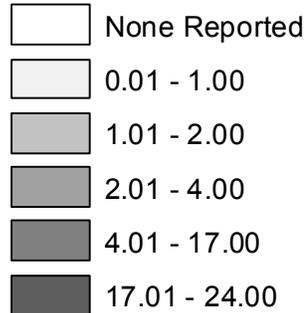


2010 MA Scalds by 10K Population

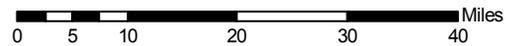


*Reported only 1 scald burn in 2010

Scalds by 10K Population



MFIRS
Massachusetts Fire Incident Reporting System



2010 Appendix

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

Specific Causes of Burn Injuries

<u>Cause</u>	<u># of Burns</u>	<u>% of Burns</u>	<u>Cause</u>	<u># of Burns</u>	<u>% of Burns</u>
Scalds	195	41.0%	Flame Burns (con't)		
Cooking	87	19.7%	Child Misusing	6	1.4%
<i>Cooking Liquids</i>	68	14.3%	<i>Child w/Lighter</i>	3	0.6%
<i>Food</i>	26	5.5%	<i>Child w/Gasoline</i>	1	0.2%
<i>Cooking</i>	1	0.2%	<i>Child/Lighter/Clothes</i>	1	0.2%
Beverages	53	11.1%	<i>Child w/Matches</i>	1	0.2%
Hot Tap Water	37	7.8%	Flammables	4	0.8%
Assault	3	0.6%	Self-immolation	4	0.8%
Steam	2	0.4%	Ignitable Gases	4	0.8%
Car Radiator	2	0.4%	<i>Propane</i>	3	0.6%
Clothes Iron	1	0.2%	<i>Natural Gas</i>	1	0.2%
Hot Water Bottle	1	0.2%	Car Part	2	0.4%
Water Heater	1	0.2%	Alcohol	1	0.7%
			Assault	1	0.2%
Flame Burns	90	18.9%	Chemical	1	0.2%
Cooking	18	3.4%	Electrical	1	0.2%
<i>Barbeque</i>	6	1.3%	Welding	1	0.2%
<i>Cooking/Clothes</i>	5	1.1%			
<i>Cooking Liquids</i>	3	0.6%	Fires	83	17.4%
<i>Barbeque (gas)</i>	1	0.2%	Camp or Bon Fires	35	7.4%
<i>Food</i>	1	0.2%	<i>Camp Fire</i>	16	3.4%
<i>Oven</i>	1	0.2%	<i>Gasoline</i>	6	1.3%
<i>Stove</i>	1	0.2%	<i>Bon Fire</i>	4	0.8%
<i>Cooking (Unspec.)</i>	1	0.2%	<i>Ignitable Liquids</i>	3	0.6%
Ignitable Liquids	16	3.4%	<i>Flammables</i>	2	0.4%
<i>Gasoline</i>	8	1.7%	<i>Aerosol</i>	1	0.2%
<i>Ignitable Liquids</i>	8	1.7%	<i>Alcohol</i>	1	0.2%
Smoking	10	2.1%	<i>Camp Fire</i>	1	0.2%
<i>Smoking on Oxygen</i>	5	1.1%	<i>Clothing</i>	1	0.2%
<i>Cigarette</i>	2	0.4%	House Fires	31	6.5%
<i>Smoking in Bed</i>	1	0.2%	<i>House Fire (Unspec.)</i>	18	3.8%
<i>Smoking/Clothes</i>	1	0.2%	<i>Smoking</i>	4	0.8%
<i>Smoking (Unspec.)</i>	1	0.2%	<i>Electrical</i>	2	0.4%
Candle	7	1.5%	<i>Arson</i>	1	0.2%
<i>Candle/Clothes</i>	5	1.1%	<i>Candle</i>	1	0.2%
<i>Candle</i>	2	0.4%	<i>Cooking</i>	1	0.2%
Heating Equipment	7	1.7%	<i>Earthquake</i>	1	0.2%
<i>Woodstove</i>	3	0.6%	<i>Natural Gas</i>	1	0.2%
<i>Heater (Unspec.)</i>	2	0.4%	<i>Stove</i>	1	0.2%
<i>Fireplace</i>	1	0.2%	Motor Vehicle Fires	7	1.5%
<i>Water Heater</i>	1	0.2%	<i>MV Accident</i>	2	0.4%
			<i>Boat Fire</i>	1	0.2%
			<i>Camp Fire</i>	1	0.2%

Cause	# of Burns	% of Burns
Fire (con't)		
<i>Car Fire</i>	1	0.2%
<i>Car Part</i>	1	0.2%
<i>Gasoline</i>	1	0.2%
Brush Fires	6	1.1%
<i>Gasoline</i>	5	1.1%
<i>Brush Fire</i>	1	0.2%
Structure Fires	2	0.4%
<i>Cutting Torch</i>	1	0.2%
<i>Rescue</i>	1	0.2%
Fires, Unspecified	2	0.4%
<i>Fire Control</i>	1	0.2%
<i>Fireworks</i>	1	0.2%
Explosions	41	8.6%
Ignitable Gases	11	2.3%
<i>Propane</i>	10	2.1%
<i>Natural Gas</i>	1	0.2%
Ignitable Liquids	11	2.3%
<i>Gasoline</i>	8	1.7%
<i>Ignitable Liquids</i>	3	0.6%
Explosives	6	1.3%
<i>Fireworks</i>	4	0.8%
<i>Gun Powder</i>	1	0.4%
<i>Explosives (Unspec.)</i>	1	0.2%
Cooking	3	0.6%
<i>Barbeque (Gas)</i>	2	0.4%
<i>Barbeque</i>	1	0.2%
Electrical	2	0.4%
Water Craft	2	0.4%
Welding	2	0.4%
Smoking	2	0.4%
<i>Cigarette</i>	1	0.2%
<i>Smoking on Oxygen</i>	1	0.2%
Explosion (Unspec.)	1	0.2%
Woodstove	1	0.2%
Contact Burns	36	7.6%
Cooking	9	1.9%
<i>Oven</i>	3	0.6%
<i>Stove</i>	3	0.6%
<i>Cooking (Unspec.)</i>	2	0.4%
<i>Barbeque</i>	1	0.2%

Cause	# of Burns	% of Burns
Contact Burns (con't)		
Heating Equipment	7	1.5%
<i>Heater</i>	3	0.6%
<i>Radiator</i>	2	0.4%
<i>Space Heater</i>	1	0.2%
<i>Woodstove</i>	1	0.2%
Clothes Iron	5	1.1%
Heating Pad	3	0.6%
Curling Iron	2	0.4%
Machine	2	0.4%
Asphalt	1	0.2%
Assault	1	0.2%
Candle	1	0.2%
Car Part	1	0.2%
Firefighter	1	0.2%
Lawnmower	1	0.2%
Metal	1	0.2%
Motor Oil	1	0.2%
Electrical	17	3.6%
Electrical (Unspec.)	13	2.7%
Electrocution	4	0.8%
Other Burn Injuries	13	2.7%
Sunburn	7	1.5%
Chemical	6	1.3%
Not Reported	1	0.2%
Unknown	1	0.2%

Causes of Burn Injuries by Age

UNDER 5			AGES 5 TO 9		
Cause	# of Burns	% By Age	Cause	# of Burns	% By Age
Scalds	104	79.4%	Scalds	13	37.1%
Beverages	44	33.6%	Cooking	8	22.9%
Cooking	33	25.2%	<i>Cooking Liquids</i>	5	14.3%
<i>Food</i>	20	15.3%	<i>Food</i>	3	8.6%
<i>Cooking Liquids</i>	13	9.9%	Hot Beverages	3	8.6%
Hot Tap Water	27	20.6%	Hot Tap Water	2	5.7%
Contact	16	12.2%	Flame	8	22.9%
Clothes Iron	5	3.8%	Child Misusing	5	14.3%
Heating	4	3.1%	<i>Child w/Lighter</i>	3	8.6%
<i>Heater</i>	3	2.3%	<i>Child/Lighter/Clothes</i>	1	2.9%
<i>Radiator</i>	1	0.8%	<i>Child w/Matches</i>	1	2.9%
Cooking	4	3.1%	Cooking	2	5.7%
<i>Barbeque</i>	1	0.8%	<i>Clothing</i>	1	2.9%
<i>Cooking (Unspec.)</i>	1	0.8%	<i>Cook/Clothes</i>	1	2.9%
<i>Oven</i>	1	0.8%	Stove	1	2.9%
<i>Stove</i>	1	10.8%	Fires	8	22.9%
Machine	2	1.5%	House Fires	4	11.4%
Curling Iron	1	0.8%	<i>Clothing</i>	1	2.9%
Hair Dryer	1	0.8%	<i>Electrical</i>	1	2.9%
Fire	7	5.3%	<i>Earthquake</i>	1	2.9%
House Fires	5	3.8%	<i>House Fire (Unspec.)</i>	1	2.9%
<i>House Fire (Unspec.)</i>	5	3.8%	Camp or Bon Fires	3	8.6%
Camp or Bon Fires	2	1.5%	<i>Camp Fire</i>	1	2.9%
<i>Bon Fire</i>	1	0.8%	<i>Gasoline</i>	1	2.9%
<i>Camp Fire</i>	1	0.8%	<i>Ignitable Liquid</i>	1	2.9%
Flame	3	2.3%	Motor Vehicle Fires	1	2.9%
Candle/Clothes	2	1.5%	<i>MV Accident</i>	1	2.9%
Cook/Clothes	1	0.8%	Contact	1	8.6%
Explosion	1	0.8%	Cooking (Unspec.)	1	2.9%
Propane	1	0.8%	Curling Iron	1	2.9%
			Radiator	1	2.9%
			Explosions	2	5.7%
			Fireworks	1	2.9%
			Propane	1	2.9%
			Electrical	1	2.9%
			Electrical (Unspec.)	1	2.9%

AGES 10 TO 14	21	4.4%
Cause	# of Burns	% By Age
Fire	7	33.3%
Camp or Bon Fires	5	23.8%
<i>Gasoline</i>	2	9.5%
<i>Camp Fire</i>	1	4.8%
<i>Clothing</i>	1	4.8%
<i>Ignitable Liquids</i>	1	4.8%
House Fires	2	9.5%
<i>Natural Gas</i>	1	4.8%
<i>House Fire (Unspec.)</i>	1	4.8%
Scalds	5	23.8%
Cooking	5	23.8%
<i>Cooking Liquids</i>	3	14.3%
<i>Food</i>	2	9.5%
Electrical	3	14.3%
Electrical (Unspec.)	3	14.3%
Flame	2	9.5%
Gasoline	2	9.5%
<i>Child w/Gasoline</i>	1	4.8%
<i>Gasoline</i>	1	4.8%
Other	2	9.5%
Chemical	1	4.8%
Sunburn	1	4.8%
Contact	1	4.8%
Car Part	1	4.8%
Explosion	1	4.8%
Fireworks	1	4.8%

AGES 15 TO 24 72 15.1%

Cause	# of Burns	% By Age
Fire	23	31.9%
Camp or Bon Fires	12	16.7%
<i>Camp Fires</i>	5	6.9%
<i>Gasoline</i>	3	4.2%
<i>Flammables</i>	2	2.8%
<i>Aerosol</i>	1	1.4%
<i>Bon Fire</i>	2	1.4%
House Fires	5	6.9%
<i>Unspecified</i>	3	4.2%
<i>Cooking (Unspec.)</i>	1	1.4%
<i>Stove</i>	1	1.4%
Brush Fires	2	2.8%
<i>Gasoline</i>	2	2.8%
Vehicle Fires	2	2.8%
<i>Boat Fire</i>	1	1.4%
<i>Car Fire</i>	1	1.4%
Fire, Unspecified	1	1.4%
<i>Fireworks</i>	1	1.4%
Scalds	20	27.8%
Cooking	15	20.8%
<i>Cooking Liquids</i>	14	19.4%
<i>Hot Food</i>	1	1.4%
Assault	1	1.4%
Hot Beverages	1	1.4%
Car Radiator	1	1.4%
Clothes Iron	1	1.4%
Hot Tap Water	1	1.4%

Cause	# of Burns	% By Age
Flame	14	19.4%
Gasoline	3	4.2%
Cooking	3	4.2%
<i>Cooking Liquids</i>	2	2.8%
<i>Oven</i>	1	1.4%
Flammables	2	2.8%
Assault	1	1.4%
Candle	1	1.4%
Clothes	1	1.4%
Self-immolation	1	1.4%
Smoking in Bed	1	1.4%
Woodstove	1	1.4%
Explosion	6	8.3%
Gasoline	3	4.2%
Barbeque	1	1.4%
Cigarette	1	1.4%
Propane	1	1.4%
Contact	4	5.6%
Cooking	2	2.8%
<i>Oven</i>	1	1.4%
<i>Stove</i>	1	1.4%
Candle	1	1.4%
Motor Oil	1	1.4%
Electrical	3	4.2%
Electrical (Unspec.)	2	2.8%
Electrocution	1	1.4%
Other	2	2.8%
Sunburn	2	2.8%

AGES 25 TO 34 54 11.3%

Cause	# of Burns	% By Age
Scalds	16	29.6%
Cooking Liquids	11	20.4%
Hot Tap Water	3	5.6%
Hot Beverages	1	1.9%
Car Radiator	1	1.9%
Flame	15	27.8%
Ignitable Liquids	5	9.3%
<i>Ignitable Liquids</i>	3	5.6%
<i>Gasoline</i>	2	3.7%
Cooking	4	7.4%
<i>Barbeque</i>	3	5.6%
<i>Cooking Liquids</i>	1	1.9%
Ignitable Gases	3	5.6%
<i>Propane</i>	2	3.7%
<i>Natural Gas</i>	1	1.9%
Alcohol	1	1.9%
Candle	1	1.9%
Heater	1	1.9%
Fire	9	16.7%
Camp or Bon Fires	5	9.3%
<i>Camp Fires</i>	2	3.7%
<i>Bon Fire</i>	1	1.9%
<i>Alcohol</i>	1	1.9%
<i>Ignitable Liquids</i>	1	1.9%

Cause	# of Burns	% By Age
Fires (con't)		
House Fires	4	7.4%
<i>House Fires</i>	2	3.7%
<i>Arson</i>	1	1.9%
<i>Candle</i>	1	1.9%
Contact	6	11.1%
Asphalt	1	1.9%
Assault	1	1.9%
Firefighter	1	1.9%
Heating Pad	1	1.9%
Lawnmower	1	1.9%
Metal	1	1.9%
Explosions	3	5.6%
Barbeque (Gas)	1	1.9%
Gasoline	1	1.9%
Water Craft	1	1.9%
Electrical	2	3.7%
Electrical (Unspec.)	1	1.9%
Electrocution	1	1.9%
Other	2	3.7%
Chemical	2	3.7%
Not Reported	1	1.9%
Unknown	1	1.9%

AGES 35 TO 44 49 10.3%

Cause	# of Burns	% By Age
Flame	12	24.5%
Ignitable Liquids	4	8.2%
<i>Ignitable Liquids</i>	3	6.1%
<i>Gasoline</i>	1	2.0%
Cooking	4	8.2%
<i>Barbeque</i>	2	4.1%
<i>Cook/Clothes</i>	1	2.0%
<i>Hot Food</i>	1	2.0%
Car Part	1	2.0%
Water heater	1	2.0%
Welding	1	2.0%
Scalds	11	22.4%
Cooking Liquids	9	18.4%
Assault	1	2.0%
Hot Water	1	2.0%
Explosions	9	18.4%
Ignitable Gases	4	8.2%
<i>Propane</i>	2	4.1%
<i>Natural Gas</i>	1	2.0%
<i>Barbeque (Gas)</i>	1	2.0%
Fireworks	1	2.0%
Ignitable Liquids	1	2.0%
Water Vehicle	1	2.0%
Woodstove	1	2.0%
Unspecified	1	2.0%

Cause	# of Burns	% By Age
Fire	8	16.3%
House Fires	4	8.2%
<i>Arson</i>	4	8.2%
Brush Fires	2	4.1%
<i>Gasoline</i>	2	4.1%
Camp or Bon Fires	1	2.0%
<i>Camp Fire (Unspec.)</i>	1	2.0%
Motor Vehicle Fires	1	2.0%
<i>Camp Fire</i>	1	2.0%
Other	5	10.2%
Sunburn	4	8.2%
Chemical	1	2.0%
Contact	2	4.1%
Heating Pad	1	2.0%
Space Heater	1	2.0%
Electrical	2	4.1%
Electrocution	1	2.0%
Unspecified	1	2.0%

AGES 45 TO 54 54 11.3%

Cause	# of Burns	% By Age
Fire	13	24.1%
Camp or Bon Fires	6	11.1%
<i>Camp Fire (Unspec.)</i>	6	11.1%
House Fires	3	5.6%
<i>Smoking</i>	2	3.7%
<i>Unspecified</i>	1	1.9%
Motor Vehicle Fire	1	1.9%
<i>Car Part</i>	1	1.9%
Fire, Unknown	1	1.9%
<i>Fire Control</i>	1	1.9%

Scalds	12	22.2%
Cooking	7	13.0%
<i>Cooking Liquids</i>	6	11.1%
<i>Cooking (Unspec.)</i>	1	1.9%
Steam	2	3.7%
Hot Beverages	1	1.9%
Hot Tap Water	1	1.9%

Explosions	11	20.4%
Ignitable Liquids	6	11.1%
<i>Gasoline</i>	4	7.4%
<i>Ignitable Liquids</i>	2	3.7%
Electrical (Unspec.)	2	3.7%
Explosives	2	3.7%
<i>Fireworks</i>	1	1.9%
<i>Gunpowder</i>	1	1.9%
Propane	1	1.9%

Cause	# of Burns	% By Age
Flame	9	16.7%
Clothes	3	5.6%
Self-immolation	3	5.6%
Electrical (Unspec.)	1	1.9%
Gasoline	1	1.9%
Woodstove	1	1.9%
Electrical	5	9.3%
Electrical (Unspec.)	4	7.4%
Electrocution	1	1.9%
Contact	2	3.7%
Heating Pad	1	1.9%
Stove	1	1.9%
Other	2	3.7%
Chemical	2	3.7%

AGES 55 TO 64	30	6.3%
Cause	# of Burns	% By Age
Flame	15	50.0%
Smoking	4	13.3%
<i>Cigarette</i>	2	6.7%
<i>Smoking on Oxygen</i>	1	3.3%
<i>Smoking (Unspec.)</i>	1	3.3%
Candle/Clothes	2	6.7%
Cooking	2	6.7%
<i>Barbeque</i>	1	3.3%
<i>Barbeque (Gas)</i>	1	3.3%
Heating	2	6.7%
<i>Heater</i>	1	3.3%
<i>Woodstove</i>	1	3.3%
Clothes	1	3.3%
Flammables	1	3.3%
Propane	1	3.3%
Explosion	7	23.3%
Propane	3	13.3%
Welding	1	6.7%
Explosives	1	3.3%
Scalds	4	13.3%
Cooking Liquids	3	10.0%
Hot Beverages	1	3.3%
Fire	3	10.0%
House Fires	1	3.3%
<i>Smoking</i>	1	3.3%
Motor Vehicle Fires	1	3.3%
<i>Gasoline</i>	1	3.3%
Structure Fires	1	3.3%
<i>Rescue</i>	1	3.3%
Electrical	1	3.3%
Electrical (Unspec.)	1	3.3%

AGES 65+	30	6.3%
Cause	# of Burns	% By Age
Flame	12	40.0%
Smoking	5	16.7%
<i>Smoking on Oxygen</i>	4	13.3%
<i>Smoking/Clothes</i>	1	3.3%
Cooking	3	10.0%
<i>Cooking/Clothes</i>	2	6.7%
<i>Cooking (Unspec.)</i>	1	3.3%
Candle/Clothes	1	3.3%
Car Part	1	3.3%
Flammables	1	3.3%
Fireplace	1	3.3%
Scalds	10	33.3%
Cooking Liquids	4	13.3%
Hot Tap Water	3	10.0%
Hot Beverages	2	6.7%
Water Heater	1	3.3%
Fire	5	16.7%
House Fires	3	10.0%
<i>Electrical</i>	1	3.3%
<i>Smoking</i>	1	3.3%
<i>House Fire (Unspec.)</i>	1	3.3%
Motor Vehicle Fires	1	3.3%
<i>MV Accident</i>	1	3.3%
Structure Fires	1	3.3%
<i>Cutting Torch</i>	1	3.3%
Contact	2	6.7%
Oven	1	3.3%
Woodstove	1	3.3%
Explosion	1	3.3%
Smoking on Oxygen	1	3.3%

Causes of Work-Related Burns

Cause	# of Burns	% of Total	Cause	# of Burns	% of Total
Explosions	13	25%	Flame	8	15%
Propane	4	8%	Cooking	3	6%
Ignitable Liquids	3	6%	<i>Barbeque</i>	1	2%
<i>Gasoline</i>	2	4%	<i>Food</i>	1	2%
<i>Ignitable Liquids</i>	1	2%	<i>Oven</i>	1	2%
Electrical	2	4%	Ignitable Liquids	2	4%
Welding	2	4%	Electrical	1	2%
Explosion (Unspec.)	1	2%	Gasoline	1	2%
Gunpowder	1	2%			
			Other	4	8%
Scalds	12	23%	Chemical	4	8%
Cooking Liquids	7	13%			
Hot Tap Water	2	4%	Contact	2	4%
Hot Beverages	1	2%	Asphalt	1	2%
Car Radiator	1	2%	Firefighter	1	2%
Steam	1	2%			
			Fire	2	4%
Electrical	11	21%	Camp Fire	1	2%
Electrical (Unspec.)	7	3%	Car Fire	1	2%
Electrocution	4	8%			
			Total	52	100%

Number of Reported Burns Per Hospital

Addison Gilbert Hospital	2	Mercy Hospital	1
Anna Jacques Hospital	4	Metro West Medical Center	1
Baystate Medical Center	19	Milton Hospital	1
Berkshire Medical Center	2	Milton Whitinsville Hospital	3
Beverly Hospital	1	Morton Hospital	3
Boston Medical Center	1	Mt. Auburn Hospital	1
Brockton Hospital	10	Nantucket Hospital	2
Brigham & Women's Hospital	37	Newton Wellesley Hospital	3
Cape Cod Hospital	3	Noble Hospital	1
Carney Hospital	2	North Adams Hospital	1
Charlton Memorial Hospital	4	Norwood Hospital	3
Children's Hospital	45	St. Anne's Hospital	1
Clinton Hospital	1	St. Elizabeth's Medical Center	3
Emerson Hospital	4	St. Luke's Hospital	6
Fairhaven Hospital	1	St. Vincent's Hospital	3
Falmouth Hospital	4	Salem Hospital	1
Franklin Medical Center	2	Signature Health Care	1
Good Samaritan Medical Center	4	SHE	1
Harrington Memorial Hospital	3	Somerville Hospital	1
Holy Family Hospital	3	South Shore Hospital	28
Holyoke Hospital	3	Shriners Burns Hospital	108
Jordan Hospital	3	Sturdy Memorial Medical Center	2
Lawrence General Hospital	1	Tobey Hospital	6
Lowell General Hospital	3	UMass Medical Center, University	34
Marlboro Hospital	2	Winchester Hospital	4
Martha's Vineyard Hospital	1	Wing Memorial Hospital	1
Massachusetts General Hospital	139		

Causes of Burn Injuries by Month

JANUARY		
Cause	# of Burns	% By Month
Scalds	20	55.6%
Cooking	8	22.2%
<i>Cooking Liquids</i>	5	13.9%
<i>Hot Food</i>	2	5.6%
<i>Cooking (Unspec.)</i>	1	2.8%
Hot Beverages	6	16.7%
Hot Tap Water	5	13.9%
Water Heater	1	2.8%
Flame	5	13.9%
Heating	2	5.6%
<i>Heater (Unspec.)</i>	1	2.8%
<i>Woodstove</i>	1	2.8%
Child/Lighter/Clothes	1	2.8%
Natural Gas	1	2.8%
Smoking/Clothes	1	2.8%
Contact	3	8.3%
Heating Pad	1	2.8%
Stove	1	2.8%
Woodstove	1	2.8%
Explosion	2	8.3%
Explosion (Unspec.)	1	2.8%
Fireworks	1	2.8%
Welding	1	2.8%
Fire	3	8.3%
House Fires	2	5.6%
<i>Electrical</i>	1	2.8%
<i>Earthquake</i>	1	2.8%
Camp Fires	1	2.8%
<i>Camp Fire</i>	1	2.8%
Electrical	2	5.6%
Electrical (Unspec.)	1	2.8%
Electrocution	1	2.8%

FEBRUARY		
Cause	# of Burns	% By Month
Scalds	16	51.6%
Hot Beverages	7	22.6%
Cooking	6	19.4%
<i>Cooking Liquids</i>	4	12.9%
<i>Hot Food</i>	2	6.5%
Hot Tap Water	3	9.7%
Flame	6	19.4%
Candle	1	3.9%
Child w/Matches	1	3.2%
Propane	1	3.2%
Self-immolation	1	3.2%
Smoking w/Oxygen	1	3.2%
Woodstove	1	3.2%
Fire	5	16.1%
House Fires	3	9.7%
<i>House Fire (Unspec.)</i>	2	6.5%
<i>Clothes</i>	1	3.2%
Motor Vehicle Fires	2	6.5%
<i>Camp Fire</i>	1	3.2%
<i>Car Part</i>	1	3.2%
Contact	2	6.5%
Cooking (Unspec.)	1	3.2%
Heating	1	3.2%
Explosion	2	6.5%
Cigarette	1	3.2%
Gasoline	1	3.2%

1 Death

MARCH	47	9.9%
Cause	# of Burns	% By Month
Scalds	23	48.9%
Hot Tap Water	9	19.1%
Cooking	8	17.0%
<i>Cooking Liquids</i>	6	12.8%
<i>Hot Food</i>	2	4.3%
Hot Beverages	5	10.6%
Car Radiator	1	2.1%
Fire	10	21.3%
House Fires	4	8.5%
<i>House Fire (Unspec.)</i>	2	4.3%
<i>Electrical</i>	1	2.1%
<i>Smoking</i>	1	2.1%
Brush Fires	2	4.3%
<i>Gasoline</i>	2	4.3%
Motor Vehicle Fires	2	4.3%
<i>Car Fire</i>	1	2.1%
<i>MV Accident</i>	1	2.1%
Camp or Bon Fires	1	2.1%
<i>Ignitable Liquids</i>	1	2.1%
Fires, Unspecified	1	2.1%
<i>Fire Control</i>	1	2.1%
Flame	9	19.1%
Cooking	3	6.4%
<i>Cooking/Clothes</i>	2	4.3%
<i>Cooking Liquids</i>	1	2.1%
Ignitable Liquids	2	4.3%
<i>Gasoline</i>	1	2.1%
<i>Ignitable Liquids</i>	1	2.1%
Candle/Clothes	1	2.1%
Smoking w/Oxygen	1	2.1%
Water Heater	1	2.1%
Welding	1	2.1%
Contact	4	8.5%
Assaul	1	2.1%
Heating Pad	1	2.1%
Oven	1	2.1%
Space Heater	1	2.1%
Explosion	1	2.1%
Gasoline	1	2.1%

2 Deaths

APRIL	44	9.2%
Cause	# of Burns	% By Month
Scalds	17	38.6%
Cooking	6	13.6%
<i>Cooking Liquids</i>	8	16.3%
<i>Hot Food</i>	2	4.5%
Hot Beverages	4	9.1%
Hot Tap Water	3	6.8%
Assault	1	2.3%
Clothes Iron	1	2.3%
Flame	11	25.0%
Ignitable Liquids	3	6.8%
Clothes	2	4.5%
Assault	1	2.3%
Car Part	1	2.3%
Chemical	1	2.3%
Cooking Liquids	1	2.3%
Flammables	1	2.3%
Woodstove	1	2.3%
Fire	9	20.5%
Camp or Bon Fires	4	9.1%
<i>Bon Fire</i>	2	4.5%
<i>Gasoline</i>	2	4.5%
Brush Fires	2	4.5%
<i>Gasoline</i>	2	4.5%
House Fires	2	2.0%
<i>Smoking</i>	1	2.3%
<i>Stove</i>	1	2.3%
Motor Vehicle Fires	1	2.3%
<i>Gasoline</i>	1	2.3%
Contact	3	6.8%
Clothes Iron	1	2.3%
Hot Metal	1	2.3%
Oven	1	2.3%
Explosion	2	4.5%
Propane	2	4.5%
Electrical	2	4.5%
Electrical (Unspec.)	1	2.3%
Electrocution	1	2.3%

MAY		
Cause	# of Burns	% By Month
	47	9.9%
Scalds	18	38.3%
Cooking	12	25.5%
<i>Cooking Liquids</i>	7	14.9%
<i>Hot Food</i>	5	10.6%
Hot Beverages	5	10.6%
Hot Tap Water	1	2.1%
Fire	10	21.3%
Camp or Bon Fires	7	14.9%
<i>Camp Fires</i>	2	4.3%
<i>Flammables</i>	2	4.3%
<i>Ignitable Liquids</i>	2	4.3%
<i>Alcohol</i>	1	2.1%
House Fires	2	4.3%
<i>Unspecified</i>	1	4.3%
Brush Fires	1	2.1%
<i>Gasoline</i>	1	2.1%
Flame	8	17.0%
Cooking	3	6.4%
<i>Barbeque</i>	1	2.1%
<i>Cooking/Clothes</i>	1	2.1%
<i>Oven</i>	1	2.1%
Candle/Clothes	2	4.3%
Ignitable Liquids	1	2.1%
Self-immolation	1	2.1%
Smoking/Oxygen	1	2.1%
Contact	6	12.8%
Clothes Iron	2	4.3%
Asphalt	1	2.1%
Car Part	1	2.1%
Motor Oil	1	2.1%
Stove	1	2.1%
Explosion	3	6.4%
Barbaque (Gas)	1	2.1%
Ignitable Liquids	1	2.1%
Woodstove	1	2.1%
Other	2	4.3%
Chemical	2	4.3%

JUNE		
Cause	# of Burns	% By Month
	46	9.7%
Scalds	13	28.3%
Cooking	11	23.9%
<i>Cooking Liquids</i>	8	17.4%
<i>Hot Food</i>	3	6.5%
Hot Beverages	2	4.3%
Flame	8	17.4%
Ignitable Liquids	2	4.3%
<i>Gasoline</i>	1	2.2%
<i>Ignitable Liquids</i>	1	2.2%
Candle/Clothes	1	2.2%
Child w/Lighter	1	2.2%
Cigarette	1	2.2%
Propane	1	2.2%
Self-immolation	1	2.2%
Explosion	8	17.4%
Gasoline	3	6.5%
Barbeque (Gas)	1	2.2%
Fireworks	1	2.2%
Propane	1	2.2%
Water Vehicle	1	2.2%
Welding	1	2.2%
Fire	7	15.2%
Camp or Bon Fires	3	6.5%
<i>Bon Fire</i>	3	2.2%
<i>Camp Fire</i>	1	2.2%
<i>Clothing</i>	1	2.2%
House Fires	3	6.5%
<i>Smoking</i>	2	4.3%
<i>House Fire (Unspec.)</i>	1	2.2%
MV Fires	1	2.2%
<i>Boat Fire</i>	1	2.2%
Electrical	4	8.7%
Electrical (Unspec.)	4	8.7%
Contact	1	2.2%
Barbeque	1	2.2%
Other	4	8.7%
Chemical	4	8.7%
Unknown	1	2.2%
Unknown	1	2.2%

1 Death

JULY	66	13.9%
Cause	# of Burns	% By Month
Scalds	22	33.3%
Cooking	11	16.7%
<i>Cooking Liquids</i>	9	13.6%
<i>Hot Food</i>	2	3.0%
Hot Beverages	5	7.6%
Hot Tap Water	3	4.5%
Car Radiator	1	1.5%
Assault	1	1.5%
Hot Water Bottle	1	1.5%
Fire	15	13.6%
Camp or Bon Fires	11	16.7%
<i>Camp Fire (Unspec.)</i>	5	7.6%
<i>Bon Fire</i>	2	3.0%
<i>Gasoline</i>	2	3.0%
<i>Aerosol</i>	1	1.5%
<i>Bon Fire</i>	1	1.5%
House Fires	2	3.0%
<i>House Fire (Unspec.)</i>	2	3.0%
Structure Fire	1	1.5%
<i>Cutting Torch</i>	1	1.5%
Fire, Other	1	1.5%
<i>Fireworks</i>	1	1.5%
Explosion	11	16.7%
Ignitable Gases	5	7.6%
<i>Propane</i>	4	6.1%
<i>Natural Gas</i>	1	1.5%
Explosives	3	4.5%
<i>Fireworks</i>	2	3.0%
<i>Explosives</i>	1	1.5%
Ignitable Liquids	1	1.5%
Water Craft	1	1.5%
Gasoline	1	1.5%
Flame	11	16.7%
Cooking	4	6.1%
<i>Barbeque</i>	3	4.5%
<i>Cooking (Unspec.)</i>	1	1.5%
Gasoline	3	4.5%
<i>Gasoline</i>	2	3.0%
<i>Child w/Gasoline</i>	1	1.5%
Candle	1	1.5%
Electrical	1	1.5%
Electrical	3	4.5%
Electrical (Unspec.)	1	3.0%
Electrocution	1	1.5%

JULY (CON'T)	43	9.0%
Cause	# of Burns	% By Month
Other	4	5.2%
Chemical	2	4.7%
Sunburn	2	4.7%
Contact	1	2.3%
Barbeque	1	2.3%
AUGUST	43	9.0%
Cause	# of Burns	% By Month
Scalds	19	44.2%
Hot Beverages	7	16.3%
Cooking Liquids	6	14.0%
Hot Tap Water	5	11.6%
Assault	1	2.3%
Fire	9	20.9%
House Fires	7	16.3%
<i>House Fire (Unspec.)</i>	5	11.6%
<i>Cooking</i>	1	2.3%
<i>Natural Gas</i>	1	2.3%
Camp or Bonfires	2	4.7%
<i>Camp Fire (Unspec.)</i>	2	4.7%
Flame	7	16.3%
Ignitable Liquids	2	4.7%
<i>Gasoline</i>	1	2.3%
<i>Ignitable Liquids</i>	1	2.3%
Barbeque	1	2.3%
Child w/Lighter	1	2.3%
Flammables	1	2.3%
Propane	1	2.3%
Smoking w/Oxygen	1	2.3%
Contact	5	11.6%
Clothes Iron	1	2.6%
Curling Iron	1	2.6%
Oven	1	2.6%
Firefighter	1	2.6%
Machine	1	2.6%
Electrical	1	2.3%
Electrical (Unspec.)	1	2.3%
Explosion	1	2.3%
Gasoline	1	2.3%
Other	1	2.3%
Chemical	1	2.3%

SEPTEMBER	30	6.3%
Cause	# of Burns	% By Month
Scalds	11	36.7%
Cooking	6	20.0%
<i>Cooking Liquids</i>	3	10.0%
<i>Hot Food</i>	3	10.0%
Hot Beverages	2	6.7%
Steam	2	6.7%
Hot Tap Water	1	3.3%
Fire	7	23.3%
House Fires	3	10.0%
<i>Unspecified</i>	3	10.0%
Camp or Bon Fires	3	10.0%
<i>Camp Fires (Unspec.)</i>	2	6.7%
<i>Gasoline</i>	2	8.0%
<i>Bon Fire (Unspec.)</i>	1	3.3%
Motor Vehicle Fires	1	3.3%
<i>MV Accident</i>	1	3.3%
Flame	5	16.7%
Cooking	3	10.0%
<i>Cooking Liquids</i>	1	3.3%
<i>Hot Food</i>	1	3.3%
<i>Stove</i>	1	3.3%
Child w/Lighter	1	3.3%
Gasoline	1	3.3%
Contact	3	10.0%
Cooking (Unspec.)	1	3.3%
Heating Pad	1	3.3%
Lawnmower	1	3.3%
Explosion	3	10.0%
Electrical	2	6.7%
Barbeque	1	3.3%
Other	1	3.3%
Chemical	1	3.3%

OCTOBER	25	5.3%
Cause	# of Burns	% By Month
Scalds	11	44.0%
Cooking	6	24.0%
<i>Cooking Liquids</i>	5	20.0%
<i>Hot Food</i>	1	4.0%
Hot Beverages	5	24.0%
Flame	6	24.0%
Ignitable Liquids	2	8.0%
<i>Ignitable Liquids</i>	1	4.0%
<i>Gasoline</i>	1	4.0%
Clothes	2	8.0%
<i>Cooking/Clothes</i>	1	4.0%
<i>Clothes (Unspec.)</i>	1	4.0%
Car Part	1	4.0%
Flammables	1	4.0%
Electrical	2	8.0%
Electrical (Unspec.)	2	8.0%
Contact	2	8.0%
Heating	2	8.0%
<i>Radiator</i>	1	4.0%
<i>Heater</i>	1	4.0%
Explosion	1	4.0%
Propane	1	4.0%

NOVEMBER	37	7.8%
Cause	# of Burns	% By Month
Scalds	14	37.8%
Cooking	6	16.2%
<i>Cooking Liquids</i>	5	13.5%
<i>Hot Food</i>	1	2.7%
Hot Tap Water	5	13.5%
Hot Beverages	3	8.1%
Flame	10	27.0%
Clothes	5	13.5%
<i>Clothes (Unspec.)</i>	3	8.1%
<i>Candle/Clothes</i>	1	2.7%
<i>Cooking/Clothes</i>	1	2.7%
Smoking	2	5.4%
<i>Cigarette</i>	1	2.7%
<i>Smoking w/Oxygen</i>	1	2.7%
Fireplace	1	2.7%
Flammables	1	2.7%
Gasoline	1	2.7%
Contact	4	10.8%
Heating	2	5.4%
<i>Heater</i>	1	2.7%
<i>Radiator</i>	1	2.7%
Curling Iron	1	2.7%
Stove	1	2.7%
Explosion	4	10.8%
Propane	2	5.4%
Gunpowder	1	2.7%
Smoking w/Oxygen	1	2.7%
Fire	3	8.1%
House Fires	2	5.4%
<i>Candle</i>	1	2.7%
<i>House Fire (Unspec.)</i>	1	2.7%
Camp or Bon Fires	1	2.7%
<i>Bon Fire (Unspec.)</i>	1	2.7%
Electrical	2	5.4%
Electrocution	2	5.4%

DECEMBER	23	4.8%
Cause	# of Burns	% By Month
Scalds	11	47.8%
Cooking	7	30.4%
<i>Cooking Liquids</i>	4	17.4%
<i>Hot Food</i>	3	13.0%
Hot Beverages	2	8.7%
Hot Tap Water	2	8.7%
Flame	6	8.7%
Smoking	2	8.7%
<i>Smoking w/Oxygen</i>	1	4.3%
<i>Smoking (Unspec.)</i>	1	4.3%
Alcohol	1	4.3%
Barbeque (Gas)	1	4.3%
Heater	1	4.3%
Self-immolation	1	4.3%
Explosion	2	8.7%
Ignitable Liquids	2	8.7%
<i>Gasoline</i>	1	4.3%
<i>Ignitable Liquids</i>	1	4.3%
Fire	2	8.7%
House Fires	1	4.3%
<i>Arson</i>	1	4.3%
Structure Fires	1	4.3%
<i>Rescue</i>	1	4.3%
Contact	1	4.3%
Clothes Iron	1	4.3%
Other	1	4.3%
Chemical	1	4.3%

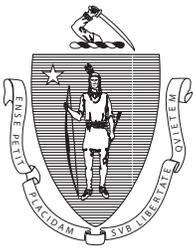
Burn Injuries by Victim's Community

<u>County</u>	<u># of Burns</u>
Barnstable	10
Brewster	1
Falmouth	2
Harwich	1
Mashpee	1
Sandwich	2
Yarmouth	3
Berkshire	4
Great Barrington	1
North Adams	1
Pittsfield	2
Bristol	18
Acushnet	1
Attleboro	1
Dartmouth	2
Fall River	4
New Bedford	6
Taunton	3
Westport	1
Dukes	1
Edgartown	1
Essex	31
Amesbury	1
Beverly	1
Danvers	1
Essex	1
Gloucester	2
Haverhill	3
Lawrence	5
Lynn	7
Merrimac	1
Methuen	2
Newbury	1
Rowley	1
Salem	2
Saugus	1
Swampscott	1

<u>County</u>	<u># of Burns</u>
Franklin	3
Bernardston	1
Deerfield	1
Erving	1
Hampden	27
Agawam	1
Chicopee	2
East Longmeadow	1
Holyoke	6
Longmeadow	1
Ludlow	1
Monson	1
Springfield	11
West Springfield	1
Westfield	3
Hampshire	5
Chesterfield	1
Hadley	2
Northampton	1
South Hadley	1
Middlesex	47
Acton	4
Arlington	2
Bedford	1
Billerica	2
Boxborough	1
Cambridge	4
Chelmsford	3
Dracut	1
Everett	4
Framingham	5
Hudson	1
Lexington	2
Lowell	5
Malden	4
Marlborough	1
Medford	2
Melrose	1
Natick	1
Newton	1
North Reading	1

<u>County</u>	<u># of Burns</u>
Middlesex (con't)	
Pepperell	1
Shirley	1
Somerville	4
Sudbury	2
Wakefield	2
Waltham	5
Watertown	5
Woburn	3
Nantucket	1
Nantucket	1
Norfolk	43
Braintree	2
Brookline	1
Canton	2
Cohasset	1
Franklin	2
Holbrook	1
Medway	4
Milton	1
Needham	2
Quincy	10
Randolph	4
Stoughton	2
Westwood	1
Weymouth	9
Wrentham	1
Plymouth	46
Bridgewater	1
Brockton	15
Carver	2
Duxbury	1
Halifax	1
Hanover	1
Hanson	2
Hingham	3
Hull	1
Kingston	1
Lakeville	1

<u>County</u>	<u># of Burns</u>
Plymouth (con't)	
Marshfield	2
Norwell	1
Pembroke	1
Plymouth	3
Rockland	2
Scituate	4
Wareham	3
Whitman	1
Suffolk	68
Boston	61
Chelsea	5
Revere	2
Worcester	31
Auburn	1
Blackstone	2
Brookfield	1
Clinton	1
Douglas	2
Gardner	1
Holden	2
Hopedale	1
Leicester	1
Mendon	1
Milford	1
Southbridge	1
Spencer	4
Sturbridge	1
Warren	1
Worcester	10
Out of State	119



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 marshal 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.”