SHC Community Health Needs Assessment Report

Shriners Hospitals for Children® — Boston

Prepared by: John F. Sugden, Jr.
Mission and Vision

Mission:
- Provide the highest quality care to children with burn injuries and other special healthcare needs within a compassionate, family-centered and collaborative care environment.
- Provide for the education of physicians and other healthcare professionals.
- Conduct basic, translational and clinical research to discover new knowledge that improves the quality of care and quality of life of children and families.

Vision:
- Shriners Hospitals for Children will be the unquestioned leader, nationally and internationally, in caring for children with acute burn injuries and advancing the field in this specialty areas.
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Our Commitment to the Community

Hospital Overview

Shriners Hospitals for Children — Boston is a licensed 30-bed pediatric hospital specializing in the treatment of severe burns and reconstructive surgery. Shriners Hospitals for Children — Boston opened in 1968 and remains committed to providing medical care for children with burn injuries, as well as educating the public regarding burn prevention, burn care, and providing medical education to physicians interested in burn specific protocols. All children receive care at Shriners Hospital regardless of their ability to pay. The hospital is a leader in acute pediatric burn care and is one of only four verified burns centers in New England. Likewise, this hospital is the only exclusively “all pediatric” burn center. The verification process for burn centers includes a joint program from the American Burn Association (ABA) and the American College of Surgeons (ACS).

The hospital has been instrumental in advancing pediatric burn care and survival rates, as well as helping to advance and measure the “quality of life” of the post-burn patient. With extensive follow-up “outcomes research”, and a comprehensive level of burn care that includes a “multidisciplinary aftercare model” designed for better recovery rates, the improved outcomes are measured in terms of patient physical, psychological, and social outcomes.

The mission for Shriners Hospitals for Children — Boston remains in alignment with the health care needs of the communities it serves through increasing burn awareness, improving burn injury outcomes, providing reconstructive surgical care, and education for both the general public and medical community.
Pediatric Burn Care and Education

For nearly 45 years Shriners Hospitals for Children — Boston has served the medical needs of the community by providing care to children with burn injuries. Shriners Hospitals for Children; which is the 42nd largest charity in the United States, offers educational outreach and training as one of its core activities. At Shriner’s a special team of educational coordinators provide training to nurses, nursing students, school nurses, emergency medical technicians and paramedics. Training averages over 75 classes per year serving Massachusetts, Vermont New Hampshire and beyond.

Burn safety awareness programs for the general public are an important focus for the Shriners outreach efforts. One such example would include a burn awareness training courses which was conducted at Golden Brook Elementary School in Windham, NH with 250 second graders in attendance over a two day period.

In fact, Shriners Hospitals for Children — Boston regularly visits Emergency Department Physicians and Pediatricians throughout New England to present Shriners pediatric burn services. Most hospitals that are visited request to have a Shriners physician or nurse schedule to present at their Grand Rounds and/or provide In-Service Training for their hospital’s medical staff. Last year alone over 28 Massachusetts and New Hampshire hospitals referred patients to SHC — Boston for advanced burn care and or reconstructive surgical care for children with burn injuries, as a direct result of our outreach efforts. Examples of educational materials that prove to be of value to the community includes a Laminated “Emergency Treatment of Pediatric Burns” card for physicians (Exhibit 1) which details emergency protocols for initial emergency care of the child, such as airway management, burn assessment criteria, fluid resuscitation, pain management, wound care and other interventions. For the general public, the distribution of a “Scald-Injury Prevention and Burn First Aid” reference card (Exhibit 2) outlines safety in the kitchen, dining areas, and how to initially treat the injured site along with an emergency phone number to speak with a SHC — Boston clinician.

Clinical Teaching

As per the hospital’s public relations archives, over 600 fellows have been trained by Shriners surgeons and over 90% now professors at prestigious academic institutions worldwide. Many serve on the boards of professional associations, including the American Burn Association and International Society of Burn Injury.
American Burn Association
Burn Center Referral Criteria

1. Partial thickness burns >10%
2. Burns involving face, hands, feet, genitalia, perineum, and/or major joints
3. Any third degree burn
4. Electrical burns, including lightning injury
5. Chemical burns
6. Inhalation injury
7. Patients with pre-existing medical problems that could complicate management
8. Patients with associated trauma in which the burn injury poses the greatest risk of morbidity or mortality.
9. Burned children in hospitals without qualified personnel or equipment for the care of children.
10. Burn injury in patients who will require special social/emotional and/or long-term rehabilitative support, including cases involving suspected child abuse

Over 60% of the estimated U.S. acute hospitalizations related to burn injury were admitted to 127 “Burn Centers”. Burn centers average over 200 annual admissions for burn injury and skin disorders requiring similar treatment. The other 4,500 acute care hospitals average less than 3 burn admissions per year.

National Inpatient Sample (HCUP-NIS 2010 data)
National Hospital Discharge Survey (2010-data)
The Scald-Injury Prevention and Burn First Aid card are dispersed to community health and civic centers, schools, and fire departments for the distribution to the general public. The card is printed in both English and Spanish and provides information on the prevention of burns and the treatment of burns. For serious burns, the card suggests calling 911 and also provides Shriners Hospitals for Children — Boston’s direct emergency phone number.
Process and Methods

The mission of Shriners Hospitals for Children — Boston is to (1) provide the highest quality care to children with burn injuries and other special health care needs within a compassionate, family centered, and collaborative environment. (2) Provide for the education of physicians and other healthcare professionals. In this past year, Shriners has taken a proactive approach in fulfilling its educational mission to the community by hiring a Director of Professional Relations. This position was created to provide direct outreach to the medical community in Massachusetts, Rhode Island, Maine, and New Hampshire initially. The focus of our educational mission is to make Shriner's educational and medical outreach programs available to communities in need of training, and to provide the highest level of burn awareness training to the general public.

Shriners elected to embark upon the community health needs assessment on an individual basis and chose not to collaborate with other partners due to the uniqueness and highly specialized nature of its medical services. Few hospitals are equipped with qualified personnel and/or equipment to provide definitive care for the acute pediatric burn patient. SHC — Boston currently serves the needs of children in New England that have sustained burn injuries or are in need of reconstructive surgery. SHC — Boston also provides education and consultation to the medical community which includes hospital emergency departments, pediatric practices, and family medicine practices. SHC — Boston also advises the general public on burn safety and awareness.

The data contained in this report was compiled from a variety of sources intended to establish a sufficient need in the New Hampshire community for pediatric burn education along with burn related surgical and clinical care. For the purpose of this assessment, we focused on burn injury data for New Hampshire and Massachusetts. We chose Massachusetts to demonstrate how SHC — Boston has successfully served their needs for nearly 45 years. Over 50 % of our patient volume is from Massachusetts. New Hampshire with a smaller population than Massachusetts has a similar need for burn care and training. New Hampshire, by comparison, has a smaller population which is largely rural which puts the probability of children dying in residential fires two to three times more likely than that of children living in cities according to the United States Fire Administration. New Hampshire is within reasonable proximity to SHC — Boston which makes our outreach efforts feasible and our Hospital services accessible.
The data sources are from publicly available records on burn injuries relative to age, etiology and ethnicity primarily. Other data is from direct feedback from meetings with emergency department physicians and pediatricians. This data demonstrates that a similar pattern of pediatric burn injuries exists in New Hampshire as in other communities that SHC — Boston serves and there is clearly a need for advanced burn management training throughout this medical community.

The data contained in this assessment was taken from the National Trauma Registry for the American College of Surgeons / American Burn Association - Burn Registry, US Fire Administration / National Fire Data Center (a part of the Federal Emergency Management Agency), National Burn Repository, the American Burn Association Burn Outcomes Program and Shriners Hospitals for Children — Boston’s Burn Registry. The qualitative data is from direct feedback primarily from emergency department physicians and pediatric physicians throughout the State of New Hampshire.

Key Findings

Based on published data, which is relative to pediatric burns and interviews with emergency department physicians and pediatricians in both Massachusetts and in New Hampshire we were able to establish a need for burn awareness training, burn medical education and burn care within the New Hampshire community. Historically, Massachusetts-based physicians have consulted with SHC — Boston medical staff and have referred their pediatric burn cases to us for definitive care. This demonstrates a need in this community, given the high level of requests from New Hampshire physicians for in-service training by Shriners surgeons.

The Director of Professional Relations at SHC — Boston has initially scheduled visitations with Massachusetts hospital’s Emergency Department Physicians and Pediatric Physicians to provide information to assist in the care of a variety of burn related injuries. Hospitals and practices included Newton Wellesley Hospital, Norwood Hospital, Quincy Medical Center, South Shore Medical Center and Pediatric Healthcare to name a few. A similar outreach effort has begun in New Hampshire with identical feedback regarding the interest and need of such training. An example of hospitals and practices in New Hampshire are Portsmouth Regional Hospital, Exeter Hospital, Derry Pediatrics, and Wentworth Douglas Hospital.
**Qualitative Data - Direct feedback**

Feedback from physicians and emergency medical responders attending the New Hampshire Trauma Conference regarding burn care information indicated a strong desire for burn management information. The conference coordinators shared the evaluations of the attendee’s revealing their high interest and regard for the information disseminated at Shriners exhibit table and also requested that a SHC — Boston physician be a presenter at next years’ New Hampshire Trauma Conference.

The qualitative data also revealed a general lack of knowledge regarding the services and expertise SHC — Boston offers in the field of burn care and outcomes.

**Typical schedule of outreach activity and follow-up**

**Wentworth Douglas Hospital**: meeting with Trauma Manager and Director of Emergency Department.

**Frisbee Hospital**: meeting with Emergency Department Director and Director of Emergency Medical Services & Preparedness.

**Dover Pediatrics**: Meeting with office staff

**Elliot Hospital**: Meeting with Pediatric Emergency Department Director at Conference and follow-up meeting at hospital with Emergency Department Nurses.

**Dartmouth-Hitchcock Pediatrics of Manchester and Bedford area**: meeting with pediatric Practice Manager for all Pediatricians in Manchester/Bedford area.

**Burn Statistics**

**Shriners Hospitals for Children — Boston**

**Burn Injury Data**

The following data is part of a comprehensive report on the National TRACS/ABA (*Trauma Registry for the American College of Surgeons / American Burns Association*) Burn Registry detailing information on Shriners Hospitals for Children — Boston Registry for the year 2011.

With respect to age as a prime factor, 71% of 2011 admissions to SHC — Boston were under the age of five, 23% of admissions were five to thirteen and 6% greater than thirteen years old.

The distribution of burn etiology is consistent with national data. In 2011, total patient population for SHV – Boston included 64% of acute cases from scald injuries, 23% flame injury and 19% from contact with hot objects, 2% from electrical burns and 2% associated with chemical burns.
According to the data, children under the age of five years old that were treated at Shriners Hospitals for Children — Boston, the most common etiology for burn injuries included scalds which affected 73% of the population by age. Contact with hot objects affected 21% of the population, which was followed by flame burns at 2%, chemical burns at 2% and electrical burns at 2%.

Children throughout the United States from low-income families are at greater risk for burn injuries from fire due to the lack of fire alarms, substandard living conditions, alternative heating sources and inadequate adult supervision due to economic constraints.

Children in rural areas are two to three times more likely to die in residential fires than children in cities.

47% of children who died from fires or burns who were ages 4 and under, twice that of children ages 5 to 9 years old.

Over 50 percent of all child fire deaths occur to those under age 5.

*National SAFE KIDS Campaign and United States Fire Administration / National Fire Data Center “The Fire Risk to Children” December 2004*
Shriners Hospitals for Children — Boston treats a higher than average number of Hispanic children as a result of our international outreach in the Southern Hemisphere.

### Shriners Hospitals for Children — Boston Patient Distribution by Race

*Data from the SHC — Boston Registry from the National TRACS/ABA Burn Registry 2011*

- **White, 91, 52%**
- **Black, 36, 20%**
- **Hispanic, 41, 23%**
- **Asian, 8, 5%**
Shriners Hospital for Children — Boston Source of Patient Admissions 2011
Data from the SHC — Boston Registry from the National TRACS/ABA Burn Registry 2011

- Massachusetts, 113, 64%
- Other New England, 26, 15%
- Outside New England, 20, 11%
- Outside U.S., 17, 10%
New Hampshire Burn Data

Inpatient Discharges Unintentional Injury by Cause, NH Residents, 2001-2009

- Fall 61%
- Motor vehicle traffic 15%
- Other 11%
- Fire/Burn 1%
- Poisoning 6%
- Overexertion 2%
- Struck by or against 3%
- Cut/pierce 1%
- Drowning/submersion 0.09%
- Firearm 0.19%

Source: NH-DPHS Inpatient Hospital Discharge Data
Current Pediatric Population by Age Group
Area: New Hampshire Patients
2012 County Report

Source: Truven Health Analytics 2012
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<tr>
<th>Variable</th>
<th>2012 Population</th>
<th>2017 Population</th>
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<td></td>
<td>Count</td>
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<td>American Indian &amp; Alaska Native Non-Hispanic</td>
<td>2,695</td>
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<td>American Indian &amp; Alaska Native Hispanic</td>
<td>495</td>
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<td>Asian/Pacific Islander</td>
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<td>Asian/Pacific Islander Hispanic</td>
<td>238</td>
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<td>2+ Races</td>
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<td>2+ Races Hispanic</td>
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<td>Other</td>
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<td>Other Non-Hispanic</td>
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<td>Other Hispanic</td>
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<td>Hispanic Ancestry</td>
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<tr>
<td>Non-Hispanic Ancestry</td>
<td>1,292,104</td>
<td>97.0%</td>
</tr>
</tbody>
</table>

Selected Statistics: 2001-2011 Burn Admissions to Burn Centers

Ethnicity: 59% Caucasian, 10% African-American, 15% Hispanic, and 7% Other

Source: American Burns Association National Burn Repository (2012 report)
**New Hampshire**

<table>
<thead>
<tr>
<th>People QuickFacts</th>
<th>New Hampshire</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population, 2012 estimate</td>
<td>1,320,718</td>
<td>313,914,040</td>
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<tr>
<td>Population, 2010 (April 1) estimates base</td>
<td>1,316,469</td>
<td>308,747,508</td>
</tr>
<tr>
<td>Population, percent change, April 1, 2010 to July 1, 2012</td>
<td>0.3%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Population, 2010</td>
<td>1,316,470</td>
<td>308,745,538</td>
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<tr>
<td><strong>Persons under 5 years, percent, 2011</strong></td>
<td>5.1%</td>
<td>6.5%</td>
</tr>
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<td><strong>Persons under 18 years, percent, 2011</strong></td>
<td>21.2%</td>
<td>23.7%</td>
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<td><strong>Persons 65 years and over, percent, 2011</strong></td>
<td>14.0%</td>
<td>13.3%</td>
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<tr>
<td><strong>Female persons, percent, 2011</strong></td>
<td>50.6%</td>
<td>50.8%</td>
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<tr>
<td><strong>White persons, percent, 2011 (a)</strong></td>
<td>94.6%</td>
<td>78.1%</td>
</tr>
<tr>
<td><strong>Black persons, percent, 2011 (a)</strong></td>
<td>1.3%</td>
<td>13.1%</td>
</tr>
<tr>
<td><strong>American Indian and Alaska Native persons, percent, 2011 (a)</strong></td>
<td>0.3%</td>
<td>1.2%</td>
</tr>
<tr>
<td><strong>Asian persons, percent, 2011 (a)</strong></td>
<td>2.3%</td>
<td>5.0%</td>
</tr>
<tr>
<td><strong>Native Hawaiian and Other Pacific Islander persons, percent, 2011 (a)</strong></td>
<td>2%</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>Persons reporting two or more races, percent, 2011</strong></td>
<td>1.5%</td>
<td>2.3%</td>
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<tr>
<td><strong>Persons of Hispanic or Latino Origin, percent, 2011 (b)</strong></td>
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<td>16.7%</td>
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<tr>
<td><strong>White persons not Hispanic, percent, 2011</strong></td>
<td>92.2%</td>
<td>63.4%</td>
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<tr>
<td>Living in same house 1 year &amp; over, percent, 2007-2011</td>
<td>88.6%</td>
<td>84.6%</td>
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<td>Foreign born persons, percent, 2007-2011</td>
<td>5.2%</td>
<td>12.8%</td>
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<tr>
<td>Language other than English spoken at home, percent age 5+, 2007-2011</td>
<td>7.9%</td>
<td>20.3%</td>
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<td>High school graduate or higher, percent of persons age 25+, 2007-2011</td>
<td>91.2%</td>
<td>85.4%</td>
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<tr>
<td>Bachelor’s degree or higher, percent of persons age 25+, 2007-2011</td>
<td>33.1%</td>
<td>28.2%</td>
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<td>Veterans, 2007-2011</td>
<td>118,313</td>
<td>22,215,303</td>
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<tr>
<td>Mean travel time to work (minutes), workers age 16+, 2007-2011</td>
<td>26.0</td>
<td>25.4</td>
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<tr>
<td>Housing units, 2011</td>
<td>617,704</td>
<td>132,312,404</td>
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<tr>
<td>Homeownership rate, 2007-2011</td>
<td>72.5%</td>
<td>66.1%</td>
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<td>Housing units in multi-unit structures, percent, 2007-2011</td>
<td>25.4%</td>
<td>28.9%</td>
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<tr>
<td>Median value of owner-occupied housing units, 2007-2011</td>
<td>$250,000</td>
<td>$186,200</td>
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</table>

Source: United States Census Bureau 2011

*US rate for fire-related fatalities is at 1.10 per 100,000 in 2009. New Hampshire rate for fire-related fatalities is at .91 per 100,000 in 2009*

“The Fire Risk to Children
US Fire Administration/National Fire Data Center

“African American Children, age 4 and below, had a relative risk of dying from fire related injury that was nearly three times higher than the general population”
### New Hampshire Hospitals Fire Related Emergency Department and Inpatient Discharge Charts

Source: New Hampshire Division of Public Health Services

#### Count of Emergency Department Discharges for Fire-related Injuries, NH Residents ages 0-18

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<thead>
<tr>
<th>HOSPITAL_NAME</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
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<th>2009</th>
<th>Total</th>
<th>Average per Year</th>
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<td></td>
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<td></td>
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<td>1</td>
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<td>6</td>
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<td>3</td>
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<td>Elliot Hospital</td>
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<td>10</td>
<td>64</td>
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<td>3</td>
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Count of Inpatient Hospital Discharges for Fire-related Injuries, NH Resident Children, Ages 0 to 18, from NH Hospitals, 2001-2009
Source: New Hampshire Division of Public Health

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**Action Plan**

**Outreach Objectives in New Hampshire**

The lack of knowledge regarding Shriners Hospitals for Children — Boston’s resources has been a barrier for many children in need of advanced burn care. SHC — Boston has provided physicians and other medical providers with up-to-date knowledge regarding acute burn care protocols, as well as, Shriners Hospital’s status as a “Verified Burn Center,” which will serve the pediatric patients medical needs. Other barriers may include poor insurance or no insurance for acute care and reconstructive surgery to rehabilitate scaring from previous burn injuries.

Our objective is to educate healthcare professionals in the State of New Hampshire, in regard to current burn treatment protocols, as well as services and surgical care available at Shriners Hospitals for Children — Boston. This will be accomplished by the continued calling effort by Shriners Director of Professional Services on all New Hampshire hospitals and major pediatric practices. Attending medical conferences, such as the recent State of New Hampshire Trauma Conference provided program speakers with medical specific printed materials. Our education coordinator will continue providing burn care training to nurses, nursing students, emergency medical technicians, and fire fighters.

As survival rates from serious burn injuries have improved throughout the United States especially among children, the expectation for survival of a child or young adult with less than 90% total body surface area burn is nearly 100%. The quality of life of the child that survives an acute burn is a major consideration when referring the patient to a Verified Burn Center, such as SHC — Boston.
Through education and collaboration with the medical providers in New Hampshire, SHC — Boston will be providing a resource which will serve the needs of children who have the misfortune of sustaining an acute burn injury.

**Acknowledgements**

New Hampshire Division of Public Health Services  
Maternal and Child Health Section  
Injury Prevention Program

New Hampshire Department of Health and Human Services  
Division of Public Health Services  
Injury Surveillance Program

National SAFE KIDS Campaign

National Inpatient Sample (HCUP-NIS: 2010 data)  
National Hospital Discharge Survey (2010 data)

United States Fire Administration / National Data Center  
“The Fire Risk to Children”  
Federal Emergency Management Agency

New Hampshire Comprehensive Health Care Information System  
Children’s Health Insurance Programs in New Hampshire

National TRACS / ABA Burn Registry (Shriners Hospitals for Children – Boston)

The Nielsen Company, 2013 Truven Health Analytics, Inc.

American Burns Association  
National Burn Repository  
Report of Data from 2002-2011

Commonwealth of Massachusetts  
Department of Fire Services

State of New Hampshire  
Division of Fire Standards and Training  
and Emergency Medical Services

The Journal of Trauma and Acute Care Surgery  
Vol.73, number 3 September Supplement 2012
Dr. Robert L. Sheridan, Assistant Chief of Staff at Shriners Hospitals for Children — Boston published a book on burns as part of his ongoing effort to educate other physicians on burn care.
Exhibits

A resource Guide for School Nurses (“Shriners Hospitals for Children — Boston knows that School Nurses are their students’ first responders”)

The First exhibit below is an 11x17 laminated poster for School Nurses. The poster provides information on the assessment of the burn injury, follow-up and wound care and the American Burn Association criteria for burn center referral.

Shriners Hospital uses the same poster for Pediatricians.

A resource guide for pediatric practices
(“Shriners Hospitals for Children — Boston…partnering with pediatricians to ensure the best possible outcomes for patients with burn injuries”)
Assessment of the injury

Initial Emergency Care
- Use C spine precautions as indicated
- Stabilize Airway, Breathing, and Circulation

Airway Management
- Suspect inhalation injury if:
  - Burned in an enclosed space
  - Darkened or reddened oral and/or nasal mucosa
  - Burns to face, lips, nares
  - Singed eyebrows and/or nasal hairs
  - Soot on teeth, tongue or throat
  - Rasp, hoarse voice or cough
  - Stridor or inability to clear secretions

Initial Treatment of Burn

Scald Injuries
- Remove from hot liquid and remove clothing. Cool the injury with cool tap water.

Flame Injuries
- Stop-Drop-and-Roll. Flames may be smothered with a heavy blanket or carpet. Cool the injury with cool tap water.

Chemical injuries
- Flush area with large quantities of water to dilute and remove the chemical from the skin. Eyes should be flushed with water or saline from the inner canthus laterally for at least 20 minutes and in transport. Dry chemicals should be brushed off the skin, then the area irrigated with large quantities of water. Neutralizations to protect yourself and others from the chemicals.

Electrical Injuries
- Do NOT touch the victim if still in contact with the current source (you will become a second victim). Turn off current. Seek emergency care.

Frostbite Injuries
- Frostbite is a medical condition that occurs when the normal protective mechanisms of the skin are overcome by severe cold. Treatment involves rapid moist rewarming and localized wound care.

American Burn Association Criteria for Burn Center Referral

The patient who requires burn unit care has:
- Partial thickness burns of greater than 10% of the total body surface area
- Burns that involve the face, hands, feet, genitalia, perineum, or major joints
- Third-degree burns in any age group
- Electrical burn, including lightning injury
- Chemical burns
- Inhalation injury
- Burn injury in patients with preexisting medical disorders that could complicate management, prolong recovery, or affect mortality
- Any patient with burns and concomitant trauma (such as fractures) in which the burn injury poses the greater risk of morbidity or mortality.

In such cases, if the trauma poses the greater immediate risk, the patient may be initially stabilized in a trauma center before being transferred to a burn center. Physician judgment will be necessary in such situations and should be in concert with the regional medical control plan and triage protocols.

- Children with burn injuries in hospitals without qualified personnel or equipment for the care of children
- Burn injury in patients who will require special social, emotional or rehabilitative intervention

Shriners Hospitals for Children — Boston

You or your child’s caregiver, or parents can contact us at 617-726-3575 to:
- Refer an emergency patient to our 24/7 medical staff
- Discuss a child’s care or evaluate any type of burn injury
- Arrange outpatient clinic visit for a child with a burn injury
- Obtain treatment for congenital issues or trauma-related injury
- Obtain educational materials for school health services staff, teachers and students

Follow Up and Wound Care

Wound Care
- Remove burned clothing and all jewelry. Elevate burned extremities to 45° to decrease swelling.
- Apply sterile DRY dressings. Do not apply ice, ointments, or creams for transport.
- Maintain body heat — wrap in blankets, prevent unnecessary exposure of body

Signs & Symptoms of Infection

An infected burn wound may appear as follows:
- Increase in wound size or amount of drainage, tender to touch, more red than usual, swollen, smells foul, red streaks present, a pust, warm, swollen area surrounding the wound. Fever may also be present.

Skin Care
- Cleanliness is very important in helping skin heal. Soaks with perfume or alcohol should not be used.

Itching
- Itching is a common problem with newly healed skin. Itching can be caused by dryness of the skin. It may be worse at night or in the heat. Perspiration can cause itching. There are some ways to decrease the itching:
  - Clean the areas frequently with non-perfumed moisturizing cream or lotion.
  - Avoid direct sunlight on the newly healed skin, even in the cooler weather. If a child is going outside, apply a sunblock that is low SPF (at least 30 SPF).

Scars
- Scarring is common after a burn. Generally, burns that heal within 14 days, that do not require grafting, are unlikely to scar. Each child heals differently. It is impossible to predict how the child will heal. It is important to keep in mind that scars will appear to get worse before they get better. In the beginning, the scars look raised and pink. At 4 to 6 months, the scars are at their peak and are more raised. Children are often fitted with pressure garments. Sometimes pressure helps to smooth and flatten the scar. Over time, the scars will get softer and less red (mature). It generally takes about 1 year.
State Fire Marshal mentions Shriners International in his press release during National Burn Awareness Week. “Draws attention to Young Children Being at High Risk for Burn Injuries”