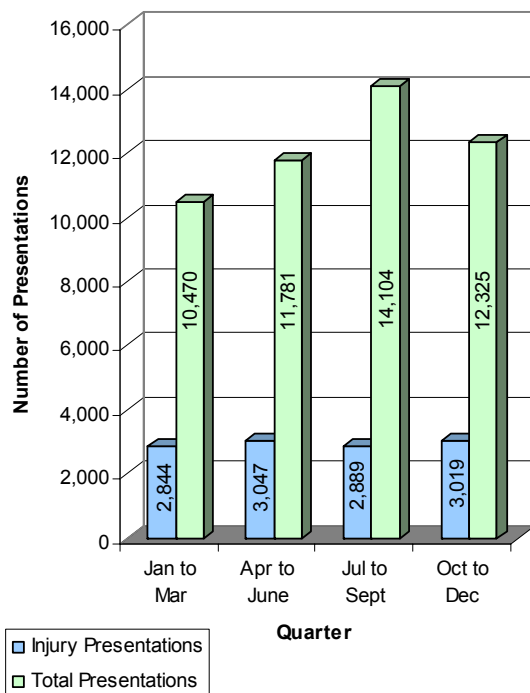


Burns and Scalds: Hot Water Burns Like Fire

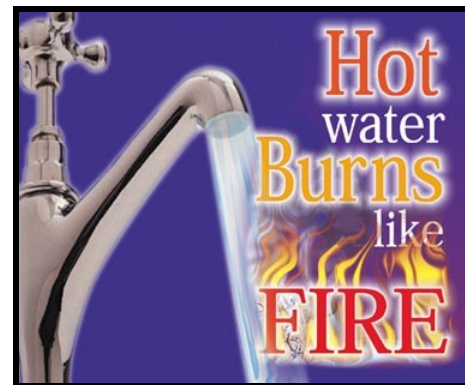
Childhood Injury Presentations: October to December 2006

- There were 12,325 presentations to Princess Margaret Hospital Emergency Department (PMH ED) from October to December 2006.
- Injury presentations accounted for 24.5% of the total number of PMH ED presentations.
- The leading cause of injury presentations to PMH ED from October to December was Falls (39.7%, n=1,204).
- For the calendar year 2006, injuries accounted for 24% (n=11,799) of the total number of all PMH ED presentations. (See graph below). This is a 7% increase in injury presentations from 2005 (n=822).

Total PMH ED Presentations, 2006



Introduction - Fire, Burns and Scalds



- There were 780 burn related injury presentations to PMH ED in 2005-06.
- Children aged 1 year and less than 12 months of age accounted for the highest number of burn injuries (1 year: n=233; <1 year: n=89).
- The majority of burns were for Contact with Hot Liquid/Steam (n=351).
- Burns accounted for 7% of the Total Emergency Department Injury Presentations for 2005-06.
- The most common body regions burnt were the arms (n=282), Legs (n=153), Face (n=111) and Body (n=109).

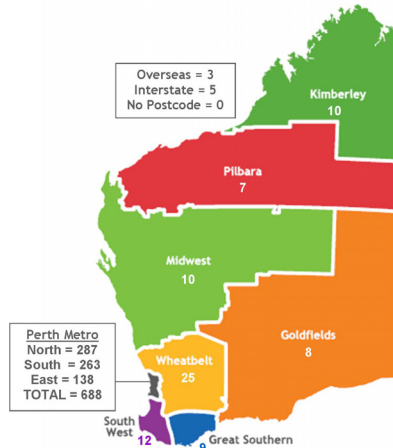


Scald injury from a Hot Cup of Coffee

Results

Burns can be one of the most devastating injuries a child can suffer with many requiring long hospital stays, multiple treatments and life long scarring.

Figure 1: Area of Residence for Burn Injury Presentations, children 0-14 years old, 2005-06



A total of 780 children presented at PMH ED in 2005-06 as a result of burn injuries, with 95.5% being unintentional. A total of 287 presentations to PMH ED were from a North Metropolitan residence (See Figure 1).

The most common location for Burns to occur is the Home (84.1%) with children aged 1 year (n=233) of age accounting for the highest number of presentations.

Males (n=470) had the highest number of burn injuries compared to Females (n=310), comparable with other injuries.

The most common body regions injured from burns are: (1) Arms n=282, (2) Legs n=153, (3) Face n=111, and (4) Body n=109.

Of the children aged 0-14 years presenting at PMH ED as a result of Burns, 65.6% (n=512) were treated and sent home, 33% (n=258) were admitted, 0.4% (n=4) Did not wait, and 1% (n=6) were referred on. The number of admissions for Burns is almost 10% higher than for other injuries.

The following summary of data is broken down by gender, age, aboriginality, location, and cause of injury. To enable a more detailed description on types of burns and stage of development the data will be summarised as:

- Children under 1 year old
- Children aged 1 to 4 years old
- Children aged 5 to 9 years old
- Children aged 10 to 15 years old

Children Less than 1 year

In 2005-06, 89 children less than 1 year of age (Approximately 11.4% of the total burn injuries) presented at PMH ED as a result of burns and scalds.

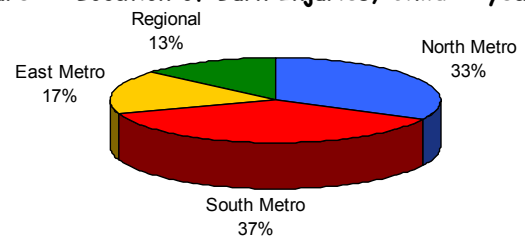
The majority of burns in this age group were either Contact with Hot Liquid/Steam (n=43) and Contact with Hot Object/Solid (n=37).

The most common cause of burns/scalds related to the preparation and consumption of hot food & drink such as hot tea and coffee, oven doors or pulling pots from stove tops (n=45).

More than 59.5% of children in this age group who presented as a result of a burn injury were able to be treated and sent home, 36% were admitted, 4.5% were referred on to another PMH department or other area.

Males (64%) had the highest number of burn injuries compared to Females (36%). Only 4.4% (n=4) of children <1 year presenting at PMH ED as a result of burns were Aboriginal.

Figure 2: Location of Burn Injuries, Child <1year.



The Home is the most common location for burn injuries to occur in children less than one year, accounting for 86.5% (n=77) of all burn injury presentations to PMH ED. The most common area of residence for Burn injuries was South Metro with 37% (See Figure 2).

Children aged 1 to 4 years

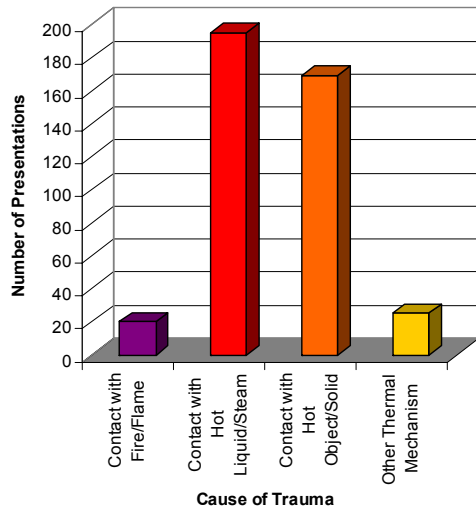
A total of 409 children aged 1 to 4 years presented to PMH ED during this time. Children aged 1 year old represented the highest number of burns presentations for all ages with 233.

Females accounted for 39.8% of 1-4 year olds presenting for burns and 60.2% were male.

Aboriginal children accounted for 9% of burn presentations for children aged 1-4 years (n=37). Aboriginal children are overrepresented in burn injury presentations to PMH ED, compared to other injury causes.

The Home remained the most common location for burn injuries in this age group at 89% (n=366).

Figure 3: Burns Presentations by Cause of Trauma, Children 1-4 years of age. 2005-06.



More than 65% of children in this age group who presented as a result of a burn injury were treated and sent home while 34% were admitted.

The majority of burns in this age group were Contact with Hot Liquid or Steam (n=195); followed by Contact with Hot Object or Solid (n=169) (See Figure 3).

The majority of Burns presentations to PMH ED for children aged 1 to 4 years were from a North Metro Area of residence (n=158), followed by 136 for South Metro, 64 for East Metro and 47 Regional presentations.

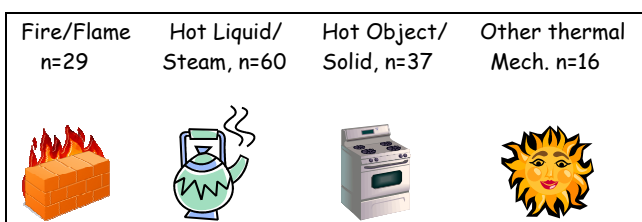
Children aged 5 to 9 years

Overall there were 142 Burn Injury Presentations to PMH ED for children aged 5 to 9 years of age in 2005-06. 11% of these injury presentations were Aboriginal children (n=16).

The gender difference in burns presentations narrowed for children aged 5-9 years. 45% of burn presentations to PMH ED for this age group were females, while 55% were males.

The Home remained the most common location for burn injuries to occur accounting for 76% of injury presentations, followed by Other Place (n=11) and Open nature area (n=10).

Figure 4: Burn Presentations by Cause of Trauma



Burns from Contact with Hot Liquid/Steam continued to be the most common type of burn injury for children aged 5-9 years (See Figure 4).

More than 66% of children in this age group who presented as a result of a burn injury were treated and sent home while 32% were admitted. There were 16 Regional burn injury presentations, with 6.25% of regional injuries occurring on a Farm.

Children aged 10 to 15 years

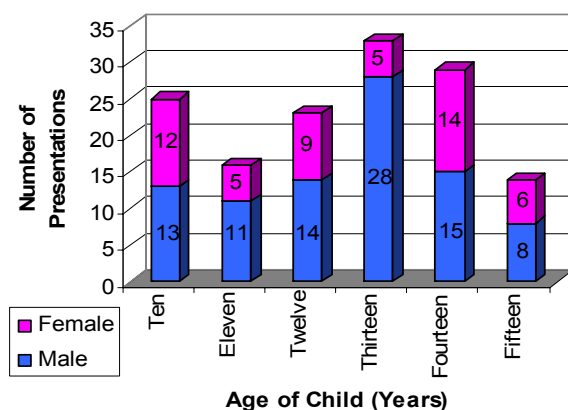
Overall there were 140 Burn Injury Presentations to PMH ED for children aged 10 to 15 years of age in 2005-06. 6.4% of these injury presentations were Aboriginal children (n=11).

A lower proportion of injuries to children aged 10 to 15 years required admission to hospital (28%) while 70% were treated and sent home.

The Home remained the most common location for burn injuries for children aged 10-15 years with 105, accounting for 75% of all burn injury presentations for this age group.

Males accounted for almost double the number of female burns presentations for children aged 10 to 15 years (M=64%; F=36%) (See Figure 5).

Figure 5: Burns Presentations by Age & Sex, Children 10-15 years of age. 2005-06.



Burns from Hot Liquid or Steam accounted for the highest number of burns for children aged 10-15 years (n=57); followed by Contact with Fire or Flame (n=30); Contact with Hot Object/Solid (n=28); and Other Thermal Mechanism accounted for 25.

Of the injury presentations for children aged 10 to 15 years, 90% were unintentional, with a further 7% of undetermined intent. The only Alleged Assault (1%), and Intentional Self Harm (2%) burn injuries for all age groups were recorded within the 10-14 year age group.

Prevention

A scald is a burn caused by hot liquid, hot vapour or steam. For young children scalds are commonly associated with hot drinks; water being boiled for drinks; cooking and hot food; and hot tap water.

Severe SCALDS and BURNS can Scar a child for Life!

Burns are a result of contact with flames and hot objects. Often fire related injuries include damage to lungs from smoke inhalation, and asphyxiation.

Preventing Hot Tap Water Scalds

At 60°C hot water can cause a full thickness (3rd degree) burn in less than a second. At 50°C it takes 5 minutes.

- 🔥 Control the delivery temperature of your bathroom hot tap water to a maximum of 50°C. Ask a licensed plumber how.
- 🔥 Always test the water temperature before bathing a child. Note: The maximum recommended temperature for bathing a child is 38°C.
- 🔥 When running a bath always run the cold water first (and turn it off last).
- 🔥 Always stay with children when they are in the bathroom.

Preventing Hot Food and Drink Scalds

- 🔥 Boiled water can scald for up to 30 minutes after it is boiled.
- 🔥 A cup of hot liquid spilled over a baby or toddler is the equivalent to a bucket of hot water being spilled over an adult.
- 🔥 Use non-slip place mats instead of tablecloths. Put your child down before having a hot drink.
- 🔥 Use commuter mugs or cups with lids and always put hot drinks in the centre of the table or somewhere else out of reach.
- 🔥 Keep kettles, jugs, teapots, coffee plungers and cords away from the edge of the bench.
- 🔥 Empty kettles after each use.

- 🔥 Use back hot plates before front ones, and turn pot handles away from the front of the stove or bench.
- 🔥 Keep your children out of the kitchen while cooking.

Surviving and Preventing Fires

- 🔥 Install smoke alarms and test them regularly, replacing batteries annually.
- 🔥 Have a fire escape plan that you practice with your family at least twice a year.
- 🔥 Have fire extinguishers or fire blankets on hand in the kitchen.
- 🔥 Practice "GET DOWN LOW and GO GO GO" and "STOP, DROP and ROLL" with children.
- 🔥 Keep Matches and Lighters out of reach of children.
- 🔥 Ensure heaters are away from curtains, furniture, clothing, bedding and other flammable material. Check they are turned off when you go to bed.
- 🔥 Install electrical safety switches to protect against faulty wiring or products.

Preventing Contact Burns

- 🔥 Install guards around fires and heaters and on top of stoves.
- 🔥 Keep children out of the kitchen when preparing meals.
- 🔥 Choose low risk children's nightwear styled to be close fitting and made of less flammable material. Look at the labelling.
- 🔥 Closely supervise children at BBQ's. Do not use petrol or other volatile material to light fires.
- 🔥 Keep irons and iron cords out of reach.

For further information on the prevention of fire burns and scalds download the individual Fact Sheets or Hot Water Burns like Fire resources at: www.kidsafewa.com.au

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The WA Childhood Injury Surveillance Bulletins are developed by Kidsafe WA in consultation with the Princess Margaret Hospital Emergency Department Injury Surveillance Officer; Department of Health (Clinical Network Development Team - Injury) and reviewed by the Injury Surveillance Steering Committee.

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