FIRE & BURN PREVENTION: Inspiration from the Field
FAMILY GAS SAFETY CHECK BEHAVIOR PROMOTION
WITH HOME VISITS AND BEHAVIOR AID TOOLS

Safe Kids China
June 2013
Background

- Gas leak is one of the leading causes of fire in winter season, especially during the Chinese New Year (CNY).
- Home visit is proven to be effective for injury prevention.
- People believe that getting red envelop during CNY brings good luck.
Objectives

- To enhance behavior for gas safety check
  - Through home visit
  - With behavior aid tools
  - With Chinese new year custom
METHOD Diagram

Intervention group
6 residential building
38 families

Control group
6 residential building
38 families

First home visit (1 week before Chinese New Year)
red envelop (Three gas safety behaviors, magnet as behavior aid reminder)

Oral Education

Second Home visit (1 week after Chinese New Year)
METHOD Diagram

Intervention group

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First home visit (1 week before Chinese New Year)

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Oral Education

Second Home visit (1 week after Chinese New Year)

93% positive reports on three gas safety behaviors, 64% families used magnet reminder

29% positive reports on three gas safety behaviors
Three Gas Safety Behaviors

Gas Safety Checklist

Gas Leak Emergency Contacts

Family Escape Plan
Magnet as behavior-aid tool
Conclusion

- The behavior on gas safety check was enhanced
  - Through home visit
  - With behavior aid tools
  - With Chinese new year custom
National Scald Prevention Campaign

Presented by

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NSPC Project Coordinator
Fire and Burn Death and Injury

Annual Statistics

- 4,000 deaths
- 400,000 burn injuries treated
- 30,000 hospitalized in burn centers
- 40% of all treated burns and one-third of those hospitalized are scalds

SOURCE: American Burn Association: Burn Incidence & Treatment in the US, 2010 Fact Sheet
What is a Scald Injury?

A scald injury occurs…

– When contact with hot liquid or steam damages one or more layers of skin
Scald Prevention Topics

- What are the frequent causes of scald injury?
- Who are the most frequent victims?
- How can scald injury be prevented?
Young Children and Scald Injury

40% of all scald injuries are to children 0 - 4 years of age

Source: American Burn Association: National Burn Repository - 2010 report
75% of all burns to young children are scalds

Source: American Burn Association: National Burn Repository - 2010 report
Frequent Sources of Scald Injury

- Hot Beverage Spills
- Cooking
- Hot Tap Water
Most Frequent Scald Injury Victims

- Young children
- Older adults
Scald Prevention

Developed by

National Scald Prevention Campaign Steering Committee

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Scald Prevention

- Tool Kit
Tool Kit Contents

- Webinar Presentation
- National Scald Burn Repository (ABA)
- Scald Prevention Educator’s Guide
- Scald Prevention PowerPoint – English
- Scald Prevention PowerPoint – Spanish
- Scald Prevention PSA
- Resource Documents
Scald Prevention Educator’s Guide

- General Background Information on Scald Burns
  - High risk groups
  - Time and temperature relationship to severe burns
  - Selected burn and scald injury statistics for children
Scald Prevention Educator’s Guide

- Fact Sheets for Community Distribution
  - Hot food and beverage scalds
  - Microwave scald prevention
  - Tap water scald prevention
  - Water heater thermostat settings and scald prevention
  - Other causes of scald burns
Scald Prevention Educator’s Guide

- **Getting the Message to the Media**
  - Working with the Media
  - Appendix A: Media Fact Forms
  - Appendix B: Press cover letter sample
  - Appendix C: Media advisory sample
  - Appendix D: Sample press releases
  - Appendix E: Sample Public Service Announcements
Scald Prevention Educator’s Guide

- Guidelines for Public Education
- Evaluation Form
- References/Resources
Why are Younger Children at Risk?

- Curiosity, imitation
- Limited understanding of danger
- Children watching younger children
Why are Younger Children at Risk?

- Limited ability to react quickly to hot contact
- Thin skin = deeper burn
- Small body = big burn
Why are Older Adults at Risk?

- Thin skin = deeper burn
- Reduced mobility, agility, vision, general awareness
- Reduced ability to feel heat, due to health conditions or medication
What Factors Determine Scald Injury Severity?

- Nature of substance
- Temperature of substance
- Length of contact
- Extent of body area scalded
- Location of scald
Protecting Children From Scalds

- Household modifications
- Everyday precautions
- Child supervision
Protecting Children from Scalds:
Kitchen and Dining Areas

Household modifications

- Mark and explain a “No-Kids Zone”
- Avoid using tablecloths
- Use spill-resistant “travel mugs”
Protecting Children from Scalds:
Kitchen and Dining Areas

- Keep crock pots & fryers away from counter edge
- Keep appliance cords short or coiled
- Avoid using extension cords
Everyday precautions

- Alert visiting friends, relatives, and caregivers
Protecting Children from Scalds:
Kitchen and Dining Areas

- Supervise at all times
- Keep hot food and liquids out of reach
- Never hold a young child when:
  - Preparing or serving hot food
  - Drinking a hot beverage
Protecting Children and Older Adults from Scalds: Kitchen and Dining Areas

Safety Underfoot

- Use non-slip floor mats near food preparation areas
Protecting Children and Older Adults from Scalds: Kitchen and Dining Areas

- Wipe up spills immediately
- Be sure path is clear when carrying or serving food (pets, children, toys, etc.)
Protecting Children and Older Adults from Scalds: Microwave Ovens

- Allow food to cool before opening door
- Mix foods before serving
Tap Water Scald
## Setting a Safe Hot Water Temperature

Time and temperature relationship required to scald a healthy adult

<table>
<thead>
<tr>
<th>Temperature (°F)</th>
<th>Temperature (°C)</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>155</td>
<td>68</td>
<td>1 Second</td>
</tr>
<tr>
<td>140</td>
<td>60</td>
<td>5 Seconds</td>
</tr>
<tr>
<td>127</td>
<td>52</td>
<td>1 Minute</td>
</tr>
<tr>
<td>120</td>
<td>48</td>
<td>5 Minutes</td>
</tr>
<tr>
<td>100</td>
<td>38</td>
<td>Safe Bathing Temperature</td>
</tr>
</tbody>
</table>
Recommended residential standard

120°F/48°C

or below “Medium” setting

(U.S. Consumer Product Safety Commission)

Nursing homes & child care facilities

110°F/43°C

(Recommended by some state or local regulations)
Protecting Children and Adults from Scalds:

Bathroom

Household Modifications

- Lower water heater thermostat setting
- Temperature control devices
- Fall prevention measures
Setting Hot Water Temperature

- Run hot water up to two minutes at tap
- Test temperature with cooking thermometer
- Lower setting as needed
Bathroom Scald Prevention - Equipment

- Tempering valve
  - on water line
- Anti-scald valves
  - on shower heads and faucets
Fall prevention

- Grab bars
- Non-slip mats in tub/shower and on floor
- Shower/bath chair
Bathroom Scald Prevention - Precautions

- For single control faucet, always turn on and off in the “cold” position
- For dual control faucet, always turn “cold” faucet on first, and off last
- Make sure all household members and caregivers understand these controls
Phase 2 – Pilot Testing

OBJECTIVES

1. Evaluate in six pilot test areas in the US the effectiveness of the NSPC materials

2. Evaluate the ability of indigenous collaborative organizations to deliver and sustain the Campaign within their service areas

3. Secure practical information regarding how best to launch the Campaign Nationwide
Pilot Sites

- Sacramento, California
- Memphis, TN / Southaven, MS
- Seattle, WA
- Cedar Rapids, Iowa
- Philadelphia, PA
- Dallas, TX
Administrator’s Guide

- Building & sustaining partnerships
- Funding program implementation
- Evaluating your program
- Sample letter of engagement
- Scald fact sheet
Pilot Test Determinations

- Pilot Test Area Administrator’s Kit contained the basic information needed for successful area/regional implementation of the program.

- Program Tool Kit contains a wealth of resource information primarily geared for program administrators/coordinators.
Pilot Test Determinations

- Additional educational products (video, PowerPoint) are needed for specific, targeted risk groups and/or caregivers of these groups. They should focus on cause, effect and intervention activity.

- Develop a Campaign slogan or “hook” for branding and recognition purposes.
Pilot Test Determinations

- Media spots must be developed to create a desire for this information among targeted individuals.

- Campaign materials should be available for order from a central source.

- Additional promotional/awareness materials need to be developed.
  - Bus banners
  - Web banners
Scalds are Preventable!

High Risk Groups are:

Age 0 – 4 years

Older Adults
National Scald Prevention Campaign

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The world is changing around you. And what are you doing about it?

Ray Reynolds
Iowa State Fire Marshal
U.S. Fire deaths in **5 days** near Christmas

- 1 dead. Occurred on Friday, 12/21. Springfield, Ill. A 50-year-old man died in a house fire. The cause is under investigation.
- 1 dead. Occurred on Friday, 12/21. Waltonville, Ill. A 53-year-old man died in a house fire. The cause of the fire is under investigation.
- 1 dead. Occurred on Sunday, 12/22. Dripping Springs, Texas. A person died in a house fire. The cause of the fire is under investigation.
- 1 dead. Occurred on Friday, 12/21. Windsor, S.C. A 72-year-old man died from a wildfire that spread to his mobile home.
- 4 dead. Occurred on Friday, 12/21. Churchville, Va. A 62-year-old woman, 47-year-old woman, 40-year-old man and a 9-year-old boy died in a mobile home fire. The cause is under investigation.
- 1 dead. Occurred on Friday, 12/21. Lancaster County, S.C. One person died in a house fire. The cause is under investigation.
- 2 dead. Occurred on Friday, 12/21. Wichita, Kan. A 63-year-old man and a 35-year-old man, both with disabilities, died in a house fire. The cause is under investigation.
- 1 dead. Occurred on Saturday, 12/22. Moultrie, Ga. A 36-year-old woman died in a house fire. The cause of the fire is under investigation.
- 3 dead. Occurred on Saturday, 12/22. Sioux Falls, S.D. A boy aged 16, and two girls ages 12 and 6 died in a house fire. The cause is under investigation.
- 1 dead. Occurred on Saturday, 12/22. Charleston City, Va. An 84-year-old man died in a house fire. The cause of the fire is under investigation.
- 2 dead. Occurred on Saturday, 12/22. Durham, N.C. A man and a woman were found dead in a house fire. The cause is under investigation.
- 2 dead. Occurred on Saturday, 12/22. Chicago, Ill. A 3-year-old girl and a 2-year-old boy died in a house fire. The cause of the fire was unattended cooking.
- 1 dead. Occurred on Saturday, 12/22. Louisville, Ky. A 69-year-old man died in a house fire. The cause of the fire is under investigation.
- 1 dead. Occurred on Saturday, 12/22. Meade Township, Mich. An 83-year-old woman died in a mobile home fire. The cause of the fire is under investigation.
- 1 dead. Occurred on Saturday, 12/22. Jackson, Miss. A person died in a house fire. The cause of the fire is under investigation.
- 1 dead. Occurred on Saturday, 12/22. Providence, R.I. A 10-month-old girl died in an apartment fire. There were no working smoke alarms. The cause of the fire is under investigation.
- 2 dead. Occurred on Saturday, 12/22. Canoe, Ala. A 58-year-old man and a woman died in a house fire. The cause of the fire was related to lighting a wood-burning stove.
- 1 dead. Occurred on Sunday, 12/23. Gary, Ind. A 63-year-old man died in a house fire. The cause of the fire is under investigation.
- 2 dead. Occurred on Sunday, 12/23. Orono, Maine. Two brothers ages 47 and 49 died in a house fire. There were no working smoke detectors, the cause is under investigation.
- 2 dead. Occurred on Sunday, 12/23. Kansas City, MO. A man in his 40s and a woman in her 30s died in a house fire. The cause of the fire is under investigation.
- 2 dead. Occurred on Sunday, 12/23. New Ipswich, NH. A 26-year-old man and a 2-year-old boy died in a house fire. The cause of the fire is under investigation.
- 1 dead. Occurred on Saturday, 12/22. Phoenix, Ariz. A woman in her 70s died in an apartment fire. The cause of the fire is under investigation.
- 1 dead. Occurred on Saturday, 12/22. Staten Island, N.Y. A 23-year-old male died in a house fire. The cause of the fire was improper handling of smoking materials.
Logan’s last breath— you think we are winning?
The Story of Patrick and Tyler

On Friday, January 22, 2010, firefighters in Clinton, Iowa responded to a house fire in their community. It was a relatively small fire. In fact, it took just 20 gallons of water to douse the flames. And yet, the heat and smoke were powerful enough to take the lives of four people - including two little boys: brothers Tyler Wade, 6, and Patrick Molitor, 3.

Autopsy reports revealed that both Tyler and Patrick died of smoke inhalation. The investigation by the local Fire Marshal revealed the fire started in a chair on the home's first floor. Though the exact cause of the fire will likely never be determined, there is one thing investigators do know: Tyler, Patrick, their mother and grandmother never received the critical warning they needed to escape the home fire. The smoke detector on the second floor of the house was not working because the battery had been removed.

Because of a simple 9-volt battery, another Iowa family suffered an incredible loss and the citizens of Clinton saw first-hand the devastating effects a fire can have on a community. Teachers and students at Bluff Elementary School struggled with the loss of their classmates.
Our Children

2010 Fires
• Makala Prudhome  8
• Tyler Wade        6
• Patrick Molitor  3
• Alex Buzzetta     7
• Matthew Caldwell  17

2011 Fires
• Henry Rodenberg   6
• Ian Rodenberg Jr. 5
• Logan Taets       2
• Olivia Rodenberg  4
• Max Rodenberg     11mo.
• Dustin Ladehoff   2
• Raymone Bryant    14
Leland Johnson – Age 4 Aug. 18, 2012 -
Council Bluffs, Iowa.
11-13-12 Tyra, Madison, Wyatt, and Xavier-Lake City.
GAME CHANGERS

• Lightning strikes/storms.

• 200 CSST home fires in 2010.

• Cost runs construction.

• Cheap isn’t always best.
Increased violent weather and lightning.
Note the “pin hole” leak to the CSST gas line.
Plastics in Homes of Two Average Households of Four
Fire Behavior / Propagation – Summary

- Faster fire propagation
- Shorter time to flashover
- Shorter escape times
- Shorter time to collapse
Are we creating a conflagration problem?
Using social media for good not evil.
• Lives saved
• Battery give away
• Smoke alarm installation / fire service empowerment
• Public relations and education

What we chose to talk about in order to tell our story.
On the morning December 18, 2010 Des Moines Fire Department responded to a structure fire at 3203 Mondamin Avenue.

“front porch fully involved and fire showing from the two front porch windows”.

The residence was occupied by three people who were asleep.

One of the occupants awakened by the smoke alarm had to break out a window for everyone to escape the fire.

**Lives Saved 141-143 (2010)**
Using your Fire Data to sell a point
Iowa School Fires vs. % of Fire Marshal School Inspections Completed per Calendar Year

- # of Reported School Fires per Calendar Year
- % of School Inspections Completed

- 2009: 41 fires, 80% inspections completed
- 2010: 58 fires, 66% inspections completed
- 2011: 96 fires, 42% inspections completed
- 2012: 72 fires, 60% inspections completed

Graph shows the increase in reported school fires coinciding with a decrease in the percentage of school inspections completed.
Juvenile Involved In Fire

Fire Chief/Official Calls 2-1-1 or Goes to 211Iowa.org, Gets Email to Regional Cord

Chief/Official Emails Regional Coordinator with Info

Intervention Specialist Makes Contact With Family/Phone Intake

Regional Cord Refers Case to Closest Program

Intervention Specialist Goes to 211Iowa.Org to Make Referral

DHS Will Be Default Referral

Research and Prevention Grants
Coalition Involvement Education

Intervention Specialist Decision
1. Age Specific Education
2. Face to Face Meeting

Statistical Data Entered Into Iowa Fire Bridge

Refer if Needed to:
- Counseling,
- In-patient
- Informal action
- Juvenile Justice

Intervention Specialist Goes to 211Iowa.Org to Make Referral
It’s a much bigger world
A 22 hour day to finally see his son’s grave.
Family
You are going to have bad days...
• Don’t wait to invest yourself in the unusual!

• Ignore naysayers.

• If that fails, remember progress occurs one retirement at a time…
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