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Scalding

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Scalding incidents cause life threatening and painful injuries. "Scalds, which are burns attributed to hot liquids or steam, account for 33%--58% of all patients hospitalized for burns in the United States (CDC MMWR 2009) and people with disabilities are at a high risk of these burns.

Caregivers must be highly diligent to prevent these burns from occurring in all settings.

People at Risk

According to the American Burn Association "Tragically, children, the elderly, and *people with disabilities* are especially vulnerable to burn injuries. Individuals who may have physical, mental or emotional challenges or require some type of assistance from caregivers are at high risk for all types of burn injuries including scalds".

Adults aged ≥65 years have a worse prognosis than younger patients after scald burns because of age-related factors and comorbid medical conditions, and they are subject to more extensive medical treatment than younger adults." (CDC MMWR 2009)

Further examples of people at high risk for burns are: people with altered sensation, that have muted pain responses, have health conditions such as neuropathy, spinal cord injury and other neurological and circulatory related illnesses, people who are older, *those with known skin sensitivity or skin breakdown and individuals who cannot communicate or move away from water if it is too hot are at extremely high risk.*

Burns can happen very quickly!

Water Temperature:	Time for a third degree burn to occur:
155° F	1 second
148 ° F	2 seconds
140 ° F	5 seconds
133° F	15 seconds
127 ° F	1 minute
124 ° F	3 minutes
120 ° F	5 minutes
100 ° F	Safe temperature for bathing

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Prevention is the Key

Prevention requires focus, training, reminders and ongoing monitoring. Providers should have specific protocols in place to ensure prevention. Burns are extremely painful and have life threatening consequences.

"The safest temperature for bathing is about 100 degrees Fahrenheit / 37o C."
http://burnprevention.org/scald-prevention/

Recommendations

Prevention

- Have anti- scalding features in bathrooms and sinks installed such as thermostatic mixing valves, temperature activated flow reducers and pressure balancing valves. Check with a certified plumber to determine what anti-scalding system is right for your home and situation and to assure all of your water systems are working properly and are set up to avoid scalding injuries.
- Check the water temperature using a thermometer before you place a person near or in water and assure the temperature is only slightly higher than normal body temperature or around 100 -102°F or lower before exposing a person to the water.
- Assure that the water is not too cold because it can cause circulatory and comfort problems. Assure the temperature of the room where bathing is taking place is comfortable to avoid chills.
- Check the water temperature using your own hand/elbow **after using the thermometer to confirm the water is not to hot or cold**. (You will not be able to accurately feel the water if you are wearing gloves so don your gloves **after** you confirm the water temperature).
- Follow Licensing regulation 12VAC35-105-280 that states: "Adequate hot and cold running water of a safe and appropriate temperature shall be available. Hot water accessible to individuals being served shall be maintained within a **range of 100-110°F.** If temperatures cannot be maintained within the specified range, the provider shall make provisions for protecting individuals from injury due to scalding".
- Identify individuals at risk of burns and develop a scalding risk plan and educate all people supporting the individual about this plan. (Assure that the plan tells caregivers how to keep the person safe whenever they are exposed to water such as when they are washing their hands, taking a bath or shower or filling a pot or glass at the sink).
- Water temperature should be cooler for those with fragile skin conditions and who are at greater risk due to age and health conditions but warm enough for comfort and to avoid a chill. **Talk to a health care provider to find a balance**. (Occupational

Therapists can help you understand the risks and how to reduce them for bathroom safety for those with a high risk of injury).

- Educate the staff on why it is important to keep the tap water temperature at 110 degrees or lower and how they can check the water temperature at the tap, shower and bath.
- Keep the thermometer readily available to encourage its use.

Action Items (for suspected scalding)

- Remove the person from the water immediately if they show any signs of distress, pain, the skin becomes pink/red and if you sense something is wrong. Obtain immediate emergency assistance; **when in doubt call 911**. (Do not use home remedies to treat burns instead follow your first aide training and seek out professional medical assistance immediately).

For any questions about this alert, please contact Susan Rudolph at susan.rudolph@dbhds.virginia.gov

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