

1 Problem

What	Problem(s)	Resident burns, scalding bath water	
When	Date	August 13, 2013	
	Time	?	
Where	Different, unusual, unique	Failure of immersion heater thermostat	
	Facility, site	Registered care home	
	Unit, area, equipment	Resident bath	
	Task being performed	Bathing	
Impact to the Goals	Resident Safety	Severe burns to resident	
	Employee Safety	Risk of burns	
		Emotional impact to employee	
	Environmental	Lack of temperature control of water	
	Compliance	Prosecution of care home & worker	£20,000
	Resident Services	Resident placed in scalding bath	
	Schedule/ Operations	?	
	Property/ Equipment	Failure of immersion heater thermostat	
Labor/ Time	Response, investigation		
	Frequency	This incident	>£20,000
		Annualized Cost	?

SCALDING BATH BURNS RESIDENT

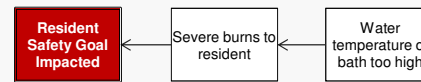
Equipment, procedural failure lead to high water temperature

The failure of an immersion heater thermostat led to a resident's bath being heated to scalding. A resident was placed in the scalding water by a caregiver who did not physically check the temperature and seriously burned.

"Thermostatic mixing valves that reduce the maximum temperature of the water at the tap, have reduced the number of accidents such as this and are a requirement in registered care homes. However, they are no replacement for a physical check of the water temperature. I would also urge anyone with an immersion heater to check that it has a secondary thermostatic cut-out to prevent the hot tank boiling if it fails."
- HSE Inspector Hazel Dobb

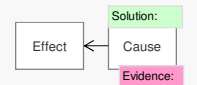
2 Analysis

Basic Level Cause Map - Start with simple Why questions.



Basic Cause-and-Effect

While equipment and procedures were both in place to prevent resident scalding from too-hot baths, failures of both resulted in a resident receiving serious burns.

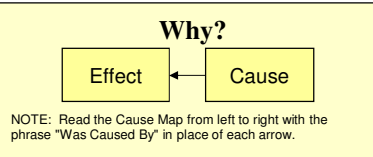
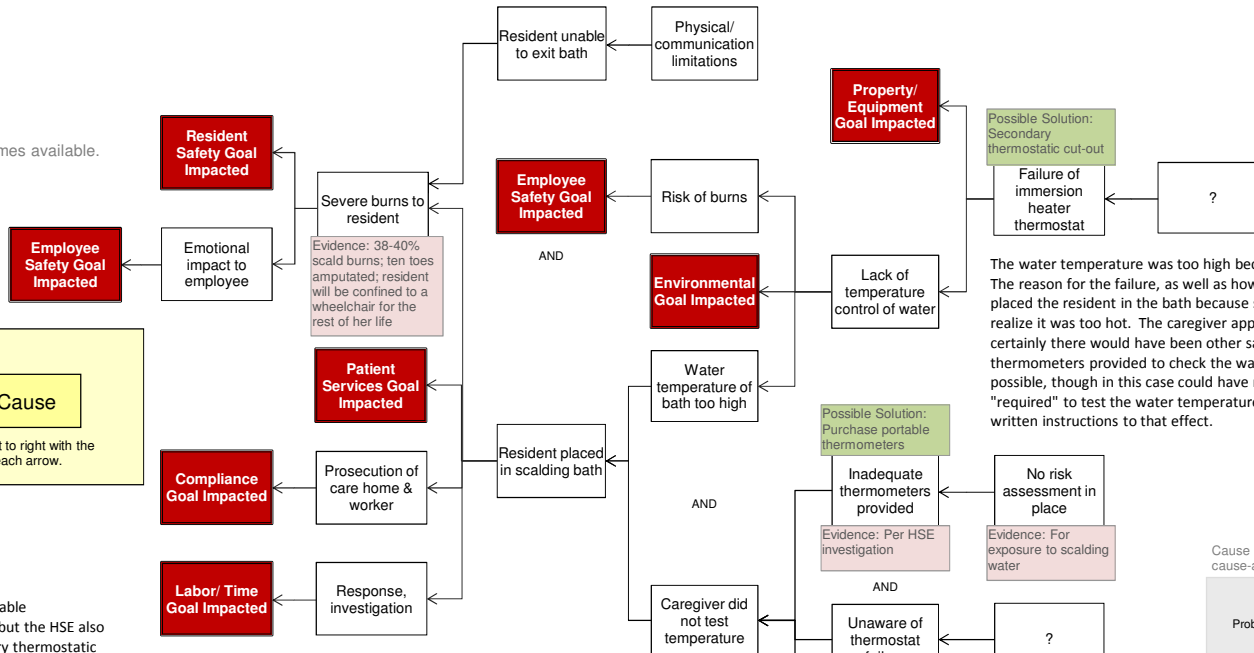


In this case, the resident's injuries resulted from being placed in a scalding bath and being unable to exit due to physical and communication limitations. The resident was placed in the too-hot bath because the water in the bath was too hot, and the caregiver placed the resident in the bath. Both of these things (the water temperature being too high, and the caregiver placing the resident in the bath) had to occur in order for the injury to occur.

The water temperature was too high because of the failure of the immersion heater thermostat. The reason for the failure, as well as how long it was not working, is unknown. The caregiver placed the resident in the bath because she did not check the water temperature and failed to realize it was too hot. The caregiver appears to have been unaware of the thermostat failure, or certainly there would have been other safeguards in check. Additionally, there were inadequate thermometers provided to check the water temperature. (A manual check for comfort was still possible, though in this case could have resulted in a burn to the employee.) Although it was "required" to test the water temperature and record that the check had been done, there were no written instructions to that effect.

More Detailed Cause Map

Add detail as information becomes available.



3 Solutions

The care home has purchased portable thermometers for caregivers' use, but the HSE also recommends the use of a secondary thermostatic cut-out, which would prevent boiling of the water tank even if the thermostat failed. The HSE has also provided a white paper "Managing the risks from hot water and surfaces in health and social care", that discusses appropriate risk assessments and control measures to prevent burns of vulnerable care home residents.

For a free copy of our Root Cause Analysis Template in Microsoft Excel, used to create this page, visit our web site.



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Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

CAUSE MAPPING

Problem Solving • Incident Investigation • Root Cause Analysis

- Step 1 **Problem** What's the Problem?
- Step 2 **Analysis** Why did it happen?
- Step 3 **Solutions** What will be done?