



California's Protection & Advocacy System  
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# Death of Rachel D--Public Advisory: In re the Matter of Rachael D: Scalding Death Reveals Inadequate Regulation and Oversight of Basic Safety Hazard in Psychiatric Health Facilities

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*Note: When this report was originally published, we were known as Protection & Advocacy, Inc. (PAI). In October 2008, we changed our name from PAI to Disability Rights California.*

## **I. INTRODUCTION**

Rachael D died in December 1995 after receiving third-degree burns over 80% of her body while showering in scalding water during her hospitalization at a rural county Psychiatric Health Facility located in Northern California. PAI's review revealed that, unlike other health facilities, there are no specific health and safety regulations which govern the temperature of hot water delivered to patient care areas in Psychiatric Health Facilities (PHFs). Furthermore, there is no effective oversight, by any entity, to govern this basic safety issue. The PHF where Rachael D was scalded was equipped with anti-scald devices, but those devices failed and caused excessively hot water to be delivered through a shower head, which resulted in Rachael D's death. PAI's review further

indicated that following Rachael D's death, the facility took appropriate corrective action to prevent similar incidents from occurring.

## **II. BACKGROUND**

### **A. RACHAEL D**

Rachael D, a woman in her fifties with a psychiatric disability, was admitted to the County Psychiatric Health Facility two days prior to her death. Before being hospitalized, she had been living independently in an apartment.

### **B. COUNTY PSYCHIATRIC HEALTH FACILITY**

County Psychiatric Health Facility (CPHF) is a 16-bed psychiatric health facility in rural Northern California. CPHF is licensed by the California State Department of Mental Health to provide 24-hour in-patient care for people with mental disabilities. The services provided by CPHF include psychiatry, psychology, psychiatric nursing, social work, rehabilitation, and medication administration.

According to the Program Manager of the CPHF, all of the showers for patient use were equipped with anti-scald devices which automatically shut the water off when the water temperature at the showerhead reached or exceeded 110 degrees Fahrenheit.

## **III. CIRCUMSTANCES SURROUNDING THE DEATH OF RACHAEL D**

On the morning of her death, Rachael D briefly met with her counselor and then went into the bathroom to shower. About fifteen minutes later, during a routine check, a male staff member knocked on the bathroom door but got no response from Rachael D. He then summoned a female staff member to check on Rachael D. Looking through the shower door, the female staff member saw Rachael D laying on the shower floor. The staff member opened the shower door and called for help while she turned off the water.

One staff member called for 911 assistance while others moved Rachael D out of the shower. Rachael D was still wearing her hospital gown. Her

skin appeared purple and peeling. After Rachel's airway was cleared, CPR was initiated. The paramedics -- who reportedly arrived approximately one minute after CPR was initiated -- took over the resuscitation and transported Rachael D to the County Community Hospital, where she was then pronounced dead.

## **A. NO REGULATION OF HOT WATER TEMPERATURE CONTROL**

As noted earlier, there are no specific health and safety regulations which govern the temperature of hot water delivered to patient care areas in Psychiatric Health Facilities (PHFs). In contrast, California Code of Regulations, Title 22, does include regulations for minimum and maximum water temperature for General Acute Care Hospitals (section 70863(d)); Acute Psychiatric Hospitals (section 71665(d)); Skilled Nursing Facilities (section 72651(d)); Intermediate Care Facilities (sections 73649(d) 76661(d) & 76952(d)); Correctional Treatment Centers (section 79855(d)); and Adult Residential Facilities, such as board and care homes (section 80088(e)(1)). These regulations require that plumbing fixtures have temperature controls which automatically regulate the temperature of hot water being delivered to and used by patients. The temperature of the hot water must be between 40.5 C (105 F.) and 48.9 C (120 F.). Additionally, Title 22 regulations governing the above-mentioned health facilities require plumbing to be maintained in compliance with the California Plumbing Code standards which address hot water temperature control.<sup>1</sup>

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<sup>1</sup> Temperature control valves shall be provided to automatically regulate the temperature of hot water delivered to plumbing fixtures used by patients to a range of 105 F. (41 C) minimum to 120 F. (52 C) maximum. High-temperature alarms set at 125 F. (52 C) shall be provided where hot water is originally generated at temperatures exceeding 125 F. (52 C). California Code of Regulations, Title 24, Part 5, Section 1011(e).

## **B. LACK OF NEEDED REGULATORY OVERSIGHT BY CALIFORNIA DEPARTMENT OF MENTAL HEALTH**

According to the County Building Department and the State Fire Marshal's Office, hot water temperature controls are inspected by the Local Building Inspector at completion of construction. However, there is no entity which routinely inspects PHFs for on-going compliance with the California Plumbing Code. The California Department of Mental Health regulates and monitors PHFs for compliance with applicable health and safety regulations. However, as noted earlier, there are no specific applicable California Department of Mental Health regulations which address hot water temperature controls or incorporate relevant standards from the California Plumbing Code. Since surveys by the California Department of Mental Health do not include inspection of the hot water delivery system, there is no effective, routine regulatory oversight of hot water temperature controls in PHFs.

## **IV. FOLLOW-UP INVESTIGATIONS**

### **A. LAW ENFORCEMENT**

Following the incident with Rachael D, Law Enforcement arrived and removed the shower head, the anti-scald device, and the cold water knob from the bathroom Rachael D had used. The anti-scald device failed when checked several minutes later in another room. Thereafter, all showers were suspended for two days while the remaining anti-scald devices were repaired and tested.

### **B. INVESTIGATION BY COUNTY CORONER'S OFFICE**

The records of the County Coroner's Office indicate the cause of death as "(A) Hypotension, (B) Hot shower water, (C) Schizophrenia treated." Other significant conditions noted in the forensic necropsy report include "cutaneous soft tissue burns over 80% of the body, third degree."

### **C. INVESTIGATION CONDUCTED BY THE CALIFORNIA DEPARTMENT OF MENTAL HEALTH**

The California Department of Mental Health, Licensing & Certification Division (Mental Health Licensing), conducted an investigation on February 22, 1996, which included reviewing the mechanical changes to the hot water delivery system. Since there are no Mental Health Licensing regulations governing hot water temperature controls, no deficiencies regarding the delivery of scalding water to a patient care area were issued. However, Mental Health Licensing found the facility's response to the failed water safety device to be thorough and appropriate, as did PAI.

### **V. IMPLEMENTATION OF NEW SAFETY MEASURES: INSTALLATION OF NEW HOT WATER TEMPERATURE CONTROL EQUIPMENT SYSTEMS AND MONITORING PROTOCOLS**

The County Psychiatric Health Facility (CPHF) responded promptly to the failure of their anti-scald devices. First, the facility installed a mixing valve and high temperature thermostat alarm on the water heater. The mixing valve ensures that the temperature of the water is maintained within preset parameters (minimum of 105 F. to maximum of 110 F.). The high temperature thermostat alarm sounds if the hot water temperature exceeds the maximum water temperature setting. To prevent tampering, the water heater is located in a locked room.

Second, CPHF installed new anti-scald devices at each of the shower heads which automatically close in the event the water temperature reaches 114 F. The devices selected have a five-year warranty.

Third, as a final safety precaution, CPHF has instituted a new nursing procedure for monitoring the water temperature of patients' showers. On a monthly basis, nursing staff manually check the water temperature and record their findings in a log. Under the new anti-scald procedure, the facility's Building and Grounds Department is required to be notified immediately if the temperature at the shower head exceeds 106 F.

The equipment and procedures now in place at CPHF meet, and in some instances exceed, the requirements of Title 22 which govern hot water delivery to patients in other health facilities. The maximum temperature setting at CPHF (110 F.) is lower than that required by Title 22 for other health care facilities (120 F.). Further, the setting for the high temperature alarm is also lower at CPHF (set at 110 F., as compared to the California Plumbing Code requirement of 125 F.). Moreover, unlike CPHF protocol, Title 22 has no specific requirements for the monitoring of anti-scald devices by facility employees.

## **VI. FINDINGS AND CONCLUSIONS**

PAI's review of this death pointed to a basic safety problem warranting correction on a system-wide basis. Unlike other facilities, Psychiatric Health Facilities are not currently subjected to any specific health and safety regulations governing the temperature or regulation of hot water delivered to patient care areas. Yet, Rachael D's death illustrates the tragic consequences of patients' exposure to inadequately regulated hot water.

## **VII. RECOMMENDATIONS**

The Department of Mental Health should promulgate regulations which establish proper standards for the control of the temperature of water delivered to plumbing fixtures used by patients in Psychiatric Health Facilities. Until such appropriate regulations are promulgated, Psychiatric Health Facilities throughout the state should voluntarily install hot water temperature control safety devices which automatically regulate the temperature of hot water to plumbing fixtures used by patients, as well as properly monitor their functioning on a regular basis.

*Disability Rights California is funded by a variety of sources, for a complete list of funders, go to <http://www.disabilityrightsca.org/Documents/ListofGrantsAndContracts.html>.*