

## Hot Tap Water Temperature and Scalds Policy Position Statement

### Key messages:

Each year in Australia around 6,000 people are hospitalised as a result of a burn or scald. Scalds resulting from contact with hot drinks, foods, fats, cooking oils and hot water comprise around 45% of all burn injury-related hospitalisations in Australia. Hot tap water scalds have been shown to be particularly amenable to prevention by reducing the temperature of water delivery from hot taps through use of tempering or hot water mixing valves.

### Key policy positions:

1. Ongoing policy and legislative commitment to heated water temperature regulations.
2. Uniform interpretation, application and implementation of the Plumbing Code in All States and Territories.
3. State and Territory governments to provide rebates for the installation of tempering valves for those with the least resources to reduce risk of scalds whilst addressing requirements for prevention of legionella bacteria.
4. Collaborative efforts between health authorities, local governments and industry groups to deliver education that highlights the potential danger of hot water and the benefit to be gained by use of hot water mixing valves to reduce heated water temperature to 50°C at the point of delivery in bathrooms.

### Audience:

Federal, State and Territory Governments, policymakers and program managers, PHAA members, media.

### Responsibility:

PHAA's Injury Prevention Special Interest Group (SIG).

### Date adopted:

September 2023

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# Hot Tap Water Temperature and Scalds

## Policy position statement

### PHAA affirms the following principles:

1. Decreasing the temperature of hot tap water delivered to bathing areas is an effective preventive measure. Lowering temperatures to 50°C at the point of delivery through the use of tempering valves will significantly reduce the risk of hot tap water scalds.
2. Although regulations are in place, further safety gains can be made. Expanding the scope of existing regulations beyond new homes or homes that have alterations made to hot water services to include all heated water systems is recommended.
3. Increases in the uptake of tempering valve installation could be achieved by providing rebates for the installation of tempering valves for those with the least resources.
4. Regulation should be implemented to ensure rental properties meet the minimum requirements at the time of lease similar to that of smoke alarm detectors.
5. Hot water scalds-specific data should be extracted from larger aggregate datasets to enable scald specific epidemiological analysis and associated prevention efforts.

### PHAA notes the following evidence:

6. Burns and scalds are devastating injuries which may result in lifelong physical impairment and ongoing psychological consequences.<sup>1</sup>
7. Each year in Australia around 6,000 people are hospitalised as a result of a burn or scald.<sup>2,3</sup> Scalds resulting from contact with hot drinks, foods, fats, cooking oils and hot water comprise between 18 to 43% of all burn injury-related hospitalisations in Australia.<sup>3</sup>
8. While scalds from hot water tap only account for a small proportion of burns hospitalisations<sup>2</sup>, they are important as they can involve a greater body surface area than other scalds.<sup>4,5</sup> In addition, evidence suggests that there are higher numbers of surgeries, longer stays in intensive care units, and a higher mortality rate for hot tap water scalds than other scalds.<sup>4,5</sup> Hot tap water scalds account for almost 5% of all burns resulting in hospitalisation among children aged 0-4 years, and 1.3% of all burns resulting in hospitalisation.<sup>6</sup>
9. Groups most at-risk for hot tap water scalds include young children aged between 1 and 4 years (24.6%) and adults 65 years and older (30.2%).<sup>7</sup> Infants and older adults are less able to respond and move themselves quickly from hot tap water, and their skin is generally thinner than younger adults, requiring less exposure time and lower temperature to cause scald.<sup>7</sup>
10. Apart from vulnerable age groups, a quarter of all tap water scalds occurred in adults between the ages of 18 and 64 during the period between January 2007 and December 2018, highlighting the risk of hot tap water to all age groups.<sup>7</sup>
11. Around 90% of hot tap water scalds requiring admission to hospital occur in the home and over 92% of them are sustained in the bathroom, primarily as a result of immersion in baths (approximately 85%).<sup>7</sup>

More than half of the hot tap water scalds occurred due to the tap water being accidentally heated to unsafe temperatures.<sup>7</sup>

12. The higher the water temperature the shorter the exposure time required to produce a full thickness scald. At 68°C a full thickness scald will occur in less than one second, and at 50°C, five-minute exposure is required to produce a full thickness scald.<sup>8</sup> Hot tap water scalds have been shown to be particularly amenable to prevention by reducing the temperature of water delivery from hot taps via tempering valves.<sup>9,10</sup>
13. Heated water must be stored at a minimum temperature of 60°C, to inhibit the growth of Legionella bacteria.<sup>8,11</sup> Hot water tempering valves blend hot and cold water together, ensuring the stored hot water can be delivered at lower temperatures (maximum 50°C) which can reduce the risk of severe hot water scalds.<sup>8,12</sup>
14. The Plumbing Code of Australia (PCA)<sup>13</sup> sets out the requirements for water storage and use of tempering valves. The PCA is given legal effect by enabling legislation in each State and Territory. However, States and Territories can adopt local variations to the Code.
15. Differentials in hospitalisation rates for hot tap water scalds between persons in the highest and lowest socioeconomic status<sup>14</sup> suggests the cost of installing a tempering valve may be a barrier to uptake for socioeconomic disadvantaged groups.

#### **PHAA seeks the following actions:**

16. Governments should make policy and legislative changes to increase the scope of the heated water temperature regulations to include all domestic residences.
17. Governments should insure uniform interpretation, application and implementation of the Plumbing Code of Australia in all States and Territories.
18. State and Territory governments should provide rebates for the installation of tempering valves for those with the least resource.
19. Collaborative efforts between health authorities, local governments and industry groups should be made to deliver education that highlights the potential danger of hot water and the benefit to be gained by reducing heated water temperature to 50°C via hot water tempering valves in bathrooms.
20. Greater research funding to evaluate high-quality community-based intervention programmes based on efficacious counter-measures to reduce burns and scalds in children.<sup>15</sup>

#### **PHAA resolves to:**

21. Advocate for the above steps to be taken based on the principles in this position statement.

**ADOPTED 2023**

**(First adopted 2012, revised 2016 & 2023)**

## References

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