

Preventing Accidents Through Safety: Reducing Ramen Noodle Burns Through Education

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Between 2015 and 2021, OU Health treated 228 pediatric burn cases, with 38% (n=86) attributed to partial thickness or full thickness scald burns from microwavable ramen noodles. Scald burns are associated with increased morbidity in the pediatric population (Hong et al., 2022). These injuries require transfer to burn centers and extensive rehabilitation, including physical therapy and wound care. In 2021, the Burn Coordinator identified a knowledge gap among consumer safety entities and caregivers regarding microwave safety, which increased the risk of scald burns (Castañeda-Rodríguez et al., 2024).

Evidence in the literature identified a decrease in flame-related burns, but no change in the frequency of scald-related burns (Yamamoto et al., 2025). Improvements in home safety, appliances, and targeted caregiver education are attributed to decreased flame-related burns (Yamamoto et al., 2025). An identified knowledge gap in the community is how microwaves heat water versus how a stove heats water. Water reaches a boiling point of 212°F on the stove that is observable with bubble formation. However, since

microwaves use radiation to heat consumables, water warmed in a microwave will not bubble until it is superheated over the boiling point. Most individuals are unaware of how a microwave heats water, so they superheat water until bubbles are identified, increasing the risk of partial- or full-thickness scald burns.

After synthesizing information from the literature, an educational burn prevention program was implemented to reduce pediatric scald burns, particularly with cooking ramen noodles.

Implementation:

An educational sticker was designed to be placed on packages of ramen noodles. These stickers educated kids and caregivers about the dangers of microwaving water to cook noodles. A large volume of ramen noodles was purchased to hand out at schools, health fairs, and community events and educational stickers were placed on each packet. Data obtained from the electronic health record was analyzed to measure the impact of the program. Data from 2022 was excluded due to the organization's transition to a

new electronic health record and concerns for inaccurate data during the transition period.

Results and Analysis:

In 2016 – 2021, there were 228 total burns, of which 86 (36%) were scald burns caused by microwaving ramen noodles. Data reviewed from 2023 – April 2025 after the intervention identified 357 burns, of which 32 (9%) were scald burns caused by ramen noodles. The program achieved a 76% decrease in scald burns related to microwaving ramen noodles.

Outcomes:

This initiative outperformed the initial goal of reducing scald burns. The goal was to reduce scald burns by 20% and the intervention resulted in a decrease of scald burns of 76%. The success of this project resulted in a concerted effort to educate the public about microwave safety and open dialogue with regulatory organizations and policy makers about food preparation safety.

Lessons Learned:

Connection with the community and meaningful conversations with caregivers contributed to the success of this project. The findings of this work were presented to the state legislature with the goal of improving safety and regulation of microwavable foods. Opportunities for improvement include coordinating resources for burn injury survivors as many parents of children, or peers of children who receive education, have experienced partial or full thickness burns in the past. ■

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