

Successfully advocating to make microwave ovens “child-resistant” to protect young children from severe scalds

Marla Robinson, MSc, OTR/L, BCPR, BT-C₁, FAOTA, Annemarie O’Connor, MSN, FNP-BC₁, Kyran P. Quinlan MD, MPH₂, Gina Lowell MD, MPH₂, Nancy Cowles₃, Lawrence J. Gottlieb MD, FACS₁

Conclusion Headline

After 15 years of advocacy efforts, on September 17, 2018, the UL 923 STP voted by a narrow margin to pass the new standard that new microwave ovens sold in the United States will be required to be made with “child-resistant doors.”

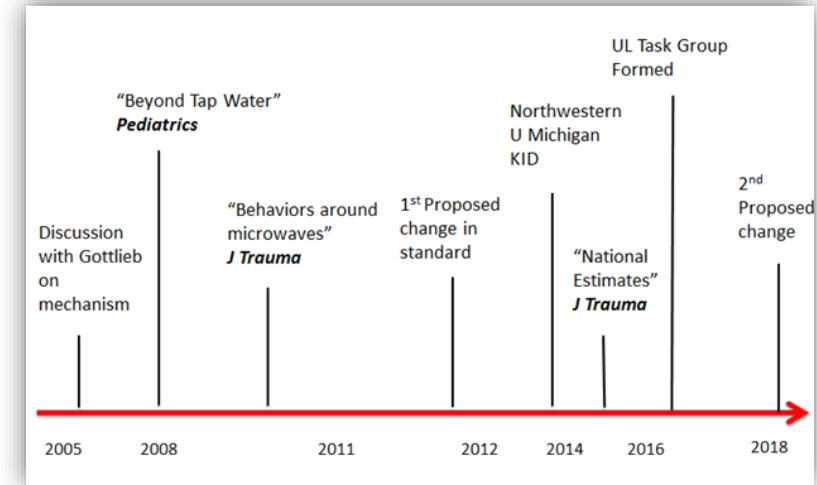


Significance Statement

- Scald burn injuries are the leading cause of burn-related emergency room visits and hospitalizations for young children.
- Many of these injuries occur when children are removing items from microwave ovens.
- We reported that children as young as 17 months can open a microwave oven door and remove the heated contents placing them or others near them at risk for burn injury.
- Over the past 15 years we have published a series of studies supporting our advocacy for a change in microwave oven design to protect children from severe scalds.
- Requiring microwave oven doors to be more difficult for a child to open would help to protect young children from these types of burn injuries.

Data Source/Population and Results

- Our analysis of the National Electronic Injury Surveillance System found an estimated 7200 young children were treated in US emergency departments from 2002-2012 for burns suffered when the child opened a microwave oven door and spilled the heated contents. In this analysis, children as young as 12 months old accessed the microwave themselves.
- In the United States, microwave ovens must meet the published microwave standard administered by Underwriters Laboratories (UL 923).
- In 2013, we formally proposed a change in the standard which underwent a voting process by the Standards Technical Panel. Microwave makers are well represented on the panel. This attempt did not pass.
- We continued to publish focused research, presented at multiple national meetings, enlisted college engineering students to design “child-resistant” microwave doors to demonstrate feasibility, and created a short video to put a face to the statistics.
- In 2017, we became active members of a National Task Group convened by UL on this issue, and two authors (KQ and MR) became voting members on the 17 member microwave Standards Technical Panel.
- A new proposal was introduced by the Association of Home Appliances Manufacturers requiring “two distinct actions” to make it more difficult for a young child to open a microwave oven door. Multiple concerns were addressed including those related to the impact on seniors. To pass, at least 50% of the voting members had to submit a ballot and at least two-thirds needed to vote “yes.” We lobbied members who appeared undecided.



Lessons Learned

- **Start with a good idea:** we believed that making microwave oven doors harder to open would protect children from injury from this mechanism.
- **Building a team who could work together to effect change was crucial:** pediatricians, an occupational therapist, a burn surgeon, a nurse and other members of the burn team in addition to those working in regulation and standards for microwave oven design.
- We learned to state our case in ways that translated to those not in the medical field. **We learned to “tell the story”.**
- Research and advocacy work together to protect children and **persistence** is the key to success.

Affiliations: University of Chicago Medicine ₁, Rush University ₂, Kids in Danger ₃