



## From SAVIR

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On 28 October 2009, the International Code Council (ICC) met in Baltimore, Maryland (USA). The ICC, a membership association dedicated to building safety and fire prevention, develops the codes used to construct residential and commercial buildings. After much debate, the Council voted to reject a set of proposals to remove a provision specifying that all new one-family and two-family homes be equipped with a home fire sprinkler system. The vote is a strong endorsement of sprinkler technology, and one that should be of interest to public health professionals. The attention within the ICC to residential sprinklers presents an opportunity for public health professionals who work in injury prevention to lend their expertise to the residential sprinkler effort at a critical point in the history of this technology. We here present a case in support of residential fire sprinkler codes, and offer *Injury Prevention* readers a brief overview of the ICC process concerning sprinklers for one-family and two-family homes.

Residential fires are a major source of injury worldwide, although rates of residential fire death vary among nations. In the USA, where the October ICC vote will have the most immediate impact (because most US localities that adopt codes use those developed by the ICC), more than 2700 people (0.91/100 000) died in a home fire in 2008.<sup>1</sup> Comparable rates for Canada in 2002 (0.80),<sup>2</sup> the UK in 2007 (0.54),<sup>3</sup> and other industrialised countries suggest a need for action on this issue. Although the magnitude of the residential fire problem varies across countries, the potential of sprinkler technology to reduce these injuries in industrialised countries is clear, and the need to establish home fire sprinklers as a standard for new residential construction as countries move toward industrialisation is urgent. Evaluations of the technology point to reductions in fire deaths and property loss.<sup>4-5</sup> Once installed, sprinklers require little maintenance and offer occupants automatic protection early in the fire event. Despite the benefits of this intervention, public health professionals have been slow to embrace residential sprinkler technology, as evidenced by the dearth of research publications from our field and the absence of sprinkler abstracts at our professional meetings.

The ICC decision about residential code requirements for sprinklers is part of the larger intersection between building codes and injury prevention, and one that is too often overlooked in modern times when evaluating how to most effectively intervene to prevent injury-related death and disability. Building codes with the potential to prevent injury offer tangible examples of the life-saving potential associated with changing the home environment. The Triangle Shirt Waist Factory fire in 1911 prompted, among other changes, a requirement that sprinklers be installed in specified factory spaces, and is cited as one of many tragic events that prompted a series of interventions to improve worker safety through the work environment.<sup>6</sup> Almost 100 years later, attention to the safety of homes (where the risk of dying in a fire is greatest) is the focus in the current effort to bring the same protections we have come to expect at work to the built environment where people live.

In 2008 sprinkler advocates prevailed at the ICC hearings in Minnesota, and sprinklers were added to the 2009 edition of the International Residential Code (IRC), the “model” code that sets the standards in the USA for one-family and two-family new home construction. In response to this addition, the National Association of Home Builders submitted a formal proposal to remove this provision from the 2012 edition of the IRC code through a formal proposal that prompted the October 2009 vote. Advocates on both sides of this issue participated in the Baltimore hearings where dues-paying ICC members cast their votes. With the votes cast, sprinkler advocates expect to retain the sprinkler provision in the IRC at a Final Action Hearing scheduled for May 2010.

As the ICC process moves toward a final resolution on the matter of sprinklers in one-family and two-family homes, the experience provides a reminder of the important role that building codes, and the process of developing codes, has in injury prevention and public health. Home fire sprinklers are an effective strategy for preventing fire-related injury and death,<sup>4-5</sup> and efforts to advance this technology through research, advocacy and practice benefit from the perspective that our field brings. The residential sprinkler issue should be familiar territory for professionals in our field. We have a history of successfully advancing policy issues that are met by resistance from some in industry—for example, airbags in motor vehicles. Our experience with similar issues, the power of the population-based scientific perspective that we bring, and the presence of a strong set of natural, established allies in the fire service and their supporters combine to make this an issue that is ripe for our involvement. We hope that the efforts of the residential sprinkler advocates and the promise of ICC maintaining a code requirement mandating fire sprinklers as a standard feature in all new homes will inspire some readers to learn more about sprinklers as a strategy for reducing residential fire-related injury, and to incorporate this technology into their future work.

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