

Grassroots Movement Building and Preemption in the Campaign for Residential Fire Sprinklers

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Home fires account for 85% of fire deaths in the United States, the majority in 1- or 2-family homes lacking fire sprinklers. Since 1978, however, a grassroots movement has successfully promoted more than 360 local ordinances mandating sprinklers in all new residential construction, including 1- and 2-family homes. The homebuilding industry has responded by seeking state preemption of local authority, a strategy previously used by other industries concerned about protecting their profits. From 2009 through 2011, 13 states adopted laws eliminating or limiting local authority over residential fire sprinklers. This study of the residential sprinkler movement adds to our understanding of grassroots public health movements and provides additional evidence that preemption can have a negative impact on public health and safety. (*Am J Public Health*. 2013; 103:1780–1787. doi:10.2105/AJPH.2013.301317)

On March 25, 1911, a fire in the Triangle Shirtwaist factory in New York City killed 146 workers. Although an effective fire sprinkler had been patented in 1874, the building did not have sprinklers. The commission that convened to study the fire recommended that, in the future, sprinklers be installed “in all factory buildings over seven stories or 90 feet in height in which wooden floors or wooden trim are used.”^{1(p44)}

Although an increasing number of jurisdictions mandated sprinklers in commercial structures following the Triangle Shirtwaist fire, it was not until the 1970s that advocates initiated a successful campaign for local laws requiring sprinklers in all new residential construction, including 1- and 2-family homes.² Concerned about the success of the grassroots sprinkler movement, trade associations representing homebuilders began lobbying for state laws limiting or eliminating local authority over residential fire sprinklers, a strategy known as “preemption.”

Preemption occurs when a higher level of government (federal or state) limits the authority of lower jurisdictions (state or local) over a given matter.³ For practical purposes, the effect of state preemption is the same as federal preemption: if laws at higher and lower levels conflict with one another, the higher level laws will typically prevail.^{3,4} Among

public health practitioners (and most researchers), the term “preemption” usually refers to “ceiling preemption,” by which higher jurisdictions limit the power of lower jurisdictions to adopt stronger protections.⁵ On the other hand, setting minimum federal or state public health standards, which can be referred to as “floor preemption,” is rarely controversial in the public health community. According to the Institute of Medicine, “the presumption should be that ‘floor’ preemption is the more appropriate option in the area of public health.”^{4(p50)} Therefore, we use the term “preemption” to signify ceiling preemption and recommend that, for the sake of clarity, other public health practitioners and researchers use this nomenclature as well.

Advocates working on numerous different public health issues, including alcohol policy,⁶ gun violence prevention,⁷ obesity prevention,⁸ tobacco control,^{9,10} and illegal drugs policy,¹¹ have expressed concerns about preemption.^{3,5} Preemption can halt state or local innovation,¹¹ eliminate the flexibility to respond to the needs of diverse communities,⁷ undermine grassroots movements,⁶ prevent or delay changes in social norms,¹⁰ and concentrate the power of industry lobbyists in Washington and the state capitals.¹²

Of course, there are circumstances under which federal or state preemption in public

health is either necessary or a valid option. However, these circumstances are rare.³ According to the Institute of Medicine,

In a few areas of public health, federal preemption seems highly appropriate. For example . . . the federal ban on smoking on airplanes—the interstate nature of airline flight makes this area ideally suited to federal preemption.^{4(p49)}

The valid desire to implement strong, consistent national standards can usually be achieved by adopting minimum standards (i.e., floor preemption) without abrogating state or local authority to adopt stronger public health or safety protections.

We have focused on residential fire sprinklers for 2 reasons: (1) from 1978 until the present, there has been a growing grassroots movement for residential fire sprinkler mandates; and (2) between 2009 and 2011, 13 states passed preemptive legislation to hinder the grassroots sprinkler movement. We studied the factors that led to success in the fire sprinkler movement and the impact of state preemption on that movement. Preemption in this case appears to fit a historic pattern in which industries have used preemption to thwart public health or safety movements.^{3,6,12}

Public health innovations and reforms in the United States often rely on grassroots efforts.^{13,14} A grassroots public health movement is a type of social movement formed to address threats to the health and safety of the community, led by activated individuals and organizations that devote resources to building grassroots capacity. A grassroots movement is typically built around a single issue or concern that energizes individuals who join together in a common cause^{13–15} and can be focused on policy change at any level of government. Social movement theory suggests that grassroots public health movements are most likely to succeed when entrepreneurs in the movements are able to take advantage of political opportunities, have available institutional

structures that will support action, and can frame their issues in ways that facilitate a shared understanding of the problem and that motivate action.¹⁶

The existence of structural opportunities for “concerted political action” creates the possibility for mobilization to influence policy.¹⁷ To move an issue through the political process, however, advocates must frame their issue in such a way that they are reflecting, influencing, or activating public opinion.¹⁸ Thus, successful grassroots efforts either are supported by majority opinion or are advocating in a field in which the majority of people do not yet hold strong opinions. In the latter case, the social movement, if it is visible in its efforts, can educate the public to adopt the movement’s understanding, or framing, of an issue.¹⁹

One of the most accessible points for health advocacy in the US political system is at the local level.^{3,12} At the local level, an informal network of those desirous of policy change—often volunteers—can work together more readily. Their voices are more likely to be heard at the local level, because they may have a personal connection with local decision makers, whereas state or national interest groups may be perceived as outsiders and thus are less likely to be able to capture local government.²⁰ In addition, the framing of an issue can be local and personal and thus more salient to community residents.²¹

At higher levels of government, the advantages enjoyed by public health advocates diminish in relation to their generally better funded and better connected opposition.¹² Groups that can afford paid lobbyists and make campaign donations are more likely to achieve their goals at higher levels.²² These groups frame preemption as a necessary antidote to inconsistent local ordinances that stifle business,⁹ with few competing voices to point out that local problems need local solutions. Public health advocates have generally lacked the access and resources needed to counteract these better funded and organized interests at higher levels of government.³ Thus, preemption serves as a repressive force, eliminating local opportunity for “concerted political action.”¹⁷

For powerful interest groups, the advantages of preemption are clear. Preemption forces public health legislation into the venues where the institutional structures and political

opportunities favor those with money and professional lobbying operations. At higher levels of government, consistency and uniformity are used to argue for preemption. What is lost is the ability of local communities to serve as laboratories of innovation where they can develop and test tailored solutions to address local problems. Only when the array of solutions is tested can an informed discussion on a single standardized set of rules begin. Issue frames that emphasize the importance of a consistent or standardized set of rules make more sense at higher levels, whereas those that emphasize local solutions do not.³

In the early 1970s, it was estimated that fires in the United States killed nearly 12 000 people, caused 300 000 injuries, and resulted in property damage of more than \$11 billion annually. To accurately assess the extent of the human costs and property damage associated with fires and recommend solutions, Congress created the National Commission on Fire Prevention and Control in 1971.²³ *America Burning*, a report published by the commission in 1973, energized fire prevention efforts, especially in the fire service.^{2,24}

Although fire deaths and injuries have declined since the 1970s, most residential fire deaths and injuries are preventable.²⁵ In 2010, fires in the United States caused 3120 deaths (exclusive of firefighters), 17 720 injuries, and \$11.6 billion in property loss. Approximately 85% of all fire deaths occur in 1- and 2-family homes.²⁶

The Federal Emergency Management Agency has concluded that automatic fire sprinklers are the “most effective fire loss prevention and reduction measure with respect to both life and property.”^{25(p17)} Sprinkler systems are relatively inexpensive to install, especially in new construction. On average, the installation of sprinklers in new homes costs \$1.61 per square foot (and as low as \$0.55 in some cases), and the presence of fire sprinklers can lower the cost of fire insurance.²⁷⁻²⁹ Retrofitting existing homes with fire sprinklers is more expensive than is installing them in new home construction, although communities have considered lower cost retrofitting options.³⁰

In 1896, the National Fire Protection Association (NFPA) published the first installation standard for automatic sprinkler systems, which ultimately evolved into NFPA Standard 13. In

1975, the NFPA published a standard specifically developed for 1- and 2-family homes and mobile homes: NFPA 13D. At a 2008 meeting of the International Code Council (a membership association that develops model building and fire prevention codes, including the International Residential Code [IRC]; most US jurisdictions rely on the IRC in updating their building codes), a requirement for fire sprinklers in all new 1- and 2-family dwellings was added to the 2009 edition of the IRC.³¹ The IRC is a model code, and not a statute or regulation, and must therefore be adopted by state or local jurisdictions to carry the force of law.

METHODS

In conducting this research, we used the case study method because of its ability to build an in-depth understanding of a phenomenon. This method is appropriate for studying political processes because of the key roles that personal interactions, alliances, and policy entrepreneurs play in generating outcomes. Case studies generate rich detail on these processes, which facilitates comparisons across cases. Our goal was to understand both the residential fire sprinkler movement and how preemption affects the adoption of fire sprinkler requirements. Thus, in constructing this case study, we wanted to profile the history of the grassroots fire sprinkler movement, its progression, and the impact of state level preemption. We thus wanted to profile early advocates, their motivations, and their successes and then examine what happened in those states that passed preemption.

We generated data for our case study from documents, key informant interviews, Web sites, and observation of a meeting of fire prevention advocates held during the 2010 annual meeting of the American Public Health Association in Denver, Colorado. We began our work by identifying existing published and Web site material on fire sprinklers and fire prevention advocacy, including the work of the NFPA. Publications by 2 people informed our research. First, Shannon Frattaroli of the Johns Hopkins Bloomberg School of Public Health has published on grassroots movement building generally and fire prevention in particular. Second, Chief Ron Coleman’s book, *Alpha to Omega: The Evolution in Residential Fire Protection*,

a professional and personal history of the fire sprinkler movement, was an invaluable firsthand account of the residential sprinkler movement. This research formed the basis for our interviews.

We identified our key informants through conversations with representatives of the injury prevention field. We designed our interview protocol to understand the fire sprinkler movement and the impact of state preemption on it. The protocol was semi-structured to ensure that, although all respondents answered some questions, there was also room for respondents to expand on their answers and the interviewers to explore emergent areas. We did not have a coding scheme established in advance but allowed key themes to emerge from the interviews.

We conducted interviews with 10 key informants between December 2010 and March 2011. We conducted 2 of the interviews in person and 8 by telephone. We recorded all interviews. We partially transcribed interviews using interview logs.³² The key informants included local advocates, policy experts, fire service members, injury prevention advocates, and representatives of burn survivors. The interviews lasted between 30 and 75 minutes.

We analyzed the interviews to identify themes in 2 primary areas: (1) the history of the residential sprinkler movement, and (2) the impact of state preemption on the progress of the movement. The document and Web site review and observation of the Denver meeting supplemented the interview data by providing additional details about sprinkler technology, fire prevention, and state preemption. Unless otherwise noted or referenced, all the observations and quotations in this article are from the interviews.

RESULTS

The residential fire sprinkler movement began as a national network of committed and respected grassroots leaders within the fire service who successfully promoted local sprinkler ordinances. The movement accelerated as grassroots advocates were later joined by supportive national organizations, burn survivors, researchers, and others. Beginning with North Dakota, Idaho, and Texas in 2009, 13 states preempted local authority over residential fire sprinklers, which had a negative impact on the movement.

Building a Grassroots Movement

During the 1970s, a small national network of fire service personnel began advocating local ordinances requiring fire sprinklers in all new residential construction. The first successful ordinance campaigns were in suburban communities experiencing rapid growth. Often in new developments far from fire stations, burgeoning construction threatened to exceed the capacity of the fire service and required new facilities, personnel, and equipment. According to Shane Ray, the former fire chief in Pleasant View, Tennessee, and the current state fire marshal in South Carolina,

I live in a [well-off] rural community that's transitioning into a suburban community fairly quickly—if a very affluent community does not have adequate resources to deal with a fire event, then how in the world does a small rural community deal with it? That's how we got into the fire sprinkler business. We want new neighbors and we want to welcome new growth if planned properly. But what we didn't want was for that growth to burden the existing owners. . . . We used the philosophy that said, "You build it, you protect it."

In addition to reducing the burden on the fire service, fire sprinklers saved lives. One of the earliest advocates was Ron Coleman, the operations chief for the Costa Mesa, California fire department in the early 1970s. He knew from firsthand experience how effective automatic fire sprinklers are and, like many in the fire service, he understood the human consequences of home fires. In 1 case, he arrived at a fire in an "unsprinklered" apartment to find the body of a 13-year-old girl who died while trying to escape. He believed the death could have been prevented by a fire sprinkler system, and it marked a turning point in his own career and the broader residential sprinkler movement. As Coleman explained: "[I] asked myself a rhetorical question of 'How the hell is it we can protect [factories] and can't save thirteen-year-old children?'"

After becoming the fire chief in San Clemente, California, Coleman proposed that the city require sprinklers in all new residential construction. In 1978, San Clemente adopted the first comprehensive residential sprinkler ordinance. San Clemente's ordinance was followed in 1981 by 1 in Cobb County, Georgia—at the time, the seventh fastest growing county in the United States.² Scottsdale, Arizona, adopted a

sprinkler ordinance in 1985, followed by Prince George's County, Maryland, in 1992. A 15-year evaluation of the Scottsdale ordinance²⁹ and a similar study of Prince George's County's³³ concluded that both ordinances had saved lives and reduced property damage.

At the inception of the residential sprinkler movement, there were several national fire prevention initiatives that provided opportunities for the sprinkler advocates to come together and share technical and strategic assistance with one another. These included the US Fire Administration, which funded research, and the Los Angeles City Fire Department. According to Coleman,

There was truly a network that went from East Coast to West and from North to South. . . . It began as a result of . . . some workshops where various parties were invited. Many of these individuals went on to implementing [residential fire sprinkler] codes and ordinances. . . . There was not only a matrix that existed, but it was highly active with a constant exchange of information. We visited frequently with each other and leveraged our research every chance we got.

Local advocates were the key to success in these efforts. According to Gary Keith of the NFPA,

In all cases you can point to several individual champions who took this on as a personal cause, usually someone . . . in the fire service, and they were able to rally others to support them. . . . It really came down to some champion within the fire department . . . leading the cause [and] being able to convince the local promulgating body that this was the right thing to do. . . . It comes from being very convincing in their argument and coming from a position of high credibility within the local community.

The local approach made fire prevention efforts meaningful and achievable, according to Tonya Hoover, the state fire marshal in California and a former local fire marshal. She said,

Sometimes when we look at the big picture, it's too much to handle. . . . [But working locally] it's about *your* family, *your* neighbors, and *your* area. . . . I had built trust with key members in the community, that when I brought forward code. . . . there was a rationale for what I did. And I think they trusted me enough to believe that I was really looking out for the betterment of my community.

The early advocates of residential sprinkler ordinances comprised an informal national network of fire service workers who shared technical and strategic support. As members of

the fire service, they understood that fire sprinklers save lives, reduce injuries, and control costs.^{2,27,28} One participant referred to the movement as “democracy at its finest.”

Fire service members were later joined by burn survivors, homeowners, researchers, and, occasionally, homebuilders. Following the 2003 Station Nightclub fire in Rhode Island, in which 100 people died in a fire during a concert, burn survivors became increasingly active in the sprinkler movement. (According to tests by the National Institute of Standards and Technology, the fire would have been extinguished by an automatic sprinkler system. Although installation of a sprinkler system was required by law, the nightclub did not have one.³⁴) For example, Amy Acton, the executive director of the Phoenix Society, an organization representing burn survivors, said,

I am a former burn nurse, a burn survivor, and now run the Phoenix Society for Burn Survivors, so I was very involved in the fire safe cigarette effort at the state level. Once that [was ending], the organization looked at other legislative or code efforts that we could get behind, and the fire sprinkler issue was starting to ramp up. . . . Probably the biggest reason why we got involved was the Station Nightclub fire in Rhode Island. We happened to have a board member in that area. . . . and so we were engaged with that community in 2003. And that. . . was the catalyst for getting involved in a much larger way.

In 2009, 40 members of the Phoenix Society attended a meeting of the International Code Council, a membership association dedicated to building safety, fire prevention, and energy efficiency, to support the residential sprinkler requirement that had been added to the IRC in 2008. Although the IRC is a model code and must therefore be adopted by regulators, adding 1- and 2-family homes to the IRC sprinkler standard was considered critical to promoting adoption.^{31,35}

In 2009, the NFPA launched the Fire Sprinkler Initiative,³⁶ a Web-based resource for advocates. The Web site provides centralized, accurate information to support grassroots advocates. According to Lorraine Carli of the NFPA,

We use the Web as 1-stop-shopping for grassroots advocates, where they can get model ordinances, letters, facts and figures, videos, everything else they need to make successful arguments in their community. They can get that all online much quicker than they could have 5 years ago. . . . We're [also] much better

able to respond quickly to media accounts, whether it's news stories or editorials. . . . We know that an article has appeared and we can respond very quickly because of the Internet.

By November 2011, the grassroots sprinkler movement had successfully advocated 368 local residential sprinkler adoptions.³⁶ Local sprinkler laws had been adopted in 34 states over 33 years. As has been typical in other grassroots movements, policies diffused from 1 locality to another.

Common Voices, a coalition that advocates on behalf of burn survivors, was incorporated in 2010. According to Peg Paul, a consultant with Common Voices,

Municipalities start a trend: “Our neighbor passed an ordinance; we should, too.” We ran ads congratulating fire chiefs where ordinances had passed [with the message] “He cares about his community and firefighters.” What we've seen happen in Northern Illinois trickled down to the southern part of the state.

In addition to the local adoptions, statewide regulatory bodies adopted the 2009 IRC in California and Maryland (effective in both states January 1, 2011), 2 of the most active states in the grassroots sprinkler movement. Local jurisdictions had adopted 146 ordinances in California and 31 in Maryland. Neither state preempts stronger local code adoptions, such as requiring sprinkler installation in existing dwellings when certain remodeling projects are undertaken. These statewide rules were adopted after a sufficient number of local ordinances had passed, demonstrating that sprinkler ordinances were acceptable to the public and homebuilders. For example, the California Building Industry Association ultimately took a neutral position on statewide code adoption. The adoption of numerous local ordinances in both states increased public and industry acceptance of residential sprinklers. According to Keith,

It's proved that it could work because we've got. . . . 20, 30 years of. . . successes in several large communities that we've been able to point to as evidence of how the world doesn't end. . . . from a construction standpoint, [and] it ends up having very positive fire loss results as well. And so we've been able to use the local case studies to help prove why it should be adopted at the state level.

Advocates believe that in communities with ordinances, there is a greater appreciation of the risks of home fires and the benefits of fire

sprinklers—even among homebuilders. Local sprinkler campaigns promote public education and collaboration between homebuilders and the fire service, and builders “learn they can live with the code.” According to Ray,

The success of the sprinkler ordinances has been because of local leadership and stakeholder involvement. . . . You had to have the builders on board—they had to see the benefits instead of the negative. . . . The chamber of commerce, the fire department, insurance agents, the local utility provider, the fire sprinkler contractors—all those people had to be brought in.

Outside the fire prevention field, the residential sprinkler movement received relatively little attention from the media, the public, or the public health community. Some participants attributed the success of the movement, at least in part, to working quietly with local elected officials and policymakers and “flying under the radar.”

Meri K. Appy of the Home Safety Council and Ray both commented that the residential sprinkler campaign would benefit from the support of the broader public health field. According to Appy,

The fire service is a world unto itself and so is public health. There should be more collaboration, and I and others of my ilk would like to cross-pollinate. . . . I have had some discussion with leading public health people who wonder if the cost-benefit analysis is truly there. They don't really know that much about sprinklers—they're very persuaded that smoke alarms work—but they're waiting for the data for sprinklers.

Preemption

The national- and state-level homebuilders' associations often oppose the addition of new health or safety requirements into building codes, and this includes residential fire sprinkler rules. Their primary rationale for opposing residential sprinkler mandates is that the expense of installing sprinklers in new single-family homes will negatively affect home sales. However, it has been estimated that sprinkler installation in new homes averages \$1.61 per square foot.²⁷ In an evaluation of the impact of 1 of the earliest residential sprinkler ordinances, in Scottsdale, Arizona, it was found that installation costs dropped to between \$0.55 and \$0.75 per square foot for “typical homes” following widespread implementation.²⁹

The National Association of Home Builders opposed the residential sprinkler provision in the 2009 IRC Code.³¹ Having unsuccessfully

opposed the new model code provision, and unable to stem the tide of local ordinance passage, the homebuilders turned to the state legislatures to preempt local authority.^{37,38} According to Jeff Shapiro, a sprinkler advocate and building code expert,

The thought by many . . . was that by getting this into the [IRC] that the state and local level would adopt the code as written and we would start to see homes sprinklered on a wide scale. . . . [The builders] vowed after losing the national battle that they would fight this at the state and local level, particularly the state level, where they are known to be exceedingly powerful, and they have experience fighting these types of requirements.

In 2009, the Texas house of representatives, at the instigation of homebuilders, considered a bill to preempt local residential sprinkler ordinances. Although the house bill stalled in committee, a preemption clause—

Notwithstanding any other provision of state law, after January 1, 2009, a municipality may not enact an ordinance, bylaw, order, building code, or rule requiring the installation of a multipurpose residential fire protection sprinkler system or any other fire sprinkler protection system in a new or existing one- or two-family dwelling.³⁹

—was later added to an unrelated bill that had already passed the state senate, thus avoiding

the committee process in the house. The preemptive amendment was adopted during the second reading in the Texas house, meaning that no time remained for the supporters of residential sprinklers to organize in opposition to preemption. According to Shapiro,

At the end of the session, there was a senate bill which dealt with plumber licensing. That bill had already passed the senate. It was a nonissue bill. It went to the house, and the [supporters of] the failed preemption bill tacked on an amendment to the senate bill. . . . When it went back to the senate, all it needed was concurrence.

Idaho⁴⁰ and North Dakota⁴¹ also adopted preemptive state sprinkler laws in 2009.⁴² In 2010, South Dakota⁴³ and Louisiana⁴⁴ preempted all local sprinkler ordinances, whereas Alabama,⁴⁵ Florida,⁴⁶ and Georgia⁴⁷ “grandfathered in” sprinkler ordinances adopted before a specified date. Louisiana’s preemption clause, which is typical of state preemption laws without a grandfather clause, reads, “No municipality or parish shall adopt or enforce an ordinance or other regulation requiring a fire protection sprinkler system in one- or two-family dwellings.”⁴⁴

In 2011, Alaska,⁴⁸ Kansas,⁴⁹ and Missouri⁵⁰ also preempted local authority. Arizona

preempted future local fire sprinkler requirements, while allowing existing residential sprinkler requirements, such as Scottsdale’s historic 1985 law, to remain in force.⁵¹ In Minnesota and Montana, preemptive legislation passed the state legislature but was vetoed by the governor. In New Hampshire, a gubernatorial veto was overturned by the state legislature.⁵² Table 1 lists the states that adopted preemption by the end of 2011. Since 2009, preemptive state legislation has been introduced in at least 23 states.⁵³

Proponents of residential fire sprinklers believe that preemption has had a negative impact on their movement and is not consistent with the way fire prevention policy is typically adopted. According to Chief Coleman, “State governments have never preempted the ability of local government to control their fire problem until this particular issue.” This was seconded by Keith,

If the state allows local [code] adoption, there are certain reasons why they’ve done that. . . . In most cases, it boils down to . . . a realization that conditions across the state vary community by community, and . . . can be terrain . . . , type and size of fire department response, response time, distances . . . , water supply. A whole host of issues that the state has decided that the locals are in a better position to decide.

TABLE 1—Legislative Adoption of State Laws Preempting Local Authority Over Residential Fire Sprinklers: 2009–2011

State	Bill	Exceptions	Year of Passage	Action by Governor	Citation
Idaho	HB 218	No	2009	Signed	Idaho code, §39-4116(3)
North Dakota	SB 2354	No	2009	Signed	North Dakota cent. code, §54-21.3-03(4)
Texas	SB 1410	Grandfather clause ^a	2009	Signed	Texas occ. code ann., §1301.551(e)
Alabama	HB 264	Grandfather clause ^a	2010	Signed	Alabama code, §41-23-85(d)
Louisiana	HB 206	No	2010	Signed	Louisiana rev. stat., §40:1730.28(A)(3)(f)
South Dakota	HB 1216	No ^b	2010	Signed	South Dakota codified laws, §11-10-5
Florida	SB 864	Grandfather clause ^a	2010	Signed	Florida stat., §553.73(17)
Georgia	HB 1196	Grandfather clause ^a	2010	Signed	Georgia code ann., §8-2-4
Alaska	HB 130	Yes ^c	2011	Signed	Alaska stat., §29.35.144
Kansas	HB 2088	No	2011	Signed	Kansas stat. ann., §12-16-219
Missouri	SB 108	No	2011	Signed	Missouri ann. stat., §67.281
Arizona	HB 2153	Grandfather clause ^a	2011	Signed	Arizona rev. stat. ann., §9-807
New Hampshire	SB 91	No	2011	Veto overturned	New Hampshire rev. stat. ann., §674:51(V)
Minnesota	HF 460	No	2011	Vetoed	Vetoed May 25, 2011
Montana	HB 307	No	2011	Vetoed	Vetoed April 18, 2011

Source. National Fire Protection Association. Fire sprinkler initiative: bringing safety home. 2012. Available at: <http://firesprinklerinitiative.org/legislation/sprinkler-requirements-by-state.aspx>. Accessed July 29, 2013.

^aA grandfather clause permits local ordinances adopted before a specified date to remain in force.

^bPreemption applies only to single-family dwellings.

^cPreemption does not cover all classes of municipality.

Extinguishing local authority can have the effect of “shutting down” the movement by taking away the opportunity to organize around local policy change, which compromises public health. According to Keith,

The end result is we have communities across the country where there has been a desire to at least . . . consider sprinklers, where that discussion hasn't occurred. . . .

[Preemption] results in the advocates becoming passive. They get frustrated. . . . There's no longer any energy for moving forward.

Appy agreed, commenting,

[Preemption] slows down the momentum or it can discourage people, especially those who worked to get it to a certain point and then all of a sudden it's preempted at the state level. . . . To me the danger is that the people who are holding it together to make change might disperse.

Before 2009, the sprinkler advocates had focused their national strategic energies on amending the IRC, and the homebuilders had focused on keeping the comprehensive sprinkler requirement out of the model code. Having succeeded in adding the residential sprinkler mandate into the IRC in 2008, and ensuring its retention in 2009, some sprinkler supporters assumed that widespread adoption of the code would follow. Sprinkler supporters were surprised by the widespread introduction of preemption in the state legislatures and unaware that other industries (e.g., tobacco) had previously employed preemption as a strategy to counter public health movements. According to Shapiro,

It would have made our job easier if we would have gone into this . . . knowing that [preemption] was the approach that the builders would be taking. . . . If there were examples of preemption having been tried. . . . that would have been hugely beneficial.

Keith agreed, saying,

We were certainly geared up almost entirely for offensive campaigns as soon as the provision was accepted in the model codes, and we spent months in just a defensive mode that we didn't anticipate. . . . But we've been able to regroup for the most part and have still been successful in some cases on the offensive strategy, but we proportionately have spent more time on the defensive side.

DISCUSSION

The movement for residential fire sprinkler ordinances provides a model for promoting

public health policy. Fire service personnel, later joined by injury prevention advocates and burn survivors, emerged as trusted and effective grassroots leaders. They were able to take advantage of political opportunities to enact residential fire sprinkler laws, primarily through the institutions of local government, where advocates knew their community needs and their local decision makers. These institutions are typically more open to citizen activists than are higher levels of government. Finally, at the local level, advocates could frame residential fire sprinklers as a relatively inexpensive way to save lives and control fire service costs.

At higher levels of government, powerful homebuilder interests were more likely to control the policy agenda, framing fire sprinkler requirements as imposing an unreasonable economic burden. In the 2 cases of statewide adoption of the IRC residential sprinkler mandate (Maryland and California), the popularity, efficacy, and economic practicality of fire sprinkler installation had been established by the prior adoption of dozens of local ordinances.

Political Opportunities

To take advantage of policy opportunities, a movement needs leaders who can recognize opportunities when they present themselves. The grassroots movement for residential fire sprinklers began as a network of individual champions with high levels of credibility in their communities and passionate commitment to fire prevention. These grassroots advocates supported one another with technical assistance and strategic advice. As the movement matured, burn survivors, researchers, and others joined with the firefighters. This increasingly diverse movement reflected a larger constituency in support of residential fire sprinklers, allowing the movement to make stronger claims on the political system.

In addition, an infrastructure to support grassroots advocates developed at the national level, which was key to maintaining and growing the movement. Organizations such as the NFPA, the Phoenix Society, and Common Voices provided training, Web sites, technical assistance, research, and communications tools to support local campaigns. This combination of experts and advocates provided leadership at the local level, and in most cases activists focused their

efforts at this level, understanding that that is where they could be the most effective.

Supportive Institutional Structures

The decision to proceed locally rather than at the state level was central to the movement's success. As the fire sprinkler movement expanded, numerous national organizations invested resources into supporting grassroots advocates. These organizations provided training, technical assistance, communications tools, and funding, which increased the extent of the movement's reach.

This combination—working locally with strategic assistance from national organizations—provided an effective pairing of institutional structures. In several cases, strong statewide policy followed a series of strong local ordinances.

Issue Framing

According to the advocates we interviewed, they chose their goals on the basis of their perception of the needs of their communities, which increased the chances that advocates' understanding of the fire sprinkler issue would become the accepted public understanding. This was possible at the local level, where the impact of home fires on victims, survivors, neighbors, and the local fire service can be compelling. Presented with the evidence of relatively low costs and important community benefits from members of the local fire service, the advocates we interviewed believe that public opinion was swayed to support the sprinklers, or at least the public had no reason to oppose them. Local legislation followed.

This approach, however, was less effective at the state level. Although representatives of the fire service presented evidence of the efficacy and economy associated with fire sprinkler installation, builders were able to frame the requirement as an economic issue. The state legislatures could stop the grassroots movement by preempting local authority while simultaneously blocking the adoption of the IRC's updated residential sprinkler requirement at the state level. The preemptive action could be taken quickly and without significant debate, as in the case of Texas, by circumventing the legislative process.

The Impact of State Preemption

The tactic of adding preemptive language to legislation late in the legislative session, as in the

case of Texas, is not unique to fire prevention.^{3,54} When opponents have the time to organize, preemptive amendments may lose support. Organizations representing states, cities, and counties typically oppose preemption on principle (e.g., the National Conference of State Legislatures maintains a “Preemption Monitor” feature on its Web site⁵⁵ that tracks proposed federal legislation that preempts state authority), as do many public health advocates, who have more influence at the local than the state level.^{3,12}

State preemption has had a negative impact on the grassroots sprinkler movement. In addition to the lost opportunities to pass local sprinkler ordinances, preemption eliminates the educational opportunity associated with community-level advocacy (including the opportunity to defuse opposition from homebuilders). A recent study of the effects of preemption in tobacco control found that the absence of local debate and legislation inhibited public education on secondhand smoke issues.¹⁰ Community-level debate on public health policy can be an effective form of public health education that can lead to positive social norms change.¹⁰

In addition, preemption has likely compromised health and safety. On the basis of the success of the grassroots sprinkler movement, it is likely that new local ordinances would have been adopted in some or all the 13 states that had preempted local authority by the end of 2011. Considering the evidence that residential sprinkler ordinances have saved lives and prevented injuries,^{29,33,56} it is reasonable to assume that preemption has resulted in preventable fire deaths and injuries.

Lessons for the Field

Automatic fire sprinklers are considered the most reliable method for preventing residential fire deaths and injuries²⁵ and are relatively inexpensive.^{27–29} The success of the grassroots sprinkler movement in promoting hundreds of local sprinkler ordinances and efforts by the homebuilding industry to hinder the movement via state preemption suggest 5 important lessons for advocates working to address other public health and safety concerns.

1. A small number of effective grassroots advocates can achieve major policy changes. The fire sprinkler movement began as a small

national network of passionate, trusted local leaders in the fire service, later joined by other advocates. Together, their efforts resulted in the passage of more than 360 ordinances and 2 state laws mandating fire sprinklers in new 1- and 2-family homes.

2. To achieve this kind of success, advocates must work in venues in which their effectiveness is amplified and that of more ostensibly powerful groups is reduced. This generally occurs at local levels of government. There, advocacy results in tangible improvements in public health and safety that further energize grassroots activists. Local laws also have the advantage of local enforcement and educational capacity, which can facilitate implementation.⁴ Interestingly, a recent report from the Pew Center found that by a 61% to 31% margin, most Americans have a favorable view of their local government by contrast to their state government (52% to 42%) or the federal government (33% to 62%).⁵⁷
3. The successful pursuit of the grassroots strategy requires that local entities have support from state and national organizations. Depending on the issue, these can be nonprofits, public, or profit-seeking entities. In the case of residential fire sprinklers, national organizations provided training, technical assistance, advocacy tools, and other support to local advocates. In addition, grassroots fire sprinkler advocates relied on research that was funded or conducted by public agencies such as the US Department of Commerce.
4. The local strategy can achieve major changes and is the most likely to achieve significant improvements on many public health and safety issues. However, local strategies, particularly those relying on grassroots efforts, may take many years to succeed. The sprinkler movement has taken 30 years to achieve widespread success, which is consistent with the experience in other public health movements. It is important for funders and other public health leaders to recognize that, although successful movements can produce fundamental improvements in policies and society, they may take significant time to achieve their ultimate goals.
5. Preemption hinders grassroots movements. State preemption has had a negative impact

on the grassroots sprinkler movement because it takes away the structural opportunity to advocate local policy change, a key reason that local movements form in the first place. Participants in the sprinkler movement were, for the most part, unaware of the historic role preemption has played in undermining other public health movements. A deeper appreciation of the power of grassroots movements and the risks associated with preemption can help the field take advantage of movement building and protect state and local public health authority.

Conclusions

The residential sprinkler movement adds to the evidence that grassroots movement building is a powerful tool in public health, regardless of the issue being addressed. As has been the case in other areas of public health and safety, however, local action is stymied by state preemption. To achieve enduring success, the public health community should, in most cases, support grassroots movements and oppose preemption. This case study also strengthens the argument that the fire service performs an important public health function and is thus an important partner in public health efforts.⁵⁸ ■

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This article was accepted March 3, 2013.

Contributors

M. Pertschuk, M. Paloma, and M. A. Larkin originated the study. M. Pertschuk, R. Hobart, and E. D. Balbach conceptualized the article. M. Pertschuk and R. Hobart conducted the research. M. Pertschuk, R. Hobart, and E. D. Balbach were primarily responsible for the writing. M. Paloma and M. A. Larkin provided editorial support and comments. E. D. Balbach provided advice on data analysis and policy implications.

Acknowledgments

Funding for this study was provided by the Robert Wood Johnson Foundation (grant 66857).

The authors would like to thank Amy Acton, Meri K. Appy, Lorraine Carli, Ron Coleman, Shannon Frattaroli, Tonya Hoover, Gary Keith, Peg Paul, Shane Ray, and Jeff Shapiro for agreeing to be interviewed for this study. Thanks also to Warren Orland of the Public Health Law Center for reviewing drafts of the article and table and Rebecca Edelberg, Jordana Laks, and Tracey Wall for research assistance.

Human Participant Protection

No protocol approval was needed because the interviews were about policies and social movements, and no personal information was collected from the informants.

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