

# Standards in Crisis Prevention and Response: Inconspicuous but at the Core

By Scott Brody

Rowan University

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## **Abstract**

Standards play a central role in emergency management by providing thoroughly tested and increasingly globally applicable solutions to a host of challenges in both the crisis prevention and response domains. Recognizing that safety is universal, standards development organizations (SDOs) create deliverables for many audiences. Some documents, such as life safety codes, are meant to be followed by manufacturers, service providers, and other businesses and groups that serve the public. Other times, standards-based tools are geared towards expert analysts. Nearly all first responders rely upon standards to help control incidents ranging from everyday service calls to catastrophes. Procedures covered by standards include but are not limited to response, investigation, training, equipment, and information technology. To prevent repeats of past system failures, SDOs play a key role in public policy formation. They strive to advance effective policies that often rely upon the implementation of voluntary consensus standards incorporated by reference into rulemaking. This can be seen with the post-9/11 efforts to standardize ID and passport security. Though content is unique, the role of standards in crisis prevention and response is not fundamentally different from other fields. SDOs rely on the expertise of diverse stakeholders from industry, government, and consumer groups who come to consensus on best practices. This expert-based, time-tested nature makes the methods outlined in standards the simple and lower-risk choice for countless emergency-related decisions.

## Introduction

Every citizen has both a right to safety and a duty to practice it. This fundamental principle is enshrined in legal systems across the world, (Mohan, 2003) and, in some shape or form, is the core mission of safety and security-oriented standards developing organizations (SDOs). In working toward this vision, standard makers are involved in a wide range of activities aimed at the public, industry, and safety professionals themselves. Today, standards have forever changed safety, and they continue to do so.

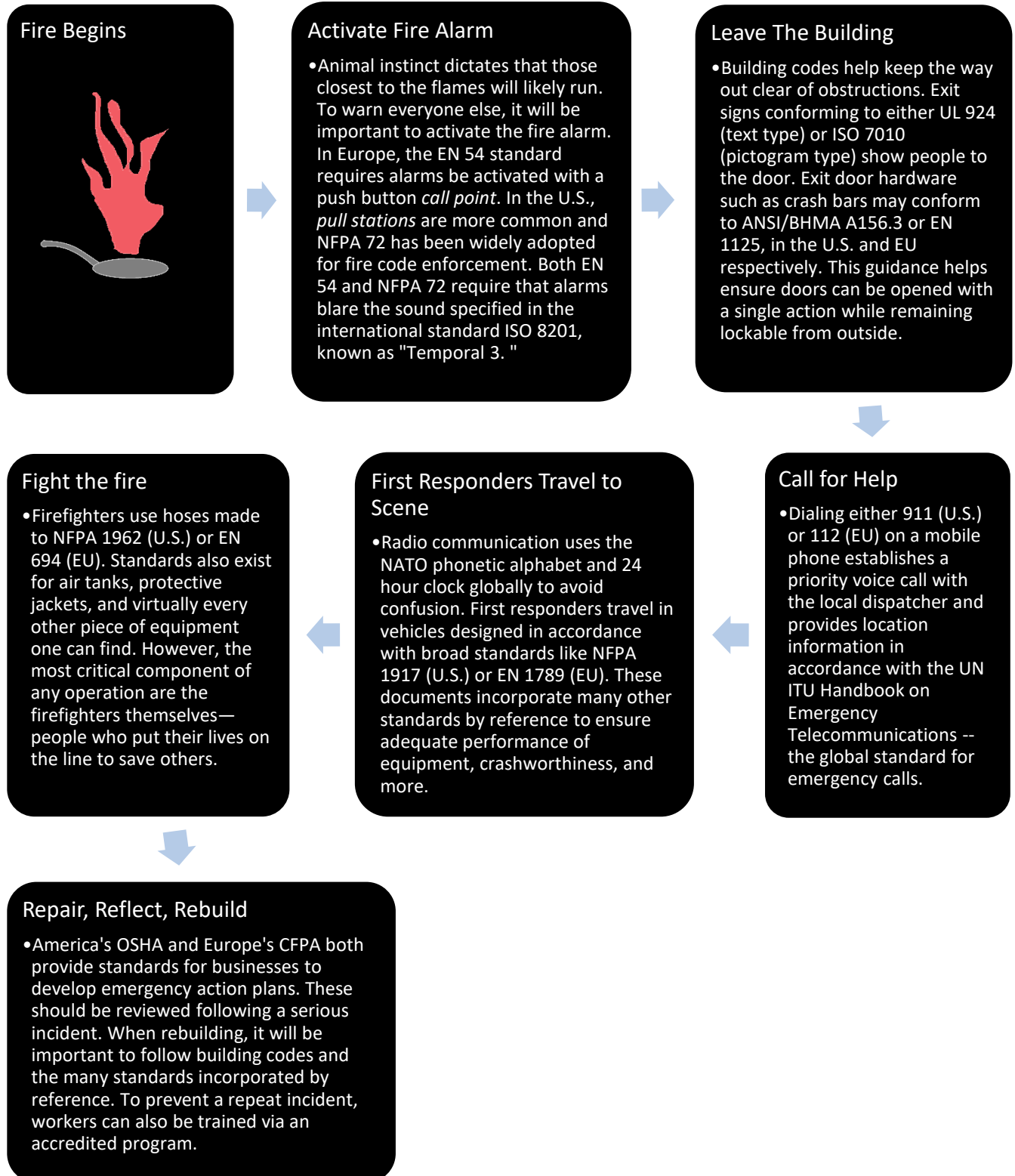
Some of the work of SDOs—such as model building codes, which are voluntary consensus standards frequently adopted by jurisdictions—helps assure the safety of the general public in a wide array of environments. For safety professionals, standards influence nearly every aspect of their occupations by offering guidance in both prevention and response for a broad range of crises from the everyday to the unthinkable. This includes but is not limited to guidelines and best practices for incident response, investigation, training, resource allocation, equipment, and information technology.

To grasp the centrality of standards in emergency response, I created the following flowchart showing the theoretical chain of events following a restaurant kitchen fire breakout. With each event, associated standards are mentioned. The chart runs through the scenario in both the United States and the European Union to demonstrate the similarities and differences between regions.



## Case Study: The role of standards in everyday emergency response.

### What happens after a restaurant kitchen fire starts in the United States vs Europe?



## Kitchen Fire Case Study (ctd.)

As evidenced by the flowchart, standards are involved in every phase of the fire response system. This makes sense given that fire departments are primarily in the business of fighting fires, not testing fire-related equipment and procedures. By relying on tried-and-tested methods, first responders can devote more resources to addressing the problems in their region. At the same time, commanders know that following standards reduces the risk of an unexpected fault occurring.



### A Side Note on Duplicative Standards and Use in Smaller Countries

Notwithstanding global organizations like the International Organization for Standardization (ISO), the U.S. and European standards axes are in many ways the world's two biggest standardization systems. Safety and security norms are no different and, as witnessed in this scenario, there are both duplicative and divergent standards between the two regions. This is partly a result of differences, some historic some current, in the preferred means of achieving a goal. For example, North American fire codes are more oriented towards active fire suppression than their European counterparts. (Lugar, 2013) Yet for all their differences, the fact that that both entities produce standards for the same thing shows the universality of each party's objectives.

Another important note: If we were running this simulation in a small country, it is most likely they wouldn't have the capacity to produce fully packed standards in subject areas like fire alarm design. As such, it is common to find the codes mentioned here—NFPA 72, EN 54, or some combination of the two—incorporated into plans across the world. (IFSEC Global, 2010)

## Using Standards to Prepare for Unexpected Disaster

Besides supporting daily emergency crew tasks, standards help mitigate disaster by offering predetermined responses for unexpected events. Such crisis prevention standards are available for all audience levels. For public agencies, standards-based protocols exist for everything from a hostage situation to national famine. On a more technical level, standards form the spine of risk-based decision-making tools such as the FEMA flood maps. As well as helping emergency responders plan, FEMA models are used in making building code and insurance related determinations. (FEMA, 2019) This is one of many examples of the interrelation between standards.

Recognizing the importance of commerce to national security, U.S. standards developers have created protocols to help businesses become more resilient to disasters. For instance, NFPA publishes standard 1600, which sets out how to design a business continuity plan. For large corporations, some security objectives include making the supply chain resilient to damage at a single point, establishing lines of communication and command, preventing loss of records, and keeping the employees and assets safe. (NFPA, 2013)

For citizens, the Federal Emergency Management Agency (FEMA) maintains the ready.gov platform to create personal disaster plans. There is even disaster planning information for pets. The importance of this was made evident following the 2018 California wildfires when shelters filled with more animals than people, ultimately forcing emergency responders to rescue and reunite thousands of animals left behind in the chaos. (Almasy, 2018)

In all, disaster preparedness standards are a useful tools for becoming resilient to the unexpected. For this reason, they are widely used and are easily downloadable. But it is important to point out that they are general guidelines which must be tailored to individual situations, and are only effective when properly followed. In the absence of pre-incident planning and practice, even the best disaster preparation programs are of limited value.

### **Standards Respond to Evolving Needs**

Sometimes an incident reveals the limits of existing methods or uncovers a previously unrealized need. Though the crisis response field constantly tries to prepare for the unexpected, there are always surprises. To stay relevant in the face of societal change and address loopholes, SDOs constantly update standards. One example of this was the joint effort between SDOs and government to improve document security following the 9/11 attacks. These standardization efforts made passports more resistant to forgery and elevated driver's license design from a patchwork of mostly state level regulations to following national, and increasingly international, best practice.

In its report, the 9/11 Commission noted that that an ID check may be the last line of defense against stopping a wanted person. Accordingly, they recommended "the federal government should set standards for ... sources of identification, such as drivers licenses." (National Commission on Terrorist Attacks Upon the United States, 2004) This recommendation was codified into law with the 2005 passage of the Real ID act.



## Conclusion

In line with many of the organizations' safety missions, SDOs maintain best practices first responders and the general public for preventing, preparing for, and responding to emergencies of all severity levels.

First response standards play a role in every phase of the incident management cycle. This begins with the technical backbone to support the first 911 call and goes on to encompass everything from emergency action procedures to mechanical components such as alarms, exit doors, and tactical equipment. As these systems are key to stopping ordinary disturbances from becoming disasters, it could be said that the role of standards here alone makes them central to crisis prevention. Yet, standards also keep people safe in other ways. In today's interconnected and often unstable world, the harmonization work of standards organizations is vital to getting safety and security information across everything from national borders to adjacent jurisdictions. For leaders seeking solutions to these and other challenges, standards offer tested, consensus-based guidance with fewer unknown risks.

In the event that existing standards fail to work as intended, or when societal changes create the need for new methods, SDOs provide guidance and new standards to prevent repeated system failures. In all, while they are not usually the first thing that comes to mind when thinking of a crisis, standards form the basis of a significant part of emergency prevention and response work.

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