

LEGAL PERSPECTIVES

Legal Perspectives is aimed at informing healthcare providers, emergency planners, public health practitioners, and other decision makers about important legal issues related to public health and healthcare preparedness and response. The articles describe these potentially challenging topics and conclude with the authors' suggestions for further action. The articles do not provide legal advice. Therefore, those affected by the issues discussed in this column should seek further guidance from legal counsel. Readers may submit topics of interest to the column's editor, Lainie Rutkow, JD, PhD, MPH, at lrutkow@jhu.edu.

JUDICIAL OPINIONS ARISING FROM EMERGENCY PREPAREDNESS, RESPONSE, AND RECOVERY ACTIVITIES

Alexander D. McCourt, Gregory Sunshine, and Lainie Rutkow

This article describes and analyzes the body of emergency preparedness, response, and recovery litigation that has arisen since the September 11, 2001, terrorist attacks. Search terms were developed to identify judicial opinions related to emergency preparedness, response, and recovery activities. Using the Thomson Reuters Westlaw legal database, searches were conducted to collect judicial opinions related to disasters that occurred in the United States between September 11, 2001, and December 31, 2015. An electronic form was used for data abstraction. Cases that did not directly involve emergency response, preparedness, or recovery activities were excluded. Data were summarized with descriptive statistics. We identified 215 cases for data abstraction. Many of the cases stemmed from preparedness, response, and recovery activities related to hurricanes (57.7%) and terrorist attacks (16.7%). The most prevalent emergency response activities at issue were disaster mitigation (29.3%), disaster clean-up (21.9%), a defendant's duty to plan (14.4%), evacuation (12.6%), and conditions of incarceration (12.1%). Although it can be anticipated that litigation will arise out of all phases of disaster preparedness, response, and recovery, policymakers can anticipate that the most litigation will result from pre-event mitigation and post-event recovery activities, and allocate resources accordingly.

Keywords: Emergency preparedness, Emergency response, Litigation, Public health preparedness/response

Alexander D. McCourt, JD, PhD, is an Assistant Scientist, and Lainie Rutkow, JD, PhD, is a Professor; both in the Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD. Gregory Sunshine, JD, is a Public Health Analyst, Public Health Law Program, Center for State, Tribal, Local, and Territorial Support, Centers for Disease Control and Prevention, Atlanta, Georgia.

NATURAL AND HUMAN-MADE DISASTERS can take a tremendous toll on residents of affected areas. Three of the 5 costliest US hurricanes ever recorded occurred in 2017: Hurricanes Harvey, Maria, and Irma. The National Hurricane Center estimates that, as of January 2018, Harvey had caused \$125 billion in damage and Irma had caused \$50 billion.¹ Hurricane Maria is estimated to be responsible for thousands of deaths in Puerto Rico.² Given these types of challenges, policymakers—including federal, state, and local agencies and elected officials—must try to anticipate their constituents' needs before a disaster occurs and respond to issues that arise during and after a disaster.

As new threats from natural and human-made disasters emerge, policymakers must draft, revise, and implement policies—including legislation, regulations, executive orders, and guidance—that govern preparedness, response, and recovery. The federal government alone has spent billions of dollars since 2001 on emergency preparedness and response activities, including guidance for state and local policymakers.³ Much of the responsibility for preparedness and response, however, falls to state and local public health practitioners and emergency responders. Despite efforts to prepare, disasters like Hurricane Harvey, Hurricane Katrina, and the terrorist attacks on September 11, 2001, trigger unique challenges requiring rapid responses. Officials must make decisions about a wide range of issues, including evacuations, rescues, caring for vulnerable populations, and clean-up. Each of these policy choices can have impacts at the population and individual levels.

Policies implemented before, during, or after a disaster can result in actual or perceived mental, physical, or financial harm to individuals. For example, residents of affected areas might take issue with having their movement restricted⁴ or with an evacuation decision.⁵ Special needs populations might require care that becomes difficult to provide during an emergency.⁶ Hospitalized individuals might claim they did not receive healthcare services that met the typical standard of care.⁷ Emergency workers might inadvertently injure someone while engaged in recovery work.⁸ Each of these actual or perceived harms can result in litigation.

Disaster-related litigation has not been systematically identified and analyzed; rather, reports of litigation in the wake of disasters or emergencies have been anecdotal. State and local policymakers can anticipate this litigation generally but might not know which types of claims are most likely to arise. In this study, we collected and analyzed published disaster- and emergency-related court cases that arose between September 11, 2001, and December 31, 2015. We identified the types of emergencies—as defined by the Federal Emergency Management Agency's (FEMA's) emergency type classifications—discussed in the court opinions, types of parties involved as plaintiffs or defendants, and the types of preparedness, response, or recovery activities at issue, and we describe trends in litigation that

have arisen from emergency preparedness, response, and recovery activities. This analysis will assist policymakers and practitioners in anticipating potential sources of litigation and determining how to minimize legal risk when preparing for future disasters.

METHODS

For this study, we used a standard legal epidemiology approach.⁹ We searched the Thomson Reuters Westlaw legal database (Westlaw) for federal and state judicial opinions concerning emergency preparedness, response, and recovery activities. We initially developed search terms using a priori knowledge of emergency preparedness, response, and recovery and FEMA's emergency type classifications and finalized our search string through an iterative process.¹⁰ Cases were excluded if they concerned overtime pay, survivorship rights, insurance claims for disaster damage, wrongful termination of emergency personnel outside of a disaster, or contract rights. While such issues can be related to a disaster, they do not arise directly out of emergency preparedness or response activities. The search string limited results to cases decided between September 11, 2001, and December 31, 2015. We selected this date range because there were significant changes to the ways in which the country responded to large-scale incidents after the September 11 terrorist attacks.¹¹

The final search string* was run in Westlaw on July 11, 2016. The search returned 4,970 cases. We screened each case to determine whether it fell within the project's scope. The most common exclusion arose because a case did not involve a disaster or because the disaster at issue occurred before September 11, 2001. We limited our search results to cases decided after September 11, 2001, but had to screen the results further to ensure that the litigation in question concerned activities surrounding a disaster that occurred on or after September 11, 2001. The following additional exclusion criteria were applied at this stage: cases that discussed disasters in the context of procedural delays but not in the cause of action; cases concerning the FEMA National Flood Insurance Program; cases concerning fraudulent disaster relief loan applications; and cases concerning liability for the cause of man-made emergencies (eg, failure to prevent the September 11 attacks). These cases

*advanced: (chemical drought earthquake fire flood freez! hurric! mudsli! landsli! storm snow! blizz! terror! tornado "toxic substanc!" tsunami typhoon volcano virus "disaster response") & (disaster OR "emergency power!" OR "emergency prepared!" OR "emergency activat!" OR "emergency command" OR "emergency trans!") & DA(aft 09-10-2001 & bef 01-01-2016) % inherit survivorship overtime "wrongful! terminat!" "simultaneous death" spoliation (pursue pursuit /s suspect) "risk #of loss" "loss adjustment"

were excluded because, although the litigation was related to disasters, it did not arise directly out of emergency preparedness or response activities.

All cases that met the inclusion criteria were coded to build a legal dataset. Cases with multiple records (eg, several appellate decisions related to the same set of facts) were treated as one unit (“case”), and the most recent decision was coded. We created an 18-item electronic data collection form using Qualtrics (Qualtrics.com, Provo, Utah). A draft Qualtrics form was piloted by all members of the study team. Thirty cases were selected at random, and each team member used the form to code 20 cases. Thus, each case in the pilot sample was independently coded by 2 members of the study team. We then compared the results, resolved discrepancies through discussion and consensus, and refined the form. We used the finalized form to abstract the following information from each included case: (1) a final check to determine whether the case was outside the project’s scope; (2) case name; (3) case citation; (4) name of the court issuing the decision; (5) decision year; (6) plaintiff name(s); (7) plaintiff category—private/government, person/entity; (8) defendant name(s); (9) defendant category—private/government, person/entity; (10) filing state; (11) criminal versus civil litigation; (12) description of decision; (13) case synopsis; (14) primary type of emergency; (15) emergency description; (16) emergency response activity or activities; (17) immunity claimed, if any, by a defendant; and (18) additional coding comments.

Once the cases were coded, results were exported to Microsoft Excel and then to Stata. We reviewed the dataset to identify possible issues with data entry and to evaluate whether additional variables were needed. We added variables for state/federal court, state in which the emergency-related cause of action or injury occurred, and year in which the emergency occurred. Descriptive statistics were conducted. The variables containing open text data, such as case synopsis and decision, were analyzed qualitatively for common themes.

RESULTS

The initial search and screening yielded 587 cases. After applying the additional exclusion criteria and removing duplicates, the dataset contained 215 unique cases; 212 cases (98.6%) concerned civil law, while only 3 (1.4%) involved criminal law (Table 1). Figure 1 shows the distributions of dates of the issuance of opinions and dates of disaster occurrence from September 11, 2001, to December 31, 2015: 91.2% of the decisions were issued after 2005, and 47.4% of the disasters at issue occurred in 2005. Figure 2 shows the distributions of the state in which the litigation was filed and the state in which the injury at issue occurred. Louisiana was the most common state in which cases were filed (47.0%) and in which disaster injuries occurred (49.3%), followed by

Table 1. Case Characteristics

	No. (%)
Cases included ^a	215
Civil	212 (98.6)
Criminal	3 (1.4)
Federal court	132 (61.4)
State court	83 (38.6)
Plaintiffs (civil)	
Private person	188 (88.7)
Private entity	32 (15.1)
Government entity	9 (4.3)
Government official	0 (0)
Other	3 (1.4)
Defendants (civil)	
Private person	16 (7.6)
Private entity	81 (38.2)
Government entity	150 (70.8)
Government official	55 (25.9)
Other	3 (1.4)

^aOur initial search yielded 587 opinions. Once we removed duplicates, consolidated opinions by case name, and applied the additional exclusion criteria, there were 215 cases remaining.

New York (21.9% of filings and disasters) and Texas (5.1% of filings and 4.7% of disasters).

The most prevalent plaintiff type was private parties. In 88.7% of the civil cases, at least 1 plaintiff was a private person. The most prevalent civil defendant type was a government entity (70.8%), followed by private entity (38.21%), government official (25.9%), and private person (7.6%). Government entities and officials were named as defendants in 79% of the cases we examined. In the few cases that did name a private person as a defendant, 11 (68.8%) involved a hurricane or severe storm, 2 (12.5%) concerned a fire, 1 (6.3%) arose from an earthquake, and 1 (6.3%) from the H1N1 influenza pandemic. A little less than half (45%) of the cases discussed at least 1 defendant’s claim of immunity from liability. In 44 cases (20.5%), a defendant claimed immunity under state disaster or emergency liability protections. In 41 cases, a defendant claimed sovereign immunity. In 2 cases, a defendant claimed immunity under the Public Readiness and Emergency Preparedness (PREP) Act. These cases involved responses to the H1N1 outbreak in 2009. In 24 cases (11.2%), a defendant claimed some other type of immunity (eg, qualified immunity).

Most of the cases involved responses to or preparedness for a hurricane (57.7%) (Table 2). The next most common type of disaster was a terrorist attack (16.7%). Overall, the most prevalent emergency response activity at issue was disaster mitigation (29.3%). In disaster mitigation cases, the injured party claimed that the defendant had a duty to mitigate certain conditions that led to an injury sustained during the disaster. In all, 47 cases (21.9%) arose out of disaster clean-up activities; 14.4% involved a defendant’s duty to plan for an emergency; 12.6% involved issues

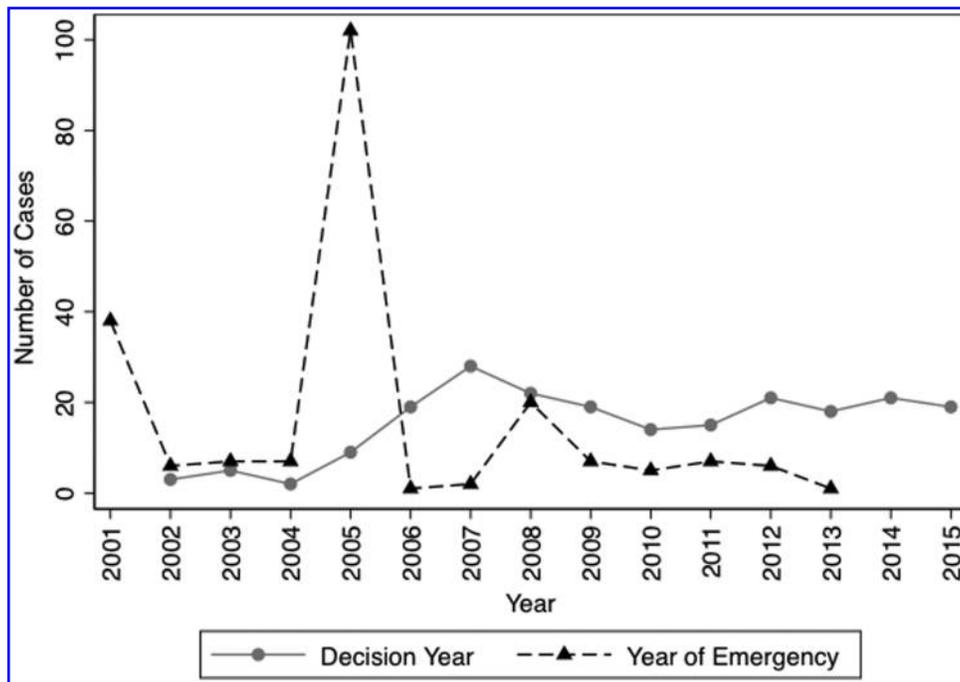


Figure 1. Decision Year and Year of Emergency for Included Cases

related to evacuation; and 12.1% of the cases involved conditions of incarceration during a disaster (Table 2).

Of the 63 cases involving disaster mitigation, 32 (50.8%) related to a hurricane. Of the 47 cases involving disaster clean-up activities, 29 (61.7%) arose in the wake of a terrorist attack. All 20 cases involving personal protective equipment related to terrorist attacks. These cases

were triggered exclusively by the terrorist attacks of September 11, 2001. Of the cases involving issues related to evacuation before or during a disaster, 85.2% involved a hurricane, and 95.7% of those cases involved a hurricane that occurred in 2005. Overall, 79.8% of the hurricane cases arose out of hurricanes that occurred in 2005. The vast majority (92%) of the cases concerning prison

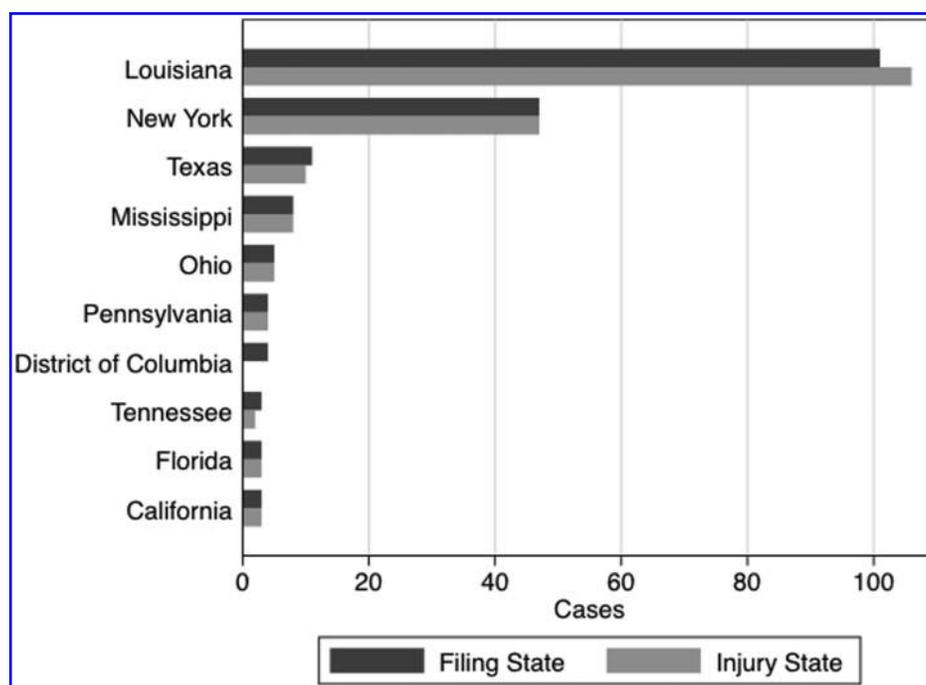


Figure 2. Most Prevalent States in which Litigation Was Filed and in which Emergency-Related Injury Occurred

Table 2. Emergency Types and Activities at Issue in Included Cases

<i>Type of Emergency</i>	<i>No. (%)</i>
Hurricane	124 (57.7)
Terrorist	36 (16.7)
Flood	13 (6.1)
Severe storm	12 (5.6)
Fire	7 (3.3)
Chemical	3 (1.4)
Severe ice storm	3 (1.4)
Toxic substances	3 (1.4)
Drought	2 (0.9)
Human cause	2 (0.9)
Snow	2 (0.9)
Earthquake	1 (0.5)
Tornado	1 (0.5)
Other ^a	6 (2.8)
Emergency Response Activity	
Disaster mitigation	63 (29.3)
Post-disaster clean-up	47 (21.9)
Duty to plan	31 (14.4)
Evacuation	27 (12.6)
Conditions of incarceration	26 (12.1)
Personal protective equipment	20 (9.3)
Takings	20 (9.3)
Duty to warn	9 (4.2)
Medical services and triage	7 (3.3)
Post-disaster housing	5 (2.3)
Treatment of at-risk/special needs/vulnerable populations	5 (2.3)
Restriction of movement	4 (1.9)
Suspension of law/regulations	4 (1.9)
Condemnation	3 (1.4)
Arrest	2 (0.9)
Crowd control	1 (0.5)
Mandatory service	1 (0.5)
Mutual aid agreement	1 (0.5)
Volunteer	1 (0.5)
Other ^b	57 (26.5)
Defendant Claims Immunity	
State disaster/emergency liability protections	44 (20.5)
Sovereign immunity	41 (19.1)
PREP Act immunity	2 (0.9)
Other immunity	24 (11.2)

^aIncludes disease outbreak, blackout, coal ash spill.

^bIncludes emergency services, search and rescue, identification of government employees, etc.

conditions arose in the wake of hurricanes that occurred in 2005.

ILLUSTRATIVE EXAMPLES

Five activities arose most often in the identified cases: disaster mitigation ($n=63$), post-disaster clean-up ($n=47$), duty to plan ($n=31$), evacuation ($n=27$), and conditions of incarceration ($n=26$). The following example cases il-

lustrate common situations, legal issues, and outcomes of cases concerning each of these activities.

Disaster Mitigation

These are cases in which an injured individual claimed that the defendant had a duty to mitigate certain conditions that allegedly led to the injury sustained during the disaster. *City of Muncie ex rel. Muncie Fire Department v. Weidner* (2005):¹² In 2002, a severe storm in Muncie, Indiana, caused a widespread power outage, with a downed power line between 2 houses reported to the fire department and the electric company. The next day, a child living in the neighboring house was electrocuted and killed while in the backyard. That child's parents, the Weidners, filed a wrongful death of child action against the city, alleging that the fire department failed to protect their child from a downed power line. They claimed that the fire department had a duty to protect city residents from dangerous conditions once alerted to their existence. The Indiana Court of Appeals held that neither the city nor the fire department had assumed a duty to protect a child from a downed power line. Instead, the Court noted that the responsibility belonged to the electric company.

Post-Disaster Clean-up Activities

These cases involve clean-up activities such as debris removal or injuries allegedly caused in the process of removing debris. *Alfonso v. U.S* (2014):¹³ In 2005, in the aftermath of Hurricane Katrina, members of the Louisiana National Guard were tasked with removing debris and repairing a damaged levee. As part of this work, the Guard carried large loads of mud and dirt, resulting in a significant accumulation of mud on a highway. A driver, Joseph Alfonso, lost control of his vehicle when he hit the mud and was ejected from his car. Alfonso filed a claim against the National Guard workers. The Louisiana Homeland Security and Emergency Assistance and Disaster Act contains a provision granting immunity to the "state and its agents if they are engaged in emergency preparedness activities." The US Court of Appeals for the Fifth Circuit held that the guardsmen were engaged in emergency preparedness activities and, therefore, were immune under state law.

Duty to Plan

These cases concern whether the defendant had a duty to plan for an emergency or disaster. *LaCoste v. Pendleton Methodist Hospital, L.L.C* (2007):¹⁴ Althea LaCoste was admitted to the defendant hospital in late August 2005. During and after Hurricane Katrina, the hospital lost all electrical and emergency power. Mrs. LaCoste's life support system failed, and she subsequently died. Her family filed a

claim against the hospital, alleging negligence “as a result of the failure of the hospital to implement an adequate evacuation plan, to have a facility available for the transfer of patients, and/or to have in place a plan to transfer patients in the event of a mandatory evacuation.” The hospital claimed that the lawsuit involved medical malpractice and therefore could not be filed prior to a report from a medical review panel. The Supreme Court of Louisiana disagreed, holding that the actions were based in general negligence, not medical practice, and sent the case back to the lower court.

Evacuation

These cases involve evacuation before, during, or shortly after a disaster. *Cooley v. Acadian Ambulance* (2011):¹⁵ Special needs residents of St. Bernard Parish in Louisiana drowned in their homes during Hurricane Katrina. Surviving family members filed wrongful death, survival, and negligence actions against the parish and their insurers. The decedents had qualified for a government evacuation assistance program for disabled and homebound residents, and a specific ambulance company was tasked with executing their emergency evacuations. On August 27, the parish declared a state of emergency, and the emergency evacuation plan was initiated. By the next afternoon, the ambulance company ceased operations due to high winds and because the primary special needs shelter had closed. The residents subsequently drowned. The Court of Appeals of Louisiana held that, unless they engaged in willful misconduct, the parish officials, the parish government, and their insurers were entitled to complete immunity under the federal Homeland Security and Emergency Assistance and Disaster Act.

Conditions of Incarceration

These cases involve prison or jail conditions before, during, or shortly after a disaster. *Spotts v. United States* (2010):¹⁶ Hurricane Rita hit Beaumont, Texas, on September 24, 2005. The Federal Correctional Complex in Beaumont has low-security, medium-security, and high-security units. Around the time of Rita’s arrival, only the low- and medium-security inmates were evacuated. The Federal Correctional Complex sustained substantial damage; its emergency generator was inoperable, large portions of the roof were ripped away, and it lacked potable water. The high-security inmates alleged that they were without power for 36 days in sweltering heat. During the days immediately following the storm, the inmates remained locked in their cells and did not receive medical care. The inmates filed suit against state officials, claiming that the decision not to evacuate gave rise to a variety of claims, including negligence, intentional infliction of emotional distress, and wrongful death. The US Court of Appeals for the Fifth Circuit held

that the decision not to evacuate the high-security inmates was a policy decision protected by federal law.

DISCUSSION

Our findings indicate that large-scale disasters like hurricanes and terrorist attacks generate the most litigation and that litigation targets government entities and officials in the majority of cases. In fact, when examining federal public assistance funds obligated for emergencies in our study period, the vast majority of cases (60.9%) arose out of 2 of the most costly disasters in our study’s time period: Hurricane Katrina and the September 11, 2001, attacks.¹⁷ This finding suggests that, when considering what is needed to respond to large-scale disasters, policymakers and public health practitioners should anticipate using resources on legal assistance to address allegations of liability among the many other tools necessary for response and recovery.

Further, our study suggests that litigation associated with a given disaster can last for years or even decades. The majority of the emergency preparedness, response, and recovery cases we identified and analyzed were decided after 2005, but the majority of disasters that triggered litigation occurred during or before 2005. In fact, almost half of the identified cases concerned disasters—hurricanes, specifically—that occurred in 2005. As such, while the immediate injuries, death, and damage caused by a disaster may occur over a matter of days and weeks, emergency response stakeholders should consider the time (and cost) required to litigate disaster-related injuries when estimating the length of the recovery process. In general, jurisdictions seeking to minimize liability risk should focus on preparedness and response policies that reduce harm in each phase. Policies that reduce harm—to people and property—will minimize liability risk.

Our analysis of common emergency preparedness, response, and recovery activities at issue in disaster-related cases demonstrates that litigation may arise from any phase of the disaster cycle: mitigation, preparedness, response, or recovery.¹⁸ The 2 most common issues we identified (disaster mitigation and post-disaster clean-up activities) occur during the mitigation and recovery phases. Other common activities that generated litigation—including evacuation, conditions of incarceration, and a defendant’s duty to plan—involve the other 2 phases of the disaster cycle. Although policymakers may spend a significant amount of time and resources on pre-disaster preparedness and mitigation, post-disaster recovery and clean-up activities might generate nearly as much litigation, which suggests jurisdictions seeking to minimize harm and litigation should prioritize each phase similarly.

While we identified certain disaster activities that arose more frequently than others in our sample, our results should not be construed to suggest that other types of activities do not generate litigation. The activities we

identified as most common are areas of particular importance for public health practitioners seeking to evaluate potential liability. While other activities were rare or non-existent in our sample (eg, issues related to arrest or crowd control during a disaster), it is possible that these types of activities have generated litigation following a disaster that did not lead to a published court opinion (eg, due to settlement). For example, while cases related to medical services or triage during an emergency are discussed in only 7 cases (3.3%) (Table 2), this should not imply that litigation arising from health care provided during an emergency is not an area of concern. Rather, our findings serve to illustrate which areas of emergency preparedness, response, and recovery can be prioritized for attention, not which areas should be ignored.

Given the potential volume of litigation following a large disaster, protections for government employees and entities are important. It is critical for government actors to understand the protections that are in place during disasters and ensure their actions fall within the parameters of those protections. Certain types of emergency-related laws have built-in protections. The PREP Act, for example, provides immunity from liability related to the development and provision of medical countermeasures during a disease outbreak.¹⁹ Many protections are specified by state or federal laws or have been firmly established by the courts. These include, for example, sovereign immunity,²⁰ which generally protects state and federal governments, and qualified immunity,²¹ which protects government employees engaged in discretionary actions that are within their official capacity. The fact that half of the cases we examined included some argument that immunity should be extended to the defendants demonstrates the utility of such protections.

Our study has several limitations. Although we used a thorough process to develop our search string, it is possible that relevant cases were not captured. Cases that do not appear in the Westlaw legal database would not have appeared in our search results and were therefore not included in our study. We also likely omitted cases that were settled out of court before any other judicial resolution. Relatedly, the opinions we collected might not represent the ultimate disposition of the legal dispute, particularly if the parties reached a settlement after an appellate decision; this reality was reflected in our decision not to include disposition of the case in our current analysis. Despite these limitations, our search process was systematic and thorough, and our results should assist public health practitioners and emergency planners in understanding the types of emergency preparedness, response, and recovery activities that could lead to litigation.

Further analysis is needed to examine pre-September 11 judicial opinions—to determine whether changes to the nation's response system affected disaster litigation—as well as post-2015 opinions, which would likely include court

opinions related to Hurricane Sandy, the 2014 West Africa Ebola epidemic, and Hurricanes Harvey, Maria, and Irma.

CONCLUSIONS

Policymakers and public health practitioners can expect allegations of liability to arise out of any phase of the disaster cycle. Specifically, pre-event mitigation and post-event recovery activities might trigger litigation that lasts for an extended period following a disaster. Policymakers should pay particular attention to these elements of preparedness and response. Litigation is an inevitable consequence of large-scale disasters, but our findings will help policymakers and public health practitioners anticipate some of the most common legal issues surrounding emergency preparedness, response, and recovery.

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21. See, eg, Benzman v. Whitman, 523 F.3d 119 (2008).