Ethical and Legal Challenges Posed by Mandatory Hurricane Evacuation: Duties and Limits

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Executive Summary

When Hurricane Katrina made landfall in August 2005, between 70,000 and 100,000 residents of New Orleans either did not or could not comply with the order that had been issued to evacuate. The events surrounding Katrina raised critical legal and ethical questions about the use of mandatory evacuation orders. These include two of primary consideration:

- What are the legal and moral foundations of mandatory evacuation orders given the fact that a failure to leave one’s home poses a threat primarily to those who stay behind, and generally do not endanger the safety of others through their actions?

- When can those overseeing an evacuation invoke their own safety as a rationale for not assisting those who refused to obey the order?

- To what extent and in what circumstances should limited resources be used to evacuate those who do not follow orders when these resources can also be used to execute the evacuation order?

- What level of coercive authority ought to be applied to those who do not comply?

- What are the limits of liability and immunity for those calling for and executing the evacuation?

The authority of the state to issue an order for a mandatory evacuation is granted under the police powers of states to guard the health, welfare, and safety of their populations. There is little doubt that governments have ample authority to order and enforce mandatory evacuation orders. In almost every state, statutes enable police powers to be exercised during natural disasters and emergencies. Where the authority is vested differs among states, however; in some states it is granted to the governor while in others both the governor and local officials may do so.

We discuss four key ethical issues that must be confronted when considering whether to issue an order of mandatory evacuation:

1. The costs of precautionary action in the face of uncertainty.

Mandatory evacuation orders impose costs on governments, business, individuals, and not-for-profit and educational organizations, and these costs may argue against an invocation of such an order. An order of
evacuation may also damage the credibility of public officials, which is essential to securing public trust and cooperation, if the hurricane (or other forecast disaster) fails to strike. Evacuations also pose special risks to the ill and disabled.

#2 The duty to provide for people.

An ethical axiom holds that “ought implies can”—that is, ordering people to evacuate implies an assumption that they have the means to comply. Therefore, any order of mandatory evacuation imposes an ethical duty on the government to provide the material conditions necessary for citizens to carry out the order. In the states and territories vulnerable to hurricanes, laws require that a variety of services be provided once the order has been issued. In many states, however, language specifying the obligations of the states is exceedingly general. Further, what obligation does the state have after an evacuation to return those who have been evacuated to their homes? Issues of liability and immunity underlay the entire process from evacuation to the rights of those who are left behind.

#3 Paternalism and the preemption of individual choice

As a compulsory measure instituted by the government to guard the health and safety of the population, mandatory evacuation raises some of the same ethical issues as quarantine such as when should an order be given and how should it be enforced. But in sharp contrast to the confinement of people with an infectious disease, which is designed to protect third parties from harm, those who defy an evacuation primarily place themselves at risk. Nevertheless, the government bears an obligation not only to provide for the public in emergency situations, but also to decide for them. Moreover, the government must reconcile the need to provide for those who evacuate, and to determine to what extent they must dedicate resources to those who stay behind, either voluntarily or out of personal limitation such as handicap.

#4 The acceptability of compulsory measures.

There exists a broad consensus that the use of physical force to remove people from an area where an evacuation has been ordered is unacceptable. However, emergency officials are justified in using a variety of coercive or quasi-coercive means to convince people to comply. These include levying fines or holding people civilly liable for the costs of their rescue.

The implications of these legal and ethical dimensions on public policies are wide ranging. In the face of uncertainty, officials must always have the option to recommend rather than impose evacuation. In order to have any meaning, a mandatory
order of evacuation requires officials to engage in vigorous, deliberate efforts to persuade reluctant citizens to leave: the compulsory nature of the order must be made clear and enforced. As one legal scholar has argued, the law, in fulfilling its tutelary functions, acknowledges a kind of paternalism—that is, the realization that “the teacher knows something the students do not.”

The challenge of how to handle the evacuation of minors in an emergency situation requires further analysis. Among the states and territories vulnerable to hurricanes, only Puerto Rico’s emergency management statutes provides for the forceful separation of families. Child abuse law in the U.S. grants the state the capacity to remove children from the custody of their parents. But in the history of civil defense evacuations, the challenge of reuniting families rather than separating them has been the priority.

Providing assistance requires knowledge of the needs and whereabouts of the most vulnerable. The creation of registries of populations with special needs, like the elderly and physically and mentally disabled, brings into sharp focus the tension between surveillance as an essential strategy for identifying individuals at risk and the claims of privacy. To the extent that states may legitimately order and use some degree of coercion to compel compliance, authorities may similarly compel registration. The privacy-limiting features of such compulsory registration, however, require
Overview and Context

On Friday, August 26, 2005, the National Weather Service warned that a Category 4 hurricane was bearing toward the Gulf Coast region. At 5:00 p.m., with Hurricane Katrina 56 hours from landfall, Louisiana Governor Kathleen Blanco declared a state of emergency. By the next morning, Blanco began urging the evacuation of New Orleans, which, though protected by levees, rests nine feet below sea level. New Orleans Mayor Ray Nagin followed on Blanco’s heels, issuing a voluntary evacuation order late Saturday afternoon. That evening, Max Mayfield, the head of the National Hurricane Warning Center, placed calls to Governor Kathleen Blanco and Mayor Nagin. He advised them that the approaching Hurricane Katrina represented conditions such as he had never before seen in his 36 years of professional experience. “Preparations to protect life and property should be rushed to completion,” he urged. “This has to be taken seriously.” Only once before had Mayfield himself initiated such a call to warn officials about the severity of a storm.\(^3,^4\)

The morning of Sunday, August 28, Katrina was elevated to a Category 5 hurricane.\(^5\) In response, Mayor Nagin—for the first time in the history of New Orleans—put into place plans that had been made in consultation with the governor the night before and ordered a mandatory evacuation. This order was issued 19 hours before the storm hit.\(^6,^7,^8,^9,^{10}\) Mississippi and Alabama quickly followed suit, issuing mandatory evacuation orders at 10:00 a.m. and 1:00 p.m., respectively.\(^11,^{12}\)

When Katrina made landfall on Monday, August 29, Louisiana had evacuated over 90 percent of residents who were threatened by the storm. Governor Blanco, reflecting on the evacuation effort, described it as a “stunning success.”\(^13\) Nagin, likewise, heralded the effort. “Our region had one of the most successful mass evacuations in the history of the United States.”\(^14\) Some 70,000 to 100,000
individuals, however, either could not or would not comply with the order to evacuate.\textsuperscript{15,16} The city’s levies broke on August 29, causing widespread flooding. By the next day, the police were receiving a request for help every 25 seconds, recording 900 calls in a 6 hour period.\textsuperscript{17} By the next day, the police were receiving a request for help every 25 seconds, recording 900 calls in a 6 hour period.\textsuperscript{18} Local, state, and federal efforts proved insufficient to cope with the scale of the emerging disaster, and vituperative accusations of incompetence and misjudgment roiled all levels of government.

Most of the post-Katrina analysis has focused on logistical issues related to effectively implementing wide-scale evacuations.\textsuperscript{19,20} In the political aftermath of the storm, the U.S. House of Representatives created a Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina. The committee interviewed the highest ranking officials in Louisiana, Alabama, Mississippi, and the Federal Emergency Management Agency (FEMA). Central to the controversy was whether state and local officials had issued mandatory orders of evacuation soon enough and provided citizens adequate information and assistance to escape from the path of the storm.\textsuperscript{21} State and local officials were given extraordinary warnings and yet, said Virginia Republican Thomas Davis, “no action [was] taken.”\textsuperscript{22} Former FEMA Director Michael Brown called the city and state’s failure to evacuate “the tipping point for all the other things that either went wrong or were exacerbated.”\textsuperscript{23}

In February 2006, the U.S. House select committee presented the results of its inquiry, concluding that a mandatory evacuation order, issued earlier, would have saved lives and mitigated the morbidity and suffering that resulted from the hurricane and subsequent flooding.\textsuperscript{24} It was particularly critical of Mayor Nagin’s “decision to enforce that order,” once made, “by ‘asking’ people who had not evacuated to go to checkpoints for bus service.”\textsuperscript{25} But while the report noted the lack of “a clear and consistent definition of mandatory evacuation,” it gave little guidance as to what mandatory orders should entail, noting only that the term “implies that individuals do not have a choice, that the government will...
As the events surrounding Katrina suggest, insufficient attention has been given to critical legal and ethical dimensions of mandatory evacuation. When and under what conditions of severe threat should officials order citizens to leave their homes? What are the legal and moral foundations of mandatory evacuation orders given the fact that a failure to leave one’s home poses a threat primarily to those who stay behind despite official warnings? What level of coercive authority ought to be applied to those who resist? Should penalties be sought in such cases? What duties of rescue, if any, do public officials bear for those who resist orders of evacuation? When there are orders of evacuation, what obligations does the government have to provide effective means to leave safely?

In this paper we address the ethical and policy challenges of mandatory evacuation orders. We begin with an overview of the legal basis for such orders. We then analyze decisions made in preparation for Katrina in August and September, 2005, underscoring the ethical issues that they raise. We focus on the contested meaning of compulsory orders of evacuation, which are sometimes taken to mean the duty of the government to provide for people and, in other instances, to mean the prerogative of the government to decide for people. In carefully differentiating the different impulses motivating evacuation, we can clarify the affirmative duties of the government and the acceptability of coercion in emergency situations. While this analysis focuses on the response to hurricanes, it has specific relevance for any disaster situation involving advance warning, which can include floods, wildfires, mudslides, or a terrorist attack.
The Law and its Limits

The authority to issue an order for mandatory evacuation is granted under the police powers of states to guard the health, welfare, safety, and morals of their populations. In the early to mid-twentieth century, the Red Cross ordered evacuations under its de facto authority as a federally chartered disaster relief organization, but it is not clear that it was legally vested with police powers. The oldest available news report of mandatory state-directed hurricane evacuation dates to 1933, from Florida's Lake Okeechobee. The year before, a massive hurricane had hit Palm Beach with winds of 140 miles an hour then blew the waters of Lake Okeechobee, Florida's biggest lake, into an adjoining town of mostly black migrant laborers, flooding the town and causing as many as 2,400 to drown. As the Weather Bureau had predicted that the storm would miss Florida, nobody had been evacuated; dikes around the lake, not designed to handle storm surges, had given way. When hurricanes again hit the East coast of Florida a year later, evacuation plans were quickly put into motion for remaining residents of the Lake Okeechobee areas. Periodically, over the next 19 years, this region would be evacuated whenever hurricanes threatened to pass over the lake (although the Army Corps of engineers also erected a stronger system of dikes around the lake after the 1928 flood). These repeated evacuations demonstrated a pattern of repeated mandatory evacuation of a particular area only after a lethal hurricane had hit.

During World War II, when technological advances began to make it possible to more accurately predict hurricanes and it became imperative to protect vital coastal airbases, mass evacuations became part of a systematic government response to disaster. In 1950, in the context of the Cold War and the Korean conflict, the Federal Civil Defense Act mandated the creation of a national civil defense organization for protection against enemy attack, declaring that “this responsibility for civil defense shall be vested primarily in the several States and their political subdivisions.” Under the act, federal funds were directed toward the construction of emergency shelters and hospitals, and civil defense administrators were hired for states and municipalities. Numerous states also passed state civil defense acts, which became the template for later emergency management statutes (in some cases a legal template that has been revised surprisingly little). While the Federal Civil Defense Act was not directed
to natural disasters, in practice state and local civil defense administrators and volunteers began serving as local coordinators in hurricanes and civil defense equipment and shelters were repeatedly used to cope with such emergencies.\textsuperscript{36,37,38}

Throughout the 1960s, officials in various locales continued to rely on voluntary evacuations and used different degrees of persuasion to try to move people out of harm’s way. Reliance on voluntary measures continued even after catastrophes like hurricane Betsy, which struck New Orleans and caused the levies to break in 1965.\textsuperscript{39,40} It is not until the 1970s and 1980s—ironically, during a period of rights-based political activism and profound distrust of government—that states began to favor mandatory evacuation orders, sometimes accompanied by the threat of force or other forms of coercion.\textsuperscript{41}

There is little doubt that governments have ample authority to order and enforce mandatory evacuation orders. The U.S. Court of Appeals for the First Circuit has noted that “Almost every state in the United States has adopted statutes providing for the exercise of police powers in the event of an emergency or disaster (such as fire, flood, tornado, or hurricane).”\textsuperscript{42} In some states, power to order evacuations rests with local authorities rather than the governor. Emergency statutes in Massachusetts, New York, and New Jersey, however, do not specifically grant their governors power to evacuate residents in the case of an emergency. Texas only provides that “The governor may recommend the evacuation of all or part of the population from a stricken or threatened area in the state if the governor considers the action necessary for the preservation of life or other disaster mitigation, response, or recovery.”\textsuperscript{43}

Most of the state statutory schemes, however, grant the governor authority to declare an emergency. Further, most of the states also allow the exercise of emergency or disaster authority by a local government.”\textsuperscript{44} This is true for the states and territories that have been struck by a hurricane, which include Alabama, Connecticut, Delaware, Florida, Georgia, Hawaii, Louisiana, Maine, Maryland, Massachusetts, Mississippi, New Jersey, New York, North Carolina, Rhode Island, South Carolina, Texas, Virginia, and Puerto Rico. Typical is the language of Louisiana, which grants the governor power to “Direct and compel the evacuation of all or part of the population from any stricken or threatened area within the state if he deems this action necessary for the preservation of life or other disaster mitigation, response, or recovery.”\textsuperscript{45}

In some instances, authority is granted to both governors and municipal officials. Louisiana’s statute, in addition to designating authority to the governor, also explicitly authorizes municipalities to order evacuations.\textsuperscript{46} The legislation specifies that a mayor or chief executive of a municipality must then convey this order to parish presidents, but offers no guidance regarding
communication between chief executives and the governor or vice versa, save to indicate that it is the governor who is ultimately responsible for the public safety in emergency situations. In Mississippi, evacuation is “Subject to the order of the chief executive of the county or municipality or the Governor.” In Delaware, Florida, Georgia, Hawaii, Maine, and Mississippi, however, the Governor is only empowered to declare a state of emergency when he or she determines that the situation exceeds the capabilities of local authorities. A lack of clear lines of command, without a doubt, complicated the response to Katrina in Louisiana and, later, Rita in Texas.

Federal law does little to clear this confusion. The Disaster Relief Act Amendments of 1974, commonly known as the Stafford Act, gave the federal government authority to assist state and local governments with disaster preparedness and relief, but specified that federal disaster assistance be contingent on a request by the governor of a state, based upon “a finding that the disaster is of such severity and magnitude that effective response is beyond the capabilities of the state and the effective response is beyond the capabilities of the state and local governments and that federal assistance is necessary.” This provision also mandates that, as a condition of receiving federal assistance, the governor must “direct execution of the State’s emergency plan,”—which typically includes evacuation measures—thus reemphasizing the state as primary authority in the disaster at the same time the Federal government becomes involved.

Case law provides a second unequivocal basis for taking forceful actions in response to an emergency. Although mandatory orders of evacuation have yet to be challenged, U.S. Courts have upheld the authority of the government to force the evacuation of distressed vessels in life threatening emergencies.

In the instance of the evacuation of a sinking ship, a Federal appeals court disagreed with the vessel’s owner, who argued that the Coast Guard, as an agent of the government, had “exceeded its authority by compelling the boat’s captain to leave it against his will.” While “we do not accept [that the] Coast Guard [has] carte blanche authority to engage in forcible evacuations in less than life-threatening emergencies,” the court wrote, “the body of case law developed under the ‘emergency aid’ exception to the Fourth Amendment’s warrant requirement both lends support for evacuation authority and cabins it. That exception requires an objectively reasonable belief by safety officers that a true emergency exists and there is an immediate need for assistance or aid.”

Courts, likewise, have upheld the right of governments to enforce curfew in the wake of disasters. In three states vulnerable to hurricanes—Delaware, Maryland, and New York—emergency management statutes explicitly grant the governor authority to issue a curfew, although such
statutes do not provide the sole source for such authority. The courts have generally viewed curfew cases in light of "whether the executive’s actions were taken in good faith and whether there is some factual basis for the decision that the restrictions imposed were necessary to maintain order" and whether they were "reasonably necessary to prevent widespread lawlessness." 56

The Virgin Islands’ territorial governor, for example, issued a curfew after a hurricane had knocked out power and telephone service in St. Croix and led to the escape of the island’s prison population. 57 Thus, the district court ruled that “Current conditions on the islands still justify the nocturnal curfew. Electrical power is not yet restored—power lines are still down on the roads. Crews are working 24 hours a day to restore electrical power. The problems of law enforcement during hours of complete darkness and still present. The lack of telephone service on St. Croix makes summoning help nearly impossible during night time hours. The imposition of a nocturnal curfew not only allows work crews to work unimpeded overnight, but protects them as they restore service on the island.” 58

Curfews also seek to ensure the safety of citizens: “the residents of the Virgin Islands are protected during the night from those who might take advantage of the emergency situation to cause injury to persons or property.” Thus, “while the curfew is a drastic measure, the court can not say that a less restrictive measure would be sufficient to counter the grave dangers presented.” 59 The court considered the rights of citizens to travel, to visit friends, clients, and relatives at night, but ruled that it was “substantially outweighed by the public’s right to be safe in their homes during the hours of darkness, and to be safe from injury from continued dangerous conditions on St. Croix.” 60
Ethical Issues Related to Mandatory Evacuation

While the law is important to recognize in defining the parameters of acceptable practice, the requirements of law must be distinguished from what ethics might demand or preclude. It is one of the functions of ethical discussion and review to provide a standard against which to judge current practice and legal requirements. Here we outline what we considered to be the four critical issues: the costs and risks associated with precautionary action in the face of uncertainty, the duty to provide care, the acceptability of paternalism, and the appropriate use of coercion.

**The costs of precautionary action in the face of uncertainty.**

One of the primary ethical and policy challenges related to the use of precautionary measures such as an order of mandatory evacuation is that actions taken preemptively to reduce harm can themselves cause harm. Mandatory evacuation orders may impose costs on governments and individuals that may argue against their invocation.

Most obviously, mandatory evacuation orders entail enormous economic costs on governments, businesses, and voluntary organizations.\(^{61,62,63}\) Public officials in Louisiana, which has no provisions for deficit spending, stressed these costs in the aftermath of Katrina. Mandatory evacuations cost state and local governments millions of dollars in overtime pay to police and emergency officials. Privately funded relief organizations such as the Red Cross, as well as local and state emergency agencies, spend millions of dollars in setting up and running shelters for evacuees. Transportation departments spend extra money on overtime turning highways into one-way evacuation routes, suspending toll collection for more efficient evacuation, and addressing traffic accidents that can result from clogged highways during evacuation. Police use up overtime in trying to enforce mandatory evacuations.\(^{64}\) Costs may be exacerbated by the problem of “shadow evacuation,” in which people who are not in danger nonetheless hit the roadways because of misunderstanding or a sense of vulnerability, and contribute to traffic delays. About half of the two million people who evacuated from Florida in anticipation of 1999 hurricane Floyd, for example, were determined to be shadow evacuees.\(^{65}\)
In addition to burdening public coffers, mandatory evacuation imposes costs on individuals. These include loss of time at work and extra expenditures in gasoline and lodging for evacuees, as well as danger to the property which they must temporarily abandon. In 1980, officials in Galveston, Texas ordered an evacuation of the city when Hurricane Allen menaced the city. But Allen missed Galveston, and numerous homeowners returned to find out that their homes had been looted.

In the case of Katrina, Representative Gene Taylor, a Mississippi Democrat, sought to impress on his colleagues that they, like him, could afford to “waste a little money buying fuel needlessly or food needlessly.” But if they would “try to think the way an average Joe is thinking back home” they would need to remember that “it’s the end of the month” and people are “on a fixed income.” Decisions have to be made on the weekend and the “Social Security check doesn’t come until Thursday.” It was for similar reasons that many in New Orleans refused to evacuate in anticipation of the region’s next hurricane, Rita. Said one Algiers resident, “I don’t have money to run. I don’t have no car, so where am I going to run to?” People may also feel a need to stay in area to take advantage of clean-up employment immediately after a storm. Some employers threaten to dock the pay of workers who evacuate, thrusting them an untenable position of weighing their lives against their jobs. One official succinctly summarized the difficulty of decision-making in the face of uncertainty: “it all goes back to money and resources.”

Some of the costs to both governments and individuals are not calculable in strictly monetary terms. For individuals, such costs may include hours spent on roadways, stays at uncomfortable shelters with little or no privacy, and burdens on family members and friends with whom they stay. An order of evacuation may also damage the credibility of public officials, which is essential to securing public trust and cooperation, if the hurricane (or other forecast disaster) fails to strike. Indeed, although it was focused on terrorism rather than hurricanes, a study by the National Center for Disaster Preparedness found that one third to nearly half of people polled at three different intervals in 2004 and 2005 cited lack of confidence in officials issuing orders as representing a reason not to evacuate immediately. Louisiana Governor Kathleen Blanco, testifying before the House select committee on the response to Hurricane Katrina, thus explained, “Put your four kids in the car, you’re sitting in the traffic, and they’re screaming. And nothing happens, and you go home and you say, ‘I’m not doing this again, this is crazy.’”
New Orleans Mayor Ray Nagin underscored this point. A rash mandatory evacuation order issued by one of the city’s parish presidents the prior year, he argued, “had the effect of lowering public confidence on exactly when they would listen to a public official as far as ordering a mandatory evacuation.”

Evacuations pose special risks to the ill and disabled. In the case of hospital populations, the question raised during Katrina was “whether they were harming them more by moving them or not.” Mississippi officials, for example, did not order mandatory evacuation for areas on higher ground that had a “large number of medical facilities” and thus “the potential risk to patients.” In prior hurricanes, sick and elderly people have been moved from hospitals and nursing homes to facilities as many as 100 miles away, only to suffer cardiac deaths presumably due to the shock of transit or the stress of the situation. Since the 1970s, as Florida has become one of the nation’s most popular retirement destinations, evacuation from this hurricane-prone state has entailed massive mobilizations of elderly residents from retirement homes and nursing homes. For these populations, evacuation to an unfamiliar and uncomfortable place such as a shelter set up in a school gymnasium by the Red Cross is not trivial. An elderly person, even if physically and mentally healthy, will likely have one or more prescription medications to take and may feel disoriented if sent to a shelter without friends or family present.

The duty to provide for people.

An ethical axiom holds that “ought implies can”—that is, ordering people to evacuate implies an assumption that they have the means to comply. Therefore, any order of mandatory evacuation imposes a duty on the government to provide the material conditions necessary for citizens to carry out the order. Congressional Representative Christopher Shays (R-CT) stressed this point when he criticized public officials for their lateness in imposing an order of mandatory evacuation: “the point of making it mandatory, was that then there’s a whole host of assistance that your community gets. They don’t have to just get in their cars and drive off. They are given special assistance.”

In the states and territories vulnerable to hurricanes, issuance of an order of evacuation generally requires those states to provide a variety of services. In Alabama, for example, officials become responsible for providing for transportation, food, clothing, housing, and medical care. Likewise, Connecticut’s emergency management act stipulates that officials may “take such steps as are necessary for the receipt and care of such...
In some states and territories, though—including Georgia, Louisiana, Maine, New Jersey, the Carolinas, Texas, Virginia, Puerto Rico, and even Florida, which boasts perhaps the most comprehensive emergency management statute—language specifying the obligations of the states is exceedingly general. Notably, these obligations are imposed whether or not an order of mandatory evacuation has been issued. Florida’s governor, for example, has a general mandate to provide shelter and relief. In many states these obligations are contingent on the governor’s declaring a state of emergency. All of the law in states vulnerable to hurricanes views such measures as a means of “reduce[ing] the vulnerability of the people” or the “care and welfare of the people.” The Federal Stafford act also authorizes the President to provide “temporary housing” free of charge for twelve months but only after the governor of a state has declared a major disaster and requested federal assistance.

The duty to provide for people is an especially critical one for sick and elderly populations, whose needs may include prescription medications and other life-sustaining interventions that must be made available in the days following evacuation. A critical element of meeting this duty is knowing well in advance of a rapidly approaching disaster who will require additional assistance. In preparing for Hurricane Georges in 1999, for example, Louisiana officials were surprised by the number of people with special needs who needed help evacuating. “I don’t think any of us had any idea as to the magnitude of the problem…and how serious it was,” commented the emergency management director for Jefferson Parish. On a national level, a 2005 Marist poll commissioned by the National Center for Disaster Preparedness found that between 25 and 30 percent of the population felt they would be unable to evacuate in the event of a terror attack without some assistance.

One way to track such people is through a registry or database maintained at the state level. In Florida, for example, a registry of those with physical, mental, and sensory disabilities is populated with data from a number of social welfare agencies—the Department of Children and Family Services, the Department of Health, the Agency for Health Care Administration, the Department of Labor and Employment Security, and Department of Elderly Affairs—and updated annually. Surveillance efforts have, since the 1970s, raised profound confidentiality concerns, particularly when they involve medical information that individuals might view as being intimate or potentially stigmatizing. The legitimacy of sharing public health data has been the subject of particularly intense debate. Nevertheless, a special Texas task force to the Governor recommended...
creating a registry of the elderly, individuals with physical or mental disabilities and their caregivers, the homeless, and people without transportation.\textsuperscript{95} It did not specify whether the state should follow in the path of Florida,\textsuperscript{96} where such registration is populated with data from a number of social welfare agencies and updated annually and allows citizens the option of preauthorizing emergency response personnel to enter their homes during search and rescue operations, or New York, which maintains a voluntary registry.\textsuperscript{97}

\textit{Paternalism and the preemption of individual choice about risk.}

As a compulsory measure instituted by the government to guard the health and safety of the population, mandatory evacuation raises some of the same ethical issues as quarantine. But in sharp contrast to the confinement of people with an infectious disease, which is designed to protect third parties from harm, those who defy an evacuation \textit{primarily} place themselves at risk. Likewise, while the primary purpose of curfew is to ensure the safety of hurricane response personnel and to prevent misconduct like looting, it also serves to protect a population against its own potentially bad judgment in venturing out after dark.\textsuperscript{98 99}

This is not to say that there is no potential risk to third parties; the safety of emergency responders during rescue operations and the fair distribution of scarce personnel resources illustrate that individuals who elect to defy evacuation orders place not only themselves in jeopardy.\textsuperscript{100} In 1987, for example, a Florida Mayor said, after having issued a mandatory order of evacuation, \textquoteleft\textquoteleft I don\textquoteleft t want to be callous, but if someone wants to be that foolish (to ignore evacuation), we have to be concerned with taking care of people who do want to get out… I\textquoteleft m not going to lose a police or fireman because somebody wouldn\textquoteleft t leave.\textquoteright\textquoteright\textsuperscript{101,102,103,104}

Although it would be consonant with a broader history of justifying action that compels or prohibits individual behavior by framing it in terms of harm to others, as in the instances of smoking and motorcycle helmet laws,\textsuperscript{105,106} suggesting that risk to others is the central ethical issue represents a disingenuous sleight of hand. The central and perhaps most vexing question that mandatory evacuation raises is whether such orders are unacceptably paternalistic, substituting the judgment of government officials for that of the affected individuals. Some paternalistic public health measures are widely accepted. Regulations on occupational and environmental exposures, for example, express the belief that society should not let people expose themselves to hazards, even though they might \textquoteleft\textquoteleft choose\textquoteright\textquoteright to do so.\textsuperscript{107}
Governor Blanco and most officials familiar with the threat of hurricanes, believed that there would always be some people who feel that “they were tougher than the storm.” Without shifting attention away from the 80 percent of the Louisiana population reliant on public transportation and could not have evacuated without assistance, the House’s Select Bipartisan Committee also found that those who had the capacity to leave yet chose to remain behind “must share some of the blame.”

The view that the government bore an obligation not only to provide for the public, but also to decide for them in emergency situations, did not appear in its final report. During the hearings, however, Representative Shays and others made this argument quite explicitly. Said Shays, “if your argument to us is, you know, we’re brave, we’re tough, so we’re going to stay…. [t]hat’s the whole point of making it mandatory. You don’t have an option. You’re going.” For such critics, it was unconscionable to have the power to compel people to leave and not use it. The final report of the House Bipartisan Select Committee, however, failed to explore what Shays might have required and offered no alternative to persuasion.

The issue of paternalism takes on a somewhat different cast in considering the case of minor children whose parents may place them at risk by defying evacuation orders. When hurricane Hugo threatened South Carolina in 1989, one teenager told reporters, “My parents are staying, so what am I going to do?” It has long been accepted in law and policy that the state may overrule parental choice when the welfare of children is endangered. Puerto Rico’s emergency management statute, for example, provides for evacuation of “minors…against the will of their parents, guardians, custodians or tutors.” Yet in practice there is no evidence of children forcibly having been removed from their parents’ custody during an evacuation.

It is a widely accepted tenet of public health ethics that voluntary measures are preferable to compulsory ones. Persuading rather than forcing people to comply with health-preserving procedures is also consistent with the country’s liberal democratic values. Louisiana Governor Kathleen Blanco gave voice to this view when she argued that that forcing people out of their homes at “gunpoint” was unjustified, unnecessary, and impractical.
United States of America,” said Blanco, “you don’t go out and force people. You urge people.” This position is consonant with the recent history of responses to hurricanes, in which mandatory orders were issued with little intention to enforce them. A Florida official has argued that “mandatory evacuation” is a misnomer: Officials can’t force anyone to leave. Some view this stance in terms of respecting individual choice, others in terms of expressing the inability of the government to provide further assistance once a hurricane hits, and still others of relieving states of responsibility and liability for those who choose to remain. Yet other officials have expressed worries that enforcing mandatory evacuation orders makes the government liable for damage that might occur to private property. Nagin, for example, was reportedly concerned that a mandatory evacuation order would leave the city liable for lost revenue.

Indeed, in only seven of the states vulnerable to hurricanes do the emergency management statutes explicitly limit liability for injury, death, or property damage. But in practice, there are questions as to whether people should be arrested for failure to evacuate. And, indeed, arrests have typically been limited to instances in which people are found on the beaches after the supposed completion of a mandatory evacuation or on the streets in violation of a curfew. Terry Ebert, director of the New Orleans homeland security office, in testimony before the House Select Bipartisan Committee, explained that “non-lethal verbal persuasion was the way we managed trying to regain control over some of those problems.”

There exists a broad spectrum of options lying between the two extremes of “urging” and “forcing at gunpoint.” One preferred tactic in the realm of non-lethal verbal persuasion been to make contact with individuals either through “reverse 911” calls (warning individuals about the urgent need to leave the area). Such calls should also be made to residents who are requested not to evacuate an area to minimize the problem of shadow evacuation, in which people who are not in danger nonetheless hit the roadways, because of misunderstanding or a sense of vulnerability. In more urgent situations, fire or law enforcement personnel have been sent door to door. In highly populated urban areas where such intervention would be infeasible, they could,
at least, be sent neighborhood to neighborhood with loudspeakers. For example, the President of one of Louisiana’s low-lying Parishes called for a mandatory evacuation on Saturday morning before the storm. On Sunday, sheriff’s deputies went door to door to warn any remaining residents of the need to evacuate and to identify those who required further assistance. In this way they were able to evacuate up to 98 percent of the parish and avert all but three deaths. But while such strategies have typically proved to be effective, they have been criticized by some as representing an inappropriate use of scarce resources in an emergency situation.

Although not necessarily less resource intensive, various types of burdens or penalties have also been placed on those who refuse to leave. Local police have often asked those who refuse to evacuate for contact information for next of kin, in part to impress on them the gravity of the risk they were assuming. Some legal scholars have recommended this as a more practicable and effective use of police powers. Other tactics intended both to convince people to evacuate and to reduce the burdens on the public resources if they continue to refuse include levying substantial financial penalties. North Carolina, for example, holds persons who ignore a disaster warning and then must be rescued civilly liable for the costs.

Even following a hurricane, when there is a clear and present danger to citizens remaining in a disaster zone, officials have shown a strong preference for lesser forms of coercion. For example, a little over a week following hurricane Katrina doctors in coastal Louisiana reported several cases of vibro vulnificus, an illness much like cholera. A spokesperson for the federal Centers for Disease Control and Prevention (CDC) confirmed the cases, stating, "It could be life-threatening." In response, Mayor Nagin issued a sharply worded order to city police and federal law enforcement officials, commanding them to search houses in all areas of the city, flooded or not, and "to compel the evacuation of all persons...regardless of whether such persons are on private property or do not want to leave." "Individuals are at risk of dying," stressed the city’s police superintendent, "There’s nothing more important than the preservation of human life." It was in this context that Nagin declared a state of martial law and ordered the city to be emptied.

A day later, officials from the EPA and CDC confirmed the waterborne hazard. Levels of e-coli and lead were 10 times higher than was deemed safe. Indeed, bacteria levels were so high that they
exceeded the limits of EPA testing equipment.\textsuperscript{158} The CDC and state and local officials confirmed four deaths in neighboring states from Vibrio vulnificus.\textsuperscript{159,160,161} CDC Director Julie Gerberding warned, “For the evacuees who haven’t left the city yet, you must do so.”\textsuperscript{162} Local health officials were unable to assist in the effort for, according to Gerberding, “the entire public health staff in New Orleans is gone.”\textsuperscript{163}

In many instances, knowledge of the danger and the order to evacuate were insufficient to persuade people to leave. Said a restaurant manager, “They keep talking about the threat of disease, but how many people have gotten sick so far? I’m not buying it.”\textsuperscript{164} Post-storm evacuation orders, particularly in neighborhoods that were free from flood waters, raised some residential suspicions. “It has overtones of ethnic cleansing,” said one resident who could see no other reason for having to leave what seemed like a safe area. “They’re calling us a pocket of resistance,” he continued, but “We’re calling ourselves a pocket of civilization.”\textsuperscript{165} A London correspondent reported that “The authorities were quick to characterize the diehards, estimated to number as many as 10,000, as people losing their grip on reality.”\textsuperscript{166}

Mayor Nagin, therefore, stated his commitment to using force to evacuate anyone remaining in the city. State officials, however, determined that state troopers and National Guard units were unlikely to assist with any forced evacuations. One official with the Louisiana Office of Homeland Security and Emergency Preparedness commented, “We personally will not force anyone out of their homes.” Another was less adamant, noting only that Nagin would first have to request the assistance of state law enforcement officers and troops and at that point it would be left to the state’s discretion: “We are not required by law to provide military troops to force people to leave their homes.”\textsuperscript{167} Even some local officials refused to abide by the order. Jefferson Parish President insisted that it was voluntary for his constituents: “Somehow this has gotten transferred to Jefferson Parish and it just ain’t so. I don’t have the resources to pull people out of their homes.”\textsuperscript{168}

Where it could be enforced, the task thus fell to the beleaguered city police force. The first stage of the forced evacuation involved confiscation of all firearms. “Only law enforcement are allowed to have weapons,” said the police superintendent.\textsuperscript{169} “New Orleans,” noted local reporters, “has turned into an armed camp, patrolled by thousands of local, state, and federal law enforcement officers, as well as National Guard troops and active-duty soldiers.”\textsuperscript{170}
Before resorting to employing what the police superintendent described as “the minimum amount of necessary force,” officers concentrated next on encouraging individuals to leave voluntarily. In one working-class area of the French Quarter, police officers accomplished this task by refusing to leave the home of two healthy men with adequate supplies until they agreed to accompany them. In another instance, police forcibly entered a home and found a man who had failed to evacuate while they were in pursuit of a suspect. The man reportedly stated calmly, “You’re going to have to kill me to get me out of this house.” After an hour’s negotiation, with the help of a psychologist who was part of the emergency response team, they counted the man as a voluntary evacuee. He, however, was insistent: “If I had a choice, yeah, I would have rode it out.” Emergency response personnel, however, remained certain that he would come to realize that he had made the correct decision.

Another apparently successful tactic was to inform reluctant evacuees that health officials would be dousing the area with “toxic” spray to control mosquitoes. Any individuals who wished to challenge the forced evacuations were required to do so in Baton Rouge, “where the federal judges from the Eastern District of Louisiana, based in New Orleans, have relocated.”

In the end, there was no documented use of physical force to compel evacuations. Terry Ebert, director of the
Policy Implications: Providing and Deciding for

In the face of uncertainty, officials must always have the option to recommend rather than impose evacuation. And, clearly, any evacuation recommendation must be invoked with great care. A precautionary ethic\textsuperscript{181,182,183} that would have us take bold action regardless of the cost to the government and private citizens could pose unacceptable risks to the elderly, the disabled, infirm, and those in low lying areas or citizens who might be trapped on the highways in an sweeping as opposed to targeted evacuation.\textsuperscript{184,185,186,187} In order to have any meaning, a mandatory order of evacuation requires officials to engage in vigorous, deliberate efforts to persuade reluctant citizens to leave: the compulsory nature of the order must be made clear and enforced. As one legal scholar has argued, the law, in fulfilling its tutelary functions, acknowledges a kind of paternalism—that is, the realization that “the teacher knows something the students do not.” Thus, “the law is more than debate. It is coercion.”\textsuperscript{188}

Paternalism and compulsion are justified in the instance of evacuation in the face of disaster because not everyone has equal access to media, sufficient knowledge, or adequate experience or resources to enable them to make sound decisions regarding evacuation. The use of physical force, however, is of limited utility.

Requiring the least restrictive/intrusive alternative that can effectively maximize evacuation represents a means to impose limits on government interventions consistent with the traditions of privacy, freedom of association, and liberty. The standard, which is grounded in the principle of proportionality, requires that the least invasive interventions that may help to achieve the desired objective are utilized first. Face-to-face encounters with officials conveying mandatory evacuation orders, where feasible, are typically sufficient to convey the urgency of the situation. At the very least, when situations are urgent, disaster response personnel can be sent neighborhood to neighborhood with loudspeakers.\textsuperscript{189}

If such direct communication fails to reduce substantially the proportion of the population who refuses to leave, requirements involving next of kin declarations or conveying information about personal liability for rescue efforts represent ethically acceptable measures that require no physical force. It is not ethically permissible to hold citizens liable for the costs of their rescue unless they have been fully informed of the consequences of their actions. Just as states cannot be relieved of the responsibility of making every reasonable effort to rescue people in the
midst or aftermath of a hurricane or other calamitous event, they cannot be relieved of the responsibility to inform them fully of the practical limits of those efforts and the potential catastrophic consequences of the failure to comply. How and under what circumstances penalties might be imposed would require weighing the complex factors that figure into decision-making in the context of a crisis.¹⁹⁰,¹⁹¹

The challenge of how to handle the evacuation of minors in an emergency situation requires further analysis. As noted above, among the states and territories vulnerable to hurricanes, only Puerto Rico’s emergency management statutes provides for the forceful separation of families. Child abuse law in the U.S. grants the state the capacity to remove children from the custody of their parents. But in the history of civil defense evacuations, the challenge of reuniting families rather than separating them has been the priority. Health professionals and officials with special expertise in the law and the limits of coercion as it applies to children must be brought together to decide in advance of a hurricane how officials will approach the problem of evacuating minors against the will of their parents. They should explore alternatives to the use of outright compulsion. What steps, both punitive and persuasive, might be taken to pressure parents with children to evacuate?

In practice, regardless of powers they are allowed by law, officials have placed greater emphasis on providing for people in emergency situations rather than deciding for them. There is little question that, in the face of a mandatory evacuation, the government bears specific responsibilities. Because not all citizens have the financial resources necessary to evacuate, states should provide certain key resources, namely, means of egress to anyone who wants or needs transportation and shelter equipped with sufficient food, water, and security personnel. In turn, the States should provide return from flight under circumstances where evacuation is compulsorily. The principle of justice requires that the benefits and burdens of public health action be fairly distributed, thus precluding the additional burdening of already socially vulnerable populations. Officials should, then, extend the same kind of material resources to anyone who requests them even during voluntary evacuations.

Providing assistance requires knowledge of the needs and whereabouts of the most vulnerable. The creation of registries of populations with special needs, like the elderly and physically and mentally disabled, brings into sharp focus the tension between surveillance as an essential strategy for identifying individuals at risk and the claims of privacy. To the extent that states may legitimately order and use some degree of coercion to compel compliance, authorities may similarly compel registration. Such an effort carries an obligation to ensure that databases are as complete and accurate as possible regardless of whether
registration is voluntary of mandatory and regardless of whether special needs populations are defined narrowly, as in Florida, or broadly, as Texas has recommended. The privacy-limiting features of such compulsory registration, however, require the government to demonstrate clearly the need to know and intervene with such vulnerable populations and then restrict the use of sensitive data to emergency evacuation purposes only.

Hurricanes prior to Katrina have consistently underscored the lack of adequate shelter space in many regions, Louisiana in particular. Identifying or building appropriate shelters is primarily a logistical issue. But sheltering raises humanitarian and ethical issues as well. The case of public health quarantines—where ethical and legal analyses have stressed the importance of providing those confined with a “safe and habitable environment” that includes provisions for living and basic comfort such as food, water, clothing, bathing, and health care—provides a framework for determining acceptable standards for sheltering evacuees from hurricanes.

Who, then, is responsible for providing and maintaining vital resources? After 1999’s Hurricane Georges, one New Orleans official said that “The bottom line is the city doesn’t have enough buses and vehicles to get everybody out.” In anticipation of Katrina, Jefferson Parish President said that he lacked the necessary resources to enforce mandatory evacuation orders. Yet, noted the House Select Bipartisan Committee report, “no one requested that the state or federal government provide resources to supplement those of the parish to implement more complete evacuation.” FEMA officials, however, strenuously distanced themselves from the position that if local resources were insufficient then the federal “government needed to assist people to evacuate.” For Michael Brown, federal responsibility represented “a horrible path to go down.” Justice, however, would demand that if local and state officials are unable to extend the necessarily assistance, then this burden must be borne by the federal government. Swift and equitable distribution of material resources and coordination of relief efforts, in turn, requires explicit government authority to issue orders of evacuation.

The Stafford Act broadly authorizes the president to direct any federal agency to utilize its resources to support State and local disaster assistance efforts, and to “prescribe such rules and regulations as may be necessary and proper to carry out any of the provisions” of the Act. It also specifically authorizes federal agencies to perform “any emergency work or services essential to save lives and to protect and preserve property, public health and safety, including…search and rescue, emergency medical care, emergency mass care, emergency shelter, and provisions of food, water, medicine, and other essential needs, including movement of supplies or persons.”
(emphasis supplied.) The federal government must be willing to use this discretionary power in cases of massive mandatory evacuation.\textsuperscript{202}
Concluding its report on the response to Katrina, the House select committee report stressed, “This extraordinary storm required extraordinary measures.” Making clear the obligations of government will help to take emergency responses out of the realm of the extraordinary, creating both a set of expectations regarding the degree to which government is required to provide for people and specific but limited measures that it must take when deciding for them. However, the committee stops short of reconciling the many disconnects between state and federal evacuation planning and response and clarifying when an evacuation order should be called, whom it covers, the extent to which it can be enforced, the liabilities for those who fail to evacuate, and the burden of return following an evacuation. These issues are far from trivial and failure to provide carefully debated, codified resolutions can undermine even the best evacuation plans.

States, and where applicable local jurisdictions, should review emergency management statutes with an eye to clearly and explicitly define options that may be available to implement in a mandatory evacuation.

There must be some mechanism for ensuring that residents are aware that a mandatory order of evacuation has been issued. These can include:

- Making contact with individuals through “reverse 911” calls warning individuals about either the urgent need to leave the area or the imperative to resist evacuating an area to minimize the problem of shadow evacuation.
- Sending vehicles with loudspeakers through neighborhoods to make announcements.
  - The means for compliance must be available, such as information about evacuation routes, public transportation, and shelter; providing gasoline along evacuation routes; providing shelter for pets; taking steps to accommodate increased traffic on highways; and special assistance for those who cannot evacuate without help.
Mandatory evacuation should not entail physical force, but officials should be required to use a variety of non-physical means of enforcing the order.

Mechanisms to enforce evacuation should begin with the least intrusive, least resource-intensive alternatives and proceed to more forceful, more costly methods as the urgency of the situation demands. These include:

- Sending fire or law enforcement personnel door to door.
- Requiring those who refuse to evacuate to complete next of kin forms.
- Levying financial penalties or holding those who fail to evacuate liable for the costs of their rescue.

States should create registries of those in need of special assistance when evacuating.

The privacy-limiting features of such registration require the government to restrict the use of sensitive data to emergency evacuation purposes only.

The legal and ethical aspects of evacuation must be addressed not only at the state but also at the federal level.

We recommend a national dialogue led by a federally assembled task force comprising leaders from FEMA, the National Guard, the military, state and local law enforcement, emergency response personnel; the American Red Cross; medical professionals; and ethicists and policy analysts. Such a dialogue should consider the following:

- Review of the implications, limitations, and obligations imposed by the federal Stafford Act
- The responsibly of states with respect to involuntary evacuation of minors or other dependents against the wishes of their parents or guardians.
- The ethical and legal obligations of key employees to stay and provide services in the face of a mandatory evacuation including but not limited to police and fire personnel, emergency medical service providers, hospital-based medical providers and staff, and bus drivers.
- The obligation to ensure sufficient public sector resources and funds as needed for persons with limited resources to comply with mandatory evacuation orders.
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