

AN INVESTIGATIVE REPORT BY THE MINORITY STAFF  
OF THE U.S. SENATE COMMITTEE ON FINANCE

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# SHELTERING

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IN

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# DANGER

*How Poor  
Emergency  
Planning and  
Response Put  
Nursing Home  
Residents at Risk  
During Hurricanes  
Harvey and Irma*



NOVEMBER 2018



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## Acronyms

*The following list provides abbreviations frequently used in this report.*

<b>AHCA</b>	Florida Agency for Health Care Administration
<b>ASHRAE</b>	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
<b>CEMP</b>	Comprehensive Emergency Management Plan
<b>CMS</b>	U.S. Centers for Medicare & Medicaid Services
<b>FPL</b>	Florida Power & Light Co.
<b>HHSC</b>	Texas Health and Human Services Commission
<b>LTC</b>	Long-Term Care facility
<b>NHC</b>	National Hurricane Center
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NWS</b>	National Weather Service
<b>OIG</b>	Office of Inspector General for the Department of Health and Human Services
<b>SCC</b>	Senior Care Centers (owner of the Port Arthur, Texas, nursing homes)

## Foreword

Every time a hurricane strikes the United States, hundreds of thousands, even millions, of people face a difficult decision: heed the warnings of local officials and evacuate the area, or ride out the storm by “sheltering in place.” This decision can be a matter of life or death, especially for people living in low-lying areas vulnerable to flooding and storm surges.

For nursing homes and assisted living facilities entrusted to take care of frail residents with complex medical needs, the decision to evacuate or shelter-in-place takes on even greater weight. Administrators of these facilities are not only considering their own safety, but that of residents unable to fend for themselves, and the staff who care for them.

Many nursing homes and assisted living facilities chose to shelter-in-place when hurricanes Harvey and Irma struck Texas and Florida, respectively, late in the summer of 2017. While most of these facilities weathered the storms without incident, the exceptions were glaring and tragic.

At one Florida nursing home, the county medical examiner ruled the deaths of 12 residents as homicides. Each resident died due to complications from heat exposure after the facility’s air conditioning was knocked out for several days. The nursing home’s administrators failed to recognize the threat posed by prolonged exposure to extreme heat and did not move residents elsewhere. In Texas, several facilities were inundated by water and were among those that conducted chaotic mid-storm evacuations that potentially put residents in harm’s way. Texas state regulators have cited two of the nursing homes examined in this report with more than 50 violations of state and federal standards, which could result in termination from the Medicaid program.

Instead of sheltering in safety, residents found themselves sheltering in danger.

The Minority staff of the Senate Finance Committee investigated these incidents and found they were not random failures. They resulted from inadequate regulation and oversight, ineffective planning and communications protocols, and questionable decision-making by facility administrators.

Sheltering-in-place—that is, keeping occupants inside a building during an emergency rather than evacuating—can sometimes be the best option for the health and welfare of residents in a nursing home or assisted care facility. If properly carried out, sheltering-in-place can reduce stress on already-frail residents and patients, who often have complex medical illnesses and care needs.

However, when a facility decides to shelter-in-place, staff must have the skills, knowledge and training to respond competently to post-storm complications. A nursing home or assisted living facility that decides to shelter-in-place must not only have ample resources for residents and staff—especially sufficient backup power and climate controls to keep conditions inside safe—it also must be able to rapidly re-evaluate its shelter-in-place decision as conditions change. If the

anticipated conditions do change, secondary and tertiary procedures and protocols must be in place to protect residents from catastrophe.

The facilities examined in this report were not adequately prepared for conditions they encountered, which made circumstances life-threatening for residents to shelter-in-place. Moreover, ineffective procedures for communicating with, and obtaining support from, state and local emergency officials, and, in Florida, an electric power provider, made the situation even worse.

This report examines the decisions that were made before, during and after the 2017 storms, as well as gaps in federal regulations currently on the books. It makes recommendations on how to avoid these types of tragedies in the future. As the report was finalized in October 2018, the U.S. Coast Guard reported that it had helped evacuate one Florida nursing home after Hurricane Michael made landfall. The month before, at least two North Carolina nursing homes were evacuated due to flooding in the middle of Hurricane Florence. These incidents provide additional evidence of the need for more robust federal action.

While this report focuses on the dangers presented by hurricanes, the findings and recommendations can be applied to other natural disasters. The bottom line is that families should have confidence that their loved ones will be safe in nursing homes, assisted care facilities and other long-term-care settings, no matter what emergency a facility faces.



## Part I: Introduction

On August 25, 2017, Hurricane Harvey made landfall as a Category 4 hurricane 30 miles northeast of Corpus Christi, Texas. It was the first Category 4 hurricane to make landfall along the Texas Coast since Carla in 1961.<sup>1</sup> In an after-storm review, the National Weather Service (“NWS”) described what it called the “unique” attributes of Harvey:

Instead of moving inland and farther away from the coast, Harvey stalled over South and Southeast Texas for days, producing catastrophic devastating and deadly flash and river flooding. Southeast Texas bore (sic) the brunt of the heavy rainfall, with some areas receiving more than 40 inches of rain in less than 48 hours! Cedar Bayou in Houston received a storm total of 51.88 inches of rainfall which is a new North American record.<sup>2</sup>

After initially electing to shelter-in-place, several nursing homes and assisted living facilities in Texas experienced flooding and, as a result, required evacuation – one of which literally occurred at gunpoint. At the La Vita Bella assisted living facility in Dickinson, Texas, 15 elderly residents were rescued after pictures of residents sheltering-in-place in waist-deep water went “viral” on the Internet.<sup>3</sup> At the Lake Arthur Place nursing home, an armed volunteer pulled a gun on the facility’s director, and reportedly assaulted him, in an attempt to assist residents’ evacuation.<sup>4</sup> Local law enforcement officers who arrived shortly afterwards placed the director in handcuffs when he refused to assist them in the evacuation.<sup>5</sup>

As this report was being finalized in late October 2018, Texas state regulators informed Minority staff that after further investigation, SCC had been cited for more than 50 violations of state and federal standards at Lake Arthur Place and Cypress Glen. The violations, which were recently upheld in an informal dispute resolution process, could lead to the facilities being barred from participating in the Medicaid program. In addition, the state is reviewing the licenses of the three nursing facility administrators who ran Lake Arthur Place and Cypress Glen, “for possible enforcement actions.”<sup>6</sup>

Two weeks later, on the morning of September 10, 2017, Hurricane Irma made landfall as a Category 4 hurricane on the western tip of the Florida Keys.<sup>7</sup> Tracking north, it made a second landfall near Marco Island, Florida, around 3:30 p.m. the same day as a Category 3 hurricane,

<sup>1</sup> David Roth, *Texas Hurricane History*, National Weather Service, (2010), available at <https://www.weather.gov/media/lch/events/txhurricanehistory.pdf>.

<sup>2</sup> National Weather Service (NWS), *Major Hurricane Harvey—August 25-29, 2017*, (2018), available at [https://www.weather.gov/crp/hurricane\\_harvey](https://www.weather.gov/crp/hurricane_harvey).

<sup>3</sup> John Wayne Ferguson, *18 People Rescued from Flooded Assisted Living Facility*, Galveston County Daily News (Aug. 27, 2017), available at [https://www.galvnews.com/news/free/article\\_e1ffff8e-435d-5c78-ab46-57d6bc7dc6a5.html](https://www.galvnews.com/news/free/article_e1ffff8e-435d-5c78-ab46-57d6bc7dc6a5.html).

<sup>4</sup> Matt Pearce, *After Harvey Hit, One Texas Nursing Home Evacuation Began with a Gun Drawn*, L.A. Times (Sept. 29, 2017), available at <http://www.latimes.com/nation/la-na-texas-harvey-nursing-homes-20170929-story.html> [hereinafter, L.A. Times Texas Evacuation Report].

<sup>5</sup> Appendix G, Ex. 1, *Search Warrant signed by Judge J. Stevens*, Criminal District Court of Jefferson County, Texas (Sept. 14, 2017), at Attachment A [hereinafter, SCC Search Warrant].

<sup>6</sup> Appendix C, Ex. 1, Email from David Kostroun to David Berick (Oct. 26, 2018) [hereinafter Kostroun October Email].

<sup>7</sup> NWS, *Hurricane Irma—September 10, 2017*, available at <https://www.weather.gov/mfl/hurricaneirma>.

raking the state as it moved across Florida.<sup>8</sup> An estimated 6 million Floridians were ordered to evacuate. The NWS described the storm’s widespread power outages:

[O]ver three-quarters of electrical service customers in South Florida lost power, many for close to a week. For east coast metro areas of Miami-Dade, Broward and Palm Beach Counties, about 95% of the power was restored within 1 week after the hurricane. In the western half of South Florida, including Collier, Hendry and Glades counties, over 90% of customers lost power and for periods of over a week.<sup>9</sup>

In the days following Irma’s landfall, 12 elderly residents of a Broward County nursing home died as the result of complications related to heat exposure after the facility’s air conditioning equipment lost power on the afternoon of September 10th.<sup>10</sup> Without air conditioning, temperatures in the building began to climb, reaching an estimated 99 degrees or higher.<sup>11</sup> The conditions in the building of the Rehabilitation Center at Hollywood Hills (“Hollywood Hills”) were so extreme that one first responder recalled “it was hot in the building coming from the outside in,” and the nursing home’s staff resorted to removing lights from the nursing station lamps in an attempt to keep down temperatures.<sup>12</sup>

The 12 deaths at Hollywood Hills were ruled homicides by the Broward County Medical Examiner; of those, seven occurred during a six-and-a-half hour stretch in the early morning hours of September 13th.<sup>13</sup> One deceased resident’s temperature was recorded at 109.9 degrees shortly *after* the resident’s death at the hospital, while several others were found dead in their rooms at the nursing home.<sup>14</sup> Based on the Minority staff’s investigation, these deaths were preventable. Dozens more residents were put in serious danger, according to a review by the Florida Agency for Health Care Administration.

The Agency’s review of the medical records of the Facility’s residents showed that 42 of 51 residents reviewed on the second floor of the facility were diagnosed with heat exposure or dehydration. In addition, 31 of 71 residents reviewed on the first floor were diagnosed with heat exposure or dehydration.<sup>15</sup>

The cases examined in this report were not the only nursing homes that experienced difficulties during these hurricanes. The Centers for Medicare & Medicaid Services (“CMS”) reported that the licensing agencies for Texas and Florida, designated by CMS as State Survey Agencies, had received dozens of storm-related complaints filed against nursing home operators. According to CMS, as of July 30, 2018:

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> Amended Complaint at 8-14, 54, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769, Dec. 22, 2017), available at [https://www.doah.state.fl.us/DocDoc/2017/005769/17005769\\_237\\_12222017\\_16175941\\_e.pdf](https://www.doah.state.fl.us/DocDoc/2017/005769/17005769_237_12222017_16175941_e.pdf) [hereinafter, Hollywood Hills Amended Complaint].

<sup>11</sup> *Id.* at 14.

<sup>12</sup> In regards to “it was hot,” quote, *see* Appendix E, Ex. 1, Deposition of Amy Parrinello et al. at 432, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769, Jan. 31, 2018). In regards to removing lights, *see* Appendix D, Ex. 1, Letter from Gregory Smith to David Berick (June 4, 2018), at Exhibit 9, Deposition Dr. Frances Cadogan at 26 [hereinafter, Gregory Smith Letter].

<sup>13</sup> Hollywood Hills Amended Complain, *supra* note 10, at 4, 8-14.

<sup>14</sup> Hollywood Hills Amended Complain, *supra* note 10, at 9-11.

<sup>15</sup> Hollywood Hills Amended Complain, *supra* note 10, at 4.

...the Texas Health and Human Services Commission (TXHHSC) reported 74 complaints filed on 38 Skilled Nursing Facilities. Of the 38 complaints, 36 were deemed to justify an onsite investigation. Of the 36 investigations, 10 SNFs [skilled nursing facilities] were found to have Medicare requirements out of compliance for which the TXHHSC recommended a federal remedy. None resulted in an involuntary termination from the Medicare program, however, 1 SNF permanently closed.<sup>16</sup>

In Florida, CMS reported that “42 complaints were received, which each resulted in an onsite investigation. Of these, there were 12 resulting findings of deficient practices.”<sup>17</sup>

Such problems and violations are not new developments in nursing homes. More than a decade earlier, the Office of Inspector General for the Department of Health and Human Services (“OIG”) concluded in 2006 that “a lack of effective emergency planning or failure to properly execute the emergency plans” led to problems at nursing homes in Gulf Coast states following a string of hurricanes.<sup>18</sup> The OIG conducted a follow-up report in 2012 that found the percentage of nursing homes in compliance with federal regulations for emergency plans had declined over the intervening five years, as had the percentage that completed emergency training.<sup>19</sup>

Following the OIG reports, the Centers for Medicare & Medicaid Services developed new emergency preparedness regulations for Long-Term Care facilities (“LTC”) that were finalized in September 2016; however, facilities were not required to comply with the new standards until November 2017, two months after Harvey and Irma made landfall.<sup>20</sup> In October 2016, CMS also finalized new “reform” requirements as conditions of participation for LTCs.<sup>21</sup>

While the hurricanes examined in this report occurred before these new emergency requirements and regulations took effect, the investigation found major gaps and insufficiencies in the regulatory approach taken by CMS. Furthermore, more than a year after these hurricanes made landfall, CMS has failed to revise its emergency preparedness guidance, which it told the Minority staff it would do.

<sup>16</sup> Appendix C, Ex. 2, Email from William Harris to David Berick (Aug. 7, 2018) [hereinafter, Harris Email].

<sup>17</sup> *Id.*

<sup>18</sup> Office of the Inspector General for the Department of Health and Human Services (HHS-OIG), *Nursing Home Emergency Preparedness and Response During Recent Hurricanes*, OEI-06-06-0020 (August 2006), at ii, available at <https://oig.hhs.gov/oei/reports/oei-06-06-0020.pdf> [hereinafter HHS-OIG 2006].

<sup>19</sup> HHS-OIG, *Gaps Continue to Exist in Nursing Home Emergency Preparedness and Response During Disasters: 2007-2010*, OEI-06-09-00270 (April 2012), at 10, available at <https://oig.hhs.gov/oei/reports/oei-06-09-00270.pdf> [hereinafter HHS-OIG 2012].

<sup>20</sup> Medicare and Medicaid Programs; Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers, 81 Fed. Reg. 180, 63860 (Sept. 16, 2016) (codified at 42 C.F.R. pts. 403, 416, 418, et al.), available at <https://www.gpo.gov/fdsys/pkg/FR-2016-09-16/pdf/2016-21404.pdf> [hereinafter, Emergency Preparedness Rule]. The regulations went into effect on November 16, 2016. However, health care providers and suppliers affected by this rule were given one year after the effective date to comply and implement all regulations on November 15, 2017.

<sup>21</sup> Medicare and Medicaid Programs; Reform of Requirements for Long-Term Care Facilities, 81 Fed. Reg. 192,68688 (Oct. 4, 2016) (codified at 42 C.F.R. pts. 405, 431, 447, et al.), available at <https://www.gpo.gov/fdsys/pkg/FR-2016-10-04/pdf/2016-23503.pdf> [hereinafter, LTC Rules].

## Part II: Minority Staff Investigation

Given this history, the recent tragedies, and requests from both of the U.S. Senators representing Florida, Sen. Nelson<sup>22</sup> and Sen. Rubio,<sup>23</sup> the Senate Committee on Finance began an investigation on October 18, 2017 exploring the impact of the two hurricanes on LTCs and the adequacy of health, safety and emergency preparedness standards for nursing homes and assisted living facilities. This report was prepared by the Committee’s Minority staff (hereinafter “Minority staff”).

The Committee on Finance has jurisdiction over matters related to “health programs under the Social Security Act and health programs financed by a specific tax or trust fund,” as provided by Rule XXV of the Standing Rules of the Senate, including CMS, which administers Medicaid and Medicare. In 2016, these programs combined to account for 53% of national spending on freestanding nursing care facilities and continuing care retirement communities, i.e., those not connected to a hospital. Federal data show Medicare spent \$37.5 billion; Medicaid, including federal, state and local outlays, spent nearly \$50 billion.<sup>24</sup> The programs combined to spend an additional \$7.2 billion on hospital-based facilities, according to data CMS provided to the Congressional Research Service.<sup>25</sup>

CMS, in turn, establishes requirements to protect the health and safety of beneficiaries of those programs in nursing homes.<sup>26</sup> While assisted living facilities do not participate in Medicare and are generally licensed by states, as explained by CMS, “in some instances where states have elected to furnish optional home and community-based services (“HCBS”) through Medicaid, assisted living facilities may be HCBS providers, and are subject to HCBS-related health and welfare requirements, as well as state-based regulation.”<sup>27</sup>

Any documents cited in this report that are not publically available are contained in the appendices that follow.

Appendix A contains letters from Senator Nelson and Senator Rubio, respectively, that were sent to Chairman Hatch and Ranking Member Wyden requesting an investigation. The Committee sent information request letters to CMS, the Florida Agency for Health Care Administration, and the Texas Health and Human Services Commission. Those information requests can be found in Appendix B; responses to those requests can be found in Appendix C.

The Minority staff sent additional requests for information to counsel for the owners of Hollywood Hills and Senior Care Centers; the owner of Lake Arthur Place; NextEra Energy, the parent of Florida Power & Light—the utility company serving Hollywood Hills; and CMS. Those responses can be found in Appendix D; responses from NextEra/FPL can be found in

<sup>22</sup> Appendix A, Ex. 1, Letter from Sen. Bill Nelson to Chairman Orrin Hatch and Ranking Member Ron Wyden (Sept. 29, 2017).

<sup>23</sup> Appendix A, Ex. 2, Letter from Sen. Marco Rubio to Chairman Orrin Hatch and Ranking Member Ron Wyden (Oct. 11, 2017).

<sup>24</sup> Centers for Medicare & Medicaid Services (“CMS”), *National Health Expenditures by type of services and source of funds, CY 1960-2016* (Dec. 6, 2017), see NHE Tables, available at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html>.

<sup>25</sup> Appendix G, Ex. 2, Email from Kirsten Colello to Peter Gartrell (Sept. 13, 2018).

<sup>26</sup> 42 C.F.R. Part § 483.

<sup>27</sup> Appendix C, Ex. 3, Letter from Administrator Verma to Ranking Member Wyden (Dec. 13, 2017) [hereinafter, Verma Letter]. The same letter states that the same response was sent to Chairman Hatch.

Appendix F. Minority staff collected transcripts and other trial information from the licensing hearing for Hollywood Hills, which can be found in Appendix E.

Correspondence and documents cited in this report that cannot be categorized in one of the aforementioned appendices can be found in Appendix G.

The appendices are contained in three volumes:

- Volume 1 contains Appendices A, B and C,
- Volume 2 contains Appendix D, and
- Volume 3 contains Appendices E, F and G.

In some cases in which the location of information cited in this report are not easily identifiable within the documents, Minority staff has added Bates numbers and/or highlighting to facilitate identification of the cited information. Documents that have had numbering or highlighting added to them by the Minority staff are noted in the index on the following page.

Lastly, the Minority staff has redacted certain information from a small number of the documents contained in the appendices. These redactions include personal information such as email addresses and non-public phone numbers; business information such as certain contract terms and financial information, and security-sensitive information. The Minority staff also consulted with the companies that provided documents as a part of this investigation in making these redactions. In the view of the Minority staff, none of the redactions subtract from the substance of the report, or the events and issues discussed therein.

## Part III: Discussion of Events

### A. Summary of Events—Hurricane Harvey and Texas Care Facilities

While some Texas nursing homes and assisted living facilities were under mandatory evacuation orders, the Senior Care Centers (“SCC”) nursing homes in Port Arthur were not. According to the Texas HHSC, 122 facilities “in storm-affected counties evacuated due to predicted structural damage, flooding, and power outages,” and an estimated 740 facilities “in storm-affected counties sheltered-in-place, based on information self-reported by providers.”<sup>28</sup> Regarding the eventual evacuation of the Lake Arthur Place and Cyprus Glen nursing homes in Port Arthur, Texas, on August 30th, the General Counsel for SCC noted:

The previous week, when Hurricane Harvey made landfall near Corpus Christi, we followed our documented process to safely evacuate three facilities in the expected strike zone. The situation in Port Arthur was an unforeseen catastrophe that local authorities could not have predicted, and we followed our process for choosing to evacuate or shelter in place for both instances.<sup>29</sup>

Timelines provided to the Minority staff by SCC—when reviewed in concert with information released by local law enforcement and contemporaneous news reports—combined to show the dangerous and chaotic conditions confronted by residents and staff of Lake Arthur Place while they sheltered-in-place and during the subsequent evacuation.<sup>30</sup>

SCC has 92 nursing facilities in Texas.<sup>31</sup> Although there were multiple warnings of possible flooding, SCC staff at the facility and corporate level elected to shelter-in-place at both Lake Arthur Place and the adjacent Cyprus Glen nursing homes. SCC claims that as of 5 p.m. on August 29th, Houston, Beaumont, and Port Arthur areas were under directives to “shelter in place by local authorities,” and that the potential for flooding was unforeseen.<sup>32</sup> (As noted in the weather chronology below, by that time, the National Hurricane Center had been warning of the potential for catastrophic flooding in the region for days.)

The SCC timelines state that water began entering these two facilities around 9:59 p.m. on August 29th. SCC reported that as early as 10:45 p.m. that night, staff began calling its emergency transportation contractor and the local fire department to request assistance, “. . . but was told there was nothing they could do due to other fires they were battling and one engine being stalled in the water.”<sup>33</sup> By 1:45 a.m. on August 30th, there were 9 inches of water in the facilities. “Power and water were shut off to both facilities to avoid sewage backup or hazardous electrical problems. . . . [and] patients and residents were moved to the highest points in each

<sup>28</sup> Appendix C, Ex. 4, Letter from Charles Smith to Chairman Hatch and Ranking Member Wyden (Nov. 27, 2017) [hereinafter, Charles Smith Letter].

<sup>29</sup> Appendix D, Ex. 2, Letter from Kelly Morrison to David Berick (Feb. 28, 2018) [hereinafter, Morrison Letter].

<sup>30</sup> SCC Search Warrant, *supra* note 5; Appendix D, Ex. 3, Senior Care Centers Timeline of Events Hurricane Harvey Evacuation (Exhibit H of Morrison Letter) (Feb. 28 2018) [hereinafter, SCC Timelines]. On October 24, 2018, counsel for SCC provided Minority staff with a second timeline, which also is included in the appendix. Although some of the information in the timelines matches—other information conflicts—Minority staff elected to include both timelines in the appendix in Exhibit D-3 and cite them both in the report.

<sup>31</sup> Appendix C, Ex. 5, Email from David Kostroun to Minority staff, (Feb. 5, 2018) [hereinafter Kostroun February Email].

<sup>32</sup> SCC Timelines, *supra* note 30.

<sup>33</sup> *Id.*

facility and into hallways to prepare for evacuation,” according to SCC.<sup>34</sup> SCC told the Minority staff that additional calls for assistance were made at 2 a.m.

Local authorities were called for evacuation, but we were informed they were “too swamped” with other emergency calls. ... Officials informed us they were notifying the National Guard for assistance with evacuation, but we were not given a timeline of when to expect them.<sup>35</sup>

SCC stated that by 8 a.m. on August 30th, it had made all emergency agencies aware of the situation at the homes.<sup>36</sup> At that point, the company began contacting residents’ families to inform them that they were sheltering-in-place but that the facilities were flooding and residents would be evacuated “...if authorities are able to provide evacuation.”<sup>37</sup> According to SCC, at 10 a.m. the regional vice president unsuccessfully attempted to reach State of Texas health and emergency management officials for assistance; this was followed by a reported 19 calls to state agencies and to the company’s contracted ambulance service between 11:44 a.m. and 5:56 p.m.<sup>38</sup> At 1 p.m., a call to the Texas Emergency Management District Coordinator included a discussion of evacuation priority.<sup>39</sup>

Around 1:30 p.m., the SCC timelines state that volunteers arrived at the facility.<sup>40</sup> SCC’s account supports reporting by the *Los Angeles Times* that the volunteers—the self-described “Cajun Navy”—at least one of whom was armed, forced open the doors to the facility, confronting the facility’s director and apparently demanding that he release the residents to them to be evacuated. When he refused, stating he could only release them to the National Guard for evacuation, he was physically assaulted and threatened with a handgun.<sup>41</sup>

The local law enforcement’s account, found in an affidavit filed with a search warrant of the facility after the event, differs slightly from the SCC timelines. The affidavit states that around noon on August 30th, two officers arrived by boat at the Lake Arthur Place location. One of the officers—Detective Hebert—identified himself to the facility director as a police officer with the Port Arthur Police Department.<sup>42</sup> The affidavit states:

...water was about 10-12 inches deep throughout the entire facility. He also noted the strong odor of human feces and urine throughout the facility. Det. Hebert noticed some patients still in their rooms. Some were in the hallways that were lying in beds or sitting in wheel chairs. The ones in wheel chairs had their lower extremities submerged in flood waters. Det. Hebert said it was obvious the patients needed immediate assistance to evacuate and be placed out of harm’s way.<sup>43</sup>

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<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

<sup>41</sup> L.A. Times Texas Evacuation Report, *supra* note 4.

<sup>42</sup> SCC Search Warrant, *supra* note 5.

<sup>43</sup> *Id.*

Even with the presence of two uniformed local police officers, the facility director insisted that patients could not be removed from the facility. He reportedly questioned their credentials and a physical confrontation occurred between the director and the officers and they “...had to physically restrain [the facility’s director, Jeff] Rosetta with handcuffs so Rosetta could not prevent the necessary evacuation of the patients.”<sup>44</sup> The affidavit goes on to note “(t)here were also persons who arrived by boat to assist in the evacuation and were told by Rosetta that they could not evacuate anyone and that “the National Guard was on the way.”<sup>45</sup> No mention is made of the timing of when these individuals arrived or their assault on the director.

The evacuation at Cypress Glen appears to have been less confrontational. SCC told the Minority staff that the National Guard arrived at the facility around 2 p.m. and began evacuating. SCC claims that its employees were not allowed to accompany the Cypress Glen patients, some of whom were “Memory Care patients who physically were unable to communicate their condition or identity.”<sup>46</sup> SCC also contends that its Chief Clinical Officer was given incorrect information by state officials about the location to which the Lake Arthur Place residents were transferred. SCC only learned of the actual location in Port Arthur reportedly after a company administrator physically arrived at the Cyprus Glen location by Jet Ski.<sup>47</sup> The company’s account does not fully align with the Texas HHSC account. HHSC reported:

Our regulatory regional director was in contact with both corporate and facility staff at Lake Arthur Place Nursing Home early on Aug. 30, 2017, to assess the facility’s status and discuss evacuation. Around 6:45 that evening, corporate staff sent HHSC an email requesting that emergency personnel transport these residents to other facilities in the corporate chain. However, emergency personnel had already activated and were unable under their orders to honor the request. At the request of local emergency personnel, we coordinated with other area nursing facilities that had the capacity and ability to transport Lake Arthur’s residents, who were evacuated first to a staging area in Conroe, Texas, and then to these alternative facilities. The following day, Aug. 31<sup>st</sup>, HHSC staff informed corporate staff about the new location of these residents. We would not have information for any other state authorities.<sup>48</sup>

The HHSC informed Minority staff in late October 2018 that its investigators “were able to substantiate allegations of regulatory violations and cite these two facilities for failure to comply with state and federal standards in the storm’s aftermath, including violations that rose to a high severity level known as substandard quality of care.”<sup>49</sup> As a result, the agency’s enforcement staff has recommended “state administrative penalties, as well as federal penalties to deny these two facilities Medicaid payments for any new resident admissions and to terminate their agreements to participate in the federal Medicaid program.”<sup>50</sup> According to the Texas officials, CMS “received our team’s recommendations and can alter them at its discretion.”<sup>51</sup>

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<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> SCC Timelines, *supra* note 30.

<sup>47</sup> *Id.*

<sup>48</sup> Kostroun February Email, *supra* note 31.

<sup>49</sup> Kostroun October Email, *supra* note 6.

<sup>50</sup> *Id.*

<sup>51</sup> *Id.*



**Image 1:** This photo of residents at the La Vita Bella Assisted Living Facility in waist-deep water drew widespread attention to the plight of senior citizens after the 2017 landfall of Hurricane Harvey in Texas. *Photo:* Trudy Lampson, *Source:* <https://www.twincities.com/2017/08/28/residents-in-viral-photo-of-flooded-houston-nursing-home-are-doing-fine/>.

The facilities appealed the agency’s findings through an informal dispute resolution process, which upheld all of the state and federal violations. Those included “31 allegations at Lake Arthur Place, including violations relating to neglect of residents, quality of care, and physical environment,” and “25 allegations at Cypress Glen, also including neglect, quality of care, and physical environment.”<sup>52</sup> The facilities still maintain the right to appeal the outcome of the dispute resolution, including the opportunity for a hearing to review any proposed enforcement actions. In addition, the state is reviewing the licenses of the three nursing facility administrators who ran Lake Arthur Place and Cypress Glen, “for possible enforcement actions.”<sup>53</sup>

Lake Arthur and Cyprus Glen were not the only facilities in Texas that initially chose to shelter-in-place only to find themselves being flooded and suddenly needing assistance to evacuate. La Vita Bella, an assisted living facility licensed by Texas HHSC, received nationwide attention after pictures of the residents in waist-deep water were picked up by news agencies and widely circulated on social media and the Internet. The pictures were initially posted on social media by a relative of the facility’s owner in an effort to draw attention to deteriorating conditions following the hurricane in an attempt to obtain help.<sup>54</sup>

According to documents obtained in public records requests by Texas AARP, La Vita Bella was subsequently fined just \$200 for violations related to abuse, neglect and exploitation, and \$350 for safety operations related to their emergency preparedness and response plan.<sup>55</sup> According to the *Houston Chronicle*:

Trudy Lampson, the 72-year-old owner of the facility, said in an interview Thursday she found the citation and public uproar sparked by the now-famous photo unfair. La Vita Bella made the decision not to use its detailed evacuation plan because the journey could prove difficult for the residents, she said. Instead they chose to “shelter in place,” in part because as of late Saturday night it did not appear as if the flooding would be serious.<sup>56</sup>

Texas HHSC downplays the role of the social media posting in the evacuation. According to the HHSC response to the Committee, on August 27, 2017:

A call was received from La Vita Bella indicating the facility needed assistance to evacuate. Our staff communicated this information to the state emergency operations center, which confirmed it was addressing the situation with Texas Task Force One Urban Search and Rescue. We were in contact with La Vita Bella about its need to evacuate and communicating with 911 on the facility’s behalf, as well as with state emergency management. . . . We continued communicating with facility staff during and after the evacuation to determine where the residents were

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<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

<sup>54</sup> Jacey Fortin, *Behind the Photo of the Older Women in Waist-High Water in Texas*, N.Y. Times (Aug. 28, 2017) available at <https://www.nytimes.com/2017/08/28/us/nursing-home-houston-texas.html>.

<sup>55</sup> AARP, *Left Adrift: A Snapshot of Texas Assisted Living Facility Care During Hurricane Harvey with Policy Recommendations* (August 2018), at 4, available at <https://states.aarp.org/wp-content/uploads/2018/08/2018-08-left-adrift-report.pdf> [hereinafter, *Left Adrift*].

<sup>56</sup> Jenny Deam, *Report: Assisted Living Patients Left in Peril as Hurricane Harvey Hit*, *Houston Chronicle* (Aug. 3 2018), available at <https://www.houstonchronicle.com/news/houston-texas/houston/article/Report-Assisted-Living-residents-left-in-peril-13129748.php> [hereinafter, *Assisted Living Patients Left in Peril*].

evacuated to and received updates on their health and safety. All residents of La Vita Bella were safely evacuated.<sup>57</sup>

The timing of these calls was not provided. And while official rescue resources did arrive, AARP noted in its report:

Nearly eight hours after the facility began to flood, help arrived in the form of a resident's family member, who brought a boat and was able to use plastic-covered mattresses to transfer four residents from the facility to a local hospital. Meanwhile, the other 11 residents evacuated by two Army trucks from Texas City.<sup>58</sup>

Nonetheless, the decision to shelter-in-place resulted in residents being placed in a precarious situation that required emergency resources and many hours to respond. What's more, according to the Texas AARP report, other assisted living facilities had problems during Hurricane Harvey. In Houston, investigators with Texas HHSC found that the Lakewood 24 HR PC 2 "did not have an emergency preparedness and response plan, and residents were left unattended during Hurricane Harvey."<sup>59</sup> Residents were evacuated by boat after the owner called 911 from her house several blocks away. According to AARP, fines totaling \$1,000 were issued to the facility—\$250 for violation of "rights to be free from abuse, neglect, and exploitation," \$300 for "missing personnel records," and \$450 for lack of an emergency preparedness plan.<sup>60</sup>

However, even when evacuations did occur, they were not without mishap. Texas AARP reported that one resident of Vitality Court was reported missing after the assisted living facility in Victoria, Texas, evacuated residents to a relocation site more than four hours away. After a headcount showed the resident missing, the local police were called; officers found the woman locked in her room. "State investigators found that although the emergency preparedness and response plan called for the use of an official roster to account for residents, a handwritten list of names was created as residents boarded buses," Texas AARP reported.<sup>61</sup> "Inspection reports show the administrator failed to follow the facility's own plan and did not report the incident to the state, as is required by law. Two violations were substantiated, but no fines were assessed."<sup>62</sup>

## B. Key Issue: Evacuation Planning and Execution

Although the SCC Port Arthur LTCs had emergency plans with evacuation procedures, including a contract with an emergency transportation provider, the company has maintained that it was required to have an official evacuation order before it can evacuate.<sup>63</sup> SCC also cited the fact that the City of Port Arthur was never subject to an evacuation order and referenced an August 31st text message to that effect in defense of its decisions.<sup>64</sup>

<sup>57</sup> Charles Smith Letter, *supra* note 28.

<sup>58</sup> Left Adrift, *supra* note 55, at 4.

<sup>59</sup> *Id.*, at 6.

<sup>60</sup> *Id.*, at 6.

<sup>61</sup> *Id.*, at 7.

<sup>62</sup> *Id.*, at 7.

<sup>63</sup> Terry Langford and Holly K. Hacker, *Dallas Nursing Home Chain Comes Under Fire for not Evacuating Before Hurricane*, Dallas Morning News (Oct. 9, 2017), available at <https://www.dallasnews.com/news/investigations/2017/10/09/dallas-nursing-home-chain-comes-fire-evacuating-hurricane> [hereinafter, Dallas Nursing Home Comes Under Fire].

<sup>64</sup> Morrison Letter, *supra* note 29.

Similarly, the company issued a supplemental 2017 “Hurricane Plan”—which it provided to the Minority staff—that set out policies and procedures for the upcoming hurricane season and contains guidance that reflects this view of its responsibilities.<sup>65</sup> Under the heading “Warning,” the plan includes an initial checklist that states:

This stage is when there is less than 72 hours before landfall with a possibility of a direct hit. The Office of Emergency Management or local authorities will order shelter in place or evacuation order.<sup>66</sup>

The plan also includes a one-page discussion entitled “Hurricane In-Service – Evacuating or Staying in Place,”<sup>67</sup> which notes that hurricane season begins June 1st and ends November 30th. It goes on to say:

During hurricane season, it may become necessary to shelter-in-place or evacuate to another SCC facility located outside of hurricane danger – namely Temple, San Antonio, or Austin. ... We rely on the governor’s office and other state agencies to release buses and have no control over the time the buses will arrive at the facility or the route we will take to the receiving facility.<sup>68</sup>

However, in its public explanations of LTC responsibilities<sup>69</sup> and in its response to the Minority staff, Texas noted that “(f)acilities in Texas are allowed to evacuate residents without a state order.”<sup>70</sup>

As noted above, the SCC annual hurricane plans contemplated evacuations to other SCC facilities. It designated specific inland facilities to receive residents from each of the company’s 19 coastal Texas facilities. While it may be necessary to move patients and residents away from the affected area in a regional emergency, planning from the outset to transport them long distances over many hours to other company-owned facilities inherently carries with it additional risks. The risks of evacuating, discussed in greater detail in Section IV(E) of this report, could discourage nursing home managers from moving patients, an issue touched on in the planning document:

Staying in place can be very uncomfortable because of power outages which result in air conditioning loss and, unfortunately, most hurricanes occur in warm or hot months. An evacuation can also be very uncomfortable for all involved and the bus ride can be long and the receiving facility is accommodating an additional 100+ residents in limited space.<sup>71</sup>

### **Transportation Arrangements Were Not Consistent with Warning Protocols**

Even if SCC managers had chosen to evacuate the Port Arthur facilities prior to the storm, the company’s emergency transportation agreement would have likely left them hamstrung. The Port

<sup>65</sup> Appendix D, Ex. 4, *Hurricane Plan Supplement to Disaster Preparedness Plan for all Senior Care Centers* (Exhibit E of Morrison Letter) (Feb. 28, 2018) [hereinafter, SCC Hurricane Plan].

<sup>66</sup> *Id.* at SFC-003.

<sup>67</sup> *Id.* at SFC-054.

<sup>68</sup> *Id.* at SFC-054.

<sup>69</sup> Dallas Nursing Home Comes Under Fire, *supra* note 63.

<sup>70</sup> Kostroun February Email, *supra* note 31.

<sup>71</sup> SCC Hurricane Plan, *supra* note 65, at SFC-054.

Arthur facilities had contracted with a private ambulance service, Acadian Ambulance Services of Texas, LLC (“Acadian”). When the Minority staff reviewed the agreement, several shortcomings were identified that would have hindered SCC from utilizing the service.<sup>72</sup>

One significant issue is that SCC’s plan to transfer residents from its coastal facilities to inland facilities, noted above, appears to exceed the maximum distance set out for transportation in the Acadian contract. Cyprus Glen was expected to evacuate to Austin—a distance of 250 miles (4 hours under normal conditions)—and Lake Arthur Place was expected to evacuate to San Antonio—a distance of 300 miles (4 hours, 45 minutes under normal conditions).<sup>73</sup> The “Emergency Evacuation Request and Guarantee of Payment” between Lake Arthur Place and Acadian, executed on June 12, 2017, states that the designated shelter “must be within a reasonable distance or 200 miles unless specifically accepted in writing by an authorized Acadian representative.”<sup>74</sup>

A second issue identified by Minority staff is the unworkable timing deadlines in the Port Arthur-Acadian contract:

Facility understands and agrees that Acadian has limited resources. Therefore, Acadian agrees to use good faith efforts to accommodate any request with either internal resources or in coordination with state, federal and/or mutual aid assets when request for transport is made, as required herein, at a minimum of 48 hours prior to wind speeds reaching 40 mph [miles per hour]. Thereafter, transportation shall be performed on an as available basis without guarantee of performance.<sup>75</sup>

These requirements present limitations that would likely dissuade nursing home management from ordering evacuations, and, as written, call into question the very utility of the agreement.

The National Oceanic and Atmospheric Administration (“NOAA”), through the National Hurricane Center (“NHC”), defines a tropical storm as an organized weather system with maximum sustained winds between 39 mph and 73 mph; when maximum sustained winds reach 74 mph, the system is classified as a hurricane.<sup>76</sup> NOAA issues Hurricane Watch advisories 48 hours before tropical storm force winds “are possible” within the geographic watch area. A NOAA/NHC Hurricane Warning, on the other hand, is issued 36 hours before tropical storm force winds “are expected” within the warning area.<sup>77</sup> In cases when a tropical storm is forecast to make landfall, or when an area falls outside a hurricane’s central wind field, but is expected to experience sustained winds between 39 and 73 mph, NOAA may issue tropical storm watches and warnings with identical 48- and 36-hour time horizons.<sup>78</sup>

As such, the contract’s 48-hour notice and 40-mph standard make executing the contract’s terms difficult, at best. Strictly following the terms of the contract would certainly require the contract be executed before a Hurricane Warning is issued, and possibly before a Watch is even put in place. (As noted above, a Watch is issued at the exact 48-hour mark required in the contract.

<sup>72</sup> Appendix D, Ex. 5, *Lake Arthur Place Disaster Preparedness Plan* (Exhibit C of Morrison Letter) (Feb. 28, 2018) at SFC-103-SFC-109 [hereinafter, *Lake Arthur Disaster Plan*].

<sup>73</sup> SCC Hurricane plan, *supra* note 65, at SFC-008-SFC-014.

<sup>74</sup> Lake Arthur Disaster Plan, *supra* note 72, at SFC-103-SFC-109.

<sup>75</sup> *Id.*

<sup>76</sup> National Hurricane Center (“NHC”), *Glossary of NHC Terms* (accessed on Sept. 23, 2018), available at <https://www.nhc.noaa.gov/aboutgloss.shtml?#TROPICYC>.

<sup>77</sup> *Id.*

<sup>78</sup> *Id.*

Given the terms of the contract, SCC would seem to have needed to execute the contract at the same time a Watch was issued.) Even as meteorology has improved, predicting the path of tropical storms and hurricanes remains an inexact science. It's understandable that nursing home management would not want to make an evacuation decision when a tropical storm or hurricane watch is all that has been issued, yet the company nonetheless entered into a contract for emergency evacuation transportation requiring SCC to do just that to fulfill a key part of their emergency plan.

Lastly, it's also notable that the contract ultimately places the burden of any likely evacuation on local responders through its legal terms:

Furthermore, if mutual aid resources are not available for the request and Acadian resources are not available, Acadian may give notice of the request to the local EOC command with jurisdiction over the Event and Acadian shall notify Facility of same at which time Acadian's obligations hereunder shall be deemed fulfilled.<sup>79</sup>

This provision means that even if SCC met its obligation to execute the contract 48 hours before tropical storm-force winds arrived, the ambulance company could meet its contract obligations by notifying local authorities that it does not intend to provide evacuation services. It is also clear that once SCC officials decided to shelter-in-place, and the 48-hour notification deadline passed, there was little chance that evacuation services detailed in the Port Arthur-Acadian contract would or could be provided.

The SCC timelines note the company sought assistance from "the contracted ambulance service company" (i.e., Acadian) beginning as early as 10:45 p.m. on August 29th, as well as from state health and emergency response officials.<sup>80</sup> SCC seemed to believe that it may have had some contracted service available to it at that point in time. However, it is hard to reconcile that apparent belief with the specific terms of the emergency transportation contract, the documented transportation requirements of the SCC supplemental hurricane plan, and with standard protocols for hurricane warnings. In the end, the emergency evacuations of the Port Arthur facilities were unable to utilize the Acadian agreement.

Furthermore, it is important to note that the SCC Supplemental Hurricane Plan mischaracterizes the terms and meanings of "tropical storm," "hurricane watch," and "hurricane warning" in its instructions to its management and staff. These mischaracterizations suggest that the company was not familiar with important distinctions between different weather conditions and advisories that could affect residents' safety. The plan states that tropical storms are "[w]inds over 59 miles per hour but less than 74 miles per hour."<sup>81</sup> As noted above, NOAA defines a tropical storm as a weather system with maximum sustained winds of 39 mph. The plan says that a hurricane watch means that a "hurricane is expected to strike the area."<sup>82</sup> As discussed above, it does not. A hurricane watch means that hurricane conditions may occur in the watch area within 48 hours.

The plan is not only dangerously inaccurate, but internally inconsistent in its definitions of a hurricane warning. In one portion of the plan, it states "(w)hen a hurricane warning is announced, hurricane conditions are considered imminent and may begin immediately or at least

<sup>79</sup> Lake Arthur Disaster Plan, *supra* note 72, at SFC-103-SFC-109.

<sup>80</sup> SCC Timelines, *supra* note 30.

<sup>81</sup> SCC Hurricane Plan, *supra* note 65, at SFC-002 (emphasis in original).

<sup>82</sup> *Id.*, at SFC-002.

with the next 12 to 24 hours with wind speeds of 74 mph or higher.” In another, it states “This stage is when there is less than **72 hours** before landfall with a possibility of a direct hit,” adding, with certainty, “The Office of Emergency Management or local authorities will order a shelter in place or evacuation order.”<sup>83</sup>

This is factually incorrect. NOAA’s National Hurricane Center began issuing warnings 36 hours before the anticipated onset of tropical storm-force winds in 2010.<sup>84</sup> Furthermore, while local authorities in coastal communities often issue evacuations or other precautionary messages to citizens in the case of a hurricane warning, they are by no means obliged to do so, nor do they in every instance. Taken together, these instructions could reasonably be expected to have led SCC managers and staff to believe that they had substantially less time to prepare and less time to make shelter-in-place and evacuation decisions than they actually had.

### **Texas Weather Warnings – Foreseen or Unforeseen?**

The Executive Summary of events that SCC provided to the Minority staff notes:

The previous week, when Hurricane Harvey made landfall near Corpus Christi, we followed our documented process to safely evacuate three facilities in the expected strike zone. The situation in Port Arthur was an unforeseen catastrophe that local authorities could not have predicted, and we followed our process for choosing to evacuate or shelter in place for both instances.<sup>85</sup> (emphasis added)

The owner of La Vita Bella, as noted above, chose to remain sheltered-in-place because “. . . as of late Saturday night [August 26th] it did not appear as if the flooding would be serious.”<sup>86</sup>

At issue is whether the situations in which these facilities found themselves were truly unforeseen and whether there are better ways of assessing weather threats and making shelter-in-place and evacuation decisions. As noted earlier, according to the Texas HHSC, an estimated 740 nursing homes and assisted living facilities in the storm-affected counties elected to shelter-in-place while only 122 chose evacuation.<sup>87</sup>

Throughout the period, the NHC issued increasingly ominous warnings that reiterated threats to the region.<sup>88</sup> On Wednesday August 23rd, the NHC issued a hurricane watch for the Texas coast.<sup>89</sup> The 10 a.m. CDT bulletin noted that “Harvey is expected to produce total rain accumulations of 10 to 15 inches with isolated maximum amounts of 20 inches over the middle and upper Texas coast and southwest Louisiana through next Tuesday with heavy rainfall beginning as early as Friday morning.”<sup>90</sup>

<sup>83</sup> *Id.*, at [p. 2 of the PDF] (emphasis in original).

<sup>84</sup> NHC, *NHC Issuance Criteria Changes for Tropical Cyclone Watches/Warnings* (2010), available at [https://www.nhc.noaa.gov/watchwarn\\_changes.shtml](https://www.nhc.noaa.gov/watchwarn_changes.shtml).

<sup>85</sup> Morrison Letter, *supra* note 29.

<sup>86</sup> Assisted Living Patients Left in Peril, *supra* note 56.

<sup>87</sup> Smith Letter, *supra* note 28.

<sup>88</sup> NHC, *Hurricane HARVEY Advisory Archive* (accessed Sept. 23, 2018), available at <https://www.nhc.noaa.gov/archive/2017/Harvey.shtml>.

<sup>89</sup> *Id.*, see *Advisory No. 12*.

<sup>90</sup> *Id.* see *Advisory No. 12*.

By the following day (August 24th), the NHC's 10 a.m. CDT advisory bulletin noted Harvey was quickly strengthening and forecast it to become a major hurricane.<sup>91</sup> Projected rainfall totals were increased to 12 to 20 inches with a maximum of 30 inches "over the middle and upper Texas coast through next Wednesday." By 4 p.m. CDT that day, the NHC again increased its rainfall forecast to 15 to 25 inches and isolated maximum amounts of 35 inches over the middle and upper Texas coast. This forecast noted "[r]ainfall from Harvey may cause devastating and life-threatening flooding."<sup>92</sup>

By 4 p.m. the next afternoon (August 25th), the NHC forecast again raised the expected rain totals and flooding threat. This time, the NHC noted that "Harvey is expected to produce total rain accumulations of 15 to 30 inches and isolated maximum amounts of 40 inches."<sup>93</sup> The bulletin further noted "(r)ainfall of this magnitude will cause catastrophic and life-threatening flooding." The NHC noted in a detailed "discussion" of the forecast that Harvey was expected to "slow down considerably," and that "(t)his slow motion only exacerbates the heavy rainfall and flooding threat across southern and southeastern Texas."<sup>94</sup> The weather discussion also repeated the warning that "(c)atastrophic and life threatening flooding is expected."<sup>95</sup>

The next morning, Saturday, August 26th, the NHC's 10 a.m. weather discussion noted that "...Harvey is certainly not going anywhere fast" and that this slow motion "...is expected to exacerbate the potential for catastrophic flooding from heavy rainfall at least through the middle of next week."<sup>96</sup>

By Sunday morning, August 27th, the day that La Vita Bella was evacuated, the catastrophic flooding had begun to occur. The NHC reported at 7 a.m. that "Harvey is expected to produce additional rain accumulations of 15 to 25 inches over the middle and upper Texas coast through Thursday" and that "[t]hese rains are currently producing catastrophic and life threatening flooding."<sup>97</sup> (emphasis added) At 10 a.m., the NHC repeated the message that catastrophic and life-threatening flooding was already occurring in this region, including the Houston/Galveston metropolitan area, and it boosted the maximum rainfall expected in this region to 50 inches.<sup>98</sup> At 1 p.m., and again at 4 p.m., its next advisories described the ongoing flooding as "unprecedented."<sup>99</sup> At 10 p.m., the NHC again warned of additional accumulations of rain of 15 to 25 inches but now extending through Friday.<sup>100</sup>

The NHC continued to repeat these warnings on Monday, August 28th, posting in a 10 p.m., advisory that additional heavy rain overnight was "expected to worsen the flood situation."<sup>101</sup> The NHC issued eight more advisories on Tuesday, August 29th that maintained the tropical storm warning for Port Arthur, and continued to warn of heavy rainfall and catastrophic flooding.<sup>102</sup>

<sup>91</sup> *Id.*, see Advisory No. 16.

<sup>92</sup> *Id.*, see Advisory No. 18.

<sup>93</sup> *Id.*, see Advisory No. 22.

<sup>94</sup> *Id.*, see Discussion No. 22.

<sup>95</sup> *Id.*, see Discussion No. 22.

<sup>96</sup> *Id.*, see Discussion No. 25.

<sup>97</sup> *Id.*, see Advisory No. 28a.

<sup>98</sup> *Id.*, see Advisory No. 29.

<sup>99</sup> *Id.*, see Advisory No. 29a and Advisory No. 30.

<sup>100</sup> *Id.*, see Advisory No. 31.

<sup>101</sup> *Id.*, see Advisory No. 35.

<sup>102</sup> *Id.* The NHC issued eight advisories on August 29th warning of heavy rain.

At 10 p.m. on August 29th, nearly a full week after the NHC issued its first hurricane watch for the region, water had entered Lake Arthur Place.<sup>103</sup> According to the company, there was “water in two rooms with water coming in the front, back and therapy room doors. The facility had sandbags in place to keep additional water out of the facility.”<sup>104</sup> According to the company’s account, Cyprus Glen nursing home was flooding by midnight. As early as 10:45 p.m. on the 29th, and again by 2 a.m. on Wednesday, August 30th, local emergency responders were called to evacuate the nursing homes, but were unable to assist.<sup>105</sup> Evacuations would not begin for roughly 12 more hours.<sup>106</sup>

Administrators of nursing homes and assisted living facilities cannot be expected to be experts in weather forecasting, but meteorologists who *were* experts issued quite accurate forecasts regarding Hurricane Harvey. The issuance of orders to evacuate or shelter-in-place by local governments does not relieve administrators from the obligation to protect the health and safety of their residents. State and local emergency managers—and state licensing agencies—must provide facility administrators substantially more information on how to assess threats to their facilities—not only in the preparation of their emergency plans, but in real time, during emergencies themselves.

### C. Summary of Events—Hurricane Irma and the Rehabilitation Center at Hollywood Hills

The Rehabilitation Center at Hollywood Hills (“Hollywood Hills”) was not under a mandatory evacuation order and officials there chose to shelter in place.<sup>107</sup> Many of the state’s other LTCs took the same approach. According to data collected by the Florida Agency for Health Care Administration (“AHCA”), just 88 of the state’s 683 active nursing homes evacuated due to Hurricane Irma, while 635 of the 3,109 assisted living facilities licensed by the state evacuated.<sup>108</sup> According to the state:

Reasons for evacuation varied but included pre-impact conditions, including mandatory evacuation orders and execution of emergency management protocols. The vast majority of post-impact evacuations were reported as occurring in response to power-outage. This information is self-reported by facilities and may be slightly understated due to facility loss of electrical power during the reporting period. Facilities that did not report evacuation are assumed to have sheltered in place.<sup>109</sup>

Shortly before 4 p.m. on September 10th, Hollywood Hills lost power to the chiller for its air conditioning equipment. The facility’s management decided to stay and continued to shelter-in-

<sup>103</sup> SCC Timelines, *supra* note 30.

<sup>104</sup> *Id.*

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

<sup>107</sup> Geoffrey Smith Letter, *supra* note 12.

<sup>108</sup> Appendix C, Ex. 6, Letter from Justin Senior to Chairman Hatch and Ranking Member Wyden (Dec. 4, 2017) [hereinafter, Justin Senior Letter].

<sup>109</sup> *Id.*

place with no air conditioning until a “mass casualty” evacuation was ordered in the wake of multiple residents dying on the morning of September 13th.<sup>110</sup>

AHCA conducted a post-incident survey, and the resulting report noted that outside temperatures were in the 80s, while the heat index —i.e., “what the temperature feels like to the human body when relative humidity is combined with air temperature”—reached the mid-90s in the days after the storm.<sup>111</sup> The report describes attempts by the nursing home’s maintenance and engineering staff to reduce heat in the building, including setting up portable air conditioning units called “spot coolers” and large industrial fans in the hallways. Smaller fans were placed in each patient’s room. The Director of Nursing reportedly instructed medical and professional staff to “monitor the residents frequently and offer water and ice every hour.”<sup>112</sup> However, conditions inside the nursing home quickly became dangerous. Text messages sent by frontline staff at the facility show that residents were suffering in the absence of air conditioning and that, contrary to the nursing instructions, the facility had run out of ice:

Good Morning Team. We continue to be without AC and ICE. Maybe we could buy ice somewhere for the residents. They had a difficult night. ... Those big ones [fans] are good for upstairs, the residents upstairs are having a really hard time.<sup>113</sup>

Eight residents died on September 13th, six of whom died in a three-and-a-half hour period between 4:30 a.m. and 7:54 a.m.<sup>114</sup> Four of the eight died in their beds at the nursing home; the other four died after being transported to the emergency department at Regional Memorial Hospital, which was located across the street.<sup>115</sup> All eight had been on the second floor of Hollywood Hills, which housed the long-term care residents. Four more residents died in the days following September 13th.<sup>116</sup> The Broward County Medical Examiner ruled 12 deaths at Hollywood Hills as homicides, and determined that the cause of death was environmental heat exposure or had been complicated by heat exposure.<sup>117</sup> Another 118 residents were evacuated from the facility and treated for dehydration, heat stress and other heat-related conditions.<sup>118</sup>

In addition, as noted earlier, state regulators found on their review of the medical records that 42 of 51 residents on the second floor of the facility were diagnosed with heat exposure or dehydration and 31 of 71 residents on the first floor of the facility were diagnosed with heat exposure or dehydration.<sup>119</sup> (The census at the time of the AHCA post-event survey was a total of 141 residents.)<sup>120</sup> At the time of the deaths, the air conditioning at Hollywood Hills had been

<sup>110</sup> Appendix E, Ex. 2, Deposition of Randy Katz, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC*, (Fla. DOAH 17-5769, Jan. 29, 2018), at 165-188 [hereinafter Katz Deposition].

<sup>111</sup> NWS, *What is the Heat Index?* (accessed on Sept. 23, 2018), available at <https://www.weather.gov/ama/heatindex>.

<sup>112</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 8.

<sup>113</sup> Appendix E, Ex. 3, Hollywood Hills staff Whats App Chat Messages (Hollywood Hills Trial Exhibit 21), *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769, Jan 29, 2018), at SFC-238-SFC-242.

<sup>114</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 18-39

<sup>115</sup> *Id.*, at 18-39.

<sup>116</sup> *Id.*, at 18-39.

<sup>117</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 4; Justin Senior Letter, *supra* note 108.

<sup>118</sup> *Id.*, at 39-51.

<sup>119</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 4.

<sup>120</sup> *Id.*, at 2.

out for approximately 62 hours, exposing the facility residents “to increasingly excessive heat, which caused numerous vulnerable residents to have severe heat-related conditions.”<sup>121</sup>

On September 13th, the same day residents died, AHCA surveyors were onsite at Hollywood Hills to assess compliance with state and federal health and safety requirements. A Florida appeals court summarized the agency’s findings that led it to immediately halt the facility’s operations.

AHCA concluded that a moratorium was necessary because the “practices and conditions at the [facility]” presented an “immediate serious danger” or “threat” to the residents. It found the “[facility’s] deficient conduct is widespread and places all future residents at immediate threat to their health, safety, and welfare. The [facility] has demonstrated that its physical plant cannot currently provide an environment where residents can be provided care and services in a safe and sanitary manner.”<sup>122</sup>

On September 14th, AHCA suspended the facility from participating in the Medicaid program and accepting residents.<sup>123</sup> On September 20th, an emergency suspension order was issued by AHCA against the facility’s license to operate as a nursing home.<sup>124</sup> Additionally, on October 11th, CMS terminated the Rehabilitation Center at Hollywood Hills from the Medicare and Medicaid programs.<sup>125</sup> Hollywood Hills responded by challenging the license suspension order, and its license termination.<sup>126</sup>

Additional details of the 12 deaths at Hollywood Hills were documented in the AHCA survey and in the depositions taken during the hearing challenging the revocation of the facility’s license. This additional information further supports that excessive environmental heat exposure led to the deaths of the residents.

Resident #1 is described as a highly debilitated 84-year-old with multiple chronic lung and heart problems.<sup>127</sup> On September 13th at 3:09 p.m., Resident #1 was pronounced dead in the emergency department at Memorial Regional Hospital. The cause of death was documented by the emergency room physician as hyperthermia and “presumed non-exertional heat stroke,” in the context of lack of

<sup>121</sup> *Id.*, at 1-2.

<sup>122</sup> *Rehabilitation Center at Hollywood Hills, LLC v. State of Florida, Agency from Health Care Administration*, 1D17-3858 et al. (Fla. Ct. App. 1st Dist., June 20 2018), available at [https://edca.idca.org/DCADocs/2017/3883/173883\\_1281\\_06202018\\_09373922\\_i.pdf](https://edca.idca.org/DCADocs/2017/3883/173883_1281_06202018_09373922_i.pdf).

<sup>123</sup> *Id.* For additional detail, see Emergency Suspension Order, *State of Florida, Agency from Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (AHCA No. 2017010728) (Sept. 20 2017), available at [https://ahca.myflorida.com/Executive/Communications/Press\\_Releases/pdf/RCHH2017010728.pdf](https://ahca.myflorida.com/Executive/Communications/Press_Releases/pdf/RCHH2017010728.pdf).

<sup>124</sup> *Id.*

<sup>125</sup> CMS, *Notice to Public of Involuntary Termination of Rehabilitation Center at Hollywood Hills, LLC* (Oct. 11, 2017), permanent link available at <https://web.archive.org/web/20171019073210/https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Termination-Notice-Florida-NH-Rehabilitation-Center-at-Hollywood-Hills-LLC.pdf>; Verma Letter, *supra* note 27.

<sup>126</sup> *Hollywood Hills Amended Complaint*, *supra* note 10. The case, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (DOAH No. 17-5769) is ongoing. The docket is available at <https://www.doah.state.fl.us/ALJ/searchDOAH/docket.asp?T=9/24/2018%201:15:31%20PM>.

<sup>127</sup> Appendix E, Ex. 4, Deposition of Nannette Hoffman and Katherine Hyer, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769, Mar. 7, 2018), at 1724 [hereinafter Hoffman-Hyer Deposition].

air conditioning.<sup>128</sup> The resident's body temperature reading recorded on arrival in the emergency department was 107 degrees.<sup>129</sup> The medical examiner ruled that the manner of death of Resident #1 was homicide; the cause of death was attributed to environmental heat exposure.<sup>130</sup> Regarding Resident #1, Dr. Nannette Hoffman, a geriatrician who testified as an expert witness in the agency hearing, agreed with the medical examiner's findings:

**Q:** And Doctor, based upon your career and involvement, are there physiologic natural causes for a temperature of 107.5?

**A:** Other than heatstroke, which I don't consider physiologic, no.<sup>131</sup>

Resident #2 was a debilitated 78-year-old who was fully reliant upon nursing care to handle bodily functions. The resident was fed artificially through a tube in the stomach wall. The resident could not speak.<sup>132</sup> On September 13th, the resident was pronounced dead at 5 a.m. in the emergency department at Memorial Regional Hospital. The individual's body temperature recorded in the emergency department was 108.3 degrees Fahrenheit.<sup>133</sup> The medical examiner ruled that the manner of death of Resident #2 was homicide with the cause of death attributed to heat stroke due to environmental heat exposure.<sup>134</sup>

Resident #3 was 99 years old and had been living at the facility since June 30, 2016. The resident was placed on a hospice care plan on October 16, 2016 with a diagnosis of end stage heart failure.<sup>135</sup> On September 12th at 9 p.m., the resident's temperature was 102.5 degrees Fahrenheit and shortness of breath was reported.<sup>136</sup> At that point, the resident was given Acetaminophen ("Tylenol"), and an hour later, their temperature dropped slightly to 102 degrees, with a heart rate of 115 and respiratory rate of 42; the resident would die three-and-half hours later at 1:35 a.m. on September 13th.<sup>137</sup> The medical examiner ruled that the manner of death of Resident #3 was homicide with the cause of death attributed to environmental heat exposure.<sup>138</sup> Dr. Marlon Osborne, Broward County's deputy medical examiner, said of Resident #3:

[The resident] was already frail and terminally ill. So knowing that she died and how proximate it was to the discovery of individuals who had elevated temperatures and they went to the hospital, it's reasonable to believe she was in the hot environment at the same time. The only thing that changed because [the resident] was already living with their natural diseases, even though this resident were deemed terminally ill, [the resident] was still living with those diseases up until that point where [the resident] was in that hot environment and at that time [this resident] died. So I can't ignore that and

<sup>128</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 8.

<sup>129</sup> *Id.*, at 8.

<sup>130</sup> *Id.*, at 22.

<sup>131</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1726.

<sup>132</sup> *Id.*, at 1726.

<sup>133</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 9.

<sup>134</sup> *Id.*, at 24-25.

<sup>135</sup> *Id.*, at 9; Appendix E, Ex. 5, Deposition of Marion Osborne, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769, Mar. 1, 2018), at 1040 [hereinafter Osborne Deposition].

<sup>136</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 10.

<sup>137</sup> *Id.*, at 10.

<sup>138</sup> *Id.*, at 26.

say [the resident] only died of [their] natural diseases. [The resident] had that the day before. What changed was the hot environment. Therefore the cause of death was the environmental heat exposure, because I don't have a documented temperature, proximate to [the resident's] death to say heat stroke or hypothermia (sic) or heat exhaustion and manner of death is homicide.<sup>139</sup>

Resident #4 was found in cardiac arrest in their room at the nursing home at approximately 4:30 a.m.<sup>140</sup> The individual was pronounced dead at the facility by emergency responders. A post-mortem temperature of 104.6 degrees Fahrenheit was recorded.<sup>141</sup> According to Dr. Hoffman, the geriatrician and expert witness:

...since the resident appeared, best from what I can tell from the records, medically stable prior, and that temperature is high enough in the range to be heat exposure or stroke. I believe this resident was exposed to excessive heat in the facility.<sup>142</sup>

The medical examiner ruled that the manner of death of Resident #4 was homicide with the cause of death attributed to environmental heat exposure.<sup>143</sup>

Resident #5 was 83 years old, and shared a room with Resident #4.<sup>144</sup> When EMS responded to the emergency call for Resident #4 early on the morning of September 13th, Resident #5 was also found unresponsive and declared dead shortly thereafter.<sup>145</sup> This resident lived with a third person, Resident #11, whose case is discussed below.<sup>146</sup> The medical examiner ruled that the manner of death of Resident #5 was homicide with the cause of death attributed to environmental heat exposure.<sup>147</sup> Dr. Hoffman touched on the unique medical vulnerabilities of chronically ill patients while discussing the death of Resident #5:

**A:** This patient would be more prone to suffer ill effects from excessive heat in the facility or higher temperatures. And also this patient required nursing care to be turned and repositioned every two hours to be checked upon. So this resident was frail and debilitated and was at high risk for problems or deterioration related to exposure to excessive heat.

**Q:** Was there anything that indicated prior to September 12th or 13th that this patient was in a decline towards death?

**A:** Not specifically. Clearly this was a debilitated patient and he was not initially going to survive for years, but there was no acute decline that I could see in the nursing home records.

<sup>139</sup> Osborne Deposition, *supra* note 135, at 1005.

<sup>140</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 10.

<sup>141</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1734.

<sup>142</sup> *Id.*, at 1734.

<sup>143</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 28.

<sup>144</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1735-1735.

<sup>145</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 27-30.

<sup>146</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1737.

<sup>147</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 29.

**Q:** And again, from your standpoint, is there any significance to three patients, number 4, number 5, and number 11 being in the same room?

**A:** That they all—that they all had effects from the heat. So there was too much heat in that room.<sup>148</sup>

Resident #6 was 92 years old.<sup>149</sup> This individual was found not breathing and unresponsive in their room at approximately 4:30 a.m. on September 13th; EMS performed CPR but was unsuccessful reviving the resident, who was subsequently pronounced dead.<sup>150</sup> Resident #6's post-mortem body temperature was 105.9 degrees Fahrenheit.<sup>151</sup> The medical examiner ruled that the manner of death of resident #6 was homicide with the cause of death attributed to environmental heat exposure.<sup>152</sup>

Resident #7 was 71 years old.<sup>153</sup> The individual was transferred to Regional Memorial Hospital by EMS at 7:03 a.m. on September 13th, arriving unresponsive at 7:05 a.m. with “labored shallow respirations” and no pulse.<sup>154</sup> Resident #7 went into cardiac arrest; CPR failed, and the resident was pronounced dead at 7:54 a.m.<sup>155</sup> The medical examiner ruled that the manner of death of Resident #7 was homicide with the cause of death attributed to heat stroke due to environmental heat exposure.<sup>156</sup> Dr. Hoffman summarized the resident's death during expert testimony:

**A:** ...she had underlying stroke, dementia, coronary artery disease. She arrived in the emergency room at approximately 7:03 a.m. She was not responsive. Had a cardiac arrest. She had a temperature recorded of 108.5 and she had a blood pressure of 50 over 23. Both of those are incompatible with life and she died.

**Q:** Did this patient have a heatstroke?

**A:** Yes, she did.

**Q:** And based upon your review, was this preventable?

**A:** Yes, if they would have removed her from the environment early on.<sup>157</sup>

Of Resident #7, Dr. Hoffman went on to testify:

**Q:** With respect to this patient, what was her condition as it relates to her daily living requirements?

<sup>148</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1736-1737.

<sup>149</sup> *Id.*, at 1739.

<sup>150</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 10-11.

<sup>151</sup> Osborne Deposition, *supra* note 135, at 967.

<sup>152</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 31-33.

<sup>153</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1728.

<sup>154</sup> *Id.*, at 11.

<sup>155</sup> *Id.*, at 11.

<sup>156</sup> *Id.*, at 32-33.

<sup>157</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1728-1729.

**A:** She was fairly dependent on the nurses. Had to be turned and repositioned every two hours. Required a lot of nursing care to maintain her skin and care for her basic needs.

**Q:** And based upon your review, did the Hollywood Hills nursing facility take adequate steps to provide this patient with a safe environment?

**A:** No, because she was not evacuated timely to prevent the exposure to the excessive heat.

**Q:** And based upon your review, did Hollywood Hills facility (sic) provide the appropriate and necessary health care for this resident?

**A:** No, they did not with respect to not evacuating her to prevent the heat exposure.<sup>158</sup>

Resident #8 was a 70 years old.<sup>159</sup> This resident went into cardiac arrest with a temperature of 109.9 degrees Fahrenheit when they were transferred by EMS to the hospital at 6:42 a.m. on September 13th.<sup>160</sup> Resident #8 was pronounced dead at 6:49 a.m.<sup>161</sup> The medical examiner ruled that the manner of death of Resident #8 was homicide with the cause of death attributed to heat stroke due to environmental heat exposure.<sup>162</sup> Asked about the condition of Resident #8, Dr. Hoffman testified:

**Q:** Have you ever heard of a patient with a temperature of 109.9?

**A:** No, I've never heard of a patient with a temperature that high.

**Q:** Just from your professional experience, what would be the reason for a temperature that high?

**A:** Heat. That would be the only thing.<sup>163</sup>

Four more residents died in the weeks after the hurricane. The medical examiner determined that Resident #9's death was homicide, attributable to "ruptured acute and healing myocardial infarctions with a contributing cause of environmental heat exposure."<sup>164</sup> The death of Resident #10 was also ruled a homicide, attributed to "complications of neuronal ceroid lipofuscinosis with a contributory cause of environmental heat exposure."<sup>165</sup> Resident #11's death was ruled homicide, which the medical examiner attributed to "complications of environmental heat exposure with a contributing cause of atherosclerotic and hypertensive cardiovascular

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<sup>158</sup> *Id.*, at 1729-1730.

<sup>159</sup> *Id.*, at 1730.

<sup>160</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 33-35.

<sup>161</sup> *Id.*, at 33-35.

<sup>162</sup> *Id.*, at 33-35.

<sup>163</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1731.

<sup>164</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 35-36.

<sup>165</sup> *Id.*, at 36-37.

disease.”<sup>166</sup> Finally, the medical examiner ruled the death of Resident #12 a homicide, which was attributed to “hypertensive and atherosclerotic cardiovascular disease complicated by environmental heat exposure.”<sup>167</sup>

Testimony from the administrative hearing underscored the unique medical catastrophe that the extreme heat in Hollywood Hills created. Dr. Katz, the emergency room director for Regional Memorial Hospital, cited heat in the case of a separate Hollywood Hills patient he had treated earlier on September 12th:

**A:** I do know that—and this is more after the fact, you know, reading articles and, you know, some information from our staff that the patients that were transported earlier in the evening had temperatures in the range of 105 to 106, 107. I heard—I even heard 108 at one point. I’m not sure I’ve ever seen a temperature that high, but that information makes me believe that heat played a significant part in these patients’ deaths.

**Q:** But you don’t know whether it was heat caused by a fever or heat caused by environmental conditions, do you?

**A:** I mean, typically from an infection, you don’t see temperatures that high.

**Q:** You said something I wasn’t familiar with: Superimposed infection?

**A:** Correct. You know, you could have pneumonia and heat exhaustion at the same time, and I think in that scenario, it would be likely to see a temperature that high. If it was just pneumonia, you know, you may see a—you know, temperature of 102, 103. That is more common.

**Q:** So without seeing these patients personally and without looking at their medical records, based upon the one temperature of heat, you are willing to say that heat played a significant role in these patients’ deaths?

**A:** I would tell you that based on my care of a patient on the 12th, based on the information I received after the incident, and based on what I know, I think heat played a significant role in their death.<sup>168</sup>

Separately, Dr. Hoffman concluded heat led to the deaths:

Well the temperatures were extreme and consistent with heat exposure and or resulting in heat related illness or stroke. So that tells you the ambient temperature had been excessive in the environment to result in that. Plus, taking in totality the number of

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<sup>166</sup> *Id.*, at 37-38.

<sup>167</sup> *Id.*, at 38-39.

<sup>168</sup> Deposition of Randy Katz, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769, Dec. 15, 2017), at 85-86, available at [http://ahca.myflorida.com/Executive/Communications/Requested\\_Documents/DrRandy\\_Katz/RKDeposition.pdf](http://ahca.myflorida.com/Executive/Communications/Requested_Documents/DrRandy_Katz/RKDeposition.pdf) [hereinafter Second Katz Deposition].

deaths and timing of deaths which is consistent with the conclusion that the temperatures were excessive, even though we don't know during those days the exact temperatures during exact times.<sup>169</sup>

In addition to the people who died, more than 100 residents had to be evacuated, evaluated and appropriately treated, underscoring that the facility's missteps put many more people at risk.<sup>170</sup> During his deposition, Dr. Katz described the massive triage operation:

...essentially the patients are banded with either a black band, a red band, a green band or a yellow band. And based on that color, we decide what to do with the patient. Typically the black band was put on a deceased patient who has no chance of survival. A red band means that the patient needs to go for immediate attention of health care. A yellow band is for an intermediate and a green band means that the patient is stable and can wait for reassessment.<sup>171</sup>

As residents were moved out of Hollywood Hills, they were staged and evaluated in a parking lot situated between Hollywood Hills and the hospital. From there, Dr. Katz estimated that roughly 20 residents were given red bands and immediately admitted to the hospital's emergency room. Seventy or so additional residents with green or yellow bands were transported to other hospitals because Memorial did not have enough capacity to treat them. City buses were called in to help handle the massive volume of patients who had to be transported. Another 30 patients with green bands were moved to the hospital's auditorium, an air-conditioned space where they could be given food and water, reassessed and, in some cases, reunited with family members.<sup>172</sup>

#### D. Key Issue: CMS Environmental Temperature Regulations and Hollywood Hills

CMS has in place regulations that require LTCs initially certified after October 1, 1990, to maintain a "safe and comfortable temperature," which it defines as within the range of 71 to 81 degrees Fahrenheit.<sup>173</sup> However, the CMS requirement is not adjusted for humidity (i.e., it is not a heat index-based requirement), which is problematic since heat index more accurately reflects the physiological stress placed on the human body when atmospheric conditions are hot. The specific impacts of heat index and a detailed discussion of the development of the CMS standard can be found in Section IV(A) of this report.

Environmental health researchers have demonstrated a link between high heat index values and increased mortality.<sup>174</sup> The Occupational and Health & Safety Administration notes the importance of considering heat index for worker safety, noting that "the higher the heat index,

<sup>169</sup> Hoffman-Hyer Deposition, *supra* note, at 1779-1780.

<sup>170</sup> Katz Deposition, *supra* note 110, at 179. Asked during the hearing to describe the evacuation, Katz testified, "I wouldn't say chaos I'd say maybe controlled chaos. Anytime you have 150 people they're trying to rapidly remove from a building, it does get stressful."

<sup>171</sup> *Id.*, 173-174.

<sup>172</sup> *Id.*, 165-188.

<sup>173</sup> 42 C.F.R. § 483.10(i)(6).

<sup>174</sup> Kristina B. Metzger, Kazuhiko Ito, and Thomas D. Matte, "Summer Heat and Mortality in New York City: How Hot is Too Hot?" *Environmental Health Perspectives* 118, no. 1 (Jan. 2010), 80-86, available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2831972/> [hereinafter, New York Heat Index Study].

the hotter the weather feels, since sweat does not readily evaporate and cool the skin,” adding that heat index is a “better measure than air temperature alone for estimating the risk to workers from environmental heat sources.”<sup>175</sup> The State of California has even included humidity and other environmental sources of heat in regulations governing worker safety:

Environmental risk factors for heat illness” means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.<sup>176</sup>

**Table 1**

Air Temperature, Relative Humidity and Heat Index for Fort Lauderdale/Hollywood Florida following Hurricane Irma						
Time	Sept. 11, 2017 5:53 a.m.	Sept. 11, 2017 11:55 p.m.	Sept. 12, 2017 12:53 p.m.	Sept. 12, 2017 6:53 p.m.	Sept. 12, 2017 10:53p.m.	Sept. 13, 2017 1:53 a.m.
Temp (F)	89.6	80.6	87.8	87.8	82.9	82
Relative Humidity	55%	84%	62%	55%	82%	82%
Heat Index (F)	96.2	86.2	95.6	92.6	91.8	89.4
<i>Source: Staff tabulation of data reported in the AHCA survey.</i> <sup>177</sup>						

AHCA surveyors who conducted the post-incident report at Hollywood Hills took heat index into account. The agency’s report noted the temperature, humidity levels and heat index values on September 11th, 12th and 13th. The weather data that AHCA collected for its survey—the conditions at the Fort Lauderdale/Hollywood International Airport weather station, 6 miles from Hollywood Hills—are presented in Table 1.

As Table 1 shows, heat index calculations reported in the survey were as much as 8.9 degrees higher than the air temperature readings. The NWS Heat Index Table (see following page) shows that the heat index levels during the Hollywood Hills air-conditioning outage fell within ranges in which “caution” or “extreme caution” should be taken to ward off health risks associated with prolonged heat exposure. As noted

<sup>175</sup> Occupational Safety and Health Administration, *Using the Heat Index: A Guide for Employers* (accessed Sept. 24, 2018), available at [https://www.osha.gov/SLTC/heatillness/heat\\_index/pdfs/all\\_in\\_one.pdf](https://www.osha.gov/SLTC/heatillness/heat_index/pdfs/all_in_one.pdf).

<sup>176</sup> Cal. Code Regs. tit. 8 § 7(2)(10)(b).

<sup>177</sup> Florida Agency for Health Care Administration, *Statement of Deficiencies (Form 3020-0001) re: Rehabilitation Center at Hollywood Hills* (Sept 22, 2017), at 31, available at [http://ahca.myflorida.com/Executive/Communications/Requested\\_Documents/Rehabilitation\\_Center\\_at\\_Hollywood\\_Hills\\_SOD.pdf](http://ahca.myflorida.com/Executive/Communications/Requested_Documents/Rehabilitation_Center_at_Hollywood_Hills_SOD.pdf) [hereinafter, AHCA/CMS Deficiency Reports]. This document also contains the federal Statement of Deficiencies and Plan of Correction (CMS Form 2567) re: Hollywood Hills; it was completed on the same date.

		Relative Humidity (%)																			
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Temperature (°F)	80	77	78	78	79	79	79	80	80	80	81	81	82	82	83	84	84	85	86	86	87
	81	78	79	79	79	79	80	80	81	81	82	82	83	84	85	86	86	87	88	90	91
	82	79	79	80	80	80	80	81	81	82	83	84	84	85	86	88	89	90	91	93	95
	83	79	80	80	81	81	81	82	82	83	84	85	86	87	88	90	91	93	95	97	99
	84	80	81	81	81	82	82	83	83	84	85	86	88	89	90	92	94	96	98	100	103
	85	81	81	82	82	82	83	84	84	85	86	88	89	91	93	95	97	99	102	104	107
	86	81	82	83	83	83	84	85	85	87	88	89	91	93	95	97	100	102	105	108	112
	87	82	83	83	84	84	85	86	87	88	89	91	93	95	98	100	103	106	109	113	116
	88	83	84	84	85	85	86	87	88	89	91	93	95	98	100	103	106	110	113	117	121
	89	84	84	85	85	86	87	88	89	91	93	95	97	100	103	106	110	113	117	122	
	90	84	85	86	86	87	88	89	91	92	95	97	100	103	106	109	113	117	122	127	
	91	85	86	87	87	88	89	90	92	94	97	99	102	105	109	113	117	122	126	132	
	92	86	87	88	88	89	90	92	94	96	99	101	105	108	112	116	121	126	131		
	93	87	88	89	89	90	92	93	95	98	101	104	107	111	116	120	125	130	136		
	94	87	89	90	90	91	93	95	97	100	103	106	110	114	119	124	129	135	141		
	95	88	89	91	91	93	94	96	99	102	105	109	113	118	123	128	134	140			
	96	89	90	92	93	94	96	98	101	104	108	112	116	121	126	132	138	145			
	97	90	91	93	94	95	97	100	103	106	110	114	119	125	130	136	143	150			
	98	91	92	94	95	97	99	102	105	109	113	117	123	128	134	141	148				
	99	92	93	95	96	98	101	104	107	111	115	120	126	132	138	145	153				
	100	93	94	96	97	100	102	106	109	114	118	124	129	136	143	150	158				
	101	93	95	97	99	101	104	108	112	116	121	127	133	140	147	155					
	102	94	96	98	100	103	106	110	114	119	124	130	137	144	152	160					
	103	95	97	99	101	104	108	112	116	122	127	134	141	148	157	165					
	104	96	98	100	103	106	110	114	119	124	131	137	145	153	161						
105	97	99	102	104	108	112	116	121	127	134	141	149	157	166							
106	98	100	103	106	109	114	119	124	130	137	145	153	162	172							
107	99	101	104	107	111	116	121	127	134	141	149	157	167								
108	100	102	105	109	113	118	123	130	137	144	153	162	172								
109	100	103	107	110	115	120	126	133	140	148	157	167	177								
110	101	104	108	112	117	122	129	136	143	152	161	171									
111	102	106	109	114	119	125	131	139	147	156	166	176									
112	104	107	111	115	121	127	134	142	150	160	170	181									
113	104	108	112	117	123	129	137	145	154	164	175										
114	105	109	113	119	125	132	140	148	158	168	179										
115	106	110	115	121	127	134	143	152	162	173	184										
116	107	111	116	122	129	137	146	155	166	177											
117	108	112	118	124	132	140	149	159	170	181											
118	108	113	119	126	134	142	152	162	174	186											
119	109	114	121	128	136	145	155	166	178												
120	110	116	122	130	138	148	158	170	182												
121	111	117	124	132	141	151	162	174	187												
122	111	118	125	134	143	154	165	178													
123	112	119	127	136	146	157	169	182													
124	113	120	129	138	148	160	172														
125	114	121	130	140	151	163	176														

# Heat Index




Extreme Danger	Heat stroke likely.
Danger	Sunstroke, muscle cramps, and/or heat exhaustion likely. Heatstroke possible with prolonged exposure and/or physical activity.
Extreme Caution	Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.
Caution	Fatigue possible with prolonged exposure and/or physical activity.

**Image 2:** This table shows the heat index, which is calculated by combining the effect of relative humidity and air temperature, to show how heat actually “feels” to the human body. *Source:* NOAA, <https://www.wrh.noaa.gov/psr/general/safety/heat/heatindex.png>.

throughout this report, elderly residents are more susceptible to heat-related illnesses than the general population, and the facility’s residents were subjected to a non-climate-controlled environment in the midst of these conditions for more than 60 hours. While these measurements were based on outside temperature and humidity levels, AHCA surveyors concluded, based on the on-site survey, regional heat levels and results from the Broward County Medical Examiner that residents within the facility were exposed to “increasingly excessive heat, which caused numerous vulnerable residents to have several heat-related conditions, resulting in 12 deaths.”<sup>178</sup>

### **CMS and Florida Emergency Power Requirements—Response to Hollywood Hills**

The State of Florida, at the time of the Hollywood Hills tragedy, did not have a requirement for nursing homes to have backup power capacity to maintain the 71–81 degree temperature standard that CMS regulations require LTCs to maintain. The CMS conditions of participation at the time also did not require—and still do not require—emergency generation capable of maintaining the 71–81 degree temperature standard.

On September 16, 2017 and September 18, 2017, in the immediate aftermath of the deaths at Hollywood Hills, the State of Florida issued emergency rules requiring assisted living facilities and nursing homes respectively to install emergency generation capacity capable of maintaining ambient temperatures at or below 80 degrees Fahrenheit for a minimum of 96 hours in the event of a loss of power.<sup>179</sup>

The associations representing nursing homes and assisted living facilities in Florida immediately challenged the rules claiming that they were an invalid exercise of delegated legislative authority and that there was no immediate threat to public health, safety or welfare.<sup>180</sup> These emergency rules were sustained, and on November 13, 2017, the state initiated rulemakings to establish permanent rules for both nursing homes and assisted living facilities, requiring alternative power sources that would ensure air temperatures did not exceed 81 degrees Fahrenheit for 96 hours.<sup>181</sup> These permanent rules were ratified by the Legislature in March 2018 and are now in place.<sup>182</sup>

However, only a little more than half of these facilities have fulfilled the requirement. As of October 26, 2018, state data show that 1,972 providers out of a total of 3,765 (52.3%) have

<sup>178</sup> Hollywood Hills Amended Complaint, *supra* note 10, at 1-2.

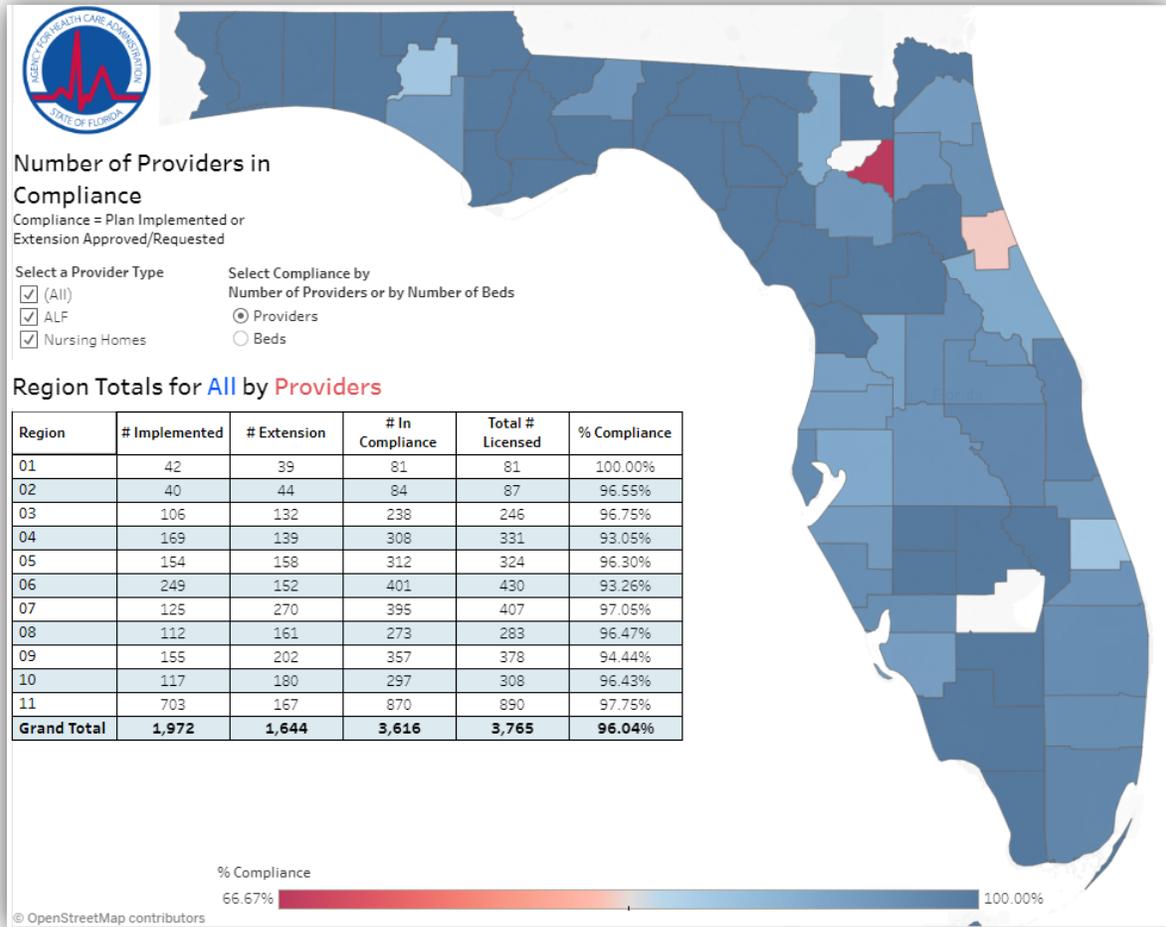
<sup>179</sup> Florida Department of Elder Affairs, Procedures Regarding Emergency Environmental Control for Assisted Living Facilities, 58 A.E.R. 17-1 (Sept. 18, 2017), available at [https://www.flgov.com/wp-content/uploads/2017/09/EN\\_DEA.pdf](https://www.flgov.com/wp-content/uploads/2017/09/EN_DEA.pdf); Florida Department of Elder Affairs, Variances from Nursing Home Emergency Power Plan Rule, 58 A.E.R. 17-2 (Oct. 12, 2017), available at <https://www.flrules.org/gateway/ruleNo.asp?id=59AER17-2>.

<sup>180</sup> *Florida Association of Homes and Services for the Aging, Inc. d/b/a LEADINGAGE FLORIDA v. AHCA and Department of Elder Affairs* (Case No. 17-5388RE); *Florida Assisted Living Association, Inc. v. Department of Elder Affairs* (Case No. 17-5409RE); *Florida Argentum v. Department of Elder Affairs* (Case No. 17-5445RE).

<sup>181</sup> Press Release, State of Florida, *Gov. Scott: Appeals Court Upholds Emergency Generator Rule* (Oct. 19, 2017), available at <https://www.flgov.com/2017/10/19/gov-scott-appeals-court-upholds-emergency-generator-rule/>; Press Release, State of Florida, *AHCA and DOEA Announce New Permanent Generator Rules Have Been Filed* (Nov. 13, 2017) available at [http://ahca.myflorida.com/Executive/Communications/Press\\_Releases/pdf/AHCAandDOEAAnnouncetheNewPermanentGeneratorRulesHaveBeenFiled.pdf](http://ahca.myflorida.com/Executive/Communications/Press_Releases/pdf/AHCAandDOEAAnnouncetheNewPermanentGeneratorRulesHaveBeenFiled.pdf).

<sup>182</sup> Press Release, State of Florida, *Gov. Scott Signs Legislation Requiring Emergency Generators at All Florida Nursing Homes and Assisted Living Facilities* (Mar. 26, 2018) available at <https://www.flgov.com/2018/03/26/gov-scott-signs-legislation-requiring-emergency-generators-at-all-florida-nursing-homes-and-assisted-living-facilities/>; Fla. Admin. Code R. 58A-5.036; Fla. Admin. Code R. 59A-4.1265.

implemented their temperature control plan, 1,644 (43.6%) have received extensions, and 149 (3.95%) are out of regulatory compliance.<sup>183</sup> (See Image 3, which provides a geographic survey of industry compliance with the state’s emergency requirements).



**Image 3:** This map and table shows the number of LTCs in compliance with emergency rules set by Florida regulators following Hurricane Irma. (Current as of October 26, 2018).

Source: [https://bi.ahca.myflorida.com/t/ABICC/views/GeneratorVERSA/Compliance?iframeSizedToWindow=true&:embed=y&:showAppBanner=false&:display\\_count=no&:showVizHome=no#1](https://bi.ahca.myflorida.com/t/ABICC/views/GeneratorVERSA/Compliance?iframeSizedToWindow=true&:embed=y&:showAppBanner=false&:display_count=no&:showVizHome=no#1).

<sup>183</sup> Emergency Power Plan Summary Report, available at [https://bi.ahca.myflorida.com/t/ABICC/views/GeneratorVERSA/Compliance?iframeSizedToWindow=true&:embed=y&:showAppBanner=false&:display\\_count=no&:showVizHome=no#1](https://bi.ahca.myflorida.com/t/ABICC/views/GeneratorVERSA/Compliance?iframeSizedToWindow=true&:embed=y&:showAppBanner=false&:display_count=no&:showVizHome=no#1); accessed October 26, 2018.

## E. Key Issue: *Ad Hoc* Use of Spot Coolers Worsened Conditions at Hollywood Hills

Under existing CMS regulations—and Florida regulations at the time—LTCs were allowed to use alternative strategies to maintain residential temperatures.<sup>184</sup> However, the emergency plan Hollywood Hills had in place in August 2017 did not include a documented procedure to use fans and spot coolers to maintain facility temperatures. The plan to use fans and spot coolers appeared to have been completely *ad hoc* and carried out without any technical analysis that fully accounted for the facility’s square footage and ventilation issues.

William Crawford, a design engineer specializing in heating, ventilation and air conditioning (also known as “HVAC”) systems, explained the flaws in this approach during expert testimony.

Mr. Crawford testified that by design and capacity, the portable air conditioners known as “spot coolers” were insufficient to keep the building cool. Spot coolers are designed to cool specific areas—not large buildings—and the spot coolers deployed at Hollywood Hills did not have enough cooling capacity to bring the temperature in the building below 81 degrees, or even to maintain that temperature:

They lost a 125-ton chiller and they replaced it with 15 tons of portable air conditioners. But that was the total building. The buildings (sic) divided into the psyche (sic) portion and skilled nursing portion of the building. So I think on the skilled nursing side they replaced it with 9 tons. And if you prorate the area it’s about 80 plus tons of air conditioning for the skilled nursing.<sup>185</sup>

The strategy of using spot coolers to lower temperatures in the entire building was flawed, because “[s]pot coolers are inherently designed to cool off a specific area wherever they’re placed,” Mr. Crawford said. “They’re not designed to cool large areas, just very small 18x18 areas.”<sup>186</sup> However, even if the coolers put in place had had sufficient capacity, Mr. Crawford stated plainly, “they weren’t used correctly,” because the exhaust heat generated by the machine was “rejected” into a closed space, in this case, the ceiling between the first and second floor.<sup>187</sup> He explained the effect of this decision later in his testimony:

**Q:** And you told us earlier that you investigated the ceiling space above the first floor and between the first and second floors. Is that where the units on the first floor were vented?

**A:** Yes, they were vented to the ceiling.

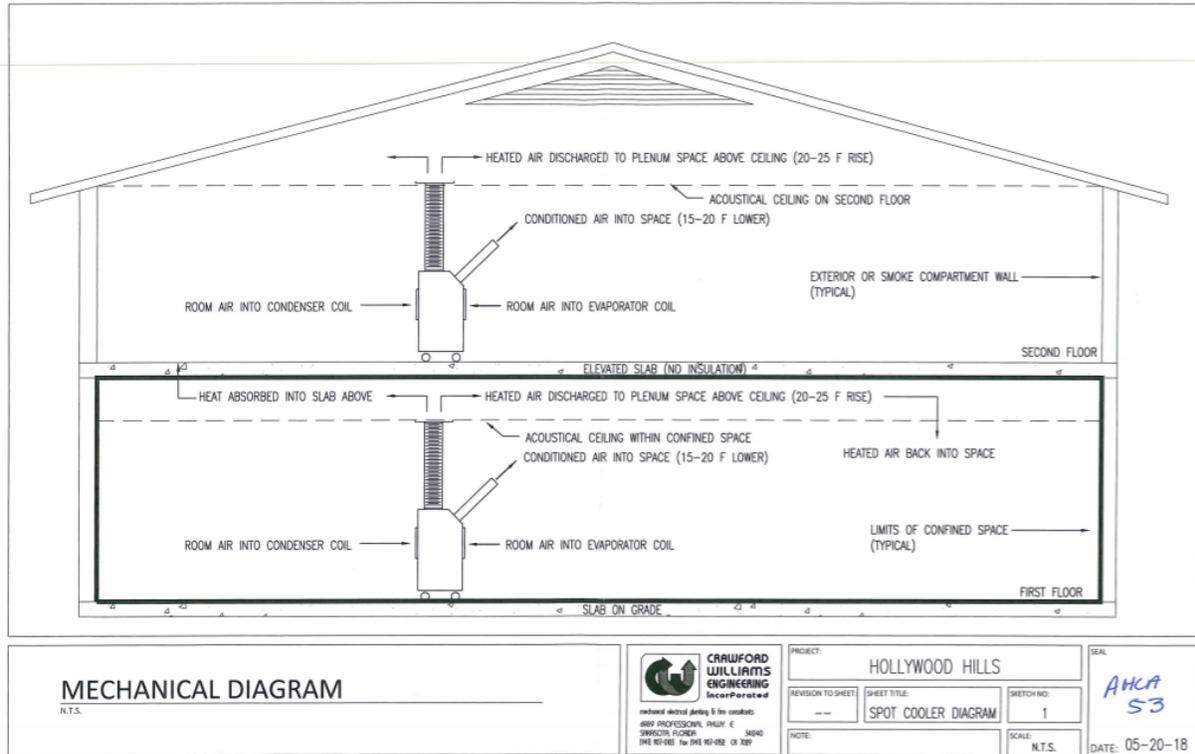
**Q:** Based on the venting that you reviewed, can you describe how that space above the first floor ceiling between the first and second floors would impact the high pressure controls?

<sup>184</sup> CMS, *State Operations Manual, Appendix Z- Emergency Preparedness for All Provider and Certified Supplier Types; Interpretive Guidance*, Rev. 169, Issued 06-09-2017 at E-0014 and E-0041; [https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap\\_z\\_emergprep.pdf](https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_z_emergprep.pdf).

<sup>185</sup> Appendix E, Ex. 6, Deposition of Scott Crawford, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769, Mar. 9, 2018), at 12 [hereinafter Crawford Deposition].

<sup>186</sup> *Id.*, at 11, 37.

<sup>187</sup> *Id.*, at 12.



**Image 4:** This mechanical diagram of the Hollywood Hills nursing home, which was entered as an exhibit during Mr. Crawford’s testimony, shows how the improper installation of spot coolers resulted in heated air being discharged into the space between the ceiling and floor. The diagram shows that the heated air increased the temperature in the space by an estimated 20–25 degrees Fahrenheit. In turn, that heat was absorbed by the floor above: “essentially you had a heated slab on the second floor,” Mr. Crawford explained during his testimony, further raising the temperature. The heated air also leaked back into the airspace on the first floor, neutralizing the cooling effect of the spot coolers. Source: AHCA Trial Exhibit #53, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC*, (Fla. DOAH 17-5769, Mar. 9, 2018)

**A:** Well it’s a confined space. There’s nowhere for it to go other than back into the space. So I think you’re blowing air out of this unit into the ceiling and it’s just going somewhere else inside the envelope. It’s not going outside. So you’re not really rejecting the heat, you’re just putting into the ceiling and it comes out somewhere else because it’s a—an acoustical ceiling is a very leaky ceiling. The air will just come right back out because you can’t just blow air in a straw. You have to have your finger over it. So you’re pumping air into the space and it’s coming out somewhere else.

**Q:** And based on your observations about porous ceiling, what did [that] indicate to you about whether high pressure controls could have been tripped?

**A:** Well its (sic) possible they could have stayed under the limit, I don’t know. The discharge of air of these units is typically 15 to 20 degrees above room temperature. So it was probably 95 or better above the ceiling.<sup>188</sup>

<sup>188</sup> *Id.*, at 42-43.

Mr. Crawford added:

...when you put one of those units in a room and close the door, it gets warmer not cooler. So you're not getting a cooling effect from these units, you're actually getting a little more heat from those units because you're not rejecting the heat from outside, its (sic) rejected within the envelope. So it goes into that ceiling tile and comes out somewhere else in the building. So it's still within the envelope of the building. ...

The second floor, where 42 of 51 residents were diagnosed with heat exposure, bore the brunt of the heating effects.

...all the heat from the first floor went to the space above the ceiling which heated up the slab. So essentially you had a heated slab on the second floor. So the heat transmission through that slab because there's no insulation there, had a bigger impact on the second floor than the first.<sup>189</sup>

In his testimony, Crawford detailed the different factors that increased temperatures inside the facility, which increased the "load" that the mobile air conditioning units needed to cool. Factors affecting load included everything from the outside temperature to ambient heat given off by lightbulbs, televisions, and even the body heat from residents and staff.<sup>190</sup> Mr. Crawford noted that the heated floor further added to the load, due to the improper disposal of exhaust from spot coolers on the first floor:

**Q:** Did the heat transmission impact the air temperature on the second floor?

**A:** Yes.

**Q:** And what was the effect of that?

**A:** I don't know what the temperature effect, but the capacity required to maintain 81 was significantly higher. The floor load was by itself like 7 or 8 tons.

**Q:** And do your calculations here on page 4 reflect that?

**A:** Yes, that's the load required to maintain 81 degrees with the heated floor.

[...]

**Q:** And what was the total cooling capacity in tons of the three spot coolers on the second floor?

**A:** 3.3 tons.<sup>191</sup>

Mr. Crawford's modeling led him to the conclusion that there was insufficient cooling capacity to maintain temperatures that the government deems appropriate for LTCs:

**Q:** Based on your calculations here, did the facility have a sufficient load capacity to maintain 81 degrees at any time in your calculations?

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<sup>189</sup> *Id.*, at 55-56, 59.

<sup>190</sup> *Id.*, at 43-55.

<sup>191</sup> *Id.*, at 60-61.

**A:** No. Not on the second floor particularly. The first floor there are moments maybe when it could have. But again it doesn't take into account the cumulative effect of the heat buildup overtime. (sic)

**Q:** Did you try to calculate what the actual temperature was in the building at any given point?

**A:** No I didn't speculate on that.<sup>192</sup>

## **F. Key Issue: Hollywood Hills Loss of Power and Restoration Efforts— Communications with the Electric Power Company and Public Officials**

The building housing Hollywood Hills and Larkin Behavioral Health Services (“Behavioral Health”) was served by two different electrical connections to the Florida Power & Light (“FPL”) distribution system. One connection was for power to the electrical system within the building, providing lighting and electrical power to rooms and receptacles. The second connection was for power to the building’s chiller, which provided air conditioning for the entire building. This second circuit was disrupted during the hurricane at 3:49 p.m. on September 10th. The timing of this event was recorded by a smart electric meter that transmitted this information electronically to FPL.<sup>193</sup>

Immediately after the chiller lost power, at about 3:50 p.m., James Williams, the Director of Engineering, called FPL to report the outage, stating the names of the two facilities, that the power loss was to the building’s chiller, and that a facility he described as a hospital was affected.<sup>194</sup> He was disconnected during the call and immediately placed a follow-up call communicating the same information; he characterized the situation as “an emergency because that’s what it is.”<sup>195</sup>

Officials at Hollywood Hills made multiple additional calls to FPL that day, some of which were re-directed to the FPL automated phone system because of high call volume.<sup>196</sup>

Nine hours after Mr. Williams’ initial call, at 1:14 a.m. on September 11th, the Director of Environmental Services for Larkin Community Hospital Healthcare System (“Larkin”), the facility’s parent company, spoke with an FPL representative.<sup>197</sup> In addition, multiple electronic queries were made to the FPL website in the intervening days.<sup>198</sup> However, no further direct personal contact between Hollywood Hills and FPL was made until 2:21 p.m. on September 12th, some 37 hours after the outage began. At that time, a Hollywood Hills employee again reported the loss of power to the chiller to FPL and the fact that a number of residents were in the facility, which in this call was described as a nursing home.<sup>199</sup>

<sup>192</sup> *Id.* 64-65.

<sup>193</sup> FPL noted that both circuits—the building and chiller—were smart-meter circuits which electronically report the status of each back to FPL in real-time.

<sup>194</sup> Appendix F, Ex. 1, *Florida Power & Light Communications Log*, at SFC-256, SFC-262, SFC-278 (calls highlighted in appendix) [hereinafter, FPL Communications Log].

<sup>195</sup> Audio recordings of calls between Hollywood Hills and FPL.

<sup>196</sup> FPL Communications Log, *supra* note 196, at SFC-256, SFC-262, SFC-278 (calls highlighted in appendix).

<sup>197</sup> Appendix E, Ex. 7, Hollywood Hills Timeline, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769), at 12 [hereinafter, Hollywood Hills Timeline]. This call does not appear in the FPL log, which indicates that the referenced in the Hollywood Hills timeline was not placed to FPL’s call center.

<sup>198</sup> FPL Communications Log, *supra* note 196, at SFC-259-SFC-261. FPL records indicate more than a dozen web queries were made between the morning of September 11th and the morning of September 13th.

<sup>199</sup> Audio recordings of calls between Hollywood Hills and FPL.

The September 12th call was the last one that officials from Hollywood Hills made to FPL. However, the daughter of one resident placed a series of calls to FPL beginning at 2:31 p.m. that same day.<sup>200</sup> A few hours later, at 6:02 p.m., this individual again called to report that she was concerned about the health of the residents and reporting that the temperature in building was 110 degrees. She called FPL two more times the next morning—September 13th—the first time at 9:34 a.m., reporting that residents were dying. Power was restored to the building’s chiller circuit around 1:59 p.m. that afternoon. By that time, eight residents had already died.<sup>201</sup>

### **Hollywood Hills Made Multiple Calls to State Officials and Agencies**

In addition to contacting the power company, administrators at Hollywood Hills, Behavioral Health and Larkin all sought to expedite restoration of power by calling Gov. Rick Scott’s cell phone, the Florida emergency hotline, and state emergency management officials. These emergency numbers and contact information were reportedly given out in conference calls to nursing home and assisted living facility operators prior to landfall on September 5th, 8th, 9th and 10th as part of the state’s preparation.<sup>202</sup>

According to the Hollywood Hills timeline, Behavioral Health’s chief executive—Natasha Anderson—began making calls and leaving voicemails on the governor’s cell phone at 5:34 p.m. on September 11th, more than 25 hours after the facility lost power to its air conditioning system.<sup>203</sup> She then made a call shortly afterward, at 5:36 p.m., to the Florida emergency hotline. The hotline, in turn, referred her to a different emergency number in Tallahassee.<sup>204</sup> Ms. Anderson called the Tallahassee emergency number at 5:39 p.m., and again at 6:57 p.m.<sup>205</sup> Ms. Anderson received a follow-up call from the hotline at 7:29 p.m., reportedly informing her that state officials were working to address the power loss.

Later that evening, at 9:41 p.m., state officials asked FPL to expedite power restoration to the “two Hollywood hospitals,” i.e., Behavioral Health and Hollywood Hills, according to state emergency operations records.<sup>206</sup> State officials identified Ms. Anderson as the point of contact, the records show.<sup>207</sup>

Shortly afterwards, at 9:57 p.m., Ms. Anderson received a follow-up call from a state health official, according to the Hollywood Hills timeline.<sup>208</sup> The Governor’s timeline similarly shows

<sup>200</sup> FPL Communications Log, *supra* note 196, at SFC-259-SFC-261.

<sup>201</sup> *Id.*, SFC-264.

<sup>202</sup> Hollywood Hills Timeline, *supra* note 197; Press Release, State of Florida, *Timeline of Events at Hollywood Hills and Related Documents*, September 2017, permanent link available at <https://web.archive.org/web/20170930161431/https://www.flgov.com/wp-content/uploads/2017/09/DOC.pdf> [hereinafter, Gov. Scott’s Timeline].

<sup>203</sup> Natasha Anderson Phone Log, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769, Mar 20., 2018), available at [http://ahca.myflorida.com/Executive/Communications/Requested\\_Documents/Natasha\\_Anderson/NA-ex66.pdf](http://ahca.myflorida.com/Executive/Communications/Requested_Documents/Natasha_Anderson/NA-ex66.pdf) [hereinafter, Anderson Phone Log]. The phone log was introduced as evidence during the deposition of Natasha Anderson, CEO of Behavioral Health. See Deposition of Natasha Anderson, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC*, (Fla. DOAH 17-5769, Dec. 19., 2017), available at [http://ahca.myflorida.com/Executive/Communications/Requested\\_Documents/Natasha\\_Anderson/NAdeposition.pdf](http://ahca.myflorida.com/Executive/Communications/Requested_Documents/Natasha_Anderson/NAdeposition.pdf) [hereinafter, Anderson Deposition].

<sup>204</sup> Anderson Phone Log, *supra* note 203; Hollywood Hills Timeline, *supra* note 197.

<sup>205</sup> *Id.*

<sup>206</sup> Gov. Scott’s Timeline, *supra* note 202, at Attachment H.

<sup>207</sup> *Id.*

<sup>208</sup> Anderson Phone Log, *supra* note 203; Hollywood Hills Timeline, *supra* note 197.

that a state health official returned the call Ms. Anderson made to Gov. Scott's cell phone roughly four hours earlier. Gov. Scott's timeline shows that the return call to Ms. Anderson was made at 9:50 p.m. on September 11th, which appears to be the same call as the 9:57 p.m. communication referenced in the Hollywood Hills timeline.<sup>209</sup>

The next morning, September 12th, Jorge Carballo, the CEO of Hollywood Hills, also made calls to Gov. Scott's cell phone; during those calls, he reportedly left back-to-back voicemail messages at 9:43 a.m. and 9:46 a.m. requesting help with power restoration.<sup>210</sup> Mr. Carballo also sent text messages to the governor's cell phone coincident with these calls.<sup>211</sup> At 9:59 a.m., just minutes after Mr. Carballo left his voicemails and sent text messages to Gov. Scott, Ms. Anderson made another call to the governor's cell phone and left a message, essentially duplicating the calls just made.<sup>212</sup> At 12:41 p.m., she called again and left another message.<sup>213</sup>

Later that day, at 4:17 p.m., Mr. Carballo reported speaking with an AHCA representative who wanted an update on the status of the facility. During that call, Mr. Carballo reportedly repeated his request for assistance with power restoration. Gov. Scott's timeline states that this call was also a "returned call left on the Governor's personal cell phone." The governor's timeline further states that the Hollywood Hills CEO reported the facility's air conditioning was not operational, but that he did not "report or indicate that conditions had become dangerous or that the health and safety of patients was at risk."<sup>214</sup>

Shortly after Mr. Carballo's call, Ms. Anderson also reported receiving a call from an AHCA representative—this one at 4:41 p.m. She also asked for assistance with power restoration and had the building engineer join the call to provide the relevant FPL account information.<sup>215</sup> Gov. Scott's timeline states that this representative was also returning "the call left on the Governor's personal cell phone" by Ms. Anderson. The governor's timeline shows that Ms. Anderson again reported that air conditioning in the facility was not operational, but that she also did not "report or indicate that conditions had become dangerous or that the health and safety of patients was at risk."<sup>216</sup> By this time, 23 hours had passed since Ms. Anderson's first call to Gov. Scott's cell phone, and the facility had been without air conditioning for more than 48 hours.

In all, administrators charged with taking care of patients and residents at Hollywood Hills made at least six calls over two critical days to Gov. Scott's cell phone seeking assistance in getting power restored. Ms. Anderson called that number even before calling the Florida emergency management hotline. It would be another 12 hours before anyone from the facility called Broward County emergency management (see below). (In addition to the calls discussed above, the company's timeline lists an additional call made to the governor's cell phone by Larkin's CFO at 4 p.m. on September 12<sup>th</sup>; however, no corresponding record of this call appears in the governor's timeline.<sup>217</sup>)

<sup>209</sup> Gov. Scott's Timeline, *supra* note 202, at Attachment A.

<sup>210</sup> Anderson Phone Log, *supra* note 203; Hollywood Hills Timeline, *supra* note 197.

<sup>211</sup> Appendix D, Ex. 6, *Text Message from Jorge Caballo to Gov. Scott* (Sept. 12, 2017).

<sup>212</sup> Anderson Phone Log, *supra* note 203; Hollywood Hills Timeline, *supra* note 197.

<sup>213</sup> *Id.*

<sup>214</sup> Gov. Scott's Timeline, *supra* note 202, at 6.

<sup>215</sup> Anderson Deposition, *supra* note 203, at 93-94; Anderson Phone Log, *supra* note 203.

<sup>216</sup> Gov. Scott's Timeline, *supra* note 202, at 6.

<sup>217</sup> Anderson Phone Log, *supra* note 203; Hollywood Hills Timeline, *supra* note 197.

Ms. Anderson testified about her calls to Gov. Scott’s cell phone during the license termination proceeding:

**Q:** During those calls wasn’t the point made that emergencies are inherently local in nature and that local authorities would be the ones that would be addressing, you know, concerns at a local level?

**A:** I want to clarify again I did not make the calls because – I did not substitute 911 to call Governor Scott. ... I had an emergency where my patients needed to be brought to a hospital. ... My purpose of calling Governor Scott was because FPL was not responding, FPL wasn’t coming soon enough, and I believed that by calling him, there would be some kind of, you know, push to make us priority or push where there was some kind of insight that maybe, you know, with his, you know, status and power that he would be able to help us get things done because that was the impression I got when you provided your cell phone number.<sup>218</sup>

### **Hollywood Hills Made One Call to Local Emergency Management**

The primary response to emergencies typically rests with local emergency response agencies. For example, it is the local emergency response entity that approves the emergency plan for nursing homes in Florida.

In a press release after Hollywood Hills was evacuated, Broward County stated that on the morning of September 12th, Hollywood Hills “...contacted the Emergency Operations Center and alerted the health and medical team to the fact that they had lost power. This was reported as a mission-critical request to FPL for power restoration.”<sup>219</sup> Yet, Ms. Anderson stated in her deposition that she was unaware of anyone from either facility, including herself, ever calling the Broward County Emergency Operations Center to report the emergency or request help.<sup>220</sup>

This call, as reported by the county, occurred well into the power outage at Hollywood Hills—a day-and-a-half after the chiller lost power. The delay is noteworthy because the call was made so long after the initial power outage. Calling frontline responders had apparently not been deemed a priority.

### **Hollywood Hills Provided Incomplete Information to State Authorities through Web Portal**

As Hurricane Irma approached Florida, state officials asked Hollywood Hills and other Florida nursing homes on September 5th to provide twice-daily updates to the Florida Health STAT Database on their post-impact status:

Pursuant to Section 408.821(4) Florida Statute, the Agency for Health Care Administration, in partnership with the Department of Health, is requesting all health care providers to report their post-impact statuses for Hurricane Irma regarding census and available beds, facility systems including utility info,

<sup>218</sup> Anderson Deposition, *supra* note 203, at 142.

<sup>219</sup> Press Release, Broward County, *Broward County Issues Statement Regarding Critical Infrastructure Facility Designation* (Sept. 13, 2017), available at <https://webapps.broward.org/NewsRelease/View.aspx?intMessageId=10720> [hereinafter, Broward County Press Release]. The communication reported by Broward County does not appear in the Hollywood Hills Timelines or other call logs reviewed by Minority staff.

<sup>220</sup> Anderson Deposition, *supra* note 203, at 90, 127.

evacuation, and facility damage twice daily: by 10:00 AM EDT and 3:00 PM EDT, through Sunday 9/17/17.<sup>221</sup>

The database had fields for the status of power and for the status of heating/cooling systems. The governor's timeline indicates that Hollywood Hills made its first electronic report to the Health STAT database at 6:51 p.m. on September 10th, just shy of three hours after it lost power to its chiller and made its first call to FPL. However, the facility's Health STAT report did not indicate any loss of heating/cooling when it was submitted.

In fact, Hollywood Hills appears to have never reported its power or cooling system loss to the database at *any* time during or after the hurricane. Notations on the correct, inoperable status of the air conditioning system were reportedly made to the database by AHCA representatives on September 12th (two days after power was lost), following the return calls made to administrators at the facility described above.<sup>222</sup> The failure to file this information seems to demonstrate that administrators at Hollywood Hills did not take seriously the state's emphasis on making timely and accurate reports to the Health STAT Database, and its apparent importance as a tool to monitor conditions in nursing homes across the state.

### **Ineffective Restoration of Communications Contributed to Unnecessary Deaths**

While it is clear that the company's administrators made multiple attempts to gain assistance restoring power, the requests were not effective in doing so. Although the state's emergency managers did request expedited attention for power restoration on the evening of September 11th, the Minority staff was unable to determine the extent to which any of these communications accelerated the actual restoration of power to the facility. FPL stated:

As far as restoration, the facility is defined in FPL's system as a "priority" location, but not as a "top CIF [Critical Infrastructure Function]." The top CIFs all received the first wave of "special, dedicated" restoration service. Once the top CIFs are done, then priority locations, like this facility would be focused on. Due to the calls and the request from the state, this facility would have been given some level of priority versus other "priority" locations.<sup>223</sup>

When asked if the company had a log of the state's power restoration requests to help determine how they were handled, Minority staff was informed no such log existed.<sup>224</sup>

In the end, none of these communications between Hollywood Hills and state and local officials or FPL succeeded in expediting the restoration of power to the facility in time to prevent the deaths at Hollywood Hills. What is apparent, however, is that they consumed time and attention of the facility's management, diverting their focus from the deteriorating conditions in the building, and the increasing risk to the residents. When asked in her deposition about whether or not she and her management colleagues at Hollywood Hills ever had discussions concerning "if

<sup>221</sup> Gov. Scott's Timeline, *supra* note 202, at Attachment A.

<sup>222</sup> *Id.*, at Attachments K, L, M, N, P.

<sup>223</sup> Appendix F, Ex. 2, Email from Robert B. Sandler to David Berick (Aug. 16, 2018).

<sup>224</sup> *Id.*

the power doesn't get turned on soon, we're going to have to get these people out of here,"<sup>225</sup> Ms. Anderson, the Behavioral Health CEO, responded:

I did communicate with Jorge [Carballo, administrator of the Rehabilitation Center at Hollywood Hills] as some point. I don't know if that was on Tuesday, but I did communicate with Jorge at some point "We really need to get this resolved. I don't know what our options are here. We need to make some decisions if we don't get the help that we are waiting for." So that did take place, yes.<sup>226</sup>

However, no decision other than to wait for the power to be restored was made.

### G. Key Issue: Deficiencies of the Hollywood Hills Emergency Plan

Nursing homes in Florida are—and at the time Irma struck, were—required to have a “comprehensive emergency management plan” (“CEMP”) that is subject to review and approved by the local emergency management agency, pursuant to section 400.23(2)(g) of Florida Statutes, and Rule 59A-4.126 of Florida Administrative Code.<sup>227</sup> The CEMP must address planning for an “emergency evacuation transportation” and contain a plan that addresses residents’ needs if sheltering-in-place, including emergency power, food, water, supplies, staffing, and emergency equipment. (Florida assisted living facilities were and are also required to have CEMPs.)<sup>228</sup>

Minority staff reviewed the various CEMP documents for Hollywood Hills that were provided by the company’s counsel in late 2017. These submissions were substantially incomplete. In April 2018, Minority staff asked that counsel provide a complete CEMP for the facility in order to complete the investigation. On June 4, 2018, counsel responded:

As you may be aware, all of the facility’s records were seized by the Hollywood Police Department, including the CEMP that was on site at several locations in the facility. We have submitted the CEMP materials to you that we have been able to obtain from the police department. You may need to contact them directly for any additional documents which are no longer in my client’s possession.<sup>229</sup>

While counsel indicated to Minority staff that the company could not provide a complete CEMP at the time after the hurricane, Hollywood Hills had already submitted a CEMP document as part of an October 2017 application to AHCA and Broward County, in order to comply with the state’s emergency order for nursing home power supplies.<sup>230</sup> (This emergency order is discussed earlier in this report.) Minority staff reviewed each of these various versions of the CEMP, but

<sup>225</sup> Anderson Deposition, *supra* note 203, at 68.

<sup>226</sup> *Id.*, at 68.

<sup>227</sup> Justin Senior Letter, *supra* note 108.

<sup>228</sup> *Id.*; see Fla. Stat. §429.42(1)(b), and Fla. Admin. Code R. 58A-5.026.

<sup>229</sup> Gregory Smith Letter, *supra* note 12.

<sup>230</sup> Appendix D, Ex. 7, Detailed Plan for Compliance with Emergency Rule 59AER17-1 (Oct. 31, 2017) [hereinafter, HH October Plan Submission].

the Minority staff analysis is based primarily on the document submitted as part of the October 2017 emergency order application to the state and county.<sup>231</sup>

**Hollywood Hills Had an Ineffective Chain of Emergency Command**

The normal hierarchy of authority for Hollywood Hills, (i.e., the nursing home portion of the Larkin facility) was identified in the plan as:

- Chief Executive Officer
- Chief Operating Officer
- Nursing Home Administrator
- Director of Nursing
- Nurse Supervisor
- Charge Nurse<sup>232</sup>

However, the plan specifically notes that the chain of command during an emergency “differs from the daily operation Chain of Command.”<sup>233</sup> In Part IV “Concept of Operations,” the plan states under paragraph A, “Direction and Control,” that:

Jorge Carballo as the Chief Executive Officer has designated James Williams, Director of Engineering, to be charge (sic) of operations during an emergency. ... Jorge Carballo, Chief Executive Officer, is the alternate person to be in charge during an emergency if the Director of Engineering, James Williams is not available. The CEO/Director of Engineering will be assisted by Maria Colon, Director of Nursing.<sup>234</sup>

Mr. Williams’ resume, provided to Minority staff by counsel, does not indicate that he has any emergency management or health care training or experience.<sup>235</sup> Furthermore, as noted above, the nursing director for Hollywood Hills was subordinate to Mr. Williams in an emergency. The emergency plan also doesn’t identify any role for the facility’s physician medical director.

**Faulty Hazard Assessment and Preparations**

The plan includes a short, two-bullet “Lessons Learned” section discussing past hurricanes:

Staff acknowledge that Hurricanes Andrew (1992), Charlie (2004), Frances (2004), Katrina (2005) and Wilma (2005) taught this organization several valuable lessons from which other facilities could well benefit.<sup>236</sup>

Bullet one of the “lessons learned” states:

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<sup>231</sup> *Id.*

<sup>232</sup> *Id.*, see Part II(C) of the CEMP.

<sup>233</sup> *Id.*, see Part IV(A) of the CEMP.

<sup>234</sup> *Id.*

<sup>235</sup> Appendix D, Ex. 8, *Curriculum Vitae for James Williams (Director of Engineering)*.

<sup>236</sup> HH October Plan Submission, *supra* note 230, see Part III, Section A(2) of the CEMP.

Better planning for providing care to those agencies that may require assistance following a disaster. This was evidenced in the number of nursing home residents that were evacuated after Hurricane Andrew.<sup>237</sup> (emphasis added)

The CEMP then includes a discussion of potential hazards:

Potential hazards that this facility is vulnerable to include: hurricanes, tornadoes, flooding, fires, hazardous materials from fixed facilities, chemical spills in the community, and/or transportation accidents, power outages during hot weather, bomb threat and bioterrorism related events.<sup>238</sup> (emphasis added)

The plan does not rank these potential hazards in terms of severity or consequences, nor does it discuss the probability of them occurring. Despite being in one of the hottest regions in the country, the Hollywood Hills emergency plan did not include procedures for a heat emergency, even though power loss in hot weather was identified as a potential hazard.

The plan, furthermore, contained no discussion of using spot coolers as an alternative means of cooling the building. There was no written plan for how, by whom, or when, to monitor the facility's temperatures or the temperature's impact on patient safety other than leaving the details to the designated emergency manager—the facility's maintenance director. There was no discernable triage plan or overarching physician oversight for the evaluation of patients who were at higher risk for heat-related health complications. In fact, in the course of the investigation, Minority staff did not find any guidelines or clinical protocols governing the specific actions to be taken by nursing or medical staff in the event of a heat emergency. This planning gap is particularly striking given the regulatory history of the facility's diminished emergency power capability.

### **Hollywood Hills Had Inadequate Emergency Power Capacity**

The 2017 CEMP plan under “Concept of Operations – Direction and Control – Self-sufficiency and Dependence” states that “[t]his facility has a 6M Diesel Emergency Generator (125KVA-100KW) with a 550 gallon diesel fuel supply which has the capability emergency power for this facility for five days and five nights.”<sup>239</sup> Yet, the facility had been without a permanent emergency generator for many years. Minority staff was unable to determine exactly how many years the facility had been without a permanent emergency generator.

In late 2014, a CMS-mandated “Life Safety Code” survey noted that Hollywood Hills had “failed to maintain the emergency generator to manufacture and code requirements” and that “...a temporary emergency generator” had been in place for a “number of years including last years [sic] survey.”<sup>240</sup> Three years later, when Irma made landfall, the facility's permanent generator was still inoperable and AHCA had only recently approved the plans for the

<sup>237</sup> *Id.*

<sup>238</sup> *Id.*, see Part III, Section A(1) of the CEMP.

<sup>239</sup> *Id.*, see Part V, Section (A)(5) of the CEMP.

<sup>240</sup> Appendix C, Ex. 7, CMS, Statement of Deficiencies and Plan of Correction (Form 2567) re Hollywood Hills (Dec. 11, 2014), at 2, 11.

replacement.<sup>241</sup> Moreover, the facility's own staff acknowledged that the portable generator on-site did not have the capacity to power the facility's air conditioning chiller:

As far as the generator in the building, it was ancient and dismantled. There was a portable generator at the facility, but when our crews arrived, they were told by the "engineer" of the building that it was not sized properly and could not power the chillers.<sup>242</sup>

Given this assessment by the state, the plan's statement that the facility possessed enough emergency generation capacity to be self-sufficient for five days and nights appears to be misleading at best, if not materially false. Perhaps worse, no contingency capacity or plan to fully address this long-known deficiency was included in the CEMP, especially in light of the identified risk of the loss of power in hot weather.

### **Nearby Hospital Was Key in Hollywood Hills Bioterrorism Emergency Plan**

It is striking that in the case of a bioterrorism attack, the Hollywood Hills CEMP specifically includes a provision for reliance upon the neighboring Memorial Regional Medical Center:

The Rehabilitation Center at Hollywood Hills/Hollywood Pavillion had developed a Bioterrorism Plan prior to September 11, 2001 which addresses the facilities (sic) ability to be self-sustaining in accordance with this Comprehensive Emergency Management Plan. This facility's close proximity to Memorial Regional Medical Center, with the south side of this building facing the north perimeter of the Hollywood Regional Medical Center, provides ready access to emergency medical/trauma care should such services be required in the event of an act of terrorism.<sup>243</sup>

The nursing home was located at 1200 N 35th Street, just a few hundred feet from the Memorial Regional Hospital. Satellite imagery shows the only thing separating the two buildings is a street, some trees and a parking lot.

To restate the obvious, in the event of a bioterrorism attack, however likely or unlikely, the Hollywood Hills CEMP specifically contemplated receiving medical aid from the adjacent Memorial Regional Hospital. In contrast, the CEMP makes no mention of the hospital in the event of a hurricane or power outage during hot weather, both of which were identified as hazards and are much more likely to occur. There is a hurricane season every year in Florida.

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<sup>241</sup> Appendix D, Ex. 9, Letter from Mairo Tur to Jorge Gabel re: Generator (May 17, 2016); Appendix D, Ex. 10, Letter from Mairo Tur to Jorge Gabel re: Generator (Aug. 23, 2017).

<sup>242</sup> Appendix F, Ex. 3, Email from Robert B. Sandler to Minority staff (Dec. 11, 2017).

<sup>243</sup> HH October Plan Submission, *supra* note 230, *see* Part III, Section B(6) of the CEMP.



**Image 5:** This satellite image shows the proximity of the Hollywood Hills nursing home (highlighted in red on the left) and Memorial Hospital (highlighted in orange on the right). The two facilities were just a few hundred feet from each other.  
 Source: Google Maps

### **Hollywood Hills Evacuation Plan Lacked Clear Decision-Making Procedures**

With regard to evacuation, the plan states: “The Nursing Home Administrator, or designee, and/or the Fire Marshall shall be responsible for initiation of evacuation procedures.”<sup>244</sup> This concept is repeated in the plan’s section on evacuations:

The point at which mutual aid agreements for transportation and the notification of alternative facilities will begin when Director [sic] from an appropriate government official has directed the facility to be evacuated (e.g. fire marshal) or the Chief Executive Officer, or designee, has so directed.<sup>245</sup>

Despite the fact that sheltering-in-place is the default approach to disaster preparedness (as discussed in Section IV of this report), the Hollywood Hills CEMP includes only a brief discussion of sheltering-in-place, which is primarily focused on the responsibilities for facilities (in other locations) that are evacuating *to* Hollywood Hills.

<sup>244</sup> *Id.*, see Part IV, Section (C)(1).

<sup>245</sup> *Id.*, see Part IV Section (C)(14).

The CEMP describes specific medical supplies, such as the number of diapers and gowns-per-resident, which should be pre-positioned “when there is adequate warning of a potential disaster.”<sup>246</sup> However, there is no discussion of the process for the CEO, or the designee, to make an actual evacuation decision, or to re-visit the decision as circumstances changed. Similarly, the plan fails to describe any process or criteria for patient-monitoring or triage during shelter-in-place, or for partial evacuations for residents at higher risk of experiencing disaster-related medical complications. A plan for extended post-hurricane sheltering in place (greater than 48 hours) is not described.<sup>247</sup>

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<sup>246</sup> *Id.*, see Part IV, Section (C)(13).

<sup>247</sup> *Id.*, see Part IV, Section E.

## Part IV: Examining CMS Emergency Preparedness Regulations for Long-Term Care through the Lens of the 2017 Hurricanes

Concern about the adequate emergency preparedness planning at nursing homes and other LTCs is long-standing. In light of the tragic deaths of nursing home residents during—and in the aftermath of—Hurricanes Katrina and Rita, the OIG issued a report in 2006 detailing a number of problems with nursing home emergency preparedness nationwide as well as certain nursing homes’ responses to the then-recent hurricanes. OIG concluded that “a lack of effective emergency planning or failure to properly execute the emergency plans” led to problems at nursing homes in Gulf Coast states following a string of hurricanes.<sup>248</sup> The OIG recommended that CMS strengthen federal standards for emergency plans and “encourage communication and collaboration between state and local emergency entities and nursing homes.”<sup>249</sup>

The OIG conducted a follow-up report in 2012 that found the percentage of nursing homes in compliance with federal regulations for emergency plans had declined over the intervening five years, as had the percentage that completed emergency training.<sup>250</sup> It also found that gaps in nursing home emergency preparedness and response continued to exist, regardless of whether they evacuated or sheltered-in-place. Such gaps included: transportation contracts were not always honored, evacuation travel took longer than expected, patients’ medication needs complicated travel, host facilities were unavailable or inadequately prepared, and facilities could not maintain adequate staff. When sheltering-in-place, food and water shortages occurred or were narrowly averted.

Following the OIG reports, CMS developed new emergency preparedness regulations for LTCs (“Emergency Preparedness”) as well as other providers participating in Medicare and Medicaid. The regulations were finalized in September 2016 and went into full effect in November of 2017.<sup>251</sup> The 2016 Emergency Preparedness rules consolidated the regulations for LTC emergency preparedness under section 483.73 and added detailed requirements in several areas including requirements that LTC facilities develop: emergency plans, emergency policies and procedures, communication plans, training and testing, and alternative sources of power.

Separately, and not directly in response to the OIG’s recommendations regarding emergency preparedness, CMS developed general “reform” regulations for LTCs (“LTC Rules”) that were finalized one month later in October 2016.<sup>252</sup> The LTC Rules included a provision covering emergency power requirements (“Emergency Power”). These Emergency Power provisions were unchanged from pre-existing requirements and were not cross-referenced in the Emergency Preparedness rule.<sup>253</sup> As detailed below, these two different emergency provisions could lead to confusion about their applicability.

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<sup>248</sup> HHS-OIG 2006, *supra* note 18, at ii.

<sup>249</sup> *Id.*, at 22.

<sup>250</sup> HHS-OIG 2012, *supra* note 19, at 10.

<sup>251</sup> Emergency Preparedness Rule, *supra* note 20.

<sup>252</sup> LTC Rules, *supra* note 21.

<sup>253</sup> *Id.*, at 68816-68817.

Because the events in Texas and Florida occurred in August and September 2017, several months before the implementation deadline for LTCs to comply with the new emergency planning regulations, Minority staff reviewed these new regulations in the light of the 2017 hurricane season in an effort to identify any gaps or concerns. Minority staff identified several areas of concern (discussed below) related to (1) temperature control and alternative sources of power, (2) emergency plan approvals, (3) integration of community-based resources, (4) procedures for sheltering-in-place or evacuation, and (5) communications with local and state entities. For its part, CMS does not believe there are major regulatory gaps:

As evidenced by the immediate termination of Hollywood Hills from Medicare and Medicaid participation, the failures at this facility were not a lack of regulatory gaps but rather care and management decisions made by facility leadership and staff that were contrary to already existing quality of care regulatory expectations. ... We are updating Appendix Z, the Interpretive Guidelines for Emergency Preparedness, which will clarify areas for acceptable use and expectations for safeguarding temperature controls, such as portable generators. ... Additionally, the requirements under the Emergency Preparedness final rule also require long-term care facilities to have protocols for sharing information from their emergency plan with residents and their families or representatives, as well as evacuation and shelter in place policies and procedures which protect the health and safety residents (sic).<sup>254</sup>

To date, CMS has not updated Appendix Z. The most recent version of this guidance was issued by CMS on June 9, 2017, several months before the hurricanes.<sup>255</sup>

## A. Policies and Procedures: Temperature Control and Alternative Sources of Power

As noted in Section III(D) of this report, AHCA surveyors who entered Hollywood Hills following the deaths and mass evacuation specifically noted the temperatures and the corresponding heat index when documenting conditions at the facility. (See an excerpt of the survey report on the following page.) The deaths at Hollywood Hills, as discussed earlier, were all heat-related and directly attributable to the loss of air conditioning at the facility.

However, Section 483.10 of the LTC regulations requires a “safe and comfortable temperature,” which is defined as within the range of 71–81 degrees Fahrenheit,<sup>256</sup> but it does not take into account adjustments—reflected in heat index calculations—of the full effect humidity along with such temperatures may have on nursing home residents. While the 71–81 degree temperature range regulation is longstanding, it is also not strictly health- or evidence-based, as discussed below.

<sup>254</sup> Harris Email, *supra* note 16.

<sup>255</sup> Appendix C, Ex. 8, Email from William Harris to David Berick (Aug. 20, 2018).

<sup>256</sup> 42 C.F.R. § 483.10(i)(6).

SHELTERING IN DANGER

DEPARTMENT OF HEALTH AND HUMAN SERVICES CENTERS FOR MEDICARE & MEDICAID SERVICES		PRINTED: 10/12/2017 FORM APPROVED OMB NO. 0938-0391	
STATEMENT OF DEFICIENCIES AND PLAN OF CORRECTION	(X1) PROVIDER/SUPPLIER/CLIA IDENTIFICATION NUMBER:  <b>105021</b>	(X2) MULTIPLE CONSTRUCTION A. BUILDING _____  B. WING _____	(X3) DATE SURVEY COMPLETED  <b>C</b> <b>09/22/2017</b>
NAME OF PROVIDER OR SUPPLIER  <b>REHABILITATION CENTER AT HOLLYWOOD HILLS, LLC</b>		STREET ADDRESS, CITY, STATE, ZIP CODE <b>1200 N 35TH AVE HOLLYWOOD, FL 33021</b>	
(X4) ID PREFIX TAG	SUMMARY STATEMENT OF DEFICIENCIES (EACH DEFICIENCY MUST BE PRECEDED BY FULL REGULATORY OR LSC IDENTIFYING INFORMATION)	ID PREFIX TAG	PROVIDER'S PLAN OF CORRECTION (EACH CORRECTIVE ACTION SHOULD BE CROSS-REFERENCED TO THE APPROPRIATE DEFICIENCY)
F 223	<p>Continued From page 6</p> <p>Administrator did not report or indicate any conditions that had become dangerous or posed a risk to the residents and as of 09/13/17 at approximately 3:00 AM, per the time line, the first patient was taken emergently to the hospital from the facility in critical condition.</p> <p>3. Review of the Weather Underground.com web site temperature readings from the weather station at the Fort Lauderdale/Hollywood International Airport, located 6 land miles from the facility, indicated for 09/11/17 at 5:53 PM the outside temperature was 89.6 degrees F with a heat index of 96.2 F and humidity of 55%.</p> <p>On 09/11/17 at 11:55 PM, the outside temperature was 80.6 degrees F with a heat index of 86.2 degrees and humidity of 84%.</p> <p>On 09/12/17 at 7:53 AM, the outside temperature was 78.8 degrees F with a humidity of 89%.</p> <p>On 09/12/17 at 12:53 PM, the outside temperature was 87.8 degrees F with a heat index of 95.6 degrees F and humidity of 62%.</p> <p>On 09/12/17 at 6:53 PM, the outside temperature was 87.8 degrees F with a heat index of 92.6 degrees F and humidity of 55%.</p> <p>On 09/12/17 at 10:53 PM, the outside temperature was 82.9 degrees F with a heat index of 91.8 degrees F and humidity of 82%.</p> <p>On 09/13/17 at 1:53 AM, the outside temperature was 82 degrees F with a heat index of 89.4 degrees F with humidity of 82%.</p> <p>On 09/13/17 at 4:53 AM, the outside temperature</p>	F 223	
<small>FORM CMS-2567(02-99) Previous Versions Obsolete      Event ID: XNWB11      Facility ID: 100611      If continuation sheet Page 7 of 56</small>			

**Image 6:** The post-incident survey of conditions at Hollywood Hills documented the air temperature, relative humidity and heat index in the Hollywood, Florida, area in the days after Hurricane Irma. CMS nursing home regulations regarding temperature control do not take into account humidity or heat index. *Source:* HH October Plan Submission, *supra* note 230.

### **Senior Citizens are Particularly Vulnerable to Extreme Heat**

Extreme heat is responsible for more deaths than all other weather-related hazards including hurricanes, major floods and winter storms.<sup>257</sup> Even small increases in ambient temperatures above normal seasonal levels can result in excess mortality and morbidity.<sup>258</sup> Senior citizens and those with chronic illness are the populations most vulnerable to extreme heat events.<sup>259</sup> Moreover, people over the age of 65 comprise the largest cohort of emergency room visits related to extreme heat events.<sup>260</sup> Given their climate, it should not be surprising that a nationwide study found that southern states accounted for the majority—60%—of heat-related hospital visits by Medicare recipients, and had the highest rates of inpatient and outpatient visits for heat-related illness.<sup>261</sup>

Heat-related illness constitutes a “spectrum of disease.”<sup>262</sup> Prolonged exposure to environmental heat can result in moderate symptoms of dehydration, such as painful muscle cramping and fatigue. Serious signs of heat exhaustion can include weakness, fatigue, headache, nausea, fainting and decreased urine output. Heat stroke is a life-threatening complication of heat stress characterized by an elevated core temperature (hyperthermia) along with signs of neurological compromise including confusion, decreased levels of consciousness, hallucinations, headache, nausea and hot-and-dry skin.<sup>263</sup> Hyperthermia is clinically defined by a core body temperature of 40 degrees Celsius (104 degrees Fahrenheit).<sup>264</sup> The presence of hyperthermia alone, especially in vulnerable populations, such as senior citizens, is a life-threatening medical emergency that requires an immediate medical intervention.<sup>265</sup> However, it is also important to note that in older persons, once frank heat stroke manifests itself as an unstable clinical condition, the risk of mortality is high.<sup>266</sup>

<sup>257</sup> Centers for Disease Control and Prevention (CDC) and Environmental Protection Agency, *Climate Change and Extreme Heat: What You Can Do to Prepare* (EPA 430-R-16-061) (October, 2016), available at <https://www.cdc.gov/climateandhealth/pubs/extreme-heat-guidebook.pdf> [hereinafter, CDC/EPA Climate Change and Extreme Heat Report], at 11.

<sup>258</sup> *Id.*, at 6.

<sup>259</sup> WL Kenney, DH Craighead, and LM Alexander, “Heat Waves, Aging and Human Cardiovascular Health,” *Medicine & Science in Sports & Exercise* 46, no. 10 (Oct. 2014): 1891-1899, available at <https://www.ncbi.nlm.nih.gov/pubmed/24598696> [hereinafter, Heat Waves and Aging]; Michael Vassallo, Kevin Navarro Gera, and Steve Allen, “Factors Associated with High Risk of Marginal Hyperthermia in Elderly Patients Living in an Institution,” *Postgraduate Medical Journal* 71 (1995) 213-216, available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4155032/>; JC Semenza et al, “Heat-Related Deaths During the July 1995 Heat Wave in Chicago,” *New England Journal of Medicine*, 335, no. 2 (July 1996), at: 84-90, available at [https://www.nejm.org/doi/10.1056/NEJM199607113350203?url\\_ver=Z39.88-2003&rft\\_id=ori%3Arid%3Acrossref.org&rft\\_dat=cr\\_pub%3Dwww.ncbi.nlm.nih.gov](https://www.nejm.org/doi/10.1056/NEJM199607113350203?url_ver=Z39.88-2003&rft_id=ori%3Arid%3Acrossref.org&rft_dat=cr_pub%3Dwww.ncbi.nlm.nih.gov).

<sup>260</sup> Ekta Choudhary and Ambarish Vaidyanathan, “Heat Stress Illness Hospitalizations—Environmental Public Health Tracking Program, 20 States,” *Morbidity and Mortality Reporting Weekly Report* 63, SS13 (Dec. 12, 2014), at 1-10, available at <https://www.cdc.gov/mmwr/preview/mmwrhtml/ss6313a1.htm>.

<sup>261</sup> Rebecca S. Noe, Jill O. Jin, and Amy F. Wolkin, “Exposure to Natural Cold and Heat: Hypothermia and Hyperthermia Medicare Claims, United States 2004-2005,” *American Journal of Public Health* 102, no. 4 (April 2002), available at <https://www.ncbi.nlm.nih.gov/p.m.c/articles/P.M.C3489350/>.

<sup>262</sup> Deana D. Wasserman and Megan Healy, “Cooling Techniques for hyperthermia,” *StatPearls Publishing* (Oct. 22, 2017), available at <https://www.ncbi.nlm.nih.gov/books/NBK459311/>. Heat stroke is defined by an elevated core temperature (hyperthermia) along with signs of neurological compromise such as confusion or decreased level of consciousness.

<sup>263</sup> *Id.*

<sup>264</sup> *Id.*

<sup>265</sup> *Id.*; CDC/EPA Climate Change and Extreme Heat Report, *supra* note 257.

<sup>266</sup> Sofie Søndergaard Mørch, Johnny Dohn Holmgren Andersen, and Morten Heiberg Bestle, “Heat Stroke: A Medical Emergency Appearing in New Regions,” *Hindawi* (October 2017), available at [https://www.researchgate.net/publication/319697600\\_Heat\\_Stroke\\_A\\_Medical\\_Emergency\\_Appearing\\_in\\_New\\_Regions](https://www.researchgate.net/publication/319697600_Heat_Stroke_A_Medical_Emergency_Appearing_in_New_Regions).

Deaths during an extreme heat event are not just caused by heat stroke and dehydration. Excess deaths from all clinical causes are increased, most often those that are cardiovascular in origin.<sup>267</sup> Secondary deaths can occur related to increases in the number of strokes, hypertensive emergencies and exacerbation of chronic respiratory illness such as emphysema or asthma.<sup>268</sup>

### **Seniors May Not Demonstrate Early Signs and Symptoms of Excessive Heat**

Seniors are uniquely vulnerable to poor health outcomes related to heat stress, even when ambient temperatures are above normal for a place or region, but not necessarily high enough to be considered a “heat wave.” The ability of the body’s thermoregulatory system to adapt rapidly to changes in ambient high temperatures decreases with age. Older persons, particularly the frail or bedridden, may not display early classical signs of heat strain such as sweating and recognition that they are thirsty.

Without these and other signs, it is more difficult for caregivers to recognize heat-related illness and intervene prior to a full clinical decompensation into a heat stroke. Moreover, older persons’ core body temperature generally runs lower than the “normal” temperature compared to younger persons, making early detection of heat stress in the elderly that much harder to diagnose.<sup>269</sup> Symptoms that develop slowly and indolently over several days can suddenly become life-threatening.<sup>270</sup>

Patients with chronic conditions and poor overall physical reserve—like those who typically live in nursing homes—can have a compromised compensatory response to heat strain, especially when they are on medications that can blunt physiological responses in heart rate, blood pressure and kidney function.<sup>271</sup>

### **The “Safe and Comfortable Temperature” Rule for Long-Term Care Facilities**

The new 2016 LTC Rules kept in place the longstanding standard regarding temperature control in nursing homes—the 71–81-degree Fahrenheit range—and left it unchanged.<sup>272</sup> Minority staff traced the origin of the 71–81-degree Fahrenheit rule (“71–81 rule”) back to the 1986 Institute of Medicine (“IOM”) report, “Improving the Quality of Care in Nursing Homes.”<sup>273</sup> This report recommended “comfort standards” developed by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (“ASHRAE”), a professional group for engineers,

<sup>267</sup> Heat Waves and Aging, *supra* note 259.

<sup>268</sup> *Id.*; John Z. Sullivan et al., “Hyperpyrexia Due to Air-Conditioning Failure in a Nursing Home,” *Public Health Reports* 94, no. 5 (Sept.-Oct. 1979), at 466-470, available at Sofie Søndergaard Mørch, Johnny Dohn Holmgren Andersen, and Morten Heiberg Bestle, “Heat Stroke: A Medical Emergency Appearing in New Regions,” *Hindawi* (October 2017), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1431755/pdf/pubhealthrep00133-0072.pdf>.

<sup>269</sup> Irving H. Gomolin, “Older is Colder: Temperature Range and Variation in Older People,” *Journal of the American Geriatric Society* 53, no. 12 (December 2005), at 2170-2172, available at <https://www.ncbi.nlm.nih.gov/pubmed/16398904>.

<sup>270</sup> Lisa R. Leon and Abderrezak Bouchama, “Heat stroke,” *Comprehensive Physiology* 5, no. 2 (April 2015), at 611–647, available at <http://www.comprehensivephysiology.com/WileyCDA/CompPhysArticle/refId-c140017.html>; Theresa P. Yeo, “Heat stroke: A Comprehensive Review,” *AACN Clinical Issues* 15, no. 2 (Apr.-Jun. 2004), at 280–293, available at <https://www.ncbi.nlm.nih.gov/pubmed/15461044>.

<sup>271</sup> Heat Waves and Aging, *supra* note 259.

<sup>272</sup> LTC Rules, *supra* note 21, at 68816-68817.

<sup>273</sup> Institute of Medicine, “Improving the Quality Care in Nursing Homes” (Washington, DC: 1986), available at <https://www.nap.edu/catalog/646/improving-the-quality-of-care-in-nursing-homes> [hereinafter, IOM Nursing Home Report].

specified in their ANSI-ASHRAE Standard 55-1981 (“ASHRAE 55 Standard”).<sup>274</sup> The ASHRAE 55 Standard, in turn, was an attempt to quantify comfort based on a survey questionnaire of persons regarding acceptable ranges of temperature and humidity in typical summer or winter clothing doing primarily sedentary activities.

The IOM recommendation to use the ASHRAE 55 Standard was included in the proposed rules CMS issued in 1987 regarding temperature regulation in LTCs:

...we would require, in accordance with IOM recommendation 3-8, that the facility maintain a comfortable and safe room temperature. The IOM recommended that we adopt a temperature range for sedentary or slightly active persons developed jointly by the American National Standards Institute (ANSI) and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE) specified in the ANSI-ASHRAE Standard 55-1981. While we have not specified this standard in the regulation, our surveys will find facilities that maintain the 71–81°F temperature range it specifies to be in compliance.<sup>275</sup>

The standard was subsequently included in the final rule, which was issued by CMS in 1989, where it has remained unchanged. (As noted, it was carried over into the 2016 “reform” rules discussed throughout this report.)

In addition to recommending the ASHRAE standard, the 1986 IOM report also encouraged nursing home providers to be vigilant and mindful of the potential harm caused by exposure to heat and cold:

Older individuals are much more sensitive to changes in temperature. They have a lower tolerance for cold and heat and easily suffer from hypothermia and hyperthermia. Thus, nursing home temperatures should be carefully monitored.<sup>276</sup>

However, the 71–81-degree ASHRAE-based standard was not a health- or evidence-based standard as it relates to chronically ill older adults. It also does not account for humidity, as a heat index-based standard would do.<sup>277</sup> As discussed above, heat index measures how hot it feels when humidity is combined with air temperature. As humidity levels increase, less sweat evaporates off the skin, reducing the body’s natural cooling mechanism. Higher heat index values increase the likelihood of developing a heat-related illness and have been correlated with higher mortality rates.<sup>278</sup>

It is notable that the NOAA heat index table (see Section III(D) of this report)—which is calibrated for the general population, not vulnerable populations such as seniors and LTC

<sup>274</sup> American Society of Heating, Refrigerating, and Air-Conditioning Engineers, “Thermal Environmental Conditions for Human Occupancy,” *ANSI/ASHRAE Standard 55-2013* (2013), available at <https://bit.ly/2ONP3jd> (abbreviated link).

<sup>275</sup> Medicare and Medicaid; Conditions of Participation for Long-Term Care Facilities, 52 Fed. Reg. 200 (Oct. 16, 1987), at 38590, available at <https://cdn.loc.gov/service/ll/fedreg/fr052/fr052200/fr052200.pdf>.

<sup>276</sup> IOM Nursing Home Report, *supra* note 273, at 97.

<sup>277</sup> 42 C.F.R. § 483.10(i)(6).

<sup>278</sup> New York Heat Index Study, *supra* note 174; NWS, *Heat Index* (accessed on Sept. 25, 2018), available at [www.nws.noaa.gov/om/heat/heat\\_index.shtml](http://www.nws.noaa.gov/om/heat/heat_index.shtml); Jason Samenow, *The Origins of Heat Index and Why It’s Important*, The Washington Post (July 21, 2011), available at [https://www.washingtonpost.com/blogs/capital-weather/-gang/post/the-origins-of-the-heat-index-and-why-its-important/2011/07/21/gIQASKrnRI\\_blog.html?noredirect=on&utm\\_term=.206c9e645877](https://www.washingtonpost.com/blogs/capital-weather/-gang/post/the-origins-of-the-heat-index-and-why-its-important/2011/07/21/gIQASKrnRI_blog.html?noredirect=on&utm_term=.206c9e645877).

residents—warns that people should use “caution” when air temperatures reach 80 degrees and relative humidity is 35% or greater. That air temperature, of course, falls within the 71–81 standard, yet NOAA warns that fatigue can occur with “prolonged exposure and/or prolonged physical activity.”<sup>279</sup>

Given the vulnerability of elderly populations to heat stress, CMS should re-evaluate the 71–81 rule to reflect current medical evidence and incorporate heat index criteria as highlighted by the AHCA Hollywood Hills post-incident survey.

### **The Emergency Preparedness Rules Do Not Define Safe Temperatures**

The Emergency Preparedness rule, also finalized by CMS in 2016, requires that nursing homes must have in place emergency plans that provide for the subsistence needs of residents and staff, including “alternate sources of energy” to maintain “temperatures to protect patient health and safety and for the safe and sanitary storage of provisions.”<sup>280</sup>

The specific protective temperature range of 71–81 degrees Fahrenheit, defined in the LTC Rules, is not cited in the Emergency Preparedness rule, nor is there any cross-reference to this standard.<sup>281</sup> There also is no regulatory guidance that makes it clear that emergency plans must maintain the standard. In fact, as discussed below, commenters who sought guidance on the appropriate temperature for LTCs were not given any clarification by CMS, which left it up to individual facilities to determine.<sup>282</sup>

Under the new Emergency Preparedness rules, nursing homes also are required to implement “emergency and standby power systems based on the emergency plan.”<sup>283</sup> This requirement could conflict with the longstanding CMS emergency power requirements, which are not based on the emergency plan.

### **“Emergency Power” Requirements for Long-Term Care Facilities**

The 2016 LTC “reform” rules contain their own longstanding emergency power provision (“Emergency Power”). This requirement was also left unchanged when it was re-promulgated.<sup>284</sup> This Emergency Power provision simply states:

Emergency Power. (1) An emergency electrical system must supply power adequate at least for lighting of all entrances and exits; equipment to maintain the fire detection, alarm, and extinguishing systems; and life support systems in the event the normal electrical power is interrupted.<sup>285</sup>

This re-promulgated Emergency Power provision similarly contains no cross-reference to either the new Emergency Preparedness rule or its emergency power requirement.

<sup>279</sup> See Image 2.

<sup>280</sup> 42 C.F.R. § 483.73(b)(1)(ii).

<sup>281</sup> Emergency Preparedness Rule, *supra* note 20.

<sup>282</sup> *Id.*, at 63911.

<sup>283</sup> 42 C.F.R. § 483.73(e).

<sup>284</sup> LTC Rules, *supra* note 21.

<sup>285</sup> 42 C.F.R. § 483.90(c).

However, it is clear from the regulation and agency guidance that the Emergency Power provision does not require emergency capacity to maintain the 71–81 temperature standard in the LTC Rules. Temperature control systems are not considered a life-support system in the way that medical equipment would be.

### **CMS Must Clarify Its Emergency and Temperature Regulations**

Notwithstanding these competing requirements, CMS believes it is self-evident that during an emergency, the residential environment must be kept in the 71–81-degree range. The agency said as much in its written response to the Committee and in a follow-up email to Minority staff.<sup>286</sup> Administrator Verma wrote in her response to the Committee that the 71–81 rule applies to all LTCs that were initially certified after October 1990, adding that “[t]his requirement applies regardless of whether a facility is experiencing any emergency conditions.”<sup>287</sup>

Minority staff believes the situation is not so clear. For one thing, there are no citations or cross references. Furthermore, the regulatory history of the LTC Emergency Preparedness rule further confuses the matter. When temperature control was raised during the Emergency Preparedness rulemaking, CMS noted when it promulgated the rule in September 2016:

Some commenters wanted more clarification on the requirements for LTC facilities to have policies and procedures to address subsistence needs for staff and residents, particularly related to medical supplies and temperature to protect resident health and safety and for safe and sanitary storage of provisions. ... We have not required minimums for these types of requirements because they would vary greatly between facilities. Each facility is required to conduct a facility-based and community-based assessment that addresses, among other things, its resident population. From that assessment, each facility should be able to identify what it needs for its resident population, including what medical/pharmaceutical supplies it needs to maintain and its temperature needs for both its resident population and its necessary provisions.<sup>288</sup> (emphasis added)

Minority staff also reviewed “Appendix Z,” which CMS described as interpretative guidance that would “clarify areas for acceptable use and expectations for safeguarding temperature controls, such as portable generators.”<sup>289</sup> However, this guidance does not resolve the problem. There is no discussion in Appendix Z related to whether or how emergency plans or facilities must meet the 71–81 temperature standard generally (Appendix Z at E-0015), nor in the section of Appendix Z related to the emergency plan implementation requirement, which reiterates that emergency power systems must conform to the emergency plan (Appendix Z at E-0041).<sup>290</sup>

Consequently, it remains unclear how the 71–81 standard applies during an emergency, a view shared by experts in the field of elder care:

<sup>286</sup> Harris Email, *supra* note 16.

<sup>287</sup> Verma Letter, *supra* note 27.

<sup>288</sup> Emergency Preparedness Rule, *supra* note 20, at 63911.

<sup>289</sup> Harris Email, *supra* note 16.

<sup>290</sup> CMS, *Appendix Z—Emergency Preparedness for All Providers and Certified Supplier Types Interpretive Guidelines (Rev., 169)* (June 9, 2017), available at [https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap\\_z\\_emergprep.pdf](https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_z_emergprep.pdf) [hereinafter, Appendix Z].

... federal standards regarding emergency power are scattered within federal regulations. The generator-specific subsection focuses primarily on location and testing, and requires ongoing generator operation only from those facilities that maintain an onsite fuel source. A provision within the “physical environment” section speaks of an “emergency electrical power system” rather than a generator, and requires such a system only for lighting or exterior doorways, fire protection systems, and life support. Finally, an emergency preparedness provision, combined with a resident’s rights provision, require that “[a]lternate sources of energy” be used to maintain temperatures from 71° to 81° F. Under the best reading of these various provisions, a facility must have a generator and fuel that are sufficient to keep temperatures between 71° to 81° F. CMS should issue guidance to make this requirement clear, effective on November 15, 2017, the deadline for implementation of the emergency preparedness regulations. Facilities should not be allowed to claim compliance with (for example) limited battery power that would be insufficient to maintain required temperatures.<sup>291</sup>

As noted above, at the time of this report, CMS has yet to issue an update to Appendix Z related to temperature controls, as it stated it would in its responses to the Minority staff. At a minimum, CMS should issue guidance to clarify that the safe and comfortable temperature regime applies during emergency situations under its new emergency preparedness rules. Furthermore, CMS should adopt additional requirements, as Florida has done, to require that LTCs have adequate emergency power supply to maintain temperature control. The principal lesson of Hollywood Hills is that temperature control is a life safety issue.

## **B. Policies and Procedures: Emergency Plans and the Process for Approval**

The September 2016 CMS Emergency Preparedness rule requires LTCs to:

- Base their emergency plans on an “all-hazards” approach to risk assessment, and outline emergency strategies based on the risk assessment;
- Consider the population of patients served that includes continuity of services, delegation of authority and succession planning;
- Detail how they will collaborate and cooperate with local, state and federal officials; and
- Review and update their emergency plans annually.

These requirements certainly took steps in the right direction. However, CMS still does not approve the plans—even though it requires that facilities provide written documentation of them.

The Emergency Preparedness rule does not require pre-approval of emergency plans. It requires that facilities provide written documentation of their plans. Many states, however, require review and approval of emergency operating plans

<sup>291</sup> Also see Justice In Aging; Issue Brief, *Why Many Nursing Facilities Are Not Ready for Emergency Situations*, September 2017, pp. 4-5, <http://www.justiceinaging.org/many-nursing-facilities-not-ready-emergency-situations>.

under state licensure. Ensuring the efficacy of these plans is a state/local function as these entities are best situated to make those evaluations.<sup>292</sup>

States do not always approve emergency plans, either. For example, while the State of Florida requires both nursing homes and assisted living facilities to have comprehensive emergency management plans, state agencies themselves do not approve the plans. Instead, Florida relies upon “review and approval of the local emergency management agency.”<sup>293</sup>

Similarly, Texas’ state regulator does not approve facilities’ emergency plans. Texas regulations appear to be even more permissive than those in Florida, since Texas does not appear to even require that emergency plans be approved by local officials. Instead, there is simply an *expectation* that LTCs work with local officials in the development of their plans.<sup>294</sup> A Texas official explained:

HHSC does not approve provider emergency plans. During an annual survey, Regulatory Staff verifies that the facility has an emergency preparedness and response plan, and also checks the plan to ensure they have the required core elements. It is incumbent on providers to work with local officials to develop an emergency plan and ensure that nursing facility staff members are properly trained on how to execute it. ... HHSC does not keep provider emergency plans on file, and we do not know whether local authorities keep them on file. Nursing facilities are required to have written, updated plans on site.<sup>295</sup>

Survey verification procedures specified by CMS for review of LTC emergency plans are also at a very cursory level of review:

**Survey Procedures**

- Verify the facility has an emergency preparedness plan by asking to see a copy of the plan.
- Ask facility leadership to identify the hazards (e.g. natural, man-made, facility, geographic, etc.) that were identified in the facility’s risk assessment and how the risk assessment was conducted.
- Review the plan to verify it contains all of the required elements
- Verify that the plan is reviewed and updated annually by looking for documentation of the date of the review and updates that were made to the plan based on the review<sup>296</sup>

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<sup>292</sup> Harris Email, *supra* note 16.

<sup>293</sup> Justin Senior Letter, *supra* note 108; Fla. Stat. §400.23(2)(g); Fla. Admin. Code R. 59A-4 126.

<sup>294</sup> 40 Tex. Admin. Code § 19.1914.

<sup>295</sup> Kostroun February Email, *supra* note 31.

<sup>296</sup> Appendix Z, *supra* note 290, *see* E-0004.

The emergency plans for both Hollywood Hills and SCC—and the SCC supplemental hurricane plan—had significant flaws, discussed in more detail earlier in this report. The Hollywood Hills plans had inaccurate information about the status and capability of its emergency power supply and its ability to respond to heat emergencies. What’s more, the designated emergency manager for Hollywood Hills did not appear to have had any emergency management experience, medical training, or sufficient facility management qualifications. The SCC plan inaccurately described hurricanes, tropical storms and their respective warnings, and had inadequate evacuation transportation contracting.

If these emergency plans are to be effective, then a more thorough review-and-approval process is needed. Local emergency officials did not appear to identify the major gaps and flaws in these emergency plans, even though CMS and state agencies relied on them to review plans for adequacy. It is also unlikely that local emergency officials could reasonably be expected to have full access to—and knowledge of—the regulatory history of LTC facilities, such as Hollywood Hills’ emergency generation problems. Likewise, it would be difficult for resource-limited local emergency officials to maintain an authoritative understanding of emergency and safety requirements for LTCs, such as the temperature control requirements.

Simply put, if emergency plans are expected to fulfill LTC licensing requirements and effectively protect residents, then someone knowledgeable about those requirements should be approving the plans. If authority is delegated to local authorities to approve these plans, then they must be provided guidance on the relevant requirements and be provided ready access to those facilities’ regulatory compliance histories.

### C. Policies and Procedures: Community Resources—the Hospital Next Door

As discussed in Section III(G) of this report, the Rehabilitation Center at Hollywood Hills was just steps away from Memorial Regional Hospital, a nationally recognized Level I trauma center.<sup>297</sup> The hospital is identified as a valuable resource “located directly across the street” on the Hollywood Hills website:

In case of an emergency, **The Rehabilitation Center at Hollywood Hills** is located directly across the street from Hollywood’s Memorial Regional Hospital, ensuring our patients will receive the finest health care at all hours of the day and night.<sup>298</sup> (emphasis in the original)

Likewise, as described in Section III(G), Memorial Regional Hospital is specifically identified in the Hollywood Hills CEMP as a source of medical care in the event of a terrorist attack. However, it appeared not to have occurred to the facility’s management to put in place a similar arrangement for more predictable events, such as a hurricane or heat emergency. Moreover, there is no evidence that officials at Hollywood Hills consulted the hospital regarding the risk of a hot environment on the residents while waiting for the air conditioning to be restored.

<sup>297</sup> Press Release, Memorial Healthcare System, *Trauma Centers Upgraded to National Verification Status* (Nov. 3, 2017), available at <https://www.mhs.net/news/2017/11/american-college-of-surgeons>.

<sup>298</sup> The Rehabilitation Center at Hollywood Hills, *Long Term Care* (Aug. 24, 2018), permanent link available at [https://web.archive.org/web/20180824092813/http://hollywoodhillsrehab.com/long\\_term\\_care.shtml](https://web.archive.org/web/20180824092813/http://hollywoodhillsrehab.com/long_term_care.shtml).



**Image 7:** This screenshot of the Hollywood Hills website shows that the facility emphasized its proximity to Memorial Regional Hospital. Despite the proximity, management at Hollywood Hills do not appear to have sought medical assistance from the hospital in the days after Hurricane Irma knocked out its air-conditioning system. *Source:* Hollywood Hills website

Ironically, the only indication of collaboration between the hospital and Hollywood Hills during Hurricane Irma that Minority staff found was when the Larkin administrators called the hospital on the afternoon of September 12th to try to secure more spot coolers.<sup>299</sup> Only when the 911 calls started early in the morning of September 13th did the hospital know to spring into action. As patients began being brought to the emergency room, the hospital's staff took the unusual step of self-deploying to the nursing home.<sup>300</sup> Tracy Meltzer, Director of Nursing at Memorial Regional Hospital, describes the conditions when she entered the facility's second floor:

So when the elevator opened, the heat, there was like a blast of heat like when you open your car door at the end of the day after it had been sitting out – when you open your car door it was like a blast of heat hitting us when the elevator opened.<sup>301</sup>

Meltzer went on to describe residents she encountered when she arrived at Hollywood Hills:

So I noticed right when – the first patient that I noticed was in the hallway and it was a gentleman and he was kind of stiff with his body; he was kind of laying across his wheelchair. He didn't bend at the waist and he wasn't sitting in it properly. At first I thought maybe he was deceased so I went up to him and took a look at him. He was dry, he was breathing very slowly, his mouth was open. He had some thick mucus in the corner of his mouth. I felt him; his skin was dry and

<sup>299</sup> Anderson Phone Log, *supra* note 203; Hollywood Hills Timeline, *supra* note 197.

<sup>300</sup> Katz Deposition, *supra* note 110, at 113-129; Appendix E, Ex. 98, Deposition of Tracy Meltzer, *Agency for Health Care Administration v. Rehabilitation Center at Hollywood Hills, LLC* (Fla. DOAH 17-5769, Jan. 30, 2018), at 246-249 [hereinafter, Meltzer Deposition].

<sup>301</sup> Meltzer Deposition, at 245.

when I realized he was breathing I went on to see if I could help the staff. So I went into one of the patient rooms and there were two females in the beds. The first patient I went up to was closest to the window, the window was open, and I was asking her, trying to establish whether she needed my assistance, if I could by myself get her out of the bed and put her in a wheelchair; there were two wheelchairs in the room. I was trying to speak to her. She was dry. She was warm. She had sunk-in eyes. She was curled up in a fetal position and she just looked at me with her eyes; she was nonverbal. I couldn't really establish whether I was going to be able to lift her myself and put her in wheelchair (sic) so I went to the next lady in the bed that was closest to the door. She too was in a fetal position curled up on her bed, which was just a mattress; there was no sheet. She was in a diaper. She was hot and sweating. She was very wet. Her hair was wet. And she too, her diaper was saturated with urine and feces, and she too just kind of looked at me. She was nonverbal and that's when some of the Hollywood Hills staff came in the room. And one of the staff members picked the lady up closest to the window by herself and put her in the wheelchair. And I asked her if she wanted me to help her lift her, and she said we don't have time for that; we've got to get these people out of here, so then another worker helped me put the other lady into a wheelchair.<sup>302</sup>

Meltzer would call for an evacuation of the facility and declared what is known as a “mass casualty incident” or “green alert,” at the hospital, meaning that its operations were transitioned to triage mode in order to handle the high volume of patients who would be arriving.<sup>303</sup>

Identifying populations at risk and anticipating their needs during natural disasters is a strategy that Broward County already deploys in partnership with local hospitals for “special needs” patients. Dr. Katz, the emergency room director, described in his deposition an established county database for patients, such as those with home ventilators, living in single dwelling homes, which is used to triage and move at-risk persons to the hospital prior to the storm.<sup>304</sup>

The new CMS Emergency Preparedness rules contemplate the use of volunteers to supplement a facility's workforce. The rules also require the establishment of “arrangements with other LTC facilities and other providers to receive residents in the event of limitations or cessation of operations to maintain the continuity of services to LTC residents.”<sup>305</sup> However, the implication is that these arrangements are primarily for the transfer of residents when facilities are evacuated, not for medical care or supervision or other critical support services. The rule does not appear to require or encourage relationships with community resources, especially health care assets, such as nearby hospitals. In the case of Hollywood Hills, such a relationship might have meant the difference between life and death.

While it is understood that home-bound special needs patients and others without the institutional support of nursing home residents may need priority, LTC emergency plans should identify community resources that can support them during an emergency and provide

<sup>302</sup> *Id.*, at 246-248.

<sup>303</sup> *Id.*, at 246-249, Katz Deposition, *supra* note 110, at 113-129.

<sup>304</sup> Katz Deposition, *supra* note 110, at 43-45.

<sup>305</sup> 42 C.F.R. § 483.73(b)(7).

documentation of coordination with them. An elderly or disabled person shouldn't have to wait for a bioterrorism attack before the hospital next door is called for help.

#### **D. Policies and Procedures: The Absence of Oversight by Medical Directors and Staff in Emergencies and Emergency Preparedness**

The new Emergency Preparedness regulations are virtually silent regarding the role of physician medical directors or any senior medical staff in emergency preparedness. There are no requirements for medical director sign-offs in the preparation of emergency plans, policies, protocols, or response.

As discussed in detail in Section III(G) of this report, Hollywood Hills did not list a role for its medical director in its 2017 emergency plan; in fact, no physician is mentioned as serving in any capacity. Although the Hollywood Hills nursing staff, beginning with the Director of Nursing, is intended to have key roles in the hierarchy of authority during normal operations, the plan does not describe any such direct authority during an emergency. The Medical Director was not assigned a role under either structure.

To this point, attending physicians on the premises who saw their own patients in the days after the storm appear disconnected from the unfolding dangerous heat conditions in the facility, depositions show. One physician described a warning he received from one of the nursing staff on the afternoon of September 12th of how hot it was on the second floor after watching the facility's workers remove a light bulb from the first floor nursing station to reduce the heat:

**Q:** Okay. And it says that one of the nurses was sitting at the station and said to you, "Doc, don't go upstairs. It's really hot up there."

**A:** Yes, that is what they mentioned to me.

**Q:** And did you ever go upstairs?

**A:** No. I—you know, I just felt as though she was saying, you know, because she—I think I might have been sweating a little, and she said, "If you are hot here, go upstairs." You know, don't go upstairs. So that's the way I—you know, attributed the statement."<sup>306</sup>

This physician had no patients on the second floor, which he noted was populated with many people who were generally less mobile and/or had "dementia or some other psychiatric disease."<sup>307</sup> He chose not to go to the second floor to check on the conditions, despite the warning, even as a matter of concern for other patients regardless of whether they were under his care.<sup>308</sup> Minority staff found no evidence that rounding physicians coming in and out of the facility in the days after the storm were working under the guidance of—or in communication with—a medical director to ensure the safety of their patients.

<sup>306</sup> Gregory Smith Letter, *supra* note 12, *see* Exhibit 9, Deposition of Dr. Frances Cadogan, at 14-15.

<sup>307</sup> *Id.*, p. 15-17.

<sup>308</sup> *Id.*

According to CMS regulations, nursing homes must designate a physician to serve as a medical director.<sup>309</sup> This requirement was included, unchanged, in the 2016 “reform” regulations.<sup>310</sup> Medical directors are responsible for “implementation of resident care policies” and “the coordination of medical care in the facility.”<sup>311</sup> CMS describes the role of the medical director in a 2005 guidance document as “key” in ensuring coordination and quality of care, policy and protocol development, regulatory issues, survey requirement and physician compliance.<sup>312</sup> However, the regulations don’t define the fulfillment of obligations, oversight and time spent by a medical director.

Although payroll information is collected by CMS about medical directors, qualitative information about them is not. Section 1128(I)(g) of the Affordable Care Act requires that nursing homes electronically submit to the Secretary direct care staffing information (including information with respect to agency and contract staff) based on payroll and other verifiable and auditable data.<sup>313</sup> However, according to the American Medical Directors Association, “(n)ot only do they [CMS] not collect data on medical director training or time spent (other than through the Payroll-based Journal (PBJ), which so far has not been effective), they do not even keep track of which medical directors are appointed to which nursing homes.”<sup>314</sup>

The Department of Health and Human Services has, however, been scrutinizing nursing practices at LTCs. The distribution of registered nurses’ time devoted to direct patient care versus administrative responsibilities is currently undefined in federal regulations. CMS recently uncovered understaffing of registered nurses’ hours in nursing homes, leaving residents without the care of nurses—sometimes for days.<sup>315</sup> The Centers for Disease Control and Prevention has noted studies that show “higher nurse staffing levels are associated with higher quality of care outcomes for nursing home residents.”<sup>316</sup> Yet, more than 60% of full time equivalents (“FTEs”) in nursing homes are nursing aides; registered nurses represent just 12% of total full time FTEs in nursing home facilities.<sup>317</sup>

In the case of Hollywood Hills, the lack of coordination and intervention by the facility’s frontline staff, rounding physicians, and the facility’s medical director, was a missed opportunity to intervene in the developing medical crisis. This failure was one of numerous missteps that can

<sup>309</sup> 42 C.F.R. § 483.70(h).

<sup>310</sup> 81 Fed. Reg. 192,68784 (Oct. 4, 2016), available at <https://www.gpo.gov/fdsys/pkg/FR-2016-10-04/pdf/2016-23503.pdf>. The prior requirement at 42 C.F.R. § 483.75(i) was re-designated in the 2016 “Reform” revisions without change.

<sup>311</sup> 42 C.F.R. § 483.70(h).

<sup>312</sup> CMS, *Pub. 100-07, State Operations—Provider Certification (Transmittal 15, Medical Director Guidance)* (Nov. 28, 2005), available at <https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/downloads/R15SOMA.pdf>; Aman Nanda, “The Roles and Functions of Medical Directors in Nursing Homes,” *Rhode Island Medical Journal* 98, no. 3 (March 2015): 20-22, available at <http://www.rimed.org/rimedicaljournal/2015/03/2015-20-ltc-nanda.pdf>.

<sup>313</sup> CMS, *Memorandum—Implementation of Section 6106 of the Affordable Care Act—Collection of Staffing Data for Long Term Care Facilities, S&C: 15-35-NH* (Apr. 10, 2015), available at <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Survey-and-Cert-Letter-15-35.pdf>.

<sup>314</sup> Appendix G, Ex. 3, Email from Christopher Laxton to Lynn Hallarman (Sept. 5, 2018), at 2.

<sup>315</sup> CMS, *Transition to Payroll-Based Journal (PBJ) Staffing Measures on the Nursing Home Compare too on Medicare.gov and the Five Star Quality Rating System (Memorandum)*, QSO-18-17-NH, (Apr. 6, 2018), at 4, available at <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/QSO18-17-NH.pdf>.

<sup>316</sup> CDC, *Long-Term Care Providers and Services Users in the United States: Data From the National Study of Long-Term Care Providers, 2013-2014*, Series 3, no. 38 (Feb. 2016), at 5, available at [https://www.cdc.gov/nchs/data/series/sr\\_03/sr03\\_038.pdf](https://www.cdc.gov/nchs/data/series/sr_03/sr03_038.pdf).

<sup>317</sup> *Id.*, Fig. 9, at 18.

be traced back to flawed emergency planning, gaps in delegation of authority, and the absence of effective medical supervision while sheltering-in-place.

Minority staff was unable to find evidence in depositions or testimony of any involvement by the medical director during the days after the storm. The lack of medical oversight can be heard in 911 calls made by frontline staff as deaths cascaded during the night. The audio of the calls, obtained by the *Miami Herald*, paint a chaotic and disorganized scene. At the same time, it's not clear that the callers fully comprehended the cause or magnitude of the unfolding medical catastrophe.<sup>318</sup> For example, as the newspaper points out, "In the course of the eight calls, totaling more than 30 minutes, only one nurse mentioned that there was no air conditioning in the nursing home. ... Not one caller suggested that an evacuation was urgently needed."<sup>319</sup>

The Emergency Preparedness rule's requirements for emergency planning do not specify or require any role for facilities' medical directors or nursing or medical staff in emergency plans. CMS should revise the rules to include such provisions.

### **E. Policies and Procedures: Sheltering-in-Place and Evacuation**

Although the new Emergency Preparedness rules anticipate evacuation and sheltering-in-place scenarios and require readiness for both, they do not require policies and procedures to make such decisions—before, during, or after an emergency event—to ensure their success. For example, plans are not required to identify the personnel who decide whether to shelter-in-place or evacuate, their qualifications, or their roles and responsibilities. There also is no requirement for plans to contain a decision matrix or include factors that should be considered when making the decision to shelter-in-place, evacuate, or to reassess previous decisions in the midst of an emergency.

Whether or not a precautionary evacuation is deemed necessary, the experiences in Texas and Florida, as in Katrina and other storms, highlight that facilities may need to evacuate after the initial event. Hollywood Hills never took steps to effectively reassess its shelter-in-place decision. In Texas, SCC believed that it was initially under a shelter-in-place order and therefore not obligated to consider evacuation of its facilities in Port Arthur. And while SCC management in Port Arthur as well as management at La Vita Bella did eventually attempt to evacuate their facilities after flooding began, patients and staff faced hazardous circumstances when they did.

Finally, if a decision is made to shelter-in-place, then preparations, facilities, staff, and procedures need to be robust enough to do so. Hollywood Hills did not have the capability to do so, which was clearly shown by the absence of medical oversight and no ongoing decision-making process to ensure the safety of residents enduring extreme temperatures for several days.

As Minority staff wrapped up its investigation in the fall of 2018, Hurricane Florence added to the list of nursing homes that have needed to evacuate during or after hurricanes, once again potentially putting residents at risk. Forty residents of a nursing home in Lumberton, North

<sup>318</sup> Audio, *Listen to the 911 Call for Help from a Hollywood Nursing Home*, MP3 Audio, Miami Herald (Oct. 16, 2017), available at <https://www.miamiherald.com/news/local/article179191741.html>.

<sup>319</sup> *Id.*



**Images 8 & 9:** Above, a Lumberton, N.C., firefighter holds on to two nursing home patients as a member of the “Cajun Navy” drives his truck during the evacuation of a nursing home due to rising flood waters in Lumberton. Below, a truck transports nursing home staff and patients during the Lumberton evacuation. *Photos:* Alex Edelman/AFP/Getty Image  
*Source:* <https://www.npr.org/2018/09/16/648552849/with-angry-waters-rising-officials-warn-of-risk-to-life-from-florence>



Carolina, were rescued by first responders and volunteers from the Cajun Navy—the same group that responded to Hurricane Harvey—during a five-hour evacuation in the midst of Florence.<sup>320</sup> News footage and photographs (see above) show the nursing home surrounded by flood waters that required a boat rescue.<sup>321</sup> One volunteer recalled the scene to a reporter:

Allen Lenard brought his air boat from Monroe, Louisiana, arriving Wednesday. He and a group of other volunteers spent Saturday night taking about 40 residents from a nursing home in Lumberton where the water was trying to come in. Staff had been overwhelmed, he said, and some residents had medical issues that had not been handled for hours. A former Army medic who is among the volunteers changed catheters and oxygen tanks for patients, Lenard said. “Walking through the place, people would call to you and just beg you, please don’t leave me,” Lenard said.<sup>322</sup>

First responders and federal emergency workers also were needed to move more than 120 residents from a Fayetteville nursing home as the storm’s rain continued falling, following an evacuation order by the city, according to a press account.<sup>323</sup> The same press account stated that at least some of the Fayetteville evacuees had been evacuated from the Lumberton facility.<sup>324</sup>

Less than a month later, following Hurricane Michael’s landfall on the Florida Panhandle, the U.S. Coast Guard reported that its “shallow-water response teams helped assist 142 nursing home patients to a bus that transferred them to a safe haven at a Pensacola [Florida] hospital.”<sup>325</sup> According to information the Coast Guard provided Minority staff, the rescue operation occurred in two stages, over the course of two days, following the hurricane’s landfall on October 10, 2018. Roughly 100 residents were transported by bus to a hospital in Pensacola, Florida, on October 11th. Another 35 residents were left at the facility because they were “bedridden and their needs couldn’t be met on the buses,” the Coast Guard said.<sup>326</sup> The next morning, October 12th, the Coast Guard returned to the facility after it was notified that the remaining 35 residents had still not been evacuated. According to the Coast Guard, all remaining residents and staff were evacuated by 2:50 p.m. that afternoon.<sup>327</sup>

<sup>320</sup> CBS News, “Cajun Navy” Volunteers Help Evacuate North Carolina Nursing Home, Video (Sept. 17, 2018), available at <https://www.cbsnews.com/news/cajun-navy-volunteers-help-evacuate-north-carolina-nursing-home-residents/>.

<sup>321</sup> *Id.*; Erica Stapleton (@EricaReportsAll), *Crews working to evacuate a Lumberton nursing home as flood waters close in @WFMY #stormtrack2*, Twitter video (Sept. 15, 2018), available at <https://twitter.com/EricaReportsAll/status/1041063770066444289>.

<sup>322</sup> Martha Quillin and Tammy Grubb, *Lumberton, N.C.: ‘Please don’t leave me.’* Myrtle Beach Online (4:26 p.m., Sept. 16, 2018), available at <https://www.myrtlebeachonline.com/latest-news/article218483510.html>.

<sup>323</sup> Zahra Hirji, *The Race to Evacuate More than 120 Seniors and People With Disabilities Ahead of Florence Flooding*, BuzzFeed News (Sept. 16, 2018), available at <https://www.buzzfeednews.com/article/zahrahirji/hurricane-florence-flooding-evacuation-north-carolina>.

<sup>324</sup> *Id.*

<sup>325</sup> Press Release, U.S. Coast Guard, *Coast Guard Hurricane Michael Response*, Oct. 11, 2018, available at <https://content.govdelivery.com/accounts/USDHSCG/bulletins/213b34e>.

<sup>326</sup> Appendix G, Ex. 4, Email from Michele Zauche to Peter Gartrell (Oct. 16, 2018).

<sup>327</sup> *Id.*

### **Weighing the Risks of Evacuating versus Sheltering-in-Place**

The decision to evacuate prior to a major weather event, barring a mandatory evacuation order, falls on the administrators of an LTC facility, presumably in consultation with emergency responders, state and local entities, and key medical personal.<sup>328</sup> The 2006 OIG report identified a number of problems encountered by nursing home administrators surrounding evacuation of residents. Among the 13 nursing home administrators surveyed, common problems encountered during evacuation included:

- Transportation contracts were not always honored;
- Evacuation travel took longer than expected;
- Medications required complicated handling;
- Host facilities were unavailable or inadequately prepared to receive incoming patients;
- Facilities could not maintain adequate staff;
- Food and water shortages occurred or were narrowly averted, and
- Difficulty promptly returning residents to their home facilities.<sup>329</sup>

The main problems reported in the 2006 report for facilities that opted to shelter-in-place was maintaining adequate staffing levels, accessing community resources, and disruptions in power.<sup>330</sup> These conditions forced two of the nine nursing homes surveyed by the OIG to be evacuated after they had originally sheltered-in-place.<sup>331</sup> The OIG also identified inconsistencies in facilities' adherence to their emergency plans, which often did not contain enough detailed criteria or other guidance to determine in the first place whether to evacuate or shelter-in-place.

Similar findings were made in an interview survey of Louisiana nursing home administrators after Hurricanes Katrina and Rita.<sup>332</sup> Critical factors identified when deciding to evacuate prior to a storm included: the degree of the emergency (as defined by state and local officials), previous experience of nursing home leadership with disaster-planning, and logistical considerations surrounding staffing numbers and transportation. This study highlighted several areas in need of improvement including:

- Inadequate assistance from state and federal emergency responders;
- Nursing home residents not identified as a priority group for evacuation;
- Staff retention during and after an emergency event; and
- Dangerous or implausible logistical—and physical—problems related to evacuating frail nursing home residents.<sup>333</sup>

Complicating any decision to shelter-in-place or to evacuate is the fact that most nursing home residents have some combination of functional, sensory, or cognitive impairments that require ongoing care and medical attention. Many take multiple medications, need special diets and

<sup>328</sup> Disaster Preparedness and Response: The Special Needs of Older Americans, Before U.S. Senate Special Committee on Aging, 115th Cong. (2017) (statement of Kathryn Hyer, Ph.D., M.P.P., and David Dosa MD, MPH), available at [https://www.aging.senate.gov/imo/media/doc/SCA\\_Hyer\\_09\\_20\\_17.pdf](https://www.aging.senate.gov/imo/media/doc/SCA_Hyer_09_20_17.pdf) [hereinafter Hyer-Dosa Testimony].

<sup>329</sup> HHS-OIG 2006, *supra* note 18, at 10.

<sup>330</sup> *Id.*, at 15.

<sup>331</sup> *Id.*, at 15.

<sup>332</sup> David Dosa et al, "To Evacuate or Not to Evacuate: Lessons Learned from Louisiana Nursing Home Administrators Following Hurricanes Katrina and Rita," *Journal of the American Medical Directors Association* 8, no. 3 (March 2007): 142-149, available at <https://www.ncbi.nlm.nih.gov/pubmed/17349942>.

<sup>333</sup> *Id.*

assistive equipment to walk or move. Complex medical care for nursing home residents can include life-sustaining interventions such as feeding tubes, dialysis, and ventilators (breathing machines). Individuals over 85 are more likely to be “frail,” meaning they have very poor global physical reserve, can be bedridden, and are particularly susceptible to life-threatening infections and poor health outcomes from environmental stressors.<sup>334</sup> Major interruptions in medication regimens, caregiving or daily routines can precipitate serious or fatal medical complications, trigger irreversible functional deterioration or induce suffering.<sup>335</sup>

Research on precautionary evacuations has also generally argued against them. Such research includes work by David Dosa, a medical doctor, and Kathryn Hyer, a professor who studies geriatric care and regulation, who both were deposed during the Hollywood Hills licensing hearing. Their research examined the impact of precautionary pre-storm evacuations on morbidity and mortality of nursing home residents during Hurricanes Katrina (2005), Rita (2005), Gustav (2008) and Ike (2008).

Dosa co-authored a 2011 study of more than 36,000 nursing home residents, which concluded that morbidity and mortality rates increased after hurricanes. The study also showed that residents living in facilities that evacuated had worse health outcomes than those that sheltered-in-place. The study found that facilities that evacuated prior to the storm had higher post-incident hospitalization rates—8.3% versus 1.8%—and mortality rates—5.3% compared to 2.7%—than facilities that sheltered-in-place.<sup>336</sup>

Another study Dosa co-authored specifically examined the evacuation of some 21,000 nursing home residents with dementia at 119 Louisiana facilities in the wake of Hurricane Gustav in 2008. The study found that death rates were 2.8% higher within 30 days of the storm for these dementia patients at facilities that evacuated compared to those that sheltered-in-place; within 90 days of the storm, death rates were 3.9% higher at evacuated facilities.<sup>337</sup>

A 2008 study of 217 Texas nursing homes following Hurricane Rita found that evacuation of a larger total number of residents—and evacuation by bus—was associated with resident death. Issues such as the length of time spent on buses, problems with air conditioning, and proper

<sup>334</sup> Mary Jo Gibson and Michele Hayunga, *We Can Do Better, Lessons Learned for Protecting Older Person during Disasters*, AARP (2006), available at <https://assets.aarp.org/rgcenter/il/better.pdf>; Lauren S. Fernandez et al., “Frail Elderly as Disaster Victims: Emergency Management Strategies,” *Prehospital and Disaster Medicine* 17, no. 2 (June 2002): 67-74, available at <https://www.ncbi.nlm.nih.gov/pubmed/12500729>; CDC, *Older Persons’ Health*, (accessed Sept. 26, 2018), available at <https://www.cdc.gov/nchs/fastats/older-american-health.htm>.

<sup>335</sup> Nicholas G. Castle, “Relocation of the elderly,” *Medical Care Research and Review*, 58, no. 3 (Sept. 2001): 291-333, available at <https://www.ncbi.nlm.nih.gov/pubmed/11523292>; Eric A. Coleman and Robert A. Berenson, “Lost in Transition: Challenges and Opportunities for Improving the Quality of Transitional Care,” *Annals of Internal Medicine*, 141, no. 7 (Oct. 2004): 533-536, available at <http://annals.org/aim/article-abstract/717858/lost-transition-challenges-opportunities-improving-quality-transitional-care?volume=141&issue=7&page=533>.

<sup>336</sup> David Dosa et al., “To Evacuate or Shelter in Place: Implications of Universal Hurricane Evaluation Policies on Nursing Home Residents,” *Journal of the American Medical Directors Association* 13, no. 2, (Feb. 2012): 190.e1-190.e7, available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3264770/>.

<sup>337</sup> Lisa M. Brown et al., “The Effects of Evacuation on Nursing Home Residents With Dementia,” *American Journal of Alzheimer’s Disease & Other Dementias* 27, no. 6 (Sept. 2012): 406-412, available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3711109/>.

accommodations for multiple persons with special physical and mental health needs were cited as contributing factors by the survey respondents.<sup>338</sup>

These studies are among those that have driven emergency planners and LTC administrators toward a general consensus that all but defaults to sheltering-in-place unless a mandatory evacuation order is issued, or if changing circumstances dictate the need to evacuate.<sup>339</sup> What researchers have not examined in their research is how secondary evacuation—i.e., one that was un-planned or was made under duress—compares to a planned evacuation. Dr. Hyer said as much in expert testimony during the Hollywood Hills trial, pointing out that many studies and articles examining nursing home evacuations do not account for the benefits and risks of post-storm evacuations, only evacuations that took place *pre-storm*.

We had never looked at the effect of evacuation after an event. So all of our work is done to look at the evacuation prior to the storm and if nursing homes evacuate because a tree falls on them, they don't have power, they're unsafe to maintain nursing home residents, those evacuations, if they occur after, would be in a group of nursing homes that were considered sheltering in place.<sup>340</sup>

### **The Importance of Planning and Decision-Making When Sheltering-In-Place**

The decision to shelter-in-place can carry with it substantial consequences. As seen in the examples examined in this report, sheltering-in-place resulted in additional risks to patients and staff. For some facilities, it required later evacuations under worse circumstances. In the case of Hollywood Hills, it resulted in 12 deaths.

In testimony to the U.S. Senate Committee on Aging on September 20th 2017—one week after Hurricane Irma—Dr. Hyer pointed out the necessity for nuanced decision-making processes surrounding evacuation-planning and execution:

Evacuation should not be “all or nothing.” There are times where certain medically complex patients (e.g., dialysis patients) might be more optimally treated with early evacuation while other more stable patients shelter in place. More research to identify the types of patients that benefit from evacuating or sheltering in place must be conducted.<sup>341</sup>

Dr. Hoffman, the geriatrician and medical director who testified during the Hollywood Hills licensing proceeding, made similar observations. She emphasized that deciding to continue to shelter-in-place versus evacuating after a storm should be reexamined depending on the situation. The safety risks and benefits also must be carefully weighed to ensure the well-being of residents.

<sup>338</sup> Carmen Castro et al., “Surviving the Storms; Emergency Preparedness in Texas Nursing Facilities and Assisted Living Facilities,” *Journal of Gerontological Nursing* 34, no. 8 (Aug. 2008): 9-16, available at <http://tcombudsman.org/uploads/files/issues/surviving-the-storm.pdf>.

<sup>339</sup> Daylina Miller, *Study: Evacuating Nursing Home Patients before a storm not always the safest option*, WLRN (Oct. 11 2017), available at <http://www.wlrn.org/post/study-evacuating-nursing-home-patients-storm-not-always-safest-option>; Hyer-Dosa Testimony, *supra* note 328.

<sup>340</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1812.

<sup>341</sup> Hyer-Dosa Testimony, *supra* note 328, at 4.

The ideal is to evacuate them to a safe environment that you know that you're going to be able to keep the ambient temperatures. If you're going to try to shelter in place, you really need to have a plan. To closely monitor your ambient temperatures and still I think you still need to continue with evacuation plans if you don't have air conditioning.<sup>342</sup>

Dr. Hoffman went on to add:

You would have in your plan an orderly fashion, such that your highest risk residents you would try to get out as soon as you could. Preferably within that subsequent hours and then your resident that are at less risk (sic), you'd continue to evacuate them as time went on. So it's a process, but you need to start it right away.<sup>343</sup>

These are difficult decisions, but they must be planned for. CMS noted in its response to the Committee that the Emergency Preparedness rule:

...is not specific as to when a facility must evacuate or shelter-in-place in order to allow flexibilities for the facilities, as the circumstances of each disaster vary. The expectation is facilities will assess these procedures during their risk assessments and continue to maintain resident safety and care during an emergency.<sup>344</sup>

The Minority staff does not expect that CMS rules will be specific about when a facility must evacuate. However, the rules should be specific about the need to have procedures in place that ensure that shelter-in-place and evacuation decisions will be made by qualified personnel in a methodical way that will protect residents, not just an expectation that *somehow* they will.

In this regard, Texas HHSC stated in its response to the Committee that in the aftermath of Hurricane Harvey it is reviewing current measures and recommendations to help nursing homes and assisted living facilities better prepare and respond to disasters. The review includes a recommendation "...to lawmakers that local authorities consider imposing evacuation orders sooner for facilities housing a high number of individuals with limited mobility."<sup>345</sup>

The more cognizance and attention that local emergency managers gain about the unique challenges of LTCs and assisted living facilities, the better. Still left unclear, however, is where responsibility ultimately rests to make these evacuation decisions—with state and local emergency managers or with facility administrators?

## **F. Additional Emergency Preparedness Concerns: Improvised Communication Strategies Compounded Problems in Florida and Texas**

The Emergency Preparedness regulations issued by CMS require the development of a communications plan. It must contain primary and alternate methods of communication, detailed

<sup>342</sup> Hoffman-Hyer Deposition, *supra* note 127, at 1745-1746.

<sup>343</sup> *Id.*, at 1779.

<sup>344</sup> Verma Letter, *supra* note 27.

<sup>345</sup> Charles Smith Letter, *supra* note 28.

contact information for residents, staff, and key personnel within the facility, as well as local, state and federal entities, licensing—and certification authorities, and the long-term care ombudsman. The plan also must contain a method of information-sharing that includes medical documentation to maintain continuity of care between providers and facilities.<sup>346</sup> The regulations also require the plan to include a means of providing information about the LTC’s “occupancy, needs, and its ability to provide assistance, to the authority having jurisdiction or the Incident Command Center, or designee.”<sup>347</sup> However, the regulations do not require clearly assigned roles and responsibilities to ensure that the LTC staff tasked with carrying out the communications plan have sufficient training and expertise to accurately convey critical information to external parties.

As described in the “Requests for Outside Assistance” discussion in Section III(F), Hollywood Hills employed a disorganized, *ad hoc* process for communication with state and local agencies. For example, along with other nursing homes in the state, it was instructed to enter the facility’s status information into the Florida Health STAT database on a twice-daily basis. However, information regarding the operability of the cooling system was incorrectly entered, listing its status as “operational” at the same time the facility’s senior executives were making urgent calls to the state authorities and the power company to report that the cooling system was non-operational.<sup>348</sup>

Hollywood Hills’ emergency external communications were also focused almost entirely on state officials and agencies—a focus driven by pre-storm conference calls those officials and agencies held with the nursing home industry prior to the storm. Although its emergency plan was annually reviewed and approved by the Broward County Emergency Management Division, and power restoration priorities were set by the county’s emergency managers, Hollywood Hills did not apparently contact Broward County emergency managers until the morning of September 12th. Even then, a senior executive involved in managing the response was unaware of even that contact with the county. Further demonstrating the lack of communication planning or internal coordination, both Ms. Anderson, the Behavioral Health CEO, and Mr. Carballo, the Hollywood Hills CEO, separately called the governor’s cell phone within minutes of each other on the morning of September 12th.

Of even greater concern is that throughout a multi-day crisis, the growing health threat facing the residents appears never to have been communicated internally among facility response managers, or coherently conveyed to appropriate emergency authorities. For example, Ms. Anderson, who communicated with multiple state officials, had no first-hand knowledge of the clinical status of patients in the nursing home other than through conversations with the facilities’ head of engineering and Mr. Carballo, the non-clinical CEO of the nursing home. The Hollywood Hills CEMP does not designate or mention Ms. Anderson as a point of contact during emergencies. While she claims to have conveyed “urgency” to state officials and agencies regarding power restoration, based on her deposition and testimony, she never went to the nursing home to assess conditions there. Furthermore, her internal communications do not appear to include input from

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<sup>346</sup> 42 C.F.R. § 483.73(c).

<sup>347</sup> 42 C.F.R. § 483.73 (c)(7).

<sup>348</sup> Gov. Scott’s Timeline, *supra* note 202.

the facility's medical staff—either the physician medical director or its nursing staff—regarding the danger residents faced from prolonged exposure to extreme heat.

Ms. Anderson describes her internal communications with Mr. Carballo and Mr. Williams, the Director of Engineering, as focusing only on power restoration and not the clinical state of the residents:

**A:** I was speaking with Jorge [Carballo] and with James [Williams], those were like my primary source of communication, and I was aware that James was communicating with FPL and his efforts with FPL, and they were aware that I was making calls to higher you know, higher government, emergency hot lines, so they were aware.

**Q:** Did they ever communicate to you that they were concerned about the temperature within the facility?

**A:** We didn't really talk about specifically in regards to, "Oh, my goodness, this is concerning" in the sense of—we were just communicating on how we can get this resolved, who is doing what, what efforts were being—taking place. That was the main source of communication in between the team in regards to what efforts were being done to make sure that we got this resolved.

**Q:** So they didn't communicate to you any concern about the patients that were in the facility and the exposure they had to the conditions in the facility?

**A:** They didn't specifically say anything about the patients. We communicated in regards to "How are things going? Is everyone okay?" and then we communicated really on the efforts altogether, like the efforts regarding who is making what phone calls, what updates we had, who is escalating what, so that was the main source of communication.<sup>349</sup>

Regarding her external communications, Ms. Anderson testified that she told the state that residents were not in distress, while simultaneously conveying that the situation was "urgent."

**Q:** Did you indicate to them that you had any patients that were in distress?

**A:** I did not indicate that because that was not the case. I just indicated that we were a hospital and a nursing home in the same building that had elderly, some on oxygen.<sup>350</sup>

Communications with other outside entities also were fragmented. It appears that at least three different Larkin managers called FPL. Larkin administrative staff called Memorial Regional Hospital searching for additional spot coolers,<sup>351</sup> but no discussions took place between the two facilities' respective health care staffs, nor any about the medical status of Hollywood Hills

<sup>349</sup> Anderson Deposition, *supra* note 203, at 67-68.

<sup>350</sup> Anderson Deposition, *supra* note 203, at 88-89.

<sup>351</sup> Anderson Phone Log, *supra* note 203; Hollywood Hills Timeline, *supra* note 197.

residents. Even on the morning of September 13th, hospital medical staff didn't call their counterparts at Hollywood Hills to find out what was taking place at the nursing home—they walked there.

At the Port Arthur nursing homes, the principal representative communicating with state and local officials was the corporate regional vice president,<sup>352</sup> a position listed on the emergency plan. The company did contact local emergency officials as early as 10:45 p.m. on August 29th—roughly one hour after flooding at the two facilities began—to ask for evacuation assistance, and was told no assistance was available. At 2 a.m. on August 30th, the company apparently again called local emergency officials, who again told them they could not assist. The regional vice president then began contacting state officials beginning at 10 a.m., some 12 hours after flooding began, according to the timelines provided by SCC. He continued trying to reach state officials until 1 p.m. on August 30th, but was unable to reach them, reportedly because they were meeting with the governor. This is roughly the time that self-deployed volunteers and local law enforcement officers arrived at the Port Arthur Place facility.

As described in the narrative of events for the Port Arthur nursing homes, the Lake Arthur Place administrator was not in control of the facility and, even when confronted by uniformed law enforcement officials, he resisted their assistance. He seemed unaware of efforts by local first responders to assist him and reportedly insisted the facility could only be evacuated by members of the National Guard.<sup>353</sup> Somewhere along the line, effective communication with local emergency managers and first responders seems to have disappeared.

In the case of La Vita Bella, the first contact for assistance was apparently made to state officials who forwarded their request on to the state emergency operations center. State officials “were in contact with La Vita Bella about its need to evacuate and communicating with 911 on the facility’s behalf, as well as the state emergency management.”<sup>354</sup> As in the case of Hollywood Hills, it appears that the primary communications channels for La Vita Bella were to state officials and agencies, not to local emergency responders. Unlike SCC or Hollywood Hills, La Vita Bella did not have a large management organization. Reliance on a state agency, once contacted, to provide communications may have been the best solution, but not the conventional solution.

The events at Hollywood Hills and Port Arthur illustrate the imperative for communication plans that specify which staff are responsible for conveying accurate emergency information internally and externally, to whom they are to communicate, and in what sequence and priority. These plans must be developed in strict coordination with local and state emergency planners and agencies to reflect the formats in which they expect to receive communications during an emergency. Designated communicators must train for these roles and plan procedures. Frontline health professionals at all levels should have clearly designated roles in emergency communications—beyond making 911 calls when it is too late—that are spelled out in emergency plans. Communication plans should recognize the necessity of fast response times to prevent and anticipate life-threatening

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<sup>352</sup> SCC Timelines, *supra* note 30, *see* Exhibit H.

<sup>353</sup> SCC Search Warrant, *supra* note 5.

<sup>354</sup> Charles Smith Letter, *supra* note 28.

situations for frail nursing home residents. Similarly, state and local authorities must provide clear and consistent guidance and procedures to nursing homes and assisted-living facilities that are approved and coordinated within the state, in advance, to avoid ad hoc procedures, redundant communications channels, delays and fatal mistakes.

### **G. Additional Emergency Preparedness Concerns: Consideration of At-Risk Populations in Power Restoration Prioritization**

Power restoration priorities in Broward County, as in other Florida counties, are established between FPL and Broward County emergency management officials. FPL provides the county with designation criteria and account information. The county designates which FPL customers fall within the specific response categories. These designations are reviewed annually. FPL representatives told Minority staff they accept the county's determinations.

There are two relevant classification categories in this case.<sup>355</sup> The highest category includes facilities designated as Critical Infrastructure Function (CIF). These are facilities and infrastructure that play a key role in the communities' ability to recover after a serious event, such as a storm, flood, tornado, etc.<sup>356</sup> The next level of priority is the Priority Function designation. Priority Function is defined as non-critical infrastructure that "play a decisive role in community recovery after a serious event."<sup>357</sup> Of the 64 nursing homes in Broward County, only three were designated as CIF facilities.<sup>358</sup> The other 61 facilities, including Hollywood Hills, were designated as Priority Function facilities. FPL "has all nursing homes designated as 'Priority Function Facilities' as a default designation."<sup>359</sup> Other types of facilities in the Priority Function category include blood banks, dialysis centers, public and private schools, universities and colleges, gas stations, grocery stores and pharmacies.<sup>360</sup>

Nursing homes and other facilities covered by this ranking system are often required to have emergency plans and capacity, such as emergency generators, to literally weather the storm. However, this restoration priority ranking system is based on the importance and role of the various power customers in the recovery phase after a serious event. It is not based on the *risk* associated with the populations in such facilities, either during or after such an event. Additional attention should be given to addressing this risk in setting power-restoration priorities.

<sup>355</sup> Broward County Press Release, *supra* note 219.

<sup>356</sup> Appendix F, Ex. 4, Email and Attachment from Robert Sendler to Minority staff (Dec. 12, 2017) [hereinafter, NextEra CIF Guidance Document]

<sup>357</sup> *Id.*; Broward County Press Release, *supra* note 219.

<sup>358</sup> NextEra CIF Guidance Document, *supra* note 356.

<sup>359</sup> Appendix F, Ex. 5, Email from Robert Sendler to David Berick *et al.* (Jan. 12, 2018).

<sup>360</sup> NextEra CIF Guidance Document, *supra* note 356.

## Part V: Conclusion

Flawed responses to Hurricanes Harvey and Irma placed nursing home and assisted living facility residents and staff in dangerous conditions and, in the case of 12 residents in Florida, led to their deaths.

During the 60-plus hours without air conditioning at Hollywood Hills, nursing home administrators in charge never recognized the increasingly dire circumstances and the threat to residents' health that they posed. Leadership failed to ensure adequate medical supervision of frontline staff while missing the signs and symptoms of impending fatal heat stroke.

While response efforts focused on power restoration, the emergency management structure and administrative team neglected to effectively and accurately assess the situation. Although the facility's emergency management plan identified a power loss in hot weather as a possible hazard, there was no strategy or clinical protocol to address a heat emergency resulting from a power loss. This failure is especially notable in light of longstanding deficiencies in the facility's emergency power capability. The evidence further suggests that the improper installation of portable air conditioning units—one of several poorly executed *ad hoc* measures taken in the absence of adequate emergency planning and preparedness—made conditions worse. Current CMS regulations and guidance allow such measures in lieu of emergency power supplies adequate to power the facilities' temperature control equipment.

At the time of Hurricane Irma, there was no Florida state requirement to have a generator adequate to maintain nursing homes or assisted living facilities at safe temperatures. There is still no federal requirement to do so. The existing CMS temperature standard is not a health- or evidence-based standard and it doesn't take into account the cumulative effect of air temperature and humidity—i.e., the heat index—on the body (a factor immediately highlighted by the survey team in their post-incident report). Moreover, Hollywood Hills did not have top priority for power restoration, and, under the current power restoration guidance in Florida, nursing homes generally do not.

In Texas, the evacuation of the Lake Arthur Place nursing home was marked by the use of physical force, intimidation, and ultimately physical restraint by local law enforcement officers. At the La Vita Bella assisted living facility, also in Texas, residents spent hours in waist-deep water waiting for help. Facility administrators in Texas looked to local officials to order mandatory evacuations and failed to accurately assess or re-assess their own risk despite forecasters' predictions of catastrophic conditions. The SCC hurricane plan had incorrect information about how to evaluate such risks and included arrangements for emergency evacuation transportation services that were directly at odds with the National Hurricane Center's protocols for hurricane advisories.

Although the circumstances of these cases are all different, they raise serious questions about the adequacy of emergency planning and training for nursing homes and assisted living facilities. In these instances, as in earlier hurricanes, and more recently during Hurricane Florence, the occurrence of nursing home emergencies during or after storms strongly suggests that emergency planning is not robust enough. Facilities must be prepared to make choices with life-or-death

consequences to either evacuate before a hurricane or shelter-in-place, or when circumstances dictate, evacuate if conditions become unsafe.

Despite recent changes by CMS to improve emergency preparedness, these events during Hurricanes Harvey and Irma raise major concerns about whether the recently updated LTC requirements and existing guidance adequately prepare care facilities to make these critical decisions and to successfully implement them. A decision to shelter-in-place must be supported by the capability to continue doing so for the duration of the storm, and for days afterwards, when power may be out and normal supply lines are not available. Shelter-in-place plans also should include a decision-making structure in which well-trained and qualified medical and administrative staff make and, if necessary, re-evaluate these decisions. Federal and state emergency planning regulations, as well as the process for approving emergency plans, should be re-examined to ensure facilities meet such a test.

Communication strategies in both Florida and Texas also proved ineffective. Key information—the heat emergency risk to patients at Hollywood Hills and the coordination of evacuation efforts in Texas—was poorly communicated both to and from local and state officials and emergency management and response personnel. The changes to CMS’s emergency communications regulations, in their current iteration, are unlikely to ensure timely and efficient preparations and responses to emergency conditions given the problems identified in Florida and Texas during the 2017 hurricanes.

Hurricanes are not rare, unexpected events. They are a common occurrence that climate scientists expect will increase in frequency and intensity as ocean temperatures continue rising, along with more extreme drought and heat.<sup>361</sup> As this report is being completed, it is once again hurricane season, which arrives every summer and fall. Hurricane Florence and Hurricane Michael have demonstrated the devastating force of hurricanes, with destructive winds, catastrophic storm surges, and widespread flooding across the southeastern United States. And as in past storms, there were nursing homes that sheltered-in-place that had to be evacuated during or after the storms.

This investigation cataloged a series of missteps, poor emergency planning, and faulty communication strategies that contributed to the misery and the preventable deaths of nursing home residents. The investigation identified gaps in nursing home emergency preparedness and response, particularly when their vulnerable residents are sheltered-in-place.

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<sup>361</sup> NOAA Geophysical Fluid Dynamics Laboratory, *Global Warming and Hurricanes* (Sept. 20, 2018), available at <https://www.gfdl.noaa.gov/global-warming-and-hurricanes/>; John Walsh and Donald Wuebbles, “Changes in Hurricanes,” in *The National Climate Assessment* (Washington, DC: 2014), available at <https://nca2014.globalchange.gov/report/our-changing-climate/changes-hurricanes>; Environmental Protection Agency, “and Climate,” in *Climate Change Indicators in the United States* (Washington, DC: 2016), 4th ed., 17, available at <https://www.epa.gov/climate-indicators/weather-climate>.

## Part VI: Recommendations

*Based on the investigation's findings, the Minority staff makes the following recommendations to improve emergency preparedness at LTCs.*

### A. Temperature Protection of Elderly Populations

#### 1. **Revising the Safe and Comfortable Temperature Standard:**

Given the vulnerability of elderly populations to heat stress, CMS should reevaluate and revise its “safe and comfortable” temperature standard. New standards should reflect health- and evidence-based risks that high temperatures pose for this population. Heat index guidelines should be incorporated into the safe temperature range.

#### 2. **Applicability of the Safe and Comfortable Temperature Standard in Emergencies:**

CMS should reissue its Emergency Preparedness rules or issue guidance, such as an update to Appendix Z, to make clear the safe and comfortable temperature standard strictly applies during emergency situations.

#### 3. **Emergency Power Capable of Maintaining Safe Temperatures:**

CMS should adopt additional requirements to specifically require that emergency power capacity be capable of maintaining the safe and comfortable temperature standard.

#### 4. **Warnings for Alternative Temperature Controls:**

CMS, state and local officials should issue warning guidance on the use of alternative means of maintaining temperatures (i.e., spot coolers). Such guidance would help head off improper use of these alternatives, like the flawed installation of these units at Hollywood Hills. Such efforts can worsen, rather than improve, emergency conditions.

#### 5. **Caring for Senior Citizens in Heat Emergencies:**

Senior citizens are uniquely vulnerable to irreversible health consequences and death related to heat stress. CMS should make this risk visible by instituting requirements and guidance that require facilities caring for senior citizens to specifically prepare for heat emergencies, particularly those located in regions of the country where they are likely to occur. Such requirements should include training of staff in the signs, symptoms, and treatment of heat stress and protocols for monitoring residents' health and exposure, the facility's temperatures, and local heat index measurements.

#### 6. **Coordination with Electricity Providers:**

Because of the vulnerability of seniors to heat stress, CMS, state and local officials should coordinate with electricity providers to ensure that higher priority is given to nursing homes when considering requests to restore power during emergencies, especially those in which heat may be an aggravating factor. These planning efforts should include appropriate contingencies for facility evacuations if power cannot be restored in a timely manner.

## **B. Sheltering-in-Place/Evacuations**

### **1. Shelter-in-Place/Evacuation Warnings:**

CMS and states should clarify the respective roles and responsibilities of government and long-term care facilities in regard to ordering, and responding to, mandatory shelter-in-place and evacuation orders. State and local governments should consider additional techniques and methods for providing emergency warnings to facilities to aid them in meeting their obligation to protect the health and safety of residents.

### **2. Shelter-in-Place/Evacuation Guidance and Research:**

The research data examining *post-storm* sheltering-in-place versus evacuation is inadequate to inform decision-making for nursing home administrators. More research is needed—including the establishment of best practices—for making sheltering and evacuation decisions. Facility administrators need more guidance on how to make these decisions including the factors that need to be weighed against one another.

## **C. Emergency Plans**

### **1. Effective Review and Approval of Emergency Plans:**

CMS, states, and local governments must re-examine their processes for reviewing and approving long-term care facilities' emergency plans to ensure that they are complete, accurate, and protective of residents' health and safety. CMS and states should ensure that emergency plans actually address the specific hazards identified in the facility's hazards assessments. The quality of the underlying hazards assessments also must be verified. CMS and the states should ensure that emergency managers have proper training and qualifications to carry out their roles and responsibilities. If states delegate plan approval authority to local governments, they should provide guidance on plan requirements, facility regulatory history, review procedures, and related documentation.

### **2. Emergency Plan Content—Community Resources:**

CMS and states should expand emergency plan requirements to require identification of community resources, such as local hospitals, that can supplement the emergency capabilities of long-term care facilities, especially with regard to health and safety services. Plans should be required to include evidence of coordination with those resources. Nursing homes and assisted living facilities are required to have their own preparedness plans and capabilities. However, communities and local emergency management-and-response entities must integrate—or better integrate—nursing homes and assisted living facilities into community-wide emergency planning strategies.

### **3. Emergency Plan Content—Evacuation/Shelter-in-Place Decision-Making:**

CMS and states should establish clear roles, responsibilities, and qualifications for decision-makers charged in emergency plans with making evacuation and shelter-in-place decisions. Such standards should also require documented protocols for making and reassessing such decisions, and include basic factors that facilities should consider.

**4. Emergency Plan Content—Evacuation and Shelter-in-Place Capabilities:**

CMS and states should re-examine their requirements for shelter-in-place preparations and operations to ensure that facilities can, in fact, safely shelter-in-place. Such requirements should ensure that facilities have the appropriate operational procedures to shelter-in-place. For example, facilities that shelter-in-place should be able to increase medical monitoring of residents and monitor post-event conditions such as flooding. Evacuation planning and capacity should similarly address likely evacuation scenarios, including weather warnings, regional emergencies, and secondary, post-event evacuations.

**5. Emergency Plan Content—Emergency Transportation Contracts**

Emergency plans must include logistically and legally executable transportation contracts to ensure safe and timely evacuations. Contracts should take into account the facility's likely evacuation scenarios, and be rooted in the definitions and procedures governing natural disaster bulletins. CMS and state licensing agencies must review emergency transportation contracts to ensure they are appropriately tailored to each facility's geography, size and the patient population's medical needs.

**6. Integrating Medical Staff into Emergency Planning:**

CMS should modify its emergency preparedness requirements and guidance to ensure that medical directors and health care staff at long-term care facilities are integrated into the emergency planning process and resulting emergency plans. Medical directors and other key medical personnel should have an active role regarding shelter-in-place and evacuation decisions, and any related operations. Medical directors and other key personnel also should be responsible for the development of clinical protocols and policies aimed at monitoring and mitigating the health risks to residents during emergency conditions. Senior medical staff should be present in the facility throughout an emergency until conditions are deemed safe. Emergency training and education should be required for all frontline staff commensurate with their roles in the care of patients and the facilities' emergency plans.

**7. Planning for Floods:**

CMS and states should ensure that long-term care facilities in coastal areas at risk of storm surge, and those that are in or near federally designated flood zones, fully address these risks in their hazards assessments and include flood monitoring and secondary evacuation procedures in their emergency plans.

**D. Communications and Communication Plans****1. Coordinating Communication with State and Local Authorities:**

Facility communication plans must be developed in stricter coordination with local and state emergency planners and agencies. These plans must reflect which entities or emergency officials will be contacted, what form of communication will be used, and in what priority order such communications will be made. Similarly, state and local authorities must provide clear and consistent guidance and procedures to nursing homes and assisted living facilities regarding emergency communications. Such guidance and procedures should be approved and coordinated within the state annually, such as prior to hurricane season. Such guidance should be intended to limit *ad hoc* procedures, redundant communications, and delays or confusion in the emergency response.

**2. Effective Communication of Emergency Information to Authorities:**

CMS emergency preparedness requirements should be revised to ensure that emergency communication plans identify and delineate the roles and responsibilities of administrators and staff at long-term care facilities expected to serve as points of contact during an emergency. Designated points of contact should be required to undergo training to ensure that they carry out emergency plan protocols and effectively communicate emergency information to first responders, emergency management officials, power providers, and other external entities.

**E. Power Restoration Prioritization**

**1. Power Restoration for At-Risk Communities:**

State and local officials and power providers should re-examine power restoration priority protocols with specific consideration of at-risk populations, including nursing homes and assisted living facilities. Allowances should be made for the extent to which individual facilities are required to have, and physically do have, emergency generation capacity to maintain temperature (see recommendation A(3) above).





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SHELTERING  
*IN*  
DANGER

AN INVESTIGATIVE REPORT  
by the Minority Staff of the U.S. Senate Committee on Finance