



Liberty Health Jersey City Medical Center

Hurricane Sandy 11-27-2012

After-Action Report



Background

On Monday 10/29/12 New Jersey was struck with a historic storm that created unprecedented damage to the entire state. The effect of the storm itself lasted over 24 hours with high winds flooding and rain. In addition a second Nor'easter struck the state on Wednesday 11/7/12 resulting in high winds coastal flooding and up to 12 inches of snow in some areas. A state of emergency was declared by Governor Christie and the entire state was later determined to be a federally declared disaster area. Waterfront communities were the hardest hit; these included Hudson County and most specifically to this review Jersey City. The area experienced large scale flooding, wind damage to trees and buildings, wide spread power outages, and fires. Operations in Jersey City in connection with this event were conducted until Friday 11/09/12 with the closure of operations at the MCC and Jersey City EOC.

Incident Summary

Jersey City Medical Center survived through the worst natural disaster in memory during Hurricane Sandy. The medical center's campus was completely enveloped in what can only be described as flash flood. The resulting flood made its way across a good portion of the first floor with anywhere from 1-18 inches across the footprint of the hospital. The hospital went on divert and was scrambling to secure the building and prevent further damage. An overwhelming number of both hospital and employee vehicles were flooded as well. The storm caused a city wide power outage and plunged a good portion of Hudson County into the dark. The next two weeks were spent recovering from the effects Sandy left.

Successes

Observation: Very early on a transportation plan was put into effect to get local staff in/out of the hospital for their scheduled shifts. Security had previous experience from Irene and instituted the same plan during this storm. This plan allowed for four separate routes to bring employees to and from the hospital. It provided dedicated routes to the Heights in Jersey City, both the Palisades side and the JFK side, Greenville, and Bayonne. Each vehicle had a driver and an assistant responsible for phone operations and coordination.

Recommendation: This was a great success. Future success can be ensured by formally documenting the plan that was utilized. Establish dedicated routes in the plan, contact methods, and make all this information is available to the staff so that it may utilized for future events. Staff seemed extremely willing to use this service but had to call the command center to get information. An internal phone number and phone tree can be established that employees can navigate that will auto-forward to the cell phone number of the route they are requesting service on.

Observation: The CEO's of the acute care hospitals held regular conference calls throughout the incident. This proved to be useful to direct patients throughout the county. Prior to the implementation of this the local hospitals were going on divert for various reasons but this was only causing a trickle-down effect and causing another facility to be overwhelmed. An agreed upon "distribution" according to capacity proved to be helpful.

Recommendations: Continue this in future events. Have a scheduled call prior to the start of an incident to guarantee planning efforts are not overlapped and prove to be more useful when the event is underway.

Observation: The census of the hospital was high during the event. A discharge "task force" was created in an ad-hoc fashion to address the needs of moving patients out of the hospital expeditiously. This worked well and we were able to accomplish a high number of discharges each day.

Recommendation: This plan should be formally developed for disaster time operations. A clear definition of membership, goals, and guidelines should be developed. This will clearly define the roles of each person during these already high stress incidents.

What can be improved?

Observation: The food supplied to the command center was overwhelmingly unhealthy. High carbohydrates, salt, caffeine, and sugar work well in the short term but lack the sustenance to maintain over a long period of time. For a shorter term event this may be sufficient but for prolonged operations such as the Sandy response this proved to be a problem.

Recommendation: Healthier foods should be supplied to the command center. Command staff should be encouraged to eat fruits and vegetables and drink larger amounts of water. While it is understood that feeding so many for so long can prove to be a trying task ensuring the health of the people making decisions by providing a more balanced diet should prove to be a prudent undertaking.

Observation: Obtaining gasoline post Sandy was near impossible state-wide. The limited amounts of fuel made available for medical personnel was limited to doctors and nurses and wasn't even a reliable source. It is well understood that in the hospital environment our operations are reliant on many levels of worker and not solely reliant on the clinical providers.

Recommendation: Arrangements should be made prior to the start of the event to have fuel available on-site for staff. A clear fuel plan should be established and published. Acquiring a tanker or on-site fuel storage may prove useful.

Observation: It became obvious during the event that email communication was difficult because there was no true “global” list. The global emails sent in Liberty’s system do not go to all the medical/dental staff, residents, and EMS staff members. There are also a large number of employees who have no email access at all.

Recommendation: Every Liberty employee should have access to a XXX@libertyhcs.org email address. This would not only allow for a better saturation of our message it would mean that anyone with global access could get the message to everyone.

Observation: Briefings held in the MCC proved to have too many people in attendance and caused both confusion and clutter. The MCC is a not good forum to deliver a message to a large group of people.

Recommendation: Only key leadership personnel that have been identified as having an important role in command center operations should be in the command center. Questions that will be directed to people responsible for an area but not within the command center should be sent out prior to the next briefing so the responsible person can have answers ready for the Incident Commander. Operational period briefings can still occur but a different venue should be selected and it should be less of a Q & A and more of a true briefing.

Observation: It was discovered during the flooding event that while the fuel supply for the generators and the generators themselves never came within danger of flooding there is a small pump in between the two that came to be under water. Through quick and decisive action the room that contained this pump was quickly sandbagged and pumped out which resulted in the pump never failing.

Recommendation: A solution should be implemented to avoid the possibility of the occurring again. In addition the hospital has a “day tank” which we were able to acquire diesel for but unable to get that diesel into the building. An alternate method of fueling the day tank should be part of a future plan.

Observation: A group of leadership personnel were tasked early on with establishing the sleeping plan in a hotel format that was recommended post Irene. Even with that established there were still multiple reports of people “commandeering” rooms and areas without prior authorization. There was also an obvious lack of enough cots to adequately fulfill the needs of the hospital staff.

Recommendation: The easy fix is obtaining more cots for use during these events. It should be noted that the cots that were being utilized for sleeping of staff are also the same cots that we would utilize for surge should we encounter a large number of patients. We need to take both surge and staff accommodations into account when determining the number of additional cots

that may be needed. In order to better respond to the needs of the staff in the future we may consider an even more “hotel like” check in process for staff. Perhaps even creating a front desk that employees can register at upon arrival would prove useful.

Observation: ICS Continuity was lacking during the event. A more formal designation of positions and responsibilities should occur. For long term incidents such as this one an incident action plan (IAP) should be developed for each operational period that clearly delineates incident objectives and job actions.

Recommendations: Clearly identify roles and responsibilities and develop IAP for each operational period during the event.

Observation: The servers that run a large number of our critical services reside in Meadowlands Hospital. Meadowlands Hospital was under serious threat of flooding during the storm and a decision was made to power down the servers as a precaution from an unplanned interruption. This put the medical center operations into downtime procedures and made a difficult situation even more difficult.

Recommendation: A plan is already underway to relocate the servers based at Meadowlands. This is a large plan and requires a great deal of coordination and approvals as high as the board level. IT is also working on developing a web based email solution that would reduce outages.

Ensure Future Success

Observation: Sandbags were used to protect the structure from water entering the building. Sandbags were pre-deployed to protect the building but as the water reached levels that far exceeded what was thought possible there was an emergent need for more sandbags. This request was ultimately filled by JC OEM.

Recommendation: To ensure future success a larger stockpile of sandbags should always remain on-site ready for deployment. Additionally alternative means of water blockades should be investigated, including but not limited to, a levee system.

Observation: Many cars were ruined in the flooding that ensued during Sandy. There was little that could have been done to prevent this from happening due to the speed and severity involved with the flooding however the vehicles that were protected due to the knowledge we had of the garage spaces being safe above the first floor.

Recommendation: With the success of the transportation plan so evident as many employees as can should utilize this and leave their cars at home. For most incidents (unfortunately not Sandy) mass transit may be a viable alternative. The end result is as few employees as possible should bring their vehicles to the hospital for future events where flooding may occur. Hospital vehicles should be brought to a location that can ensure they remain unharmed. This should be identified as part of the transportation plan mentioned earlier.

Observation: Many residents appeared at the medical center without acute care needs and their needs were mostly due to lack of power. (I.e. CPAP, home oxygen etc.) This severely taxed the hospital as were already inundated with acute cases.

Recommendation: In the future a better plan should be instituted in regards to a public information campaign prior to the storm. Residents were showing up for help because they did not know where else to go. We happily accepted and helped them but they could have been better served outside the hospital setting. As each hospital in the county experienced this it could be a prime opportunity for a joint statement from the CEO's as a result of their conference calls.

Observation: There seemed to be confusion about the role of the MCC and how it relates to both city and county OEM amongst the leadership of the hospital. Specifically whether OEM or the MCC was responsible for different items that came up?

Recommendation: A short presentation to the senior leadership that clearly defines the roles and responsibilities of OEM vs. MCC. Currently the NJ UASI committee is redefining the role of the MCC during disaster operations. As an adjunct to the local training a presentation by the committee working on this may prove useful.

Observation: A white board or smart board should be incorporated into the command center to keep relevant facts easily on display and promote uniform answers to questions that arise.

Recommendation: Purchase and install a white board or smart board and utilize during future events.

Observation: TV, or lack thereof, proved to be a large handicap. Not having easy, reliable access to news media made getting information difficult at best.

Recommendation: Determine a cost effective and reliable source for TV in the command center.

Observation: With the failure of the email system and network resources it became difficult to find contact information for key personnel.

Recommendation: A paper contact list should be generated and maintained with primary and secondary means of contact for key personnel.

Conclusion

The unprecedented damage caused by Sandy was an eye opening experience for those severely impacted. The vivid images and global press that ensued made Hudson County a prominent player in response and will surely be looked upon to see how we learn and grow from this event. FEMA has pledged hundreds of millions of dollars to recover from and mitigate future events. The Jersey City Medical Center managed to treat all those who arrived and service other areas outside the walls of the hospital making this event an overall success. Future emphasis should be placed on truly adopting the incident command system and having a more robust pre-plan.