Table 1: Select Participant Quotations from the Focus Group and Key Informant Interviews

***Initial Communications and Volunteer Surge***

"There's always improvements that can be made in communication as far as informing the physicians of the event. We used our group page, but I think one of the things that was interesting…we asked them to call back the emergency room, but then…80 people were trying to call back the emergency room at one time...so we're looking for a better way to communicate information out and have communicate their availability either through…their email or explore social media with a Tweet back saying what their availability is...”

“We’ve since discovered that our pager system sends out pages in a serial fashion, one after another, so it’s actually quite delayed.”

“After that drill about two years ago, I had created a notification system for a number of surgical subspecialties that I would want to have available in the event of a disaster. So it comes across as the disaster page, it’s really for surgery. And I did not think to activate it at all. But what it would have included is all of our staff. The trauma program manager…had notified me; orthopedics, neurosurgery, plastic surgery, hand surgery. But even without doing that, all of those people learned about the process going on from the media, from Twitter, from whatever social media they were using."

C***ommunications Across and Between Levels***

“We paired up our law enforcement colleagues with our hospital police and security. Most of them are actually police officers themselves, and it was helpful to have them paired up with people that we knew. I did speak to some of the law enforcement representatives directly, whether it was state police or FBI, just to make sure that I was comfortable with what they were asking for and what they were doing."

" I wanted to find out about the hospital command...who was the incident commander for the hospital ... I couldn’t figure out who was the incident commander... that person was in the atrium on a set of stairs with a million other people and... it was not clear who was who unless you sought out the information.”

“The law enforcement issue was definitely a bit of a challenge. I think we wanted to assist in the investigation as much as possible to try and help to make sure that either evidence or information that needed to be gathered very quickly to help law enforcement was able to do so. But there obviously were some clinical treatment priorities, making sure that we were taking the right life saving actions. And then there were some concerns that some of the patients were not able to consent to working with law enforcement; meaning that they were so ill that they were intubated, sedated and not able to talk. But law enforcement needed pictures of their injuries or pictures of their faces and some of the treatment teams were uncomfortable with law enforcement being in the room and gathering information, again such as photos, before the patients were able to consent to that."

"So one of the things that I was very involved in was helping to, within the chaos of what was going on, get law enforcement there so they could do their job quickly and efficiently. And that was a coordinated effort. Our public safety helped me with that and we had all the senior law enforcements from all the different agencies in a room and we dealt with them .”

***Leadership and Flexibility***

"I think what went well is the independent thinking of the people that we work with on a daily basis. So they were able to think outside the box in each of their fields of expertise. And collectively, we could come together with a good solution. So I like the fact that everybody had a framework to work in, as they do daily, but were allowed some freedom of decision making to make things work well."

"It was being done different from what we had planned but it worked. So be it."

"...it's also important to be a little bit nimble on your feet and to sort of modify

 things that you might do a little bit, but don't do anything radical..."

"Everybody had a framework to work in, as they do daily, but were allowed

some freedom of decision making to make things work well."

"spontaneous creation of the mass casualty service to assist with the treatment of patients from MCI."

"One thing that was very clear to me, about a year and a half ago., we had...a hospital-wide drill with a command center set up and all. And my role there was exactly this role. And that was to make the triage decisions about who’s going to survive, who we should put our efforts into and who needed to go to the operating room and how to put together those teams to take patients to the operating room. And it became very clear to me at the time of that exercise, that my role was better as an administrator than it was as a surgeon. And because what they had done in that, the exercise, was to purposely overwhelm us with patients that needed surgery and my response was, “Then you go to the operating room.” Well, once I did that in the exercise, the whole exercise fell apart. And I remember that well…my instinct was whatever you do, stay out of the operating room for this triage."

***Information systems were the universal bottleneck***

“If the patient is not in the computer, you cannot order, you cannot do many things. It is very hard to take care of patients that don’t exist.“

EDIS “lagged behind patient arrivals, and moving to paper was recommended in the midst of the response.”

 “One of the things we learned is we don’t have a really easy, flexible, non-electronic based way of keeping track of people and we need to do that.”

“we initially started to try to track them on the computer system because for the marathon, any time we have a marathon, there's a system in place to track runners who come into the hospital because we often anticipate a high volume of runners…So we have a system in place ready to track everybody. So what we tried to do is to use that early on and we just couldn't keep up with the volume, the speed that came in. What should happen and what's going to happen in the future is we're really going to go back to old school with paper and that there's going to be a packet, a pre-identified packet with a pre-stamp number and the next person in gets this packet with this number. And there's going to be a pad that somebody's going to stand there and write down whatever identifier we have, whether we have a name or just young woman, whatever, and attach to that number. So now we will have a true accurate tracking as they walk through the door. That’s one of the things that we need to work on to get better at."

 “People would have used our alpha-numeric system but because people could talk, they went registering people under their real names and so that always puts a little bit of a delay in the system and you’re trying to do rapid assessment and rapid ordering of things. That just puts in a delay that you don’t really need. We have electronic medical records and we have order entry and so, when a trauma patient comes in, I can literally order just about everything I need with one click. As long as the account is in there and the medical record and everything else, you know? If that isn’t there I can’t do anything. So that delays things a little bit when we do that."

***Illusion of Control: Central Command vs. Collaboration***

“There were different people who thought that they were in charge. But I’ll tell you who was in charge. And it wasn’t me, because I still was communicating by telephone and getting periodic updates from individuals."

“ There was such an immediate response by the entire institution that it was just making sure people didn’t get in their own way—each other’s way. But there was no need to get people to do stuff. If anything, it was to get people to not do stuff. There was such a committed effort and response, people came from all over. People just showed up and said, “What can I do?” That part of the leadership of this was to control the need, desire and participation.”

 “I think we had the potential of having too many people and that being a problem in terms of people getting in the way. What we did was we established our labor pool as essentially a large pool that we put aside in the ED and we had a small group of that, both sort of attending surgeons and residents, walk around with me, who was in communication with the ICUs, the operating rooms and the floors, my partner who had evaluated every single patient in the ED himself....How that happened, I don't know to be honest with you, because we have nothing formal in place. I think at some point, one of us must have just looked at everybody and said, “Everybody go stand in that room.””