Strong Medicine Interview with Dr. David Reisman, 26 March 2014

RICH: This is Miriam rich and today is March 26, 2014. I am here with David Reisman at Mass General Hospital. We are going to record an interview as part of the Strong Medicine Oral History Project. So, could you begin by telling me a bit about yourself, your training background, and your professional positions?

REISMAN: Sure. So I'm currently the Senior Administrative Director of Emergency Services and Emergency Preparedness here at Mass General. In that role, I'm responsible for multiple areas of the Emergency Department operations, but also for the Emergency Preparedness program for the hospital. My background is that a long time ago, I was a volunteer firefighter and emergency medical technician. I did my undergraduate degree in business management, worked for several years in consulting, and then the pharmacy industry, and decided that it was time to go back to school. I went for my graduate degree; I completed a Master's in health administration at the Ohio State University. And upon graduation, I decided that I really wanted to work in a hospital and find a way to merge my interests in emergency services and business management, and was fortunate to come to Mass General as an

Administrative Fellow in 2006 and was hired out of that program into the Emergency Department in 2007.

RICH: What led you to be interested in this field?

REISMAN: When I was a volunteer firefighter and EMT in Western Massachusetts, I was immediately hooked on the idea of serving the community and finding a unique way to help people in times of need, and for a while, thought that I would take the medical route or perhaps become a full-time emergency services worker, but also had a very deep interest in business management and organizational behavior. And it took a few years to find the right fit, but this actually ended up being a very good environment for me to work in.

RICH: What does a typical work day look like for you here?

REISMAN: The best part of my job is there is no typical work day. Obviously, I spend time doing more mundane administrative tasks, budgeting and scheduling, and things like that. But most importantly, this hospital has a deep belief, and this department certainly does as well, that all of us, whether clinical or nonclinical, are responsible for providing the best possible experience we can for our patients and their families and visitors. And part of that is making sure that we have a very strong staff, and the department operating in a way that allows us to perform in

the most optimal way possible. So my day consists usually of a lot of meetings, a lot of meetings with staff, but also a lot of planning for the future, whether it be on the Emergency Department and how we're going to expand to meet our increasing volume, or in the disaster response arena, how we prepare this hospital even better than we already are prepared to respond to the next major event.

RICH: So before the day of the marathon bombing, can you talk a bit about what your disaster response training and protocol are like and how they've been developed?

REISMAN: Sure. So my initial training in emergency response is certainly familiar, as an emergency services worker. When I came to Mass General and got involved in the emergency department, there are training modules that we complete to make sure that we are proficient in the hospital incident command system and in the way that the hospital responds to emergency events. So Mass General, like most hospitals, on the day of new employee orientation, every one of our employees receives basic training on emergency management, and the training is not terribly detailed. It advises them what we do, as a hospital, to prepare for emergencies, what their specific roles are, and what they should do if they have more questions. When they get to the department, especially if you work in the Emergency Department, there

is more intensive training. So from 2007 on, I immediately began participating in helping plan all of our drills, and exercises, and ongoing educational sessions. And that's probably the most important part of what we do, in terms of developing capacity for response, is training the staff who work here. So my technical training really is based on the experience I had working as an EMT and firefighter, and then coming here doing some of the organized trainings that happen, and helping to lead them.

And then from a response standpoint, people think of disasters basically as -- the marathon. The marathon is a typical disaster, right? We talk about bus crashes, and plane accidents, and things that produce a large volume of patients, but in a hospital, there are a lot of different events that can turn into a disaster. In this hospital, anything that has the capacity to affect operations and patient care is really considered a disaster. So, when we lose our information technology systems; if we can't drink the water that is so critical for providing the care that we give on a daily basis; if the electricity is not working correctly, if we lose steam, all of those things have the [05:00] consequence of impacting patient care and the way we do our work. So we have had multiple incidents in the

past seven years that I've been here that are not as high profile as the marathon, but are important because they test our ability to very quickly recognize that something out of the ordinary is going on and develop a plan to mitigate what is happening so that we can take care of the patients we have, patients we may get from any type of event, our staff at our facilities, so that we can continue to meet our mission, which is to provide the best care to them.

RICH: Can you talk about what some of those incidents were in the past?

REISMAN: Sure. So some of the ones that stand out were the 2010 water contamination issue, which if you were in Boston at that time, you might remember, but basically, part of a pipe that carries water to the city of Boston from the Quabbin Reservoir, in Western Mass, broke, and the water was contaminated, and we were basically told that you could not drink the water. And that is a big problem for a hospital of this size. It is not just water for our patients to take medication, it is water for the sterilizers that clean our equipment; it is water for various pieces of equipment that we use to do endoscopies and other critical functions. The ramifications were quite significant, and we activated our Emergency Operations Plan

for that disaster. And that basically puts into place a structured set of responses where people's roles and responsibilities change from what they do they do on a normal day-to-day basis, and we move from a consensus-driven organization to a command and control situation. We're using the Hospital Incident Command System. We have an incident commander who is in charge and a very clear reporting structure underneath that to make sure that we are taking care of this institution and meeting the need.

So the water incident stands out for a few reasons. One, it happened on a Saturday afternoon in May, so it was not like the marathon, which happened on a Monday, when we had a lot of staff here. Two, the ramifications of not having potable water are something that we hadn't necessarily thought through in detail before, and it's a good example of the time that we had to rely on the flexibility and ingenuity of the people who work here, our leadership and our staff, to really maintain an environment where it was safe to provide care. So we had to get a whole lot of bottled water in here very quickly, and figure out how to distribute it to the 900-plus inpatients and the outpatient areas that needed it. We had to determine early on what it was going to take to recover from that event. So what

devices had to be flushed or cleaned if they were potentially contaminated with the water that was not safe for drinking. So that event certainly stands out.

Other ones that are not, I guess, quite as exciting would be the many, many snowstorms, and weather events that we have, most notably the situations in the last few years that have shut down the public transportation system. So we have approximately 26,000 employees here, and a very large percentage of them take public transportation to work, and we have a MBTA stop at our doorstep, and many of our staff use that function on a daily basis. So when we lose those public transportation assets, we need to figure out how we're going to take care of the patients here with the staff that we have. So we activated our Emergency Operations Plans for several hurricanes in the last year, the blizzard last year, all the snowstorms this year, and we do it so we have the ability to respond in an organized and structured manner.

We also obviously are prepared and do a great deal of our of work on mass casualty incident response, and this is a big hospital with a big emergency department and very highly-trained staff, so some of the things that we deal

with on a regular basis would stress a smaller hospital but do not stress us. So if there's a car accident, and there is a bus involved, and there are 15 patients. When we get all those 15 patients, it might not overwhelm us to the point where we need to activate our disaster plan, but we plan for it, and we train for it, and all of that training and planning and our exercises and our events really helped us to be ready for the marathon.

RICH: So let's talk about that day, then, the day of the 2013 Boston Marathon. How did that day begin for you?

REISMAN: So the city of Boston is extremely fortunate to have a wonderful, robust group of healthcare people who plan for disasters, so we work with each other all the time. The Conference of Boston Teaching Hospitals has two disaster preparedness committees that we all participate in. We know each other, we train together, we exercise together, and we respond together. Part of that planning and response has resulted in the preparation of, basically, planned mass casualty incident days. So in this city, the Fourth of July, the Boston Marathon, and New Year's Eve, most hospitals treat as [10:00] mass casualty events. And what that means is that we recognize something is happening in the city that could very significantly affect our operations if there were to be a problem. And sometimes

it's something as simple as a really hot day for the marathon, or a hot day for July 4th, but we do things ahead of time to make sure that we're ready. We pre-position assets, we increase staffing, we communicate with people who might have to respond, and we think about who we would call in from off-site, and how close they live to the hospital if something were to happen. So all those things happen, and as part of that planning, the Department of Public health and the city have organized conference calls. So we do our planning at Mass General, but then in our emergency management group, we have people participating in two or three conference calls on the day of the marathon with the Department of Public health. And the purpose of those calls is to see how the hospitals along the route are doing, and if there are any known issues from public safety professionals. So, on that day, we had everything ready to go at Mass General. We had our ED staff mobilized, as they always are. On a good day for the marathon, we will still get a lot of patients, just because it's so close to Mass General. So we were certainly ready. We do activate our Hazmat decontamination tent, so that is something that we would use if there were some type of contamination event in the city and we had to basically wash people off before we could treat them. That is pre-positioned ahead of time.

But the first call we had with the Department of Public Health on the day of the marathon was really a normal call. There was nothing strange happening. People were commenting, actually, on how much better it was than the year before, because in 2012, it was very hot on the day of the marathon, and there was really no problem at any hospitals or along the route.

The second call, which occurred in the afternoon -- don't quote me on the time, but around 2:15, was also relatively benign. People were doing well. There were not hospitals being overwhelmed by injured runners. There were no incidents to report from a public safety perspective; it actually seemed to be a relatively easy, normal Boston Marathon day. And I should know better than to ever say something out loud, but after we got off that conference call, I said to a colleague just down the hall from here, I said, "This is so much easier than last year. It's just such a nice day." And about five minutes after that, my pager went off. So all of us obviously are responsible to be on call 24/7, and my pager went off and it said that there had been two explosions at the finish line of the Boston Marathon. And in all honesty, in that moment -- I

mean, I get paged for all sorts of things all the time, and they're very rarely anything that is that critical. My first instinct was, this is not happening. We'd just got off this phone call with everybody who was involved and knows what's going on, and this can't be happening here.

And part of what we're trained to do is to kind of put all that aside and focus on the immediate tasks that need to occur. So I knew what had already happened. I knew that the disaster radio in the Emergency Department, which is controlled by the City of Boston, they use that radio network to communicate to hospitals when there is an event that could produce a large number of patients. So I knew that that radio had gone off and that our staff in the ED had sent that page out to our leadership group. So I immediately reported to the Emergency Department. And it was very clear, within the first three or four minutes, that something real was happening.

The first thing that happened is I turned around and saw a young man carrying a young woman into the Emergency Department through the front door of the Emergency Department, and she was literally almost missing a leg. And I turned back around and there is a window that looks

into our ambulance bay area, and there was a Boston Police vehicle that pulled in, backed right up to the door, and the doors opened up, and a police officer and a firefighter got out and there were two victims lying on the floor of that vehicle, both with multiple amputations, with no real medical personnel treating them at all. They basically got thrown in and brought to the hospital. That all happened within a very, very short period of time. From the time we were notified to the time we had patients was somewhere around 10 minutes, which is exceptionally difficult to mobilize in that period of time.

Once I saw those first injuries, my boss had arrived and was on the phone with our senior vice president, who is responsible for emergency preparedness at the hospital at the executive level. And we decided right then that we were going to activate the full disaster system, and that's really the first critical step. It's a hard decision to make, because when we do that, we use an emergency alerting system that notifies several hundred leadership people in this institution. [15:00] It calls their cell phone, it pages them, it calls their office, it sends out an email, and it says, "There's been an attack at the Boston Marathon. Mass General is receiving patients. If you have

a role in the Emergency Operations Center, please report there now." So, the downside to doing that, if you're not sure that those resources are going to be needed, is that you mobilize a whole lot of people and you set a whole lot of systems in motion, and you alter what's happening in the hospital. But in a situation like this, we are trained to make assessments and to err on the side of caution. And it was very clear to those of us who were there that we needed to do that.

RICH: When was the last time you had mobilized that system?

REISMAN: So, the system gets mobilized in one way or another for all the events that I discussed previously, so the telephone system stopped working at one point last year. The voicemail system did not work correctly. There was a problem with the information systems, the computers in the hospital, so nurses couldn't chart appropriately. Our Emergency Operations Plan was activated for those, but it can be activated at different levels. This activation was the kind of the worst of the worst, since it was a -- you know, this was a totally unexpected event that we are prepared for, but were not, obviously expecting that day. So when we activate our Emergency Notification System and activate our Emergency Operations Plan, the first few things that happen are pretty important.

Our Emergency Operations Center gets set up, and that is where our leadership team from our Hospital Incident Command System mobilize, and that is the nerve center of the hospital that is basically deciding how the overall response is going to go. And that day, Ann Prestipino, who is the Senior Vice President for Emergency Services assumed the role of incident commander. So I was in the Emergency Department. That room was getting set up and all the key people were responding there to assume their roles.

The other thing that had to happen very quickly was that there were almost 100 patients in the Emergency Department, and we needed them to go somewhere else so that we could make room for an unknown number of critically injured people. The level of cooperation that happened that day from the inpatient units and ED staff identifying, within a very short period of time, which patients could go upstairs to inpatient beds, which patients could be discharged home, which patients needed to go somewhere else, so that we could figure out what was going on and take care of them. It happened in an exceptionally short period of time and we had cooperation and participation from people who were actually coming down from inpatient units and getting

patients to bring them up, so pulling them out of the department, which is not usually the way we function. Usually, we send people out, and we're responsible for bringing them there. So the Emergency Operations Plan and the Hospital Incident Command System exist so that we can do these kinds of things. And that day, the reason those things happened is because this hospital has invested time and resources in training people in exercising, and drilling, and coordinating with our city partners and with the other hospitals. And those first key steps, in my opinion, were very, very important for the overall success of the response.

RICH: So once the Emergency Operations Plan gets activated at that level, what are some of the changes that happen in how the hospital functions?

REISMAN: So, we always have a responsibility to take care of the patients that are here. But what people in the Emergency Operations Center, and the Incident Commander, in particular, are doing at that point in time. They're trying to think ahead and think about how we are going to get through this unexpected event. So, the first wave of patients that came in, we were able to treat very, very quickly and get them to the operating rooms or treat them in the Emergency Department as appropriate.

What the Incident Commander is tasked with worrying about is, what happens if another bomb goes off and 50 more patients come in? What happens if this goes on for the next three days and there are terrorist attacks at different locations, and this influx of patients does not stop? So in the beginning stages, we continue to provide care to the patients that are here. We come up with ways, creatively sometimes, to provide care to the victims of the event itself. We try very hard not to alter our operations in the hospital unless we absolutely have to. So the decisions that are made in the Emergency Operations Center are kind of staged. So, here's what we're doing now and how it's affecting the hospital, and then there's what we might have to do as the situation gets worse.

Some of the key decisions that we're dealing with very quickly were, we knew that there were already patients and friends and victims at the hospital, and we have a responsibility to help them, and to frankly deal with them during a very difficult period of time, and we have a plan to do that. So that part of the plan was being activated. And we actually convert an area near the front of the hospital. We staff it with psychiatry and social [20:00]

work and all sorts of people who are trained to deal with very difficult events, and we help people identify whether their family or friends are here, or whether they need to basically work with the city to figure out where they are. So that is something that happens quickly. Frankly, it needs to happen more quickly than it does, but in an event like this, those people are arriving very, very quickly.

So other things we're thinking about very immediately are, do we have enough supplies to take care of the patients that we have? Do we have enough in reserve to take care of the people who may be coming in? Staffing; do we have enough staff to take care of these people? Do we have enough staff to take care of 15 more people if they come in?

We were very fortunate on the day of the marathon last year. The bombs went off at approximately 2:50 p.m., shift change in many hospitals for many roles is at 3:00 p.m. In many cases, we were completely double-staffed. So we had more nurses, more doctors, more administrative staff in the hospital than we would have had if the bombs had gone off at -- you know, two hours earlier, two hours later, and that was very, very fortunate.

RICH: So you had mentioned earlier that when a disaster response gets activated, the sort of chain of communication or command shifts, changes to a different structure. How does that work, and how does that affect the operations?

REISMAN: So we need to provide this ability to transition to disaster mode 24/7, 365 days a year. During the week, when there are senior leadership people on site, it's actually easier because all of our senior vice presidents, our CEO, they are empowered to assume the role of Incident Commander if they choose to do so. And in this case, Anne Prestopino did that. However, all of our Emergency Department physicians are trained to assume that role. All of our nursing supervisors are trained to assume that role. And there is always an administrator on call for this hospital, and they are all trained to assume that role. And the point is that 24 hours a day, every single day of the year, there is somebody in this institution who is responsible for making the decision as to when we activate the disaster response system or not. So it's just an important clarification. We were lucky that day that we had a lot of people here, but if we hadn't, there is a system in place to make sure that somebody takes that responsibility until somebody more senior can come in.

So when that system gets activated, first of all, people stop doing their normal jobs for a little while, because they immediately have to think about what they need to do, based on their role. So there are people trained and assigned to assume different roles in the Incident Command System. That day, in the Emergency Operations Center, very, very quickly, there was an Incident Commander. There was somebody in charge of security. There was a public information officer; that's a very important role, especially in this situation. We do not send information to the media or answer media inquiries, or even communicate with our staff without it going through the Emergency Operations Center, so that communications strategy started right away.

People from our Safety Department were making sure that the way we were responding was safe for our patients, for our staff who were down in the Emergency Department and other areas. So all those people stopped what they were doing as part of their daily job, and they assumed -- and they went into disaster mode and assumed those roles.

So based on their particular department and what their responsibilities are, they are trained and were able to

make that transition very quickly. A lot of those people have department responsibilities. So I know that, because of my role, there were other people in the Emergency Department who can focus on making sure there's enough staff in the Emergency Department, making sure that we have enough supplies, making sure that we have enough transporters to get people to the OR. So I didn't have to worry, necessarily, about things at that level. And the Incident Commander benefits from people being trained, knowing what to do ahead of time, and not having to get involved in those types of decisions.

RICH: What types of decisions were you thinking about after that initial activation?

REISMAN: My primary concern was, based on the nature of the injuries, how many people with one or more amputations could we take care of in a time that they weren't going to die, quite frankly. Some of these patients arrived, had already lost almost all of their blood volume, and literally were going into cardiac arrest at our doors, or their hearts were stopping as they were coming in. We were able to empty the acute area of the Emergency Department where our sickest patients are treated very quickly, and trauma teams and Emergency Department physicians and nurses descended on that area, and developed teams by patient, and

were able to treat them very effectively and very quickly.

If we had had another 25 patients who presented with the same types of injuries, we likely would have overwhelmed our capacity to treat people in the same way, so I'm worried about [25:00] operating rooms; do we have enough operating rooms to treat 25 more people? Do we have enough surgeons?. The biggest problem is not knowing what to expect, and there is information that comes through the disaster radio from the city that gives us updates when we're going to get more patients, but for the first hour or more of the response, you often don't know. So those were some of our primary concerns.

I was also concerned that we did not receive immediate notification that these were not dirty bombs. So I mentioned the ability of us to decontaminate people if we have to, but decontaminating people takes a long time. We have to set up a big tent. We have to page out our Hazmat team and have them respond to the Emergency Department. They have to get dressed in protective equipment, and then we have to actually take people through a tent and we wash them off with hoses and scrub brushes and things. The reason we do that is so that we don't contaminate the

Emergency Department or the rest of the hospital. There was no clear notification from the city that these bombs were not -- did not contain a chemical, radiological, or other agent. And one of the physicians in the Emergency Department came up to me -- this was probably 15 or 20 minutes into the response -- and said, "I think we should activate the Hazmat team. This patient's eyes are burning." And that was probably the most difficult moment for me, personally, because we know that if we do that, the people who were really sick are not going to have time to wait to be decontaminated. I was fortunate -- we were fortunate the Boston Police Department had sent a senior officer to all the hospitals, and we had a sergeant who was standing with me in our ambulance bay and he had a radio, and I said to him, "Can you confirm that these bombs are not dirty, do not contain any type of hazardous substance?" And he was able to confirm that by radio. But that was probably my biggest concern, even more so than how many patients we were going to get, or were we doing this in a safe way. Our primary responsibility is to protect our staff so that they can take care of themselves and take care of patients, and it would have been a very difficult situation if those bombs had been -- had contained something that we had to basically decontaminate people.

It would have been a much different situation.

RICH: Is it usual to be working with law enforcement in that close way, or was that sort of another unusual part of the day?

REISMAN: We're fortunate that law enforcement participation happens at our conference of Boston Teaching Hospitals' disaster meetings, so we know a lot of the law enforcement community. Here at Mass General, we have a wonderful police and security department, and they are very connected to the local law enforcement community, so we work with our own department on a regular basis. They are a key part of our disaster preparedness activities and our response plans. And, as I mentioned, they fill a leadership role in the Emergency Operations Center. So it is not abnormal for them to work with outside law enforcement in that way. It is somewhat abnormal to have the outside law enforcement presence at the hospital that we did, certainly in the hours following the bombings, and the days following the bombings, we experienced law enforcement presence like we had not seen before.

RICH: Interesting. Besides law enforcement, are there other outside agencies and institutions that are integrated into the disaster response plan?

REISMAN: Absolutely, and they start kind of with the public

safety agencies, so the fire department, Boston Emergency Medical Services, the Conference of Boston Teaching Hospitals, the City of Boston Office of Emergency Management, the Department of Public Health, the Massachusetts Emergency management Agency. All of these agencies partner with us, with the hospitals, to plan. So we work with them during an event like this. We share information using a web-based product called WebEOC, which is basically an online secure website where we can see updates from the city. So MEMA posts information there, the Department of Public health posts information there, and hospitals can post information there, which allows us to very quickly get better situational awareness about what's going on in the city and the state.

We also partner more locally with people who are important to our response. So our medical suppliers, for example, are a key part of our response, depending on what the event is. If you look back at some of the other disasters we've dealt with that people might not think of as disasters, but H1N1 influenza, our suppliers were very important to us to make sure that they were keeping our supply chains open for face masks and protective equipment. So, it's a holistic approach to think about all the people that you need to

work with in an effort to keep the hospital running smoothly, and it really does run the gamut from those very important public safety agencies, to our suppliers and our vendors, and our fellow hospitals in the city. So, it's really a team effort.

RICH: [30:00] What are some of the challenges of coordinating that sort of heterogeneous a team?

REISMAN: It's a great question. During the planning phase of this sort of, or in terms of normalcy, like now, there really aren't that many challenges. We work well together. Obviously, there are some political issues and things that come up with people competing for resources. One of the interesting challenges that happens in our planning is that a lot of us, a lot of the hospitals in Boston rely on the same suppliers for things, and we try to do some work to make sure that if Mass General was going to ask our medical supplier for all the extra saline solution they had, what happens if Brigham & Women's asks them for that at the same time? So that's an example of something that can come up in the planning process.

During a response, and on the day of the marathon, the challenge was simply communication. Situational awareness and the validity of information is always very difficult to

secure in the beginning stages of a disaster, and there have been various studies done about social media and social media during the Boston marathon. That was something new that we had to deal with in a very acute environment. It used to be that when we activated our disaster plan, our staff were hearing from us about it. We were notifying them. In this case, a lot of staff knew before we did anything, before we got notified by the city because of Twitter, and Facebook, and text-messaging, from people who were at the scene. In fact, there was an anesthesiologist who was working in our ORs that day who got text-messaged from someone, and it said, "Something just happened at the Boston Marathon finish line." And that person in our operating room was in a position where he was controlling which OR cases started, and this was before anything happened. And he made the very fortuitous decision to hold a couple of cases. So he said, "I'm just not going to start these cases. I am going to tell these surgeons to keep these patients out of the operating rooms until we figure out what's going on," and that was based off of a tweet, or a text-message, and that probably saved lives. That was just hugely, hugely important.

RICH: So is there attempts to revise disaster response protocol to incorporate what you know now about the role of

social media?

REISMAN: Absolutely. So part of our job in Emergency Management is to assess not only our drills and exercises, but also our response to events. So every drill, every exercise, every event, at the end, has what's called an after-action report. And basically, we gather people who were involved and we talk about the response in a nonjudgmental way. It does not assign blame. We identify things that went well, and we identify things that could have gone better. We use those things, our follow-up action items to enhance our plans, and we actually go back and make changes to our plans and our training based on what we've learned. So if you look at some of the things that went really well in the Boston Marathon, a lot of them are because we've learned, as a city, from other people. So Boston EMS has tourniquets on their emergency response vehicles. Well, they didn't many years ago, and we learned from the Israelis and other people who deal with disasters on a regular basis, that tourniquets save lives. The preplanning that went on for the marathon, and that goes on every year, from a medical volunteer standpoint, saved lives, because there were so many doctors and medical providers on the scene. So, those are examples of things that have been incorporated into emergency management plans

because we've experienced them, or other people have experienced them and we've learned from them.

So here, we obviously had multiple debriefing sessions from the marathon because it's such a big event, and there's so much information to capture, and I'll share a few of those lessons with you.

One is that these things happen so, so fast, and we learned that from Israel; and we learned that from Mumbai, and other places that have had really horrific mass casualty incidents. There is no time to think. There is no time to tell people what to do. By the time you figure out what's going on, there are patients on your doorstep, and they don't always arrive by ambulance. So, the first patients here arrived by personal vehicle and by police vehicle, right? So these things actually really rang true. So we've learned that we need to be even more nimble than we were before, and able to activate more quickly and do the first essential things that really need to happen in a very expeditious manner. So, emptying the Emergency Department so that there's room for critical patients. We do it well, we did it well, but we want to focus on doing it even better, because it absolutely saved lives that day.

Increasing the coordination and communication between the Emergency Department and the operating rooms: So once we know somebody needs to go to the operating room, how do we coordinate that, and how quickly can it happen, and how is that affected if there are 15 or 20 people who need to go instead of the normal one or maybe two?

[35:00] Patient registration; this is public information, so I'm happy to share this with you. We had the very unfortunate experience of misidentifying a patient here at Mass General. Patient identification during disasters is notoriously challenging, and in this case, a patient arrived with her friend's pocketbook and identification. And the person in the Emergency Department who was completing the registration process thought that it was the patient -- that the patient was the person whose ID she had, and it turned out that was not correct. The outcome of the patient would not have changed, but one patient was deceased at the marathon site, and one patient was alive in our hospital. And there was a very challenging and unfortunate situation for her family members, who were brought here and told she was alive and then saw that it was actually her friend. Obviously, we never want that to happen, and we feel horrible about it. But our

responsibility is to make sure that it doesn't happen again. So we are reviewing our disaster registration process, and systems; thinking about ways to train our staff even better. But also focusing on supporting the staff who were involved that day and making sure they recognize that they did the best that they could in very, very challenging circumstances, with many, many people with life-threatening injuries arriving at once. So that's certainly a lesson learned for us and something that we'll take forward.

Patient and family reunification: so in a disaster of this size, in a city like Boston that is relatively compact, when something like this happens, and people know that they had friends or family along the race route or at the finish line or at the site of the event, they are going to come to the hospitals because they know that where their loved ones are going to go. And we have a responsibility to give them whatever level of information that we can. This is something that we're working with the city on right now. Because it's very difficult to take someone who is looking for their mother or father, or sister or brother, and say, "We don't think they're here, but here's a list of the other 10 hospitals in Boston, you can go call them". So,

at the marathon last year, we got into a situation where we were doing a lot of that calling, and it became a huge burden to our staff, and it took away from other things that we needed to be doing. So it's really a responsibility that should probably rest at the city level, so that there is a place that is coordinating that process, and plans are under way to do that. There is, through the Conference of Boston Teaching Hospitals, and the Department of Public Health and Boston EMS, there is a place called the Medical Intelligence Center that is now the base of operation for healthcare emergency response in this city. And they work with us, and are revising and enhancing their plans to serve in that function. So that was really another important lesson for us, is how do we reunite patients and families, and how do we do it quickly across a city like Boston?

RICH: So in revising disaster management plans, how do you navigate the balance between wanting to have sort of a very tightly-scripted protocol of what to do, and wanting to leave room for there to be improvisation based on contingency and unexpected circumstances?

REISMAN: We get asked that a lot by our staff, who really want to be prepared and do a great job to help us. We use something called an all-hazards approach, which is

ubiquitous throughout the emergency management community. And basically, what all-hazards planning says is that you don't create a separate plan for a marathon bombing, and for a July 4th event, and for snow, and hurricanes, and steam failures. You create a comprehensive emergency operations plan, and you train your staff to be flexible to respond to a wide variety of events. So, we try to provide the basic training that people need to think creatively and to get through emergency events, no matter what they are. And when there are areas that we need to focus on, for example, we know it's going to snow every year in Boston; we have to have a way to deal with transportation issues and supply issues. We focus in on that, and we create annexes to our emergency operations plan, but we don't ever override our Emergency Operations Plan. Everything lives under that umbrella. And that really helps frame the philosophy for people, I think, so they are less worried about, we don't have a specific plan for what the hospital does when the phones stop working. We have an emergency operations plan and telecommunications has a department-level plan that all fits with the framework of our overall response system.

RICH: So you touched on this a little bit, but what was the collaboration and communication like between different

hospitals in the Boston area like that day?

REISMAN: [40:00] We work together so frequently that there was a lot of individual communication; people texting back and forth, are you OK, do you need anything? In a disaster, what you really want is you want those processes centralized, and you want them centralized so that you're not relying on person-to-person contact because I could have been at the marathon that day and either been hurt or injured, or not had cell phone service, and somebody trying to contact me wouldn't have been able to get me. So where we like to be is at a place where our emergency operations centers are talking. So it doesn't matter who the Incident Commander is, but it matters that my incident commander at Mass General knows that they can call the Medical Intelligence Center to get information about resources they need, or they can call the Incident Commander at Boston Medical Center and ask them for something that they need.

So the example that I'd use is that, at one point during the event, Boston Medical Center thought they were going to run out of amputation kits. And they put a message out, using our existing systems, so the WebEOC system I mentioned, and our alerting systems, asking hospitals if they could spare these surgical kits. And very quickly,

they had them if they needed them. And it's a good example of how we share resources and communicate during an emergency. We're always trying to get better, though, and to get away from that person-to-person contact, and really focus on role-to-role contact, so that it doesn't matter who the individual is.

RICH: When putting together this system and revising the system when it involves hospitals, the city, law enforcement, is there a centralized governing structure or funding structure that sort of has ultimate authority for implementing those changes, and how do you sort of coordinate, in terms of long-term planning, across all of those?

REISMAN: It's complicated. There are a lot of players, especially in Boston, I mentioned, kind of the alphabet soup of organizations who are involved. From a hospital standpoint, we really work through the Conference of Boston Teaching Hospitals, which is the consortium of Boston teaching hospitals who gather to plan on various levels, not just emergency management, to make sure that our hospitals are in a good place, and that we're learning from each other. But we also partner very closely with the Department of Public Health and they coordinate with the Conference of Boston Teaching Hospitals. And that's how we

decide what's really important to the healthcare community, the hospital community, and how we push those issues forward. So instead of having Mass General advocating for a centralized patient and family reunification center, we have all the hospitals who are part of COBTH working with the Boston Public Health Commission, the Department of Public health, to synthesize that information and bring it forward in an organized fashion.

In terms of funding, acute-care hospitals with emergency departments in this state do receive a very small amount of Federal funding through the ASPR, which is the Assistant Secretary for Preparedness and Response, and the Federal government. That funding is filtered through the Department of Public Health, and is allocated to hospitals to support preparedness and planning. At hospitals like Mass General, we're very fortunate that we also have a separate hospital-funded emergency preparedness budget that allows us to do things like train people, buy the equipment we need, and make changes to plans as necessary, because none of this stuff is cheap or free.

RICH: Going back to the lessons you talked about learning from that day, are these lessons that other hospitals, or other communities, and other places can make use of, sort

of, in the way that you made use of, for example, the Israeli experience, or are they pretty particular to areas that have as many resources as Boston does?

REISMAN: Most of them are applicable to similar-sized hospitals in larger and smaller cities. Nothing about the recommendations I mentioned are specific to Mass General or a hospital here, so any hospital that is going to receive a large number of patients very quickly from a disaster needs to know how they're going to handle the registration process. With all of our systems being computerized, in some cases, you literally cannot get a medication out of a machine to give to a patient if they're not registered, either with their real name or with a fake name that we use to get them into the system more quickly. So you can see how that would be applicable at any hospital.

Some of the communication challenges as well; we have 26,000 employees. There are a lot of hospitals that have that many staff; there are a lot that don't. But one thing that staff want in this day and age is rapid communication. And I mentioned that a lot of our staff found out about this event through social media or from text-messages they received.

Another improvement we made that other hospitals are certainly thinking about and I think is certainly is valuable, is that we created our own staff [45:00] emergency notification system that is very similar to what colleges and universities and towns have. So our staff members can sign up to receive text-messages from the hospital that advise them of what's happening, and what they need to do. And that's something that is certainly applicable to other hospitals.

So the vast majority of what we learned, we think, is important to share with others, and we think it's responsibility to do that, because others have done that for us. So, we've invested a significant amount of time in speaking at various forums around the country, to hospitals and departments of public health, and law enforcement agencies about what we did, what went well, what didn't, and what we would recommend for them in the future.

RICH: What was the week after the bombing like in the hospital, and how long did it take things to return to normal? How long was the debriefing process? Sort of like, what were those weeks and months that unfolded right after like for you?

REISMAN: So to be perfectly honest, the Monday of the marathon

bombing was the easiest day of the week. And when I say that, some people might think it is somewhat insensitive. And I don't mean to downplay the severity of what happened at all, but we're very well-prepared to deal with an influx of very severely-injured patients, and we're also prepared to help their family members and their friends, and to do all the things that we have to do.

The rest of the week was very stressful. Between Tuesday and Wednesday, we had visits from a large number of dignitaries, including President Obama, and the preplanning that has to go into that is very challenging, from a security perspective, and from a hospital operations perspective. We had SWAT teams at the front of our hospital with big armored vehicles, and soldiers with machine guns, which created issues with our patients feeling safe and our visitors feeling safe that we had to address.

In my opinion, the most difficult day was Friday, and the fact that without much notice, we found out that there was no public transportation, and that we had to make some very difficult decisions about what we should advise our staff to do, in terms of coming to work or not. We always have

to remember that we have at least an average of 900 patients here, who need to be cared for, and we have to have plans to make sure that we can do that, no matter what happens. So the week became increasingly stressful and demanding, because people started with this very significant event on Monday, and just as they thought that things were somewhat under control, things began to ramp up again. So Tuesday and Wednesday were mostly about VIP visits and how we manage them, and how we were taking care of our patients from the bombings.

Thursday night, we were notified late Thursday night that we had received the police officer who was unfortunately shot and killed, at MIT. We had received that officer in the Emergency Department, and we did not know it was related to the bombing suspects at that point in time. But that creating his own its own cascade of events because obviously, when that happens, there is a large law enforcement presence at the hospital. And very quickly, the events started unfolding with the Watertown incident, and the violence that ensued there. And by early the next morning, we knew that we had to go back into disaster mode again. So one of the principles of emergency management is thinking long-term, as I mentioned before, and anticipating

the unexpected, and not using all your resources at once. So it was very important that early in the week, on Monday and Tuesday, people were not generally -- leadership people were not spending 24 hours a day in the hospital. They were spending 12 or 14, but then they were going home and they were coming back. And that was really important, because it ended up being certainly the longest week of my career, and the longest week for a lot of people, and a very stressful one.

By Friday, we really needed people in our Emergency Operations Center to help figure out what to do. We needed people in our labor pool to help serve meals and transport patients if our staff couldn't get in. And dealing with those issues, and figuring out how to communicate with staff; what does shelter in place mean? When the governor says, "Don't leave your house," does that apply to healthcare workers who are charged with taking care of our patients? Those were the more significant issues that we had to deal with. So, if we're doing our jobs correctly, the recovery process from any event starts as soon as the event starts. And I think we did OK in the beginning, and as the week progressed, we did better and better. Our debriefing sessions started the next day, so on Tuesday,

and continued in one form or another throughout the week and after that, so there were different groups of staff who were meeting at different periods of time. (beeping sound)

I wouldn't say that we ever fully got [50:00] back to our [rule?] --

FEMALE VOICE ANNOUNCEMENT: (overlapping dialogue; inaudible)

REISMAN: -- I think people with --

END OF AUDIO FILE