Hospital Preparedness Program Teleconference Transcript
Capability 10: Medical Surge and Immediate Bed Availability

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Operator: Good day, ladies and gentlemen and welcome to your HPP Capability 10 Medical Surge and Immediate Bed Availability Webcast. At this time, all participants will be on a listen-only mode. Later at the end of the conference, there will be a chance to ask live questions and instructions will be given at that time.

If at any time during the presentation you would like to submit a question over the Web, you can do so by using the question feature over the Webcast. If you should need any audio assistance, you can press star then zero on your touch-tone telephone and an audio operator will assist you. And as a reminder, today's conference is being recorded. And now I would like to turn it over to David Rykken, Supervisor, Field Project Officers for the Hospital Preparedness Program.

David Rykken: Thank you. And greetings from Washington D.C., the headquarters of the Assistant Secretary for Preparedness and Response. The Assistant Secretary, Dr. Lurie sends her greetings as well as the Deputy Assistant Secretary, Don Boyce. Thank you for participating in our first national call.

Medical Surge is one of the eight healthcare capabilities. We are excited to have the opportunity to share with you an innovative approach for implementing Capability 10, Medical Surge, through Immediate Bed Availability. Today, we're going to hear from members of the National Healthcare Preparedness Programs. Let me introduce the speakers on the call.

First, we're going to hear from Scott Dugas, the HPP Branch Chief who will provide some introductory remarks. Next, we're going to hear from Shayne Brannman, the Evaluation Branch Chief who will talk about the measures associated with medical surge.

Following their comments we'll hear in detail about the new medical surge model of Immediate Bed Availability from Dr. David Marcozzi, the Division Director of the Healthcare Preparedness Programs Division and Dr. Richard Hunt, the Senior Medical Advisor.

At the close of the call we'll have time for questions and answers and we'll also maybe hear from some of our members from the medical surge function group. So with that I am going to hand it over to Scott Dugas from the Hospital Preparedness Program.

Scott Dugas: Thank you and welcome everyone to this unprecedented national call. We're very excited about it to discuss again medical surge and more specifically Immediate Bed Availability. On the call today, we have state preparedness directors, State and Territory hospital program coordinators, hospital association representatives and of course, hospitals, other healthcare organizations and their respective healthcare coalitions.

We also have our executive working group, those members are on the agenda as well. And we extend a special thanks to them. And we also want to thank the State and Territory Public Health Programs. They're our direct cooperative agreement recipients that we depended on for so many years and we want to thank them.

They're also the point of contact for any sub-recipient hospital or coalition for integration and involvement in this grant. As you continue to build healthcare coalitions, build out medical surge and your other capabilities and begin to operationalize IBA along with your other preparedness capabilities. And especially as you work through integrating healthcare coalition work into your state and local emergency support function constructs.

The intent of today's call is, again, information sharing about medical surge and more specially operationalizing that through Immediate Bed Availability. From a national perspective, we wanted to administer this call with a wide net and have a deep reach approach for all the stakeholders involved who touch the preparedness enterprise and these cooperative agreements. So with that, I'm going to turn the call back over to Mr. Rykken.

David Rykken: Thank you for your opening remarks, Scott. Next, we're going to hear from Shayne Brannman the Evaluation Branch Chief to talk a little bit about the measures around medical surge. Shayne?

Shayne Brannman: Good afternoon, David, and good afternoon, everyone. It is a real honor and pleasure to be speaking with you today. As some of you know, I am new to the position as Acting Chief of the HPP Healthcare Systems Evaluation Branch.

Fortunately, I have had the distinct honor over the last decade of helping ASPR develop work products specifically designed for use at the state and local levels.

Most notably, I assisted with the operationalizing the first edition of the Medical Surge Capacity and Capability Handbook and I am currently serving as ASPR point guard for Crisis Standards of Care. These past work experiences working with many of you that are participating on the call today have helped me think through surge capacity as occurring along a continuum of care based on resource availability and demand for healthcare services.

Therefore, when the healthcare systems evaluation team refined the HPP program measures that will become effective on 1 July, 2013, we emphasized and highlighted the preparation, understanding of decisions, implementation of strategies and stewardship of resources that must occur along the continuum of care.

Under the Med Surge program measure we have developed two indicators specifically associated with Immediate Bed Availability. Many of you on this call, again, helped us refine and hone the language for these measures and we are very appreciative of your assistance.

The first indicator specifically dealing with Immediate Bed Availability is the following: The Healthcare Coalition has tested its coordinated mechanism to both deliver appropriate levels of care to all patients as well as to provide no less than 20 percent immediate availability of staffed members' beds within four hours of a declared disaster.

The second indicator under Med Surge for Immediate Bed Availability is the following: The Healthcare Coalition has demonstrated the ability to do the following during an incident, exercise or event:

1. Monitor patient acuity and staff bed availability in real time
2. Offload patients and
3. Onload patients.

You'll hear a lot more about this information in the following presentation. This topic today is very timely and relevant to our program measures and the nation that we live in today. David, I'll turn it back to you.

David Rykken: Thank you, Shayne. Now, we're going to hear from Dr. David Marcozzi and Dr. Richard Hunt about medical surge and how to functionalize and implement it through Immediate Bed Availability. Dr. David Marcozzi?

David Marcozzi: Yes, thanks, Dave. Greetings everybody from Washington D.C. Thanks for hopping on the call this afternoon. We hope that this is an innovative approach to where we're going with medical surge and the concept of IBA, really the acronym short for Immediate Bed Availability. We'll speak a little bit more about that and Dr. Hunt, when I turn it over to him, will really try and tease that out a little further.

The concept of Immediate Bed Availability is really novel and it builds on some great work that's been done by certainly a lot of folks in the preparedness sector and I want to thank them before jumping into our discussion today and thank them for their efforts.

I also want to point out that the folks who are doing the job in every state in our 62 awardees. The fact that they are really good and excellent leaders with regards to preparedness within their respective jurisdictions, I want to pause and thank them for their efforts with regard to shaping the capabilities and helping us refine these performance measures so that we can build on this as the nation moves forward for healthcare preparedness.

So with that, I'm going to jump in and provide some over-arching context to the hospital preparedness program and our coalitions because there are folks on this call who really know a lot about what coalitions mean and what that partnership is interpreted as for the hospital preparedness program and then there are some folks who are really just starting out.

So we are going to try and be level setting so let's get started. So this is a pause on the first slide. An opportunity to have a discussion on weaving a thread of preparedness with the daily delivery of care.That's important and I'll speak to that in upcoming slides but I'll reference back to that as we move forward.

For those folks who don't know about ASPR, ASPR, the Assistance Secretary for Preparedness and Response, started as a result of 2002 was codified in language in 2006 and certainly has responded to a host of public health and healthcare disasters and obviously, to date in 2013, we've responded to some most recently.

So where are we to date? We stand on a just-in-time supply chain. We stand on a just-in-time staffing models for the entire nation's healthcare delivery system. And that's a challenge when we try to build the concept of medical surge.

Those folks who work today right now are trying to deliver care for the gunshot wound, the stroke or the heart attack that just presented to that emergency department. There is not a lot of space within the current system of healthcare delivery today and that's a challenge for all of us who work in disaster preparedness and healthcare delivery that's figuring out what medical surge means. And under that umbrella, how we should be moving forward as a nation and thinking about medical surge.

Dr. Lurie is famous for saying if we can't do it today then we won't be able to do it on game day. Linking the delivery of care systems of what we do right now to what we do with disaster preparedness is critical to moving forward as a nation and we hope that as Dr. Hunt and I walk through this PowerPoint presentation, we're starting to bridge that gap.

So for the folks who are on the call and are watching on this Webinar, there are just some graphics here, some graphical representations and if it animates incorrectly pause for a second because it will eventually catch up, your computers will catch up.

So the intention of the box on the bottom is really our healthcare delivery system. The preparedness efforts are on the top of that. Our coalitions are partners – our coalitions are the unit of measure that we are going to be looking for, for the concept of IBA to execute and implement the coalition, pardon me, the capability for medical surge and the IBA performance measures.

So our coalitions are the lighter boxes on top of that big healthcare system capacity and the national capacity for where we stand today. So the truth is though if we're a just-in-time system, we may be moving actually away from surge, not towards surge. Our definition of 100 percent preparedness is the ability to be 100 percent functional, to be able to execute those eight capabilities that Mr. Rykken spoke to and I'm going to go back to that shortly in upcoming calls.

But the truth is our system may be moving away from surge, not towards surge. One reference point on that is a data reference point. In 2000, the WHO stated that we had

36 beds per 10,000 in the United States, 2006 that number dropped to 33 per 10,000 and in 2012, that number was 30 beds per 10,000.

So if that's the case certainly from a capacity standpoint, we are moving away from surge, not towards it. Understanding that, we now have to develop a construct that bridges what we do today and those realities of healthcare delivery today with what we all think about in preparedness to be able to deliver care in disasters.

Everything bubbles down to financials and this is the reality of the world we walk in with regard to that big black box. That big black box is a $2.5, I think; actually it might be larger than that $2.5 trillion industry. That $2.5 trillion industry is largely a competitive market.

Our coalitions, their intention or our intention and we hope that they actually work in partnership but recognizing that we stand on a 0.001 percent of that overall budget thinking smartly on how we do things and recognizing that $2.9 trillion competitive industry is something we have to figure out how to partner with, not conflict with, is important moving forward. Because if it all bubbles down to financials, a $347 million program, we can't grant our way to success.

We have to leverage the successes that the daily delivery of care is realizing today right now with regard to information technologies, with regard to electronic health records, with regard to accountable care organizations.

So what do we need? We need a scalable coordinated system of national healthcare preparedness that meets local, state and national needs that links with an ESF-8 construct within each jurisdiction. We need to link with daily delivery of care models. We need a financially sustainable approach to healthcare preparedness. And this is what's challenging, this next bullet.

We need a population-based healthcare delivery model for disaster preparedness. That means shifting away from individual-based healthcare delivery system that we stand on today and allowing a disaster declaration or a declared disaster within a region to allow a pivot point, a bright line that transitions from individual-based healthcare system delivery to population-based healthcare delivery.

And as a provider myself, understanding that is a challenge but we hope today to walk through a little bit more of that. And finally, defining what healthcare

capabilities are and the associated performance measures. We're going to speak to a little bit about what 100 percent prepared means and if we can achieve those what then the expected goals are or the targets are.

So the National Healthcare Preparedness Program's overview – this is simply for folks who don't know of us, what our mission and vision is. We currently stand on a $350 million program that's intended to be and link with federal, state and local assets to coordinate a more robust ESF-8 structure to realize greater national healthcare preparedness response and recovery.

So what then are we? What do we stand on as a grant program? We stand on eight fundamental healthcare capabilities. We are going to talk to slightly today around Capability 1 and there was already a call for our awardees for Capability 1 but we are going to go and jump into the pool on Capability 10.

And for those of you who haven't drank your coffee or those of you who have, you are realizing that that is not numbered correctly. These capabilities are linked with the public health capabilities that our colleagues at CDC are promoting. This is an important point.

It's important because preparedness is leading the alignment between healthcare delivery and public health. That point should not be lost. So there is Capability 6 for the healthcare system of our nation, for information sharing and our public health colleagues who we will not – who the healthcare delivery system will not be successful with if both – if not healthcare and public health come to the table and work together.

All are successful or each isn’t successful unless all are successful. That capability is also shared by the public health capabilities and our colleagues at CDC in the Public Health Emergency Preparedness grant program. So let's talk about our healthcare coalitions. The whole is greater than the sum of its parts. Certainly, this applies to our healthcare coalitions.

The intent is that yesterday or tomorrow or today, right now, competitors who compete for hips and hearts, competitors who compete for better care for oncology patients or delivery of care for dialysis patients today and are competing for those patients tomorrow.

If they're part of the same coalition, they're working together, assisting their partners in their coalition to be able to affect care so that we have better survivability for our patients when a disaster strikes. That's important. The coalitions are the cornerstone of how the Hospital Preparedness Program and how ASPR is moving forward. We will not be successful unless we have robust coalitions to stand on.

Who are some of those partners? Certainly, they're listed here, but I'll call out a few – public health, emergency management, primary care providers. We will not be successful unless those including emergency medical services are brought into our coalition construct and work together to affect care in disasters.

This is how it looks today. This is what we hope and certainly, the fact that this stick diagram does not call out all the partners I had listed, I put a strategic pause here. Those lines that are listed are the emergency medical services, the EMS folks around our communities, that need to be brought in to the work we're doing with regard to coalition development.

Interestingly enough, the insurers are brought in to those discussions with regard to coalition development and how preparedness needs to be better linked with the financial construct moving forward and that's important for our coalitions to be able to think about as they start to form or make more mature their coalitions within each jurisdiction.

So if they are the cornerstone, what should they stand on? We need to make sure our coalitions across the nation are linked with the daily delivery of care. They have a complete and robust functionality and the ability to execute the capabilities. And the capabilities are the ability to put a team on the field or just because we put the right team on the field does not necessarily mean they'll score, they'll cross the touchdown, they'll score. They'll cross the goal line to score the touchdown. So our touchdown, our target is the Performance Measures. We're going to speak to those – to one performance measure today for medical surge, but that team needs to have complete functionality.

Third, they need to be thinking about and adjusting to risk. And risk is defined as those areas that are areas of higher threat. But also, risk is defined as where are our populations more vulnerable. So we'll be looking at that moving forward as our nation's coalitions gets stood up. Lastly, we're looking at the percent population that

our coalitions cover. And certainly, with resource constraint and a $350 million budget currently, we don't know what the future holds.

And having the financial understanding to making sure that there's complete functionality of our coalitions and understanding and creating realistic expectations of what each of our awardees can do within their jurisdiction has to be thought about moving forward.

And we look forward to working with you all as we build those coalitions and what our expectation is, those coalitions will be able to execute the capabilities and implement and achieve the performance measures, particularly the one on Immediate Bed Availability which my colleague, Dr. Hunt, is going to speak to and I'm going to turn it over to him now. Dr. Hunt?

Richard Hunt: Thank you, Dr. Marcozzi. One thing is clear that without a foundation of strong healthcare coalitions, the challenges of medical surge will not be met. medical surge – it's an Achilles' heel. Medical surge has been a longstanding challenge for preparedness and response. And it's a fault or weakness that causes or could cause someone or something to fail.

That challenge, that potential Achilles' heel has been noted most recently in the General Accounting Office report from a couple of months ago. They state a particular concern or questions about the ability of healthcare systems to surge that is to have the staff and resources in place to adequately care for increased numbers of affected individuals or individuals with unusual or highly specialized needs.

So, with a persistent challenge, a new approach is needed, a new medical surge approach. Immediate Bed Availability – Immediate Bed Availability is actually a phrase that anchors a concept inclusive of not just beds but all the resources needed in medical surge, realizing it's not beds alone that will care for a patient.

Its goal is to quickly provide higher level care to more serious patients during a disaster with no new space, personnel or equipment. It is indeed, as Shayne Brannman mentioned a HPP, Healthcare Preparedness Program 2012 Medical Surge Capacity Performance Measure and the abridged version would be the ability of coalitions to provide no less than 20 percent bed availability of staffed members' beds within four hours of a disaster.

Immediate Bed Availability – it's on platform that evidence informed, operationally tenable, economically sustainable, and ethically grounded.

Evidence Informed – one of the real basic concepts that's important to understand is that of reverse triage and reverse triage is defined as inpatients at low risk for untoward events with a principle of first doing no harm that would be discharged or transferred back to the community.

It's based on a study by Kelen in Maryland that had three hospitals where they actually monitored their census over a 19-week monitoring period and those three hospitals had 1,632 total beds. The hospitals achieved the net surge capacity of 66 to 81 percent after accounting for non-disaster emergencies. Importantly, the majority of surge would have been available 24 to 48 hours after the disaster.

Operationally Tenable – I mentioned it's not just beds alone. Space. Know that every day in our community, approximately 20 percent of hospital patients are discharged and every day, even more patients may be available for discharge.

For example, clinically stable patients with few parenteral medications may be appropriate for early discharge. Strategies to expedite discharge may include discharge holding lounges, converting private rooms to double rooms, reopening closed areas, utilizing hallways, converting patient areas to critical care areas, use of temporary external structures and space such as lobbies, waiting rooms, hallways that can open up as much as 10 percent operating bed capacity.

It's also important to note about space that some of these strategies have actually already been used to decrease crowding in our hospitals.

Operationally Tenable – as referenced to staff. Staffing is likely to be the key restriction on the number of patients that facilities and coalitions can accommodate.

Coalitions should consider protocols for revision of staff work hours, callback of off-duty personnel, use of non-clinical staff, local medical reserve corps, untraditional patient care providers, surge plans for home care agencies and clinics, and note that fewer larger staff offsite facilities will benefit from economies of scale.

Economically Sustainable – how is that? Well, building disaster preparedness into existing healthcare systems makes the process economically sustainable and allows

for surge capacity without extra staff, space or stuff. Private partners and insurance companies need to be engaged in this process. Billing will certainly always be an issue but can be mitigated through proactive stakeholder buy-in.

Ethically Grounded – during overwhelming disasters, decisions have to be made about who can best be served. Medical ethics is grounded in autonomy, beneficence and non-maleficence as well as justice principles. The consent to actually be triaged is implicit in the consent to give medical care.

It's applied routinely, daily throughout our healthcare systems, in military operations, public health or population level-emergencies. Or certainly the challenges of utilitarian versus egalitarian approaches and a proportionality of care but no true disasters. And in disasters, the victims of disasters need to be considered as equals in terms of treatment, equal to existing patients.

Dr. Marcozzi used the reference to football games. And I think performance measures in terms of a goal line for a football game, a goal line for this important challenge of medical surge was already described by Shayne Brannman but I want to go through it again because it's important.

It is a very long sentence and I'm going to tease it apart. The percent of healthcare coalitions that have a coordinated mechanism established that supports their member's ability to deliver appropriate levels of care to all patients – kind of part one. And one would aspire to delivering appropriate levels of care to all patients including those that already were in your system, but also disaster-related patients, as well as to provide no less than 20 percent bed availability of staff members' beds within four hours of a disaster.

So, I've given you some of the tenets behind this and how it's operationally tenable but how does it actually work, how can it work? So trying to get beyond the mysticism or myth of Immediate Bed Availability. The next slide is going to give you a construct of a specific hospital, but think about it – about in the context of all hospitals in a healthcare coalition.

Forward construct includes medical surge, OB units, step-down units, ICUs. And then, we used to think about building additional surge, building additional beds, more staff, space and stuff. In our challenged economic climate, that's probably not going to work as well anymore. So, moving to this newer construct where indeed you have

these same units, but additional surge is built within the hospital and across hospitals in a coalition.

This next slide is going to move really fast. So watch carefully. This next slide will show multiple hospitals – a hospital with multiple patient types including higher acuity and lower acuity patients, through offloading to the healthcare coalition partners. For example, long-term care and community health centers and discharge home, we're able to create an increase in acute care space. So watch carefully.

Here is the hospital with all its patients and indeed, those with lower acuity who can be safely transferred or discharge home to facilities such as long-term care facilities, community health centers, and again, discharge home. Thus, allowing an institution and across the coalition to build 20 percent acute care space.

The pillars of Immediate Bed Availability and Shayne Brannman also alluded to these – they include continuous monitoring, offloading and on-loading. Continuous Monitoring – maintaining operations certainly will benefit from continuous monitoring. Monitoring patient acuity in real-time. Absolutely essential when an event happens and the need to continuously establish disaster disposition protocols.

That red box there or red flash is an event and it's really important to note that not all events will probably require Immediate Bed Availability implementation and it's really important to think through the kinds of triggers that will require activation of Immediate Bed Availability.

Then, offloading – whats offloading? Disaster disposition protocols are utilized, rapid bed turnover happens and discharge or transfer of lower acuity patients to coalitions, partners or to home. And then, a major issue is making a decision about deferring elective admissions and procedures and we recognize that has huge economic impact.

After offloading, on-loading, and quite frankly, that's the easiest part because these patients are going to come at you anyway and it's going to require a redeployment of existing resources to allow for higher acuity admissions. I want to move from pillars of IBA to some real-world experiences, again, trying to demystify the concept of Immediate Bed Availability.

First, talking about continuous monitoring. Continuous monitoring, it's great to have information sharing, but what is the question we're trying to answer in the context of Immediate Bed Availability. And you really want to know through that continuous monitoring, in a moment's notice, where are the 20 percent staffed beds? Indeed, healthcare coalitions greater than half of them have already started using electronic data and information sharing systems.

There's examples of systems out there that have been implemented. And we've noted that greater than – in that survey – that greater than greater than half of the healthcare coalitions have tested communication systems protocols internally and with relevant stakeholders.

Communication between coalitions is less prevalent however. But realize that communications alone, if it isn't able to answer where are those 20 percent staffed beds, we're going to be continually challenged in trying to figure out how to do Immediate Bed Availability well.

Moving to offloading, there is real-world experience with offloading. Reverse triage was actually put into practice back in 2009 at the Royal Darwin Hospital in Australia. There was a boat explosion injuring 30 asylum seekers off the coast. That hospital was full with an emergency department backlog, not unlike what's probably being experienced in many of our emergency departments here in our country today. They had a disaster response team they activated using reverse triage.

The elective – they cancelled elective procedures, multidisciplinary teams assessed patients. They increased the use of community care facilities such as nursing facilities, and discharged patients. In four hours, they made 16 percent of their capacity by making 56 beds available. Only one patient returned for further treatment. Notable. Real world experience with offloading: Hurricane Sandy. This speaks to the foundation of coalitions as absolutely critical to being able to do this. And a quote from that article in the Journal of the American Medical Association on offloading : "Where possible, investments should be coordinated across multiple institutions, using healthcare coalitions to ensure resiliency."

They noted improved situational awareness, absolutely speaking to the concept of continuous monitoring. They drilled evacuation, and they had measured success in Sandy with transport, which speaks to the issue of IBA offloading. And they also pointed to a need for improved clarity of criteria and triggers for evacuations, much

like there is a need for improved clarity of criteria and triggers for implementing Immediate Bed Available after an event occurs.

Off-loading –Let's talk about another type of event, seasonal influenza. This past January, during seasonal influenza, we noted expedited case management through discharge planning techniques, decompression of inpatient wards, and isolated hospitals actually did cancel elective admissions and procedures.

I'd like to pause for a second here around offloading as it relates to IBA and pandemic. IBA – Immediate Bed Availability – actually attempts to push healthcare systems towards the left-hand side of the standards of care continuum. Again, pushing systems towards the left-hand side of the conventional contingency crisis standards of care continuum. And a pandemic actually may reach a tipping point where crisis standards may apply, requiring, for sure, more staff, more stuff, and more space, and fatality management.

So how does Immediate Bed Availability actually apply to pandemics? Continuous monitoring will absolutely be needed across the system. Off-loading will absolutely be needed to make space for sicker patients. On-loading will also be needed since sicker patients will need acute care resources.

Meeting that four-hour IBA requirement is a foundation for building surge capacity for events that have much longer time spans. Meeting that 20 percent staffed bed requirement will help, but it may or may not be enough to accommodate volume. We're aware, all of us think about pandemic, particularly in the spirit of or the kinds of infectious diseases that are out there right now – and it is important to think about IBA in that context.

Moving again to offloading, some real world experience – and this comes from across an ocean as well – Rashid Hospital in Dubai. They have a 500-bed tertiary care hospital there, among other hospitals in that city. They are constantly over bed capacity. That might sound familiar to some of you on the phone. They actually had activated their disaster plan 10 times in response to real events in three years. They noted, among those 10 times, challenges, commonalities of challenges – lack of bed space, congested operating rooms, uncoordinated medical management.

And they did like some of us do and thought something has got to be done and they did actually a root-cause analysis of that. And they discovered that physicians

continued with normal business up on ward rounds, doing their usual patient assessments, doing their routines, ordering their routine, morning, daily chest X-rays for patients in spite of the disaster status. They had no system of recognition of need for reverse triage, and the operating rooms just continued on with routine cases without lack of leadership in this area.

So how did they tackle that? They spent a lot of energy with one-hour meetings with medical teams in individual disciplines on reverse triage education, the principles of reverse triage. They made a conscientious decision in a disaster mode that they would transfer patients to other facilities if specialist interventions were not required within 24 hours or would not be required within 24 hours, again, with the principle of first do no harm.

And then they worked to increase bed capacity and routinely worked to clear patients through use of hospitalists and extended discharge lounge facilities. They took the concept of offloading a step further. And, in Dubai, construction is what they do over in Dubai. They spend a lot of energy on construction. And they liaisoned with construction companies, noting that many victims of disasters were construction workers, and they worked with them regarding expatriating patients to home. And they liaisoned with local police to not only allow access to the hospital, but also provide transport escorts.

They took it even a step further in offloading, and they developed a minicard. Certainly, this is not the minicard for responders to the emergency department, the kind of department where the casualties were going to happen. This card, this minicard was in the pockets of those who were up on ward rounds – the internists, the hospitalists, the infectious disease specialists, those that are attending physicians up on the wards.

And these are their medical team member guidelines. And they are very specific in terms of really trying to help them figure out their actions during a disaster. And they have a specific number they can call. They actually tell those physicians "you go up on your units and wards where you have patients, figure out who is possible for discharge." And then they get very specific about how to work on implementing discharge of patients who will not be harmed by that action.

On-loading – Moving from offloading to on-loading. On-loading – it takes place in our emergency departments every day. And they'll – it will continue to take place

regardless of challenges of space, staff, and stuff. It's what we do. The continuous monitoring and the offloading of Immediate Bed Availability allow on-loading to take place in an efficient manner that does not compromise patient care.

We're going to do a quick-stretch exercise here around on-loading. And when I say "exercise," it's beyond an exercise. It's some real world experience. And that real world experience was on March 11, 2004 where 10 terrorist explosions occurred almost simultaneously on commuter trains in Madrid, killing 177 people instantly and injuring more than 2,000.

That day, 966 patients were taken to 15 public community hospitals. Two-hundred seventy-two patients arrived at the closest hospital between 8:00 and 10:30 AM – 272 patients at the closest hospital between 8:00 and 10:30 AM. We actually did work to try to sort through is this a singular experience or is this experience across the board in international similar events?

Lessons learned among multiple medical leaders of responses to explosions that have occurred in Madrid, Karachi, Israel, London, Mumbai, and Delhi found a common commonality to the responses to these events. The injured and dead will arrive at the closest hospitals. And, when that happens, the closest hospital is unable to meet the demand, resulting in the functional collapse of that hospital. It's unable to provide the same services that it usually would – therefore, an absolute compelling need to distribute patients.

It is exceptionally gratifying to watch how we have actually learned from some of those lessons and seeing Boston's healthcare systems do an extraordinary job of distributing patients among its hospitals.

Other recent experiences – and we've had too many with bombings, explosions, and tornadoes. Off-loading after the bombings, one hospital had 30 patients in their emergency department who were either discharged home or sent up to hospital floors for further workup in 20 minutes' time – 30 patients in 20 minutes' time.

In explosions, after an explosion, we received a report that nearby hospitals immediately implemented surge plans. They quickly moved lower acuity patients to other healthcare facilities and organized more bed space. Local surgeons were notified that elective procedures may be cancelled in the coming days as bed demand grows. The hospital staff, they said they – said that they were prepared for a 20

percent surge, and they found that, through the response, their facility could have surged beyond 20 percent if necessary. Boy, if that doesn't speak to the issues and – and not just issues, but meeting the challenges of medical surge, I don't know what does.

In terms of continuous monitoring, we saw a report after recent tornadoes of beds available for – bed counts being available for red, yellow, and green categories of patients very shortly after tornadoes touched down – again, speaking to the concept of continuous monitoring.

Immediate Bed Availability, Dr. Marcozzi alluded to this –importance of everyday preparedness for "game day" and absolute need to weave a thread of preparedness into the daily delivery of care. Immediate Bed Availability – further considerations. Realizing we have more work to do and challenges to meet that include federal regulations, jurisdictional challenges such as triggers, thresholds, when is it that you actually activate IBA, transportation challenges, liability, and staff and public education.

We also were aware there are rural challenges to implementation of IBA. But, independently of that, medical surge has been a continuing challenge and this new approach is not only tenable, but is a practical approach that we already are seeing some really positive, very, very positive recent experience with. So, with that, I want to turn that –Thank you for your kind time and attention. I want to turn this back over to Dr. Marcozzi for further comments.

David Marcozzi: Yes. Thanks, Dr. Hunt. So, you know, weaving that thread of preparedness within daily delivery of care- I'll pause there for one second. This is achieved, if we do this today right now, with no disaster.

If communities are engaged in this idea of continuous monitoring right now today, if, today, right now, there are cards in folks' pockets to understand how to implement this if there's an event that occurs, that means, today, right now, that our entire nation's healthcare delivery system understands, appreciates and can implement a concept like IBA. So let's talk about the measure of IBA for one second.

The United States changed an entire system of care with regard – with the result of one measure. The concept to door-to-balloon time codified and formalized and mandated the relationships between our emergency medical services, our emergency

care system, including emergency physicians and emergency departments, our cardiology colleagues, our hospital executives, so that we could provide better care as a nation to victims who are suffering from a heart attack today right now within 90 minutes.

It is a national standard that, when it started, was too difficult to achieve. And, now, it is what a nation stands on to deliver acute coronary care. The concept of IBA mimics a specific time-measured criteria to provide a quantifiable metric that's measurable, that we think allows for the better and greater availability of our nation's healthcare delivery system to provide care in disasters. So, with that, I want to turn it over to Mr. David Rykken, and I want to thank you for your time. And I look forward to your questions.

David Rykken: Thank you, Dr. Marcozzi, for that very informative presentation – also, Dr. Hunt. Now, we're going to open it up for questions. We've – you know, we just went over the IBA and the implementation thereof. Also, we have still here in the room with us Scott Dugas and Shayne Brannman for any questions you may have around the measures.

And so, with that, operator, can you let the folks know how to ask questions? And then we also have some questions from the chat room as well. So, first, we'll open up the live questions, and then we'll be addressing some of the questions that came in over the Webinar. Operator?

Operator: Okay. So, at this time, ladies and gentlemen, for a live question, press the star followed with the one key on your touchtone telephone to be placed into a live question queue. If your question has been answered and you wish to remove yourself from the queue, you can press the pound key.

So, again, for any live questions, press the star followed with the one key, and you'll be placed into a live question queue.

Okay. I am showing some questions coming in. We'll take our first from Erik Auf der Heide. Erik, your line is open.

Erik Auf der Heide: Sorry about that, I had the mute button pressed. I have – first of all, I'm really pleased to see the development of the coalition concept that the problem with uncoordinated care and the coordination between pre-hospital and hospital care has

been a problem recognized for many years, so I'm glad that we're making progress on that.

I have two questions; one of them is, as was so aptly demonstrated and has been demonstrated by numerous reports in the literature that most patients end up at the closest hospitals and to a great extent this is because most patients are transported by private vehicle as a result of search and rescue operations by private citizens.

One of the strategies for addressing this issue has been to designate the closest hospital as a triage and stabilization center with referral and transfer of patients to the other hospitals which have received initially very few patients from the incident.

And one of the big stumbling blocks on that is the EMTALA Regulations, and I'd like to know what progress has been made to maybe convince the powers that be that there should be a disaster exemption for EMTALA for communities that have developed a holistic community plan for patient distribution.

David Marcozzi: Yes, Erik, Dave Marcozzi. I appreciate the call, so – or appreciate the question. So, certainly, 1135 Waivers have to be thought about with regard to appropriate ability to distribute patients in the event of a disaster.

We're engaging currently – ASPR is engaging and certainly folks down there at CDC, we would be glad to partner with you with regard to this. But engaging our CMS partners and understanding how we execute and are implementing our coalitions. And then, therefore, they would then subsequently utilize IBA as a tool to be able to provide care for patients in disasters. One of the other tools in that toolbox is the ability to allow 1135 Waivers for an appropriate disaster. So, we are engaging in those conversations right now but thanks for the question, Erik.

Erik Auf der Heide: Okay. My second question is I've been actually working on a research proposal related to this and that is the issue of patients with ongoing and chronic diseases losing access to their routine sources of healthcare. And this may result from infrastructure damage to non-hospital healthcare facilities including pharmacies, dialysis centers, clinics and so on.

And the concept of doing the reverse triage could be problematic if those non-hospital medical assets were disabled by the disaster or access to them was not possible. And I'm wondering if any efforts are underway to identify how often this occurs in actual

disasters and what interventions might be entertained to prevent that including things like zoning requirements so you don't build your dialysis center in the flood plain or building codes that would make sure that other – not only hospitals but other medical facilities are built with disaster resistant designs.

David Marcozzi: Yes, again, I'll take it, Erik. So, certainly, continuity of operations is one of those keys and we – certainly, when we have infrastructure damage that would impair a facility's ability to continue to function. But the intent is to try and promote a coalition-based focus.

And if we have coalitions that are able to better support each other then they're also to better provide and support their communities which means that they would be able to potentially transport care from a dialysis center that is affected to a dialysis center that is not affected and to be able to share resources appropriately so that we can mitigate issues like that when infrastructure is affected. For the – in regard to zoning requirements and things, it is probably not appropriate for this call but I'd be glad to talk to you about it afterwards. Thanks for the call, Erik.

Erik Auf der Heide: Thank you.

David Rykken: Thank you. Operator, do we have any other calls, then, again, try to keep them short, we have a lot of folks on the call. Thank you.

Operator: Okay. We do have numerous other questions. We'll take our next from Andrew Bern.

Andrew Bern: Hi, Dave. I am Andrew Bern. Thanks for your presentation. Do you have a mapping of the current healthcare coalitions that have been identified under the Hospital Preparedness Program? And by doing so identifying the areas where there is a gap we need to develop those that would be amenable to new HPP grants?

David Marcozzi: Yes, Andy, thanks for the call. So if we could ask all the callers when they just identify themselves and where they're coming from, so we know or we could just make sure that we're appropriately engaged and giving the right direction.

So, Andy, I know you well from the American College of Emergency Physicians. So, Andy, we are actually looking at coalition development and actually mapping that out. We're mapping it out with different cross sections.

And I'll let you know some of the cross sections we're looking at: how accountable care organizations are being split up, how EMS systems and trauma systems across our nations align with coalitions, how actually where – how and where our rural partners, our critical access hospitals align with our coalitions.

So, we're looking at some of those maps and we're hoping to provide some of those tools to our ESF-8 leads within each jurisdiction to help them think about how to shape their coalitions appropriately as those really are the leads within each of our 50 states and our other awardees appropriately figuring out what to do within each jurisdiction. Thanks, Andy for the call.

Andrew Bern: Thank you, Dave.

Richard Hunt: Andy, this is Rick – Rick Hunt. Just to sort of tag team off of Dr. Marcozzi's comment there, you know, the maps that you're speaking of, one of the things that we think a lot about is if you recall the slide that Dr. Marcozzi put up there about it's really important as we think about coalitions that we all think about the percent populations served, the risk, the functionality and healthcare delivery. So, when we start thinking about what maps might be most be useful, trying to do the kinds of overlays that would speak to those kinds of issues.

Andrew Bern: Okay. Thank you.

Operator: Okay. Thank you. And our next question is coming from Roy Alson.

Roy Alson: Okay. Good day. Roy Alson, both with ACEP (American College of Emergency Physicians) and the state of North Carolina. Dave, Rick, thanks for the presentation and as you outlined in your talk, the coalitions are the central key to this entire process and yet day-to-day we have hospital systems that are locked in mortal combat with many of them with the avowed goal to crush their opposition.

And simultaneously we're asking them to figure out how to play together in the sandbox. Either the system has to have some kind of incentive to force them to play together because – otherwise, you're talking about exchanging information that they all feel is proprietary, how many beds might be available and so forth.

And we know from experience with prior hurricanes that some systems would never consider loaning staff to help others keep open. How do we change the mindset of

the leadership of these hospital systems very much the way you referred to changing the mindset of doctors on the floor to discharge patients?

David Marcozzi: Yeah, Roy, way to give us an easy one.

Roy Alson: When have I ever done that to you, my friend?

David Marcozzi: Right, exactly, Roy. So, hello to all my friends in North Carolina by the way. So, I think you hit the nail on the head. I think that there's different ways to do this, I don't think we have – there are different solutions, Roy. I think we need all of them in that toolbox and I'll name a couple, and we're not there yet. First of all, you need some financial incentives.

I've said we can't grant our way to success and linking up with our daily delivery of care systems which regard to how regulations are instituted so that partners who deliver healthcare whether or not they be a private institution, academic institution or long term care, all have some community – a shared community interest and a shared expectation that you'll work together once a trigger happens and a pivot point occurs and the community is affected by disaster.

And figuring out what those regulations are and you hate to say the regulations, but either regulations or incentives to try and encourage them to get there, that's first. Second, I think that there are financial linkages here that if you play in recognizing, there is some competitive nature to the healthcare delivery system.

But if you play in partnership, then there is some financial incentive to be able to do that. So, not only is it do you have – you know, it's a carrot and stick mentality in figuring out what is in each box we have that we're sorting through now, the Hospital Preparedness Program, we hope is the toe hold that at least starts that discussion, it starts those better relationships forming. Thanks, Roy.

Roy Alson: Thank you, sir.

Operator: Thank you. And our next question is coming from Paul Weiss.

Paul Weiss: Hello. I'm from the Southern Maine Regional Resource Center, Southern Maine Coalition of Hospitals and Organizations and I appreciate the talk. I guess, my question – that was a great question prior to mine because selling the idea to hospitals, not just from a competitive standpoint, from a participation standpoint.

And the other piece would be the equipment that got our hospitals up to a standard of emergency preparedness has been sort of stopped. And for the last six years, we haven't had any even maintenance of upkeep of that equipment and I was hoping to hear if there was any ideas on that or some thoughts on that. Thank you. I'll take it offline.

David Marcozzi: Yes. Hey, thanks, Paul. Dave Marcozzi here. So that's a good question and so, you know, with the shift of capabilities, we stood on the work – the great work that – you know, Scott Dugas and Dave Rykken have been part of the program since when, since 2004.

So, they know that the evolving change that – the sea change that has occurred from HPP from where it was to where it is. And a lot quite often, there was a lot of buying things, some of them appropriate, some of them were not as necessary and that shift to capabilities was to hope that, hey, this is not just about buying things but certainly not – there has got to be an infrastructure component of that.

But there also has to be a training component to that. There also has to be special – SOPs associated with that. There also has to be regulations and formality that allows those coalition partners or allows that – I bought this Widget X to be able to use or utilize appropriately for staff across the coalition.

So we get that it may not – there may not be funds needed as much to be able to support that infrastructure but we hope that there's a change into figuring out what's appropriately needed with regard to infrastructure development.

And then, building from those pieces of infrastructure what fundamentally aren capabilities and looking at those – that infrastructure development and linking that with the current eight capabilities, finding synergies and then we will support those infrastructure processes and training and SOPs moving forward if they're consistent with the healthcare capabilities. Scott, Dave, any other thoughts? No, we're good. They can't see your head nod so just tell them.

Scott Dugas: Yes, going forward through the capabilities document our building block approach. Certainly, equipment purchases are allowable and as long as they're in line with – we're encouraging that in line with operational plans and demonstrated in exercises

and if there's a need there, a solid need based on HVA. So certainly the program supports maintaining equipment, any new purchases.

David Marcozzi: Thanks, guys, Thanks, John, back to you. Operator?

Operator: Okay. Our next question is from Carol Karps.

Carol Karps: Yes, this is Carol Karps from New Mexico HPP Program. We're a rural state with just one or two metro areas. And one of the things I'm wondering is, when you talk about the measurement being within coalitions, the meet 20 percent bed availability within four hours. Is it possible that we can cross coalitions?

If we have a substantially rural coalition that some of our hospitals may be closer to the metro area or get air transport to Albuquerque as opposed to going down to let's say Las Cruces in the southern part of the state and we have like hundreds of miles in some cases between hospitals and they might only be critical access hospitals. Is it possible that we could do the IBA across coalitions not just within coalitions?

David Marcozzi: Hey, Carol, thanks. Marcozzi here. So the intent is to do it and this measure is for coalitions specifically and I've, you know, what we like about the measure is that is regardless of size of coalition applicable. So, you have a coalition of 100 beds, 1,000 beds or 5,000 beds for acute care patients, that measure can be utilized for any of those size of coalitions.

Now, recognizing that some of our rural – and we're working through some of the challenges that you all face with regards to delivery of care in a rural environment. And we're going to be working through exactly what cross coalitions means because we want to be very specific and precise on the measure but allow also appropriate care for individuals.

So we don't want to be – we want to be as supportive to our jurisdictions and thinking about creatively and innovatively how to appropriately make this measure count so that it saves lives. And that fundamentally is truthfully the only measure that I think about with regard to this job. So Dr. Hunt, did you have something?

Richard Hunt: Yes. I think keeping the measure is important, that being said, clearly there will be disasters that are going to end up just because of scale of – the scale of the disaster, will actually end up crossing a coalition boundary.

And you know, in a recent survey that we did, there has been communication between and among some coalitions and that – when Dr. Marcozzi said we really do need to keep the performance measure intact but that does not preclude the – I mean, ultimately, there will be times of need where people are going to have to cross, go across a coalition to meet a community's needs.

And also, I did mention in some of the future considerations that rural issues are ones we all are going to need to look hard and long at, to sort through how to best approach, make the kind of approaches to the challenges that you mentioned.

David Marcozzi: Yes. Let me just put a foot stomp on what Dr. Hunt just said. So, you know, when we talk about formalizing these coalitions and making them functional, you know, the intent is to try and institutionalize that, make them 100 percent functional so they're able to work amongst themselves.

And then they can work between themselves so that we actually truly build a local, state, regional, and national asset that we could utilize for a small scale event or a national event like a nuclear detonation. And that's the intent to try and figure out that pivot point.

And we build not just a National Disaster Medical System, and those folks who are from NDMS, kudos to you for being on the call. But also, we build a National Disaster Healthcare System that supports and links with our colleagues from NDMS. So thanks for the call, Carol.

Carol Karps: Thank you very much.

David Rykken: Thanks Carol. We're going to go. We have a couple of questions that came to us through the Webinar. So we're going to pause for a second to answer those questions and then come back to the live questions. So Dr. Hunt?

Richard Hunt: Yes. We had a question from the chat line. Do any hospitals – the question was- do any hospitals that you know of use standardized discharge orders and instructions to offload these patients to healthcare coalition partners?

And my – my inference with the question is I'm assuming you're – the question was in reference to standardized discharge orders in the event of a disaster. And while I am not aware and I'm not aware of anyone in the program, and people can nod their head if I'm wrong, of us being aware of that kind of standardized discharge order.

But, indeed, that kind of thing models and templates for discharge orders that could be used in, potentially, an abbreviated format, those kinds of things need to be the kinds of things that need to be considered in, essentially, a toolbox, toolkit for actually implementing this.

And that was specifically the reason why I chose to include in the slide deck the slide that showed the pocket card for disaster response by the clinicians who were attending up on rounds on the floors. That's the kind of tool that will actually help with offloading that we had never ever thought about before.

So again, I think the question, particularly pertinent in that people need to sort of start thinking through with us, in collaboration with us and your partners, and among your coalitions and your states about the kinds of things that will help you actually get this done. So thanks for the question. It really was a good chance to highlight that.

David Rykken: Thanks, Dr. Hunt. So operator, we'll go back to live questions then we'll have a couple other chat questions later.

Operator: Okay.

David Rykken: So live questions on the queue?

Operator: Our next comes from John Cutler.

David Rykken: Go ahead, John.

John Cutler: Thanks. Yes. Thanks very much. We, here in Nebraska, are a rural health coalition was SEMRS, Southeast Nebraska Medical Response System. The question I have deals with your slide number 13 which doesn't indicate that public health is involved with the hospital model. We certainly use them a lot and they would actually provide some additional beds or help in terms of a severe situation. Can you comment on that? Should we include public health in these plans?

David Marcozzi: Yes, John. Thanks for the call. That's a – we missed the – let me just stop here. The critical three here that are instrumental with regards to our coalition development are, one, healthcare partners; two, public health; and three, emergency management. Those three are critical to the success of our coalitions and we're going to be looking at as coalitions are formed to make sure that those partners are at the table.

I included EMS. And at one slide, I said public health wasn't listed; on every other slide deck that we have here, it is listed. So, for some reason, it might have dropped off but that was certainly – and I put a foot stomp on this – certainly, not the intent. The only way we are successful is if public health is at the table, part of what we all do with regards to coalition development. So thanks for the question, John.

Operator: Thank you. And our next is coming from Robert Perry.

Robert Perry: Hello. So Robert Perry, University of New Mexico Hospital. So my question is that do we – is there any talk of making it similar to the 90-minute rule for door-to-balloon time a patient safety goal? Because, historically, unless regulated to do so, hospitals have kind of said even with financial incentives, have said – okay put it on the back burner?

David Marcozzi: Robert, wow. So, very interesting to think about how this links with patient's safety. We think that maybe some food for thought for the future. I think that as IBA continues to unfold that the implications to be able to provide better care for victims of a disaster appropriately, either in a moment's notice for events like bombings or long term events.

I think that if, and as this continues to evolve, could and should be looked at as a patient safety issue. But I think as we're starting on this road, I want to – I want to just say that for right now, we're taking this charge within the Hospital Preparedness Program. As we continue to evolve, we're going to start to look at the other opportunities for engagement. So thanks, Robert.

Operator: Thank you. And I'm showing just one final question from the live queue from Kathy Silvestri. Kathy, your line is open. If you would check your mute button?

Kathy Silvestri: Yes. Hi. Thanks for taking my call. I'm actually a regional healthcare coordinator from the Northwest Ohio region. And I'm kind of looking ahead where you were talking about the fact that we would need to test on the coalition's ability to meet this 20 percent IBA standard within four hours and also to provide patient care to both inpatients and those other patients that we've on-loaded and offloaded. Have you – do you have any ideas about how we would document or what kind of documentation would be required to be able to fully assure you that we've met these standards?

David Marcozzi: Yes. So those are some good questions and the documentation piece – first of all, you know, one of the things that we were just – Dr. Hunt actually, Scott, Shayne, Cynthia, were all at the AHA meeting. And one of the questions that was brought up was do you execute this 20 percent dieresis immediately after an event.

And the nice part about the ability to execute IBA is that piece of continuous monitoring. So that does not mean we have an event, we ought to include the offload 20 percent, we just wait for – with open beds waiting for it to – waiting for patients to come on.

This is the ability to bring on-patients and as they're brought on, appropriately be able to offload those patients. If you know that there's 50 from the event, 20 are coming to you, you can offload 20. There may be 10 that are additionally coming, that you could wait on, but this is not that immediate offload piece that everyone thinks about when they think about they need to push the button, 20 percent of my coalition goes out the door. And now, wait a minute. My CEO is not going to like the fact that I have open beds within my coalition. So that's why that weaving that continuous monitoring piece within daily delivery of care is important.

Number two, the ability to rack and stack and track the disaster patients who are presenting to a coalition is important. So, certainly, there are – there is ability as patients present to coalitions, as patients present to facilities to track, to tag appropriately those patients who are from the disaster. So, from a documentation standpoint for the ability to provide care really shouldn't change.

You're providing care for the pneumonia yesterday. Now, you're providing care for that disaster patient today. No documentation really changes with regard to what we're speaking to. We're really thinking about operations on how to officially care for those patients who are presenting.

If you're talking about absolute numbers and the ability to document absolute numbers then that ability to tag patients from a disaster – that they are coming in and understanding how many within your collation will be looked at in retrospect to look at from an absolute number standpoint and documenting appropriately that you're able to assume those – or able to accept those numbers or patients to that coalition. Kathy, did that help?

Kathy Silvestri: Yes, I believe so. So, it sounds like just the ability to have – to use your established patient tracking system to track the actual disaster victims would be one way to do it. And then, those exercise participants that they actually track then the number of patients that they were able to – like the beds that they were able to make available like track the methods and the numbers like if it was an early discharge or relocation to another facility or whatever, it sounds like that's the kind of thing you'd be looking for.

David Marcozzi: Yes, Kathy, that's right. That's exactly right. So, across the system of care not just a bolus to the emergency department but this is across a system of care. So, that means if you're tracking from – you offloaded your 90-year-old with a urinary tract infection who was just switched from IV antibiotics to PO antibiotics and started on Jell-O, that patient could potentially with appropriate waivers and those waivers are – we're tracking on that 1812 F waivers to allow that rapid ability to shift to a long-term care facility that is engaged with your coalition that understands that's part of your operating principles that we may be accepting this 90-year-old into our facility that your ability to track those patients through time is important. And that's what we're going to be looking at as far as documentation.

Kathy Silvestri: Thank you very much.

David Marcozzi: Thanks, Kathy, for the question.

David Rykken: Thanks. So, operator, we have to take another question from the chat from the Webinar and then we'll come back and we're going to wrap it up pretty soon, we're going to stop right at 3:30 so we'll address one more question from the chat and then one more question – live question and then we'll wrap it up.

Sue Larkins: Okay. This question comes from James Augustine. Please address how this plan interfaces with nursing homes who have a significant role in offloading hospitals and yet are not able to manage many day-to-day roles effectively.

David Marcozzi: Yes. So, thanks for the question, Jim. So, that's an excellent one and certainly there was just a recent, I think, OIG report around how long-term care is – needs to come to the table and should appropriately be resourced to be able to think about emergency preparedness for number one, their staff; number two, their patients and number three, from an operations standpoint how they would be able to ensure the continuity of operations for their facility.

So, to that end, you know, we're looking at how our coalitions' partners engage long-term care. We certainly are – that is part of our look towards the future. It traditionally – we have been a predominantly hospital-based system approach. But we're looking at – we are not successful from a facility – individual facility-based approach.

We've recognized the subject matter expertise that's on this call. Certainly a host of evidence supports that a shift to coalitions is important. We – as we stand together, we are stronger. So, to that end, including and appropriately resourcing and engaging long-term care facilities to be part of coalition development across our nation is needed as we move forward for the hospital preparedness program and the development of these coalitions.

So, we're going to be looking at that. It may not be completely baked yet. But we're putting all the ingredients together to make sure that they are appropriately engaged. Thanks, Jim for the question.

David Rykken: Operator, do we have any other questions from the queue?

Operator: Yes. We do have a couple. We'll go ahead and open Cheryl Grantham's line.

David Rykken: Okay, we'll take two more.

Cheryl Grantham: Hi. A very quick question to wrap up. Greatly appreciate the presentation. Can you remind us all how we can get access to the slide presentation that was used today, please?

Sue Larkins: We're discussing that. We anticipate that we may have a link to the web meeting so that you could go through this presentation in the future. And we're discussing the availability of the actual slides. To be determined but it will be sent out via the channels that the meeting notice came out and also to all – any participants who provided their email address on the website.

Cheryl Grantham: Thank you.

Operator: Thank you. And our next is coming from Erika Henry.

Erika Henry: Hi, calling in from Eastern Washington State here. I really love the approach that the presentation got started off on with sustainment of healthcare collations and I think Dr. Marcozzi, you used the phrase, we can't grant our way to preparedness. And it sort of gets at a discussion we've been having around how do we sustain our healthcare coalition in the face of diminishing funds and that sort of thing.

During your presentation – during all the presentations but, Dr. Marcozzi, you in particular, you really put words to a lot of the financial implications or financial benefits of being engaged with healthcare coalitions. And it just sort of got me wondering, is there a marketing sort of tool kit or some piece similar to that that's available to healthcare coalitions as we start engaging our partners in discussions. And I know not everyone is going to do this but we are thinking about engaging our partners in discussions around sustainment beyond what ASPR may be able to provide.

David Marcozzi: Yes, Erika. Thanks. Yes. I'm a – I'm a – I like that a lot of things bubble down to finances so I appreciate the question. So, there are a lot of different reasons to engage in coalitions. With each jurisdiction we're finding different models to coalitions where actually some of our coalitions across the nation in Florida, in Seattle, and Indiana are actually forming their own robust ability without the grant they would be able to have some sustainability for their – for their coalition.

The importance of thinking about sustainability for coalitions in light of the fact of diminishing resources – I can't put an exclamation point on enough, Erika – you highlight the fact that financially, they – we have to start to think about that. And that's why the importance of linking with daily delivery of care is so important, that financially sustainable $2.9 trillion infrastructure linking with electronic health records with duplicity, with working with things in the cloud.

So, we that we saw some of these successes that happened in Joplin and their ability to care for patients because they had the ability, from an electronic health record standpoint, to look and provide the ability to – after their hospital went down, to stand up a new facility that had the ability to access those electronic health records appropriately.

So, that's a success story. But that requires thoughtful look and whatever is being instituted within different healthcare collations and facilities to have a perspective and eyes to, well, how does preparedness link in with what we're doing now.

And not just electronic health records, not just –not just IT systems but overall operating procedures, billing procedures, regulations, legal ramifications to what they do to codify the work that we're moving forward with coalition development. So certainly there are financial pieces but there are regulatory pieces. And that last slide that Dr. Hunt spoke to of, what was it called – further considerations.

Richard Hunt: Further considerations.

David Marcozzi: Right. Further considerations, we recognize that this is not – we are not 100 percent there and what's interesting is each jurisdiction has got their own set of challenges. So, there's not one quick fix that I could – we could profess from Washington D.C. that's applicable to New Mexico just as it is applicable to Nebraska.

And we have to work with – and we want to work with each ESF-8 lead within each state and each jurisdiction and city to make sure that it's appropriate to those ESF-8 leads that we can help and support their concept of what coalitions look like to the future and particularly in and around the concept of sustainability for the future. So, Erika, thanks for the question, very insightful that you're bringing that up. And we hope to work with everybody on the call to think about that moving forward.

David Rykken: Thank you, Dr. Marcozzi.

And with that, Operator is – we have 3:30. Do you want to say last remarks, Dr. Marcozzi and we'll wrap up the call?

David Marcozzi: No. You know – so, Dr. Hunt and I and this team here, I can't thank enough. It's easy to stand and walk through the PowerPoint but you stand on the team that you've got. And this has been a great team. We look forward – and I say team I also include the work group that supports the Hospital Preparedness Program with Linda and name some of them, Scott, certainly there are others.

You know, with John and Linda, you know, Timothy McDonald, Mary Keating other folks from the – who help us support the Hospital Preparedness program moving forward. Cynthia Hansen who's been really an expert with regard to where she was in measurement and now has moved to the special advisor to me with regard to – I'm thinking about and one of the things I want to make sure I call out on this call and

thanks for giving me that final concluding remarks, thinking about how our coalitions address things like – are you ready for it – pediatric issues.

Dr. Hansen is a – was previously in a prior life a child psychologist. She's going to be helping the Hospital Preparedness Program think about how we address things like special needs populations. So to that end, I am thrilled that all of you hopped on the call. This is the first I hope of other engagements that we have the opportunity to do so. I want – I want to think about that we have a coalition meeting upcoming. Is that right, Dr. Hunt?

Richard Hunt: December. I believe there is a meeting this – it's not our meeting. It's the coalitions meeting.

David Marcozzi: Oh, coalitions meeting. Sure, in December upcoming and that's going to be where, Scott?

Scott Dugas: Louisiana.

David Marcozzi: Louisiana in New Orleans. So, we'll be talking about a lot of this further moving forward. But I want to thank everybody for the call and also thank our CDC colleagues who have been at our right hip through all of this. So, this is – we have not been successful because of the healthcare institutions standing in isolation.

The way we've been successful is that our public health colleagues have come to the table, helped shape the deliverables of our capabilities, helped shape about we think about those performance measures. So, I want to publicly thank Chris Kosmos, Jeff Bryant, Steve Boedigheimer from our CDC – from the CDC Public Health Emergency Preparedness grant program.

They have really been colleagues – have made us think hard about what we're doing and make sure we're a partnership with how we move forward as a nation for health preparedness both public health and healthcare delivery. So, I want to thank you all.

Operator: Okay. Ladies and gentlemen, this does conclude your conference. You may now disconnect and have a great day.