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STRENGTHENING OUR NATIONAL TRAUMA SYSTEM

TUESDAY, JULY 12, 2016

House of Representatives

Subcommittee on Health

Committee on Energy and Commerce

Washington, D.C.

The subcommittee met, pursuant to call, at 10:00 a.m., in Room 2322 Rayburn House Office Building, Hon. Joe Pitts [chairman of the subcommittee] presiding.

Members present: Representatives Pitts, Guthrie, Shimkus, Murphy, Burgess, Blackburn, Lance, Griffith, Bilirakis, Long, Ellmers, Bucshon, Brooks, Collins, Upton (ex officio), Green, Engel, Butterfield, Castor, Sarbanes, Matsui, Schrader, Kennedy, Cardenas, and Pallone (ex officio).

Staff present: Rebecca Card, Assistant Press Secretary; Paul Edattel, Chief Counsel, Health; Bob Mabry, Fellow, Health; Graham Pittman, Legislative Clerk; Adrianna Simonelli, Professional

Staff Member; Heidi Stirrup, Health Policy Coordinator; Sophie Trainor, Policy Coordinator; Jeff Carroll, Minority Staff Director; Waverly Gordon, Minority Professional Staff Member; Tiffany Guarascio, Minority Deputy Staff Director and Chief Health Advisor; Samantha Satchell, Minority Policy Analyst; Kimberlee Trzeciak, Minority Health Policy Advisor; Megan Velez, Minority FDA Detailee; and C.J. Young, Minority Press Secretary.

Mr. Pitts. The time of 10 o'clock having arrived, the subcommittee will come to order. I ask unanimous consent to recognize and allow our colleague, Representative Rick Hudson, who's on the full committee, to waive onto the Health Subcommittee for today's hearing. Without objection, so ordered.

I recognize myself for an opening statement. Today's hearing is an important discussion that will examine the areas where we can improve our national trauma system and the care provided by emergency responders.

The recent events in Orlando, Paris and San Bernardino remind us of the very real threat of mass casualty events that can produce large numbers of traumatically injured casualties.

Terrorism, criminal violence and road traffic accidents all produce traumatic injuries which is the leading cause of death for those under age 46. Because it disproportionately affects young people, trauma is the number-one cause of productive life years lost, greater than cancer or heart disease.

A recent Institute of Medicine report released just last week estimates that one in five trauma deaths may be preventable or, in other words, about 30,000 people might be saved every year if your nation's trauma system is better optimized today.

We'll hear from witnesses on ways to address our trauma and emergency medical systems. First we will hear from three authors of IOM report entitled "A National Trauma Care System Integrating Military and Civilian Trauma Care to Achieve Zero Preventable

Deaths After Injury."

They will discuss a number of recommendations included in the report aimed at improving trauma care. Our other two witnesses will discuss legislation introduced by Congressman Richard Hudson designed to ensure our first responders have access to critical medications needed to treat emergency conditions in the field.

One of our main challenges in addressing emergency and trauma care is leadership. Responsibility for planning, coordination, communications and response are divided across multiple agencies and jurisdictions.

The axiom when everyone is responsible no one is responsible applies. Leadership at the federal level is required to achieve coordination and ultimate accountability.

While strong national leadership is needed, we must also bolster those on the front lines at the local level. Here we can look to the military's incredible advances in trauma care over more than a decade of war.

Lessons learned during war time often drive innovation in civilian trauma care. This is not surprising, as many experienced combat medical personnel often leave the military and go into civilian practice during peace time. Outside of war our military trauma teams have few opportunities to care for severely injured patients at their base hospitals. The IOM proposes integrating military trauma teams into busy civilian trauma

centers in order to improve not only military trauma care but civilian trauma care.

I look forward to the discussion and encourage the thoughtful dialogue about these critical issues. I look forward to hearing our witnesses today and yield the balance of my time to Dr. Burgess.

Mr. Burgess. Thank you, Mr. Chairman. I appreciate your yielding.

I'm glad we're doing this today. It's timely, given the events of last Thursday and Friday. The nation was riveted upon the emergency rooms at Parkland, at Baylor Hospital and the country stands in awe of the service that was rendered to fallen police officers during that sad interval in our nation's history.

I do want to recognize and thank Dr. Robert Mabry, the Health Subcommittee's Robert Wood Johnson Fellow, for the work he has done in this area and certainly for his service to the country.

As a lieutenant colonel in the Army and an emergency room physician Dr. Mabry brought a lot of expertise to bear for this subcommittee on this issue particularly.

Mr. Chairman, as you mentioned, we have recently received the National Academy's report and it identifies a unique opportunity to improve the state of trauma care for Americans at home and in combat. A partnership between our military and civilian health systems could bolster the availability of an expert work force in two ways, first by integrating military

providers into civilian systems and second, military providers would be able to continue practicing and maintain their skill levels between deployments.

The Military, Civilian and Mass Casualty Trauma Readiness Partnership Act would facilitate this partnership through grant program which would allow us to examine how federal support of such partnerships could strengthen our trauma capabilities.

This bill has the potential to save American lives here at home as well as abroad. Again, I want to thank all of our witnesses for being here today. This is an important topic, one that, again, unfortunately, because of recent events in Dallas, Texas we've seen just how critical your service is to the country.

Mr. Chairman, I will yield back.

I yield to Mr. Hudson.

Mr. Hudson. I thank the gentleman and thank you, Mr. Chairman, for holding this very important hearing and allowing me to join in today.

Regarding our first panel, I know firsthand the experience and expertise of our military trauma teams. So I want to thank my colleagues, Dr. Burgess and Dr. Bob Mabry, Army physician, along with the committee for their work and expertise on this important legislation.

I am also excited to hear from our second panel today as this is an issue I have personally been invested in for over a year. I want to ask everyone to imagine for a moment that loved one

has been injured or the excruciating pain with the responding EMS personnel trained to treat them are helpless to do anything about their pain. Under current law, this could become a reality.

Congressional action is needed immediately and that's why I authored the bipartisan Protection Patients' Access to Emergency Medications Act with my colleague, Mr. G. K. Butterfield, to clarify existing law so EMS personnel can continue to administer lifesaving medications to patients.

This is vital for our patients and EMS personnel in North Carolina and across the United States. I want to thank you, Chairman Pitts, for your leadership and holding this important hearing.

I want to thank Mr. Butterfield for his partnership and I want to underscore the importance of this being a bipartisan measure. There's a lot of issues here that become very highly partisanized. But this is one that doesn't have to be and it hasn't been because of the strong work of Mr. Butterfield and others working with me. And I want to thank all of my colleagues for this opportunity today and look forward to working to move this legislation into law.

Thank you, Mr. Chairman. I yield back.

Mr. Pitts. Chair thanks the gentleman. I now recognize the ranking member of the subcommittee, Mr. Green, five minutes for an opening statement.

Mr. Green. Thank you, Mr. Chairman. And we're here today

to examine two distinct but important ideas. The first is H.R. 4365, the Protecting Patient Access to Emergency Medications Act is authored by our colleagues on the committee, Representative Butterfield and Hudson from North Carolina.

This legislation would clarify the oversight of care provided by emergency medical services practitioners through standing orders. Standing orders allow physicians and medical directors to establish preset protocols for EMS practitioners to follow when delivering emergency care on the ground.

They are especially important in the administration and delivery of controlled substances in emergency situations when time is of the essence.

The second proposal is a discussion draft to authorize a tiered grant program to civilian trauma centers that are engaged in military-civilian partnerships. This proposed bill will also require a study on how trauma care is reimbursed.

Last month, the National Academies of Science, Engineering and Medicine -- NASEM for short -- released a report entitled "A National Trauma Care System Integrated Military and Civilian System to achieve Zero Preventable Deaths After Injury."

Trauma injury is the leading cause of death of those under age 46 and it is the third leading cause of death overall. Trauma has definitive causes which establish method of treatment and prevention.

Frequent forms of trauma include motor vehicle accidents,

gunshot wounds and falls. Traumas also result with large-scale manmade or natural disasters, too many of which we have seen recently and will continue to experience regardless of the best prevention efforts.

Survival among severely injured patients requires specialist care delivered promptly and in a coordinated manner. Care begins at the scene of injury, continues to the emergency department and on to the hospital operating room and on to the hospital operating room and intensive care unit.

This is true in both civilian and military context. Also true is the optimal response and care depends on advanced planning, preparation and coordination to produce smooth transitions and the proper sequence of interventions. Trauma care systems are the backbone of preparedness.

Unfortunately, despite clear evidence of its value in war zones and here at home, one in seven Americans, 45 million people, lack access within one hour, known as the golden hour, to a trauma center able to treat their severe injuries.

The NACEM report states that the military has made significant strides over the past decade in improving trauma care based on lessons learned during wartime.

And Mr. Chairman, years ago when we were heavily involved in Iraq and Afghanistan our committee, Health Subcommittee, went to Baghdad, Balad and in Afghanistan to see the coordination between what they do and the success they were having.

And at one time in the Houston area we -- at our Level 1 trauma centers at Memorial Hermann and Ben Taub they trained our military physicians because on a Friday or Saturday night you would see things in there that you would see in a war time.

But after Iraq and Afghanistan now we need to do -- work together because I was so impressed. I would see a hurt soldier come in and have the many disciplines working on that soldier at very primitive conditions compared to what we have in our communities.

But I think there's a lot we can learn from the military. There are nearly 30,000 preventable fatalities for trauma injury every year that could have been avoided if optimal care was provided through coordinated trauma care's system.

The NACEM envisions a national trauma care system and allows the continuous and seamless exchange of knowledge across military and civilian health care sectors. This would better provide optimal delivery of trauma care to save the lives of Americans injured in the United States or on the battlefield.

Improving our national trauma care system is an issue that I've championed for years with my colleague and fellow Texan, Representative Mike Burgess. We worked to shore up our trauma centers, expand access to care and improve the regionalization of our nation's trauma systems.

On a bipartisan basis we worked to enact and sustain federal trauma programs that enhance access to trauma care for all

Americans. We currently have two bills to strengthen the future availability of trauma care which the House of Representatives passed nine months ago and are awaiting action in the Senate.

I am encouraged by this subcommittee's attention to such an important and overlooked issue and appreciate our witnesses for their thoughtful testimony today.

I look forward to hearing more about the proposed legislation and our continued work to improve trauma care both for our men and women in combat and civilians and veterans here at home.

We must ensure that the proper systems and sites of care are in a place to provide timely lifesaving care to all injured Americans. As we grapple with how to best support our men and women in uniform and respond to tragedies at home we cannot assume that trauma care will miraculously be there.

It's the responsibility of Congress to make certain that the right care is available at the right time and we can make the most impact over the difference between life and death.

And again, Mr. Chairman, I thank you for calling this hearing. I yield back.

Mr. Pitts. Chair thanks the gentleman.

I'll now recognize the chair of the full committee, Mr. Upton, five minutes for an opening statement.

Chairman Upton. Well, thank you, Mr. Chairman.

Trauma causes such tremendous economic and human costs in Michigan and every state across the country. New National

Academy of Medicine, NAM report, underscores that we need to do more and this report cites nearly 30,000 preventable civilian deaths per year due to trauma. Not overseas in distant war-torn land but here at home in the U.S.

NAM points to a number gaps in our national trauma system, including the inconsistency in trauma care quality over time and in specific geographic areas.

They also found a diffusion of responsibility across agencies of the government. Additionally, they found significant gaps in our ability to exchange knowledge and best practices, the result of which is significant variation in trauma care deliver which in turn, of course, leads to unnecessary suffering and lives lost.

The NAM report puts forth several recommendations on how to move forward including improving the leadership of trauma care, integrating military and civilian trauma data system best practices and research, reducing regulatory barriers and, of course, improving trauma care quality processes.

Today, we're going to hear from two emergency medical service physician medical directors. The practice of medicine in a pre-hospital environment is very unique and is a key part of our health care system.

Our EMS folks, physicians, paramedics, other first responders are the front line of our emergency medical and trauma care system. They got to have the tools, training and support

to rapidly stabilize and treat a variety of emergency conditions 24/7 in every community across the country.

These EMS physicians will discuss the implication of H.R. 4365, the Protecting Patient Access to Emergency Medications Act of 2016 introduced by Mr. Hudson, to ensure first responders have critical emergency medications needed to treat a variety of emergency and life-threatening conditions.

I yield the balance of my time to Mrs. Blackburn.

Mrs. Blackburn. Thank you, Mr. Chairman. Welcome to our witnesses. We are pleased that you are here.

I represent Fort Campbell and also right outside of my district is the Vanderbilt University Medical Center and I want to tell you I am so pleased that Mr. Hudson has brought the bill forward and that we are having the hearing today and talking about the report from the academies.

I think this is very appropriate for us to do. Taking down the barriers between the military and civilian healthcare, the exchange of information, looking for how best to make the appropriate response is something that is timely.

I think that it is also needed and looking at the delivery model and optimal delivery. Important for us to have this discussion.

So Mr. Chairman, I thank you for the time and with that I yield back.

Mr. Pitts. Chair thanks the gentlelady. I now recognize

the ranking member of the full committee, Mr. Pallone, five minutes for an opening statement.

Mr. Pallone. Thank you, Mr. Chairman.

Whether it's a gruesome sports injury or an injury from an accident on the interstate or a gunshot wound, we depend on our trauma care system to provide the services necessary to save lives and prevent disability.

In the case of an emergency no one should be forced to wonder whether quality services will be available and we're fortunate to have access to some of the best trauma care in the world, ensuring access to quality trauma care based on the best available evidence.

However, there are gaps in our current system and unfortunately sometimes the determination of whether a person survives or dies depends on if the injury occurs near a good trauma center and I think we'd all agree that this is unacceptable.

All of our trauma services should be world class and that's why I'm eager to hear today about recommendations from the recent report that aimed to strengthened our trauma systems to ensure that patients get the services they need when a health emergency arises.

In particular, one of the recommendations which is the subject of draft legislation being examined today encourages the development of military and civilian partnership by placing military trauma teams and personnel in civilian trauma care

centers and I look forward to hearing more from our witnesses about the legislation's impact on our trauma care system.

In addition to ensuring the availability of trauma care services we must also make certain that providers have the flexibility they need under federal law to treat patients in emergencies. Another topic of discussion today is H.R. 4365, the Protecting Patient Access to Emergency Medications Act. This bill would amend the Controlled Substances Act to clarify that emergency service personnel can administer controlled substances under a standing order from a physician, medical director who oversees emergency care.

I understand this would codify what is current practice and ensure that patients have ready access to important and often lifesaving drugs in emergency situation.

This bill would also streamline the emergency medical services registration process and would also hold the MS agencies responsible for receiving, storing and tracking controlled substances.

While I support the intent of this legislation I understand the drug enforcement agency wasn't to ensure the proper safeguards are in place under this framework to limit the potential for diversion or misuse.

And so again, I look forward to hearing more from our witnesses today about how EMS agencies can and will ensure a appropriate regulatory safeguards are in place to prevent

diversion of controlled substances and I look forward to continuing to work with my colleagues and the sponsors, the DEA and stakeholders, to address these issues.

Mr. Chairman, these are critically important issues. I'm glad our committee continues its track record of working to improve the public health care system to better serve our communities and protect patients, and I yield the remainder of my time to Mr. Butterfield.

Mr. Butterfield. Thank you very much, Mr. Pallone, for yielding time and thank you, Mr. Chairman, for convening this hearing today on strengthening our national trauma system.

This is a subject that we all care so deeply about and I know our five witnesses today feel very strongly about this issue and so thank you for the hearing and I thank the five of you for your willingness to testify.

Mr. Chairman, trauma can occur in many forms from concussions or burns to injuries on the athletic field or even highway accidents. Pediatric trauma is the most frequent killer of children in our country.

Trauma does not need to lead to death or even permanent disability. By providing access to trauma care within what is known as the golden hour or the time immediately following the injury and I'm sure our guests will talk about that today, we can dramatically reduce those threats.

Of approximately 1,200 hospitals in the country, only about

one out of every five hospitals are designated for trauma. Even fewer are equipped to handle the challenges of pediatric trauma care.

And so in May, Congressman Richard Hudson, my dear friend and colleague that usually sits on the other side of the aisle but today he's on my side of the aisle -- I don't know if that's an omen, Mr. Upton -- Mr. Upton has left. But thank you for sitting with us today, Richard.

But in May, Richard and I launched the Pediatric Trauma Caucus to work to ensure that the U.S. trauma care network has the appropriately trained workforce, resources and evidence-based practices to meet the challenges of pediatric care. And so I'm pleased today that we are considering 4365. This bipartisan bill clarifies existing law so that EMS personnel under the supervision of a physician can administer lifesaving medication to patients in their care.

This legislation ensures EMS personnel have the necessary tools to help victims of traumatic events receive medically appropriate treatments before arriving at the hospital.

In rural communities such as mine and congested urban areas alike, such as Dr. Myers, hospitals and clinics can be difficult to access and in many cases the administration of treatments can prevent death or permanent disability.

So I thank you. I look forward to the hearing. I yield back.

Mr. Pitts. Chair thanks the gentleman. That concludes the opening statements verbal. All written opening statements of members will be made a part of the record.

I have a UC request. I'd like to submit the following documents for the record. Statements from the American College of Surgeons, America's Essential Hospitals and the American Hospital Association.

Without objection, so ordered.

[The information follows:]

**********COMMITTEE INSERT 1**********

We have one panel of witnesses today. I'll introduce them in the order of their presentation. We'll start with Ms. Jorie Klein, director, trauma program, Rees-Jones Trauma Center at Parkland.

Then Dr. David Marcozzi, University of Maryland, Department of Emergency Medicine, Dr. Bill Schwab, professor of surgery, Penn Presbyterian Medical Center, Dr. Craig Manifold, committee chair, American College of Emergency Physicians. Finally, Dr. Brent Myers, president elect of the National Association of EMS Physicians.

Thank you for coming today. Your written testimony will be placed in the record. You'll each be given five minutes to summarize your testimony. And so at this time the chair recognizes Ms. Klein five minutes for her summary.

?STATEMENTS OF JORIE KLEIN, BSN, RN, DIRECTOR, TRAUMA PROGRAM, REES-JONES TRAUMA CENTER AT PARKLAND; DAVID MARCOZZI, MD, UNIVERSITY OF MARYLAND DEPARTMENT OF EMERGENCY MEDICINE; C. WILLIAM SCHWAB, MD, FACS, PROFESSOR OF SURGERY, PENN PRESBYTERIAN MEDICAL CENTER; CRAIG MANIFOLD, DO, FACEP, COMMITTEE CHAIR, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS; AND J. BRENT MYERS, MD, MPH, FACEP, PRESIDENT-ELECT, NATIONAL ASSOCIATION OF EMS PHYSICIANS

STATEMENT OF MS. KLEIN

Ms. Klein. Mr. Chair, Ranking Members Pallone and Member Green, thank you very much for the opportunity to be here with you. I am a trauma nurse. I am the director of the trauma program at Parkland Hospital and I also am chair of the State Trauma Systems Committee.

It is my privilege to participate in the National Academy of Science Committee that has brought forward this report. I would like to also recognize Dr. Burgess, who I have trained at Parkland Hospital and is very familiar with our environment.

So when we talk about trauma we often talk about it as the neglected disease and that is not a term that's new to us. Actually, R.A. Cowley from the shock trauma center introduced that term back in 1966.

The sad thing is that those terms and many of the things that were pointed out in that report 50 years ago are still true today. You heard about the stats. Many of you read them.

I'll just give you some stats from my state. Our state reported 121,000 injuries in our trauma registry last year. This year so far from January my trauma center has evaluated 4,322 trauma patients. When we talk about those patients they all need specific care -- quick response care.

So what we would like to do is have you consider our report, look at the federal investment in trauma care. If you look at the number of individuals that are dying from trauma care and you look at the number of dollars that are appropriated for trauma care, trauma advances, trauma research you will find that there is a disparity there.

So, again, we're asking you to reconsider some of that or help us move forward with that. The key concepts of the National Academy Report, again our committee called for developing a national trauma system and that national system includes integration of the civilian as well as the military, which includes all aspects from the prehospital to the acute care, inside the hospital for stabilization as well as research in prevent activities.

I'm here today also representing the Trauma Center Association of America which strongly supports the bill that's being produced -- the grant programs being developed that will actually create an opportunity for military teams to be inside the trauma centers. And, again, this could be very, very helpful.

Many of the trauma centers, again, are growing. Our trauma

center last month had a 35 percent increase in our number of trauma patients and, unfortunately, nothing else in the system increased 35 percent. I don't have 35 percent more nurses, dollars or resources to manage those patients.

So some of the points, again, embedding the military teams as they would be fully integrated into the team and they would learn to work as a team.

If you don't know how to work as a team in trauma you set the patients up for risk and that is one of the most critical things that we see.

One of the other things that the report called for is a study. If you look at the deaths that were produced from the reports from the military as well as civilian, there are preventable deaths and when we talked about preventable deaths we're talking about after the injury occurred.

And so we would like to see research and funding to address that and to create a nation that has zero preventable deaths.

Again, appropriate funding would help support that and a national place to call home for trauma. We need a trauma center cost study that includes an opportunity to look at different billing systems.

The billing system that we currently have and things that we can bill for trauma, for example, if the patient arrives by ambulance you can bill for it.

If the patient is transferred you can bill your trauma

activation fee. On Thursday night, several of those patients arrive to our trauma center in the police car, which means we cannot bill for some of the most critical patients that we have cared for and that means the bill falls back to other resources.

So we must establish a national research action plan again to look at these deaths, to look at our system and to create systems that every echelon of care there's appropriate handoff and knowledge and the receiving provider knows and is competent how to manage a trauma patient.

So in conclusion, I would like to say thank you for the opportunity to be here with you and, again, I would like to engage any other further discussion that you might have regarding these proposed bills.

Thank you.

[The statement of Ms. Klein follows:]

**********INSERT 2**********

Mr. Pitts. Chair thanks the gentlelady and now recognizes Dr. Marcozzi five minutes for his summary.

?STATEMENT OF DR. MARCOZZI

Dr. Marcozzi. Good morning, Chairman Pitts, Ranking Member Green and members of the subcommittee.

I'm honored to have served on the committee that we're discussing here to release the report on trauma care. The committee is part of the National Academies of Sciences chartered by the Congress in 1863 to advise the government on matters of science technology. Thank you for your invitation to testify today.

It was an honor to serve on this prestigious committee under the leadership of Dr. Don Berwick. I want to begin my remarks by pausing to remember those who lost their lives during the recent tragedies in Dallas, in Orlando, and thank those who answered the call to respond to those crises.

My sympathies go out to those affected by these and all tragedies due to trauma. Additionally, I want to recognize a legendary trauma surgeon and committee member from New Orleans, Dr. Norm McSwain, who passed away during the drafting of our report.

His death was a great loss. Finally, I want to thank the sponsors of this work, the Department of Defense, the Department of Homeland Security, importantly, for their -- for its supporting a comprehensive deliverable aimed at improving our nation's approach to trauma -- to trauma care.

One could say I've worked on both sides of multiple aisles. Within the legislative and executive branches of government, under Republican and Democratic administrations as a policy maker and practising physician and finally working within the military and civilian sectors. It is these experiences that help shape my remarks today.

Right now, regardless of time, age or payer, emergency and trauma systems across our nation are diagnosing and treating those who are ill, injured or depressed. Those two health delivery systems are inextricably linked. That care has an impact on their community and the populations they serve.

Appreciating this, I reflect on a prior hearing by the House Oversight and Government Reform Committee on June 22nd, 2007. This committee hearing was in response to a 2006 Institute of Medicine report that released there reports on the state of our nation's emergency care.

Dr. Schwab likely remembers that well as he was one of the presenters there testifying that day. At that time, Ranking Member Tom Davis commented, quote, "Emergency critically care services are in critical condition." He went on. "Such a fragile fragmented system holds virtually no surge capacity in the event of a natural disaster or terrorist event."'

Representative Cummings, who chaired that meeting, further remarked, "after providing a thorough overview of the challenges facing our nation's emergency care system, the time for action

is long overdue."

Our nation's trauma care systems are a vital component of both our nation's health delivery system and our nation's resilience. As the leading cause of death under those of 46 -- at the age of 46, preventing injury is certainly an optimal strategy. But unfortunately, people still fall or are involved in motor vehicle accidents, get assaulted, are shot or are stabbed.

In addition to those unfortunate daily occurrences of traumatic injury, recent events and remarks by CA Director Brennan and Secretary of Department of Homeland Security Johnson, strongly compel us to assure that our nation's emergency and trauma systems also stand at the ready for mass casualties.

Coining a phrase from a comprehensive federal guidance on best -- how best to respond to terrorist bombings, a robust system needs to be ready to respond in a moment's notice to injuries.

Simply, that system delivers optimal trauma care and lives will be saved. Designing that system to achieve optimal outcomes is also important economically as care to victims of trauma totaled $600 billion in 2013.

The title of a famous book, "Good to Great," allows me to put in context advances in trauma care and highlight findings in two recommendations that I'll discuss I hope you'll fine germane to our discussion today.

We are good in many aspects of trauma care but we aren't

great. As an example identified by the committee on this dichotomy was the finding that approximately a thousand service members died of potentially survivable injuries from 2001 to 2011. One thousand.

Here at home, nearly 150,000 trauma deaths occurred in 2014. As many of 30,000 of those deaths were preventable. That's 80 deaths a day that potentially are survivable that we don't yet act on.

First and foremost, we are good at leadership but we aren't great. There are federal offices and programs that attempt to address this issue. But those civilian entities have small staff and little or no funding to influence and improve our nation's emergency trauma systems.

Within the military, the joint trauma system's future remains tenuous and it is not currently utilized across all combatant commands. This is a glaring omission by the Department of Defense.

In short, there is no single entity within entity within HHS or DoD with the authority and accountability to guide the delivery of optimal trauma care.

Prehospital care has achieved success due to tireless champions for improving the care the lives that are saved when we recall 911 due to paramedics, emergency technicians and physicians.

Chief James Robinson, Lieutenant Colonel Bob Mabry, Captain

Frank Butler, Colonel Russ Kotwal are just four of those champions that worked to shape the recommendations of this committee in pre-hospital care.

We are good but we aren't great. EMS remains a patchwork of symptoms, fragmented and largely isolated from health delivery and health delivery reform efforts. Unfortunately, and as dictated by Congress, prehospital care is considered only a transport mechanism, not part of the health delivery mechanism and apparatus of the nation.

As a result, we don't have a seamless construct that includes medical care provided before you enter the doors of a hospital. The report outlines recommendations on how to address this.

In conclusion, traumatic injury is nonpartisan and the delivery of optimal trauma care is shared -- is a shared responsibility by Democratic and Republican leadership alike. Both sides of the aisle can and should support a system that benefits service members sitting in harm's way as well as every American.

The report on National Trauma Care System Integrating and Military Civilian Systems to Achieve Zero Preventable Deaths after Injury Presents a vision for national trauma care -- for a national trauma care system with a bold aim of zero preventable deaths after injury and minimal trauma-related disability.

The committee's work on this report serves as a dedication to the lives cut short because of trauma whether on our streets,

at a dance club, at a marathon, within our towns, our schools, our movie theaters, our places of worship or work. We are good, but we aren't great and we should be.

Thank you, and I look forward to your questions.

[The statement of Dr. Marcozzi follows:]

**********INSERT 3**********

Mr. Pitts. Chair thanks the gentleman.

I now recognize Dr. Schwab five minutes for his summary.

?STATEMENT OF DR. SCHWAB

Dr. Schwab. Thank you. My name is Bill Schwab and I'm a trauma surgeon. I'm a professor of surgery and I've trained military and civilian trauma surgeons for the last 40 years of my life.

I think as we focus on what's going on in the streets of America it's appropriate to take a moment and realize that we have soldiers, airmen, Marines and Navy in harm's way.

Yesterday, a letter arrived from one of my trainees who is currently six miles from Fallujah, Iraq, and I read this letter from Lieutenant Colonel John Schavonis, a surgeon.

"I write this sitting in my tent about five or six miles from Fallujah, Iraq. The tent is pretty big and it has great air conditioning. We have hot showers, three minutes combat style, no more, and fresh fruit.

Outside it's about 104 degrees, a dry heat we mockingly like to say. Our spirits are good. Over the past few weeks I've done over dozens of major operations -- thoracotamies, exploratory laporatomies, amputations, craniotomies and all of them to save soldiers' lives.

Now an intense battle rages in Fallujah. We are quiet for the time being. I am as ready as I can be for whatever comes through these doors and the reason is because of what you taught me. Your insights, your intellect, your skills, your cell phone

always being on brings me the strength and the courage to go on."

I am the product of a military civilian partnership. The United States Navy put me through medical school and trained me as a trauma surgeon during Vietnam. Every one of my teachers in surgery had served in Vietnam.

Trauma surgery became my genes. I'm going to discuss briefly recommendation 11 of the National Academy report which calls for integrating and optimizing the civilian network of America's best and busiest trauma centers as robust platforms to train, sustain and retain military teams in an expanded expert trauma workforce necessary to perform the primary mission of the Department of Defense's military health system readiness, battlefield medicine and combat surgery.

I'm going share some data with you that we gleaned and published after two years of extensive research. I won't bore you with the methodology but let me just say it was extensive and involved.

Over 40 face to face interviews with leaders from the United States military medical corps, all three services as well as civilian leaders.

We looked at how well prepared surgeons were to go to war, and I want to clarify I'm going to use the word surgeons just to abbreviate the time. But this also relates to physicians, nurses, allied health professions and administrators.

Our research showed that the best word to describe the

preparation prior to deployment to go to battle is inconsistent. Inconsistent in training, inconsistency in skills and inconsistency in competency.

And please don't blame the men and women that wore the uniform because the military has very little opportunity to train in trauma surgery in their hospitals. The most common invasive or surgical procedure done in military hospitals is obstetrical delivery.

The most common diagnosis and treatments rendered by military physicians and surgeons are the care of the diseases of aging amongst beneficiaries.

There is only one level of trauma center in the entire Department of Defense at its 51 hospitals. As important, when war ramps up there is very little time to train physicians and nurses to go to war.

What was necessary and what is necessary is to provide a constant training platform, a network of national military civilian excellent trauma centers that has embedded full trauma teams interdisciplinary that are continuously practicing trauma night after night, day after day. And when called upon can rapidly deploy to support the modern war machine.

Let me give you some statistics that might be a bit shocking. What was the average age of the general surgeon that deployed to Iraq and Afghanistan? Thirty-six. How many years of practice did they have under their belt? Two.

How many times were they accompanied by another surgeon who had combat experience? Eighteen percent of the time.

That implies tremendous flaws in preparing to serve those men and women put in harm's way to defend our freedoms and our democracy.

This has been studied before. The Rand Corporation in 2008 did an extensive -- an extensive study and documented that the best place to prepare military providers for combat and battlefield medicine are in the busy trauma centers of the United States. They also went on and studied with nine health organizations any problems that might arise -- financial, business, statutory licensing, and interestingly enough, none of the problems, one, were identified as insurmountable, number two, the nine healthcare organizations were optimistic and said they would even be willing to do cost sharing, and last, from 2009 to 2014 when we interviewed the leaders of the five current military civilian trauma training hospitals, no problem had arisen with any of the things that I mentioned.

Mr. Pitts. Your time has expired. Would you wrap up, please?

Dr. Schwab. We also -- I would like to just show you one map because it's very important, if I could.

This map is actually a map that we generated looking at American Colleges Surgeon data. These are the busiest and the best academic trauma centers in the United States.

We asked the question whether it was capacity to absorb as many as 20 to 25 of these teams by looking at this data and the answer is yes, there is.

I will also point out that in those orange and yellow dots are some of the most stressed hospitals in the United States, the safety net hospitals in inner city America who could greatly benefit from the placement of these military teams to health care of those victims of violence that you're reading about in the papers.

Thank you very much, Mr. Chairman.

[The statement of Dr. Schwab follows:]

**********INSERT 4**********

Mr. Pitts. Chair thanks the gentleman and now recognizes Dr. Manifold five minutes for your summary.

?STATEMENT OF DR. MANIFOLD

Dr. Manifold. Thank you, Mr. Chairman.

My name is Craig Manifold and I'm an EMS medical director in San Antonio, Texas and current chairman of the American College of Emergency Physicians EMS committee.

And on behalf of the 35,000 members of the American College of Emergency Physicians I'd like to thank you for the opportunity to testify today regarding House Resolution 4365, Protecting Patient Access to Emergency Medications Act of 2016.

A critical component of EMS care is the ability of paramedics to administer controlled substances to patients when the follow the EMS medical director's treatment protocols, more commonly referred to as standing orders.

However, patient's access to these lifesaving medications is in jeopardy and Congress must take action quickly, and I emphasize and request quickly, to codify the use of standing orders in the prehospital setting.

In my written testimony I provide a brief synopsis on why this legislation is needed at this time and briefly the DA does not believe the standing orders comply with the 1970 Controlled Substance Act, which was the beginning of the Emergency Medical Services. And so the issues and procedural processes could not have been envisioned at the time of the enactment of the Controlled Substance Act.

But the DEA was prepared to promulgate a role prohibiting the use of these standing orders for EMS personnel.

ASEP, in conjunction with National of EMS Physicians and the National Association of EMTs determine the legislation would be needed to codify the current practice of medicine and ultimately lead to the introduction of this resolution by Representatives Hudson and Butterfield.

And thanks to the efforts of our groups, our coalition partners, the bill has received the support of over 120 bipartisan cosponsors and stakeholder organizations at this time.

While codifying the use of standing orders for EMS personnel is essential, we also want the legislation to advance policies that would provide uniformity, clarity and certainty for EMS agencies and their medical directors around the country.

One of the easiest solutions to reduce confusion and duplicity with regard to the primary point of contact between the EMS agency and the DEA is to simplify the registration process.

Currently, most EMS medical directors rather than the EMS agency itself register with the DEA and then their agency obtains and administers the controlled substances associated with these processes.

This utilizes the medical director's individual DEA number and places a tremendous burden on these often volunteer positions because of the potential liability of the medical director if the ambulance services a drug diversion.

Many of my colleagues and I believe it makes sense for the EMS agency to be registered with the DEA. It should be an agency, not an individual, which assumes the responsibility for ordering, storing, dispersing and administering these controlled substances.

EMS agency registration would also allow for the entire organization to be united under one enrollment, thereby streamlining the process and reducing administrative costs while still preserving accountability.

Maintaining a separate registration for individual locations and vehicles under the purview of the EMS agency is extremely time consuming, duplicative and expensive.

Preventing the misuse or unintended use of the medications and controlled substances is solemn comment of the EMS medical director's job.

We as the medical directors and the associated management staff work diligently to oversee the implementation, administration and monitoring of these controlled substances within their agencies.

My colleagues and I take this responsibility very seriously and we believe that provisions of House Resolution 4365 will actually reduce the opportunities for drug diversion.

Although diversion is not a common occurrence in fact one recent survey of large EMS agencies across the U.S. showed less than 20 diversions were investigations over the last five to ten

years for nearly 70,000 doses administered annually.

As I previously mentioned, many EMS agencies rely on their medical director's DEA license to order, transport and administer controlled substances. These medications can only be delivered to the address associated with the registration.

In the recent past, that meant these controlled substances were delivered to my house. Alternatively, I could have waited for address changes and ordering processes to be updated.

But this would have placed patient care in jeopardy and I was not willing to do that. It makes sense for these substances to be delivered to a central location operated by the EMS agency where there would be direct supervision of these medications at all times.

It's also vital that the EMS agency has the ability to transfer controlled substances within its own organization. A colleague in Houston, Texas, has over 100 DEA registrations due to the requirement of meeting a specific DEA registration for every brick and mortar facility or fire station where medications are stored.

Completing a distributorship registration requires a complex procedure, expense and increase potential for diversion. The ability for an EMS agency to track and monitory these controlled substances within the agency will improve the efficiency and the medical care provided.

In conclusion, if the DEA prohibits the use of standing

orders in EMS, patients will needlessly suffer and potentially die.

Thankfully, the DEA has given us time to pursue legislative and relief that will codify the use of standing orders and make other common sense changes that will improve the delivery of care in the prehospital setting.

However, I do not believe this grace period is unlimited. Congress must take action quickly to ensure millions of Americans who require emergency medical services each year are not prohibited from receiving these live saving medications.

On behalf of ASEP and myself, I would like to thank the members of Congress who have supported this resolution, our coalition partners who have helped advance this legislation and the National Association of EMTs in particular for their work who have added to this critical issue in today's hearing. I look forward to answering questions you may have about this bill and my testimony.

Thank you, Mr. Chair.

[The statement of Dr. Manifold follows:]

**********INSERT 5**********

Mr. Pitts. I know recognize Dr. Myers five minutes for his summary.

?STATEMENT OF DR. MYERS

Dr. Myers. Good morning, Chairman Pitts, Ranking Member Green, distinguished members of the subcommittee. My name is Brent Myers and I serve as the president elect of the National Association of EMS Physicians, 1,500 members strong, the vast majority of whom are EMS physicians providing daily oversight for the EMS care that's rendered in the streets of the United States.

I would like to thank you for holding this particular as it relates to strengthening our trauma system and the National Academy's report recommendation number ten which focuses on EMS and this ties directly in to the bill that we're talking about this morning, the Patient Access to Emergency Medicines Act of 2016.

Our membership would like to thank Representative Hudson, Representative Butterfield and their more than 100 co-sponsors of This very important legislation.

Dr. Manifold and I committed that we would not have duplicative testimony so he has covered the issue of registration and I'm going to move directly into standing o0rders and talk about the direct importance for daily patient care of this very important concept.

The beginning of the Controlled Substances Act referenced normal medical care as we think about it in a hospital.

So if you think about a patient that comes in a hospital and

I, as an emergency physician encounter that patient I would write an order in the chart or put it into the electronic medical record and a nurse would enact that single order for a single registered patient. That simply does not apply in the EMS environment.

We encounter patients who are trapped, who are burned, who have near amputations, who have overdoses on cocaine or other medications and place our providers at risk and we must be able to immediately provide lifesaving and safety-preserving medications to those patients. And the way that that is accomplished in almost every community in the United States is via a standing order or a written protocol.

For twelve and a half years I've had the honor and privilege to serve as the medical director for Wake County EMS in Raleigh, North Carolina. During those twelve and a half years, over 1 million EMS responses occurred under my medical direction.

The ability of those 250 paramedics, 1,500 firefighters and 200 emergency medical dispatchers to work on a standing order is the only way that the important care for those patients was provided and, indeed, is true across the country.

I'm going to use just a little bit of my time to give a couple of examples from our community about how these standing orders are so important.

Before the end of the day today, a paramedic in Raleigh, North Carolina, based on a standing order will provide a seizure control medication to an actively seizing patient, many of whom are

pediatric patients and in the absence of a standing order those patients would continue to seize and potentially suffer brain damage. Before the end of the day today, a paramedic in Raleigh, North Carolina will administer a medication to a cocaine overdose that will provide control to that situation and provide safety for the providers -- law enforcement, firefighters and EMS -- who have responded to that situation.

In the next three hours and every three hours until the end of the day a paramedic in Raleigh, North Carolina, based on standing orders will provide pain medication to a severely injured patient.

These include in the past year a two-year-old that experienced burns over 40 percent of their body who was able to receive immediate pain medication. Seventy-seven year old active individuals who were in their work shed at their house and amputated three digits of their fingers.

How wonderful to be 77 years old but how horrible to be there if we could not have provided immediate pain control for that citizen based on the standing orders. Five-year-olds with 20 percent body surface area burns, a 34-year-old male who suffered near complete amputation in a motor vehicle crash and was uncontrollable due to pain and could not be extricated from that severe environment were it not for medications on standing orders.

So these are not theoretical concepts. This is day to day practice of medicine in the United States and what we are asking

with this particular bill is not anything new. It is the preservation and codification of our current practice.

And with that, I yield my time. Thank you very much.

[The statement of Dr. Myers follows:]

**********INSERT 6**********

Mr. Pitts. Chair thanks the gentleman. That completes the opening statements of the witnesses. We'll begin questioning. I'll recognize myself five minutes for that purpose. Start with you, Ms. Klein.

The National Academy of Medicine Committee called trauma care in the military and civilian sectors, quote, "a portrait of lethal contradiction," end quote. On one hand, we have never had betters systems of care but on the other hand so many trauma patients don't receive the benefit and needlessly die or sustain lifetime disabilities.

The committee's report essentially called for overhauling our national trauma system to integrate military and civilian trauma and this is a sea change from where we are today.

What do you believe are the most critical components to changing this paradigm and achieving the committee's goal of zero preventable deaths?

Ms. Klein. I would say it has to start with the national leadership. Second to that it needs to start with the infrastructure. The great trauma centers that you hear talked about are typically in an urban area and that means if you're in the rural areas of the United States you're at great risk.

And so we've got to figure out systems to move these people out and have current systems in the rural area and move them swiftly into the trauma centers to take care of them and the ideal is to have an integrated system with the military and the civilian

hospitals working hand in hand to accomplish that.

Mr. Pitts. Thank you.

Dr. Marcozzi, in the last few years we've seen much destruction as a result of manmade and natural disasters and we've seen -- responded to significant threats from infectious diseases such as Ebola, influenza, now Zika.

Six months ago, this committee held a hearing focused on another IOM report focused on improving the health care response to cardiac arrest. Are we building parallel systems for these conditions?

Should we be or should we be taking a more strategic look at where the gaps are in emergency care delivery system and approaching this with a broader perspective?

Dr. Marcozzi. Thank you for the question, Chairman.

I think that, you know, in those conditions that you just described minutes matter, and when minutes matter system design has to be precise and accurate to affect the care of those individuals whether or not it's a cardiac arrest patient, a gunshot victim or a victim of a mass casualty be it a bombing.

So to that end, I think we are slightly building different systems and I also think that the way the health delivery systems are evolving are to encourage minimization of surge capacity, the minimization and just in time staffing, just in time supply chains, which is at odds with the concepts of mass casualty and surge development and that's a challenge for us as a nation.

But there's a way to proceed forward, and you mentioned is there a strategic path forward and I think there is, and the way to do that is to take some concepts that are championed by preparedness colleagues across the nation that are championed by trauma surgeons and emergency physicians and move them into the health delivery reform aspects. So we don't develop two different systems of care.

We develop a uniform system of care that is able to be applied to both the cardiac arrest patient, the stroke victim, the trauma patient or the gunshot victim because when minutes matter getting the system right is important. And to do that effectively I think both the military and the civilian sectors need to learn from each other, develop one system that actually is a learning health system and this is what's described in our report. The vision is there. The means to accomplishment is there.

I think that strategically both the Congress and the executive sides of government, the authorizing language and the appropriators need to think about how we can best shape not just a grant program because I don't think we can grant our way to success on this. I think we need to include what we think about as delivery of care what, we're discussing today, and move it within the health delivery construct of what we do every day. Thank you, sir.

Mr. Pitts. Thank you.

Dr. Schwab, we know that historically many surgical and

medical advances are made during war time. What happens to these lessons? How are they integrated in the medical practice? How are they passed on? Are these lessons truly learned? If not, why not?

Dr. Schwab. Thank you, Mr. Chairman. It's a good question.

Medical history shows that actually it takes about a year of war time for physicians and nurses to actually perfect their skills.

It takes much less time for those physicians and nurses to work back or to move back into civilian communities and not use those skills. So the lessons learned from war are not readily adapted or inconsistently adapted to the civilian practices.

What the National Academy and its recommendations are trying to do is to formalize a bidirectional platform for learning, for teaching, for education, for creating experts that can go back and forth between the military and civilian sector and as important to focus those people rendering care and seeing the problems as the translators to the research laboratories.

And so in that way in the future the vision is is that lessons learned will be lessons maintained and shared. From the military to the civilian and during peacetime from the civilian to the military.

Thank you, sir.

Mr. Pitts. The chair thanks the gentleman. My time has expired.

The chair recognizes the ranking member, Mr. Green, five minutes for questions.

Mr. Green. Thank you.

Ms. Klein, I understand that Parkland took seven patients from the Dallas attack on the police last week. Can you elaborate on the kinds and degrees of costs that it takes for a major trauma center like Parkland to be prepare to handle devastating injuries and mass casualty incidents?

Ms. Klein. Yes, sir. Well, the first thing I will just have to say is that a hospital has to be integrated into the system and the system is EMS and for Texas we are very blessed.

We have a very strong trauma system which includes our regional system and part of the regional system means in 19 counties the hospital's EMS agencies, public health come together to look at plans, how to execute and how to manage these plans.

On this particular night, we knew that there was an event going on downtown. No one knew that there was significant danger in this event. And so all of a sudden how we were notified is that we had a police car with an injured officer in it on our dock.

At that time we began to activate and be able to move forward. So our activation process we have three levels of disaster response. We spoke immediately to downtown to our office of emergency management and we also talked to our regional trauma advisory council to put them on alert this had occurred.

In a few minutes we had six of our faculty surgeons that were

downstairs. Three remained downstairs. The others went to the operating suite to wait in that particular area. Anesthesia was downstairs.

Those officers -- three, four of them were severely injured. The others had wounds that obviously needed operative intervention and stabilization but they were not in a life situation distress.

And so the message needs to be that the trauma center, as far as I'm concerned, is the absolute foundation for disaster response. Then you have to expand it out. It has to be a system. The system has to be able to respond and, again, it is the foundation.

So and last year or two years ago when Ebola hit I happened to be the director of disaster response at that time as well. Our hospital spent $750,000 to mitigate should a patient with Ebola hit our system.

We never got one patient. We have critiqued our response and asked ourselves what would we do different and the answer is the same. We feel like we were strongly prepared.

We had people that had -- were trained for medical decontamination that stood up and were immediately available. But we bought the suits that you needed and so we felt like our response was adequate.

Mr. Green. In the Metroplex in Dallas/Fort Worth is there another level one trauma center other than Parkland?

Ms. Klein. Yes, sir. There is. There is Baylor's, a level one trauma center. Methodist is a level one trauma center and we are very fortunate to have Children's that sits right beside us as a level one pediatric trauma facility.

Mr. Green. Okay. So you have three in the Metroplex?

Ms. Klein. Uh-huh.

Mr. Green. Okay.

Ms. Klein. And that particular night one of the other hospitals got patients and then all of a sudden we were notified that all the other trauma centers had shut down and we remained open.

In the course of 7:00 p.m. to 7:00 a.m. we received 17 trauma activations, motor vehicle crashes, motorcycle crashes and severe burns and our trauma center remained open the entire time caring for all the citizens that hit our doors.

Mr. Green. My frustration is Houston. Our two level one trauma centers are right next to each other, at Memorial Hermann and our public hospital, Ben Taub.

Ms. Klein. Yes.

Mr. Green. And recently -- well, relatively recently the one in Galveston at UTMB has opened up so we have three within a 50-mile radius.

In your opinion what does the National Academy of Medicine Committee focus on creating a national trauma care system? How do you picture that to fit in with the state trauma system would

fit with the national picture?

Ms. Klein. Well, again, I think there needs to be national infrastructure just like R. M. Caley called for in the neglected disease. There has to be some type of national voice to say this is what we're going to do and set the stage. That should trickle down to the state level.

The state level should be held accountable for that and then it's going to trickle to the regional. Everything, to me, is regional. You can't create something in North Carolina that's going to specifically work every single time in Texas or New Mexico or New York.

But there has to be structures that say these are the pieces that you have to have and you have to be compliant with this in some way to hold people accountable to address that, plus the funding. Our hospital last year spent $65 million on uncompensated trauma care.

We have a little bill back that we can get money from the state. We got $7 million back. So there has to be some way to fund that infrastructure because these citizens are usually the ones that are at their most productive years of life. So we can not only save them but put them back on the street so they can return to work. Then we have done a good job.

Mr. Green. Thank you.

I'm almost out of time. But I agree with our other witnesses about the military and because, like I said, I saw the success

in Iraq and Afghanistan, the quickness that may not happen in even our level one trauma centers back ten years ago. So but I appreciate you all being here today because I think there's a lot of coordination we can do to help, and again, thank you for being here.

Mr. Pitts. The chair thanks the gentleman.

I now recognize the vice chair of the health subcommittee, Mr. Guthrie, five minutes for questions.

Mr. Guthrie. Thank you, Mr. Chairman, and I appreciate it.

And Dr. Marcozzi, I want to ask you a question based on your role on the committee on military trauma care learning and health systems.

One of the recommendations from the committee was to ensure that EMS be made a seamless component of health delivery system rather than merely a transport mechanism. Why the emphasis on prehospital care? I just want you to elaborate and give you an opportunity to elaborate.

If we really wanted to eliminate preventable deaths shouldn't the focus be on getting the patient to the hospital as quickly as possible and can you explain what really can be done by paramedics and EMTs and what do you propose needs to be done to improve prehospital care?

Dr. Marcozzi. I think the committee did a good job in its due diligence and learned the lessons from what the military learned and if you look at the data from those thousand service

members what should be palpable to everyone, every American, that a thousand brothers, sisters, fathers, daughters, could have been saved from potentially survivable death, of those the majority of those deaths occurred in the prehospital sector.

So before they hit the doors of a hospital, not coined a hospital overseas, their deaths were potentially survivable with the right care. Now, why is that? It's not the medics. It's not the physicians.

It's not the PAs necessarily don't or aren't providing as optimal care as they could but they're not -- we're not providing the system of care and integrating that delivery of care in the prehospital sector with the hospital sector's care. So why is that? And you start to pull that string and fundamentally that's a congressional -- the Social Security Act has not defined prehospital are as one of the service types defined by CMS.

So therefore it is subject to a different set of -- it's a different look than how we deliver care in the hospital sector and the long-term care sector versus what we do in the prehospital sector.

But the truth of the matter is when someone has anaphylaxis or someone gets shot that care that's delivered in the back of an ambulance should be seamless. From a patient-centered standpoint, that care is delivered on scene in the back of a rig and to the emergency department to the trauma suite.

That team of providers has to be all integrated and

coordinated and right now, unfortunately, prehospital care is subject to a fragmented system and championed by good folks like Dr. Myers in North Carolina to try and do the right thing.

But federally I think we can shepherd that system better and make it part of a system of care and not necessarily as an outsider. That requires leadership and a leader to help do that.

Mr. Guthrie. Thank you for those comments. I appreciate you elaborating further.

And Dr. Schwab, in your testimony you describe the benefit to both civilian hospitals and military combat readiness, utilize military trauma teams in civilian hospitals as a way they can hone their skills and be best prepared for high-level traumas on the battlefield. Can you elaborate on why you recommend the entire military team be assigned to civilian centers and not just military surgeons?

Dr. Schwab. Well, thank you. By saying the military trauma team, military trauma team defines a little bit less of a work force than actually the entire medical corps of the Army, Navy and Air Force.

In discussion with the Department of Defense after the report came out, there's actually been discussion about all military personnel -- military medical personnel ought to have some knowledge about what's going on on the battlefield. But there are core specialties -- I'm using that word to describe physicians -- and core practices among nursing and allied health professions

that are necessary for trauma and combat casualty care.

Three specialties are necessary for rapid deployment and, again, both the Rand study and our study found that very quickly in the early war years general surgery -- trauma surgery -- orthopedic surgery and anesthesia providers were the three specialists that were absolutely necessary but quickly the military ran out of those specialties because they were so rapidly deployed and they needed rest periods.

So we're not saying the whole military medical provider core be assigned to them. But those specialties, those nurses and allied health professions that are necessary or combat designated need to be placed into these trauma centers in order to train and sustain their proficiencies.

Mr. Guthrie. Okay. Thank you very much.

And that concludes my questions and I yield back.

Mr. Manifold. Mr. Chair, if I perhaps could add to the comments.

Mr. Guthrie. Yes. As long as I get my 30 seconds back. Okay.

Mr. Manifold. I apologize. I give you the perspective of an emergency medicine physician and military physician with the United States Air Force and developing the critical care, air medical transport teams and mobile field surgical teams.

That component of a field perspective is critical on a day to day basis on trauma care, being faced with that. I trained

at Milford Hall Medical Center in San Antonio and we had trauma patients every day and when we went to war when I was deployed to Afghanistan with my team we were ready to go from day one.

That doesn't occur in every environment, particularly in the military setting and that's where the advantages of these programs recommended by the National Academy of Sciences through their program report is integrating those teams into the civilian community allows us to prepare and deploy those folks at a moment's notice.

Not only does it enhance your combat readiness but also our disaster response and domestic response capabilities by having these folks prepared. And as the joint surgeon for the Texas National Guard, it allows me to assure that my medical members are prepared to walk out the door and also enhances the opportunity to have additional military medical personnel perhaps serve in the military without a full time response component but being able to serve in a part time reserve component capacity.

Mr. Guthrie. I think I agree and I'm supportive. I appreciate that and I yield back.

Mr. Pitts. The chair thanks the gentleman.

I know recognize the gentlelady from Florida, Ms. Castor, five minutes for questions.

Ms. Castor. Well, thank you, Mr. Chairman and Mr. Green, for calling this hearing on how we improve trauma care and thank you to all of the witnesses here today.

Our discussion draft of the Military-Civilian and Mass Casualty Trauma Readiness Partnership Act being considered today would encourage civilian trauma systems to accept the placement of military trauma teams into the civilian care delivery system and I wanted to say I strongly support this. I am so pleased that the committee is being proactive on this because I have seen it work back home in Tampa.

Tampa is home to MacDill Air Force Base where we have the headquarters for Central Command and Special Operations Command. We have the Air Mobility Wing and they are all supported by the Sixth Medical Group and they have started a partnership with our level one trauma center, Tampa General Hospital, back in 2011 starting with nurses and it has now evolved to surgeons and then the full team approach.

It has been a benefit to the community because we have fantastic specialists and dedicated military members taking care of my neighbors.

But it has also provided the training that the medical group has needed on -- where they wouldn't get it in other places because the Air Force and military has scaled back a lot of their hospitals on bases across the country.

So this is going to be an important part of the future. Tampa General Hospital is our safety net hospital. It's our -- it's the only level one trauma center on the west coast of Florida, big metropolitan area. It's the home of one of our only burn units

in the state and it's our teaching hospital.

So it's a perfect place. So I wanted to drill down into some of the criteria as we -- this discussion draft says we're going to provide grants.

We don't have all the money in the world to do this everywhere. We're going to have to be particular. So Dr. Schwab, what criteria should be fundamental to these kind of partnerships?

What kind of invectives and specifics do we need to build into this so that we get we're efficient with the tax dollars?

Dr. Schwab. Thank you very much. It's a great question, and one of the things that we've published earlier is the chance of survival in this country is based on where you get hurt and we know from the data in Tampa that you do pretty well. So congratulations on that.

Let me just say that I don't want to define for the Department of Defense what they need. But we know from other studies and comparative studies between what combat physicians and surgeons see on the battlefield and what is seen in our large very, very busy trauma centers that it's a good match.

First, you need very, very high volume. The medical terminology is you need extremely high case severity indexes, which means that the cases are life threatening or limb threatening and unless receiving some type of operative or invasive intervention in a time manner, death is loss.

Penetrating injury, unfortunately, in this country, all too common, but gun wound injury is a great thing. And then the ability to have mass casualty. Where does that come exclusive of what you're reading about and seeing in newspapers?

It actually comes with inner city violence and specifically gun violence. Again, in report this is cited but our own work and publications actually from the trauma center in New Jersey shows that many times when there is warring factions in urban violence, trauma centers receive two, three, five, six, seven wounded people at one time.

What is interesting about that a terrible liability to our country is the asset is training teams how to respond to mass casualties.

The other piece, and you mentioned it is, these happen to be in academic centers because another part of recommendation 11 is that the Department of Defense and specifically the secretary of the Department of Defense create career paths for military physicians and nurses to become trauma experts and be able to run their own trauma centers or their own trauma programs.

So placing these in academic medical centers is extremely important. And the last thing I would say, and it was on the map, one of the things that's fascinating, if you look at who responded to the questionnaire where we got all of our data -- this is in 2014 -- 86 military physicians responses.

They were divided pretty equally between active duty

reservists, recently separated and retirees. So these are gray grizzlies. These are people that had been to war, deployed multiple times.

It's fascinating. Where do they go when they leave the military? They to the urban centers, one of which is Tampa. But they go to the urban centers and they're there. So there's this symbiosis that we're looking for, this efficiency that we have combat experienced teachers already in many of these academic medical centers.

To quote one of the other representatives, we have the right model with the right people in the right places. It's just waiting to be nationalized, memorialized and funded.

Thank you very much.

Ms. Castor. Thank you very much.

Mr. Pitts. The chair thanks the gentlelady.

Now recognizes the gentleman from Pennsylvania, Dr. Murphy, five minutes for questions.

Mr. Murphy. Thank you. This is a fascinating discussion. I particularly want to thank Dr. Marcozzi and Dr. Schwab. I'm also a Navy Medical Service Corps. And I currently work at Walter Reed Hospital and we also have a unit in Pittsburgh at our 911th Air Force where C-130s have an air med evacuation unit. So Dr. Manifold, your thoughts are important too, as I look at this.

And I certainly see that as things have ramped down at Walter Reed we don't have the same number of trauma cases. There has

been other things which the hospital has done. I think it's an important model whether it's oncology or orthopedics, et cetera, to maintain the skill set of physicians.

But I do think this idea of having military physicians embedded in civilian trauma units is important.

But there's another level to this I want to ask about. One, who is in charge in the country? Is DOD, VA, HHS, CDC -- is there a system already in place where people work together? Anybody? Is anybody in charge?

Dr. Schwab. So one of the questions we ask leading up to the publication that came out in 2015 using interviews. The responsibility for combat readiness -- trauma combat casualty care is diffuse across many leaders and many programs and departments in the Department of --

Mr. Murphy. But it needs to be united, doesn't it, and if some --

Dr. Schwab. Not only needs to be united but there needs to be actually one particular leader and one of the recommendations actually we -- there's 11 main recommendations and 61 subordinate recommendations. It was hard to go through those.

But one of the very strong recommendations amongst leadership is that the Department of Defense and specifically the secretary recognized that within the medical health system -- military medical health system -- that there be one commander, one person in charge of readiness in trauma and combat casualty

care. It's a strong recommendation supported by other recommendations to support that office so that policy, standards and assessment of medical care for combat is put in place.

Mr. Murphy. To add to this too is that I remember participating in a exercise called Operation Lycoming Reach with the 911th and then NOSC, Naval Operations Support Center, in Pittsburgh, and as well as other military and civilian trauma physicians and nurses participated.

So, first, the volunteers were made up to look like various trauma victims, put on C-130s, flown out to different parts of New York and Pennsylvania, where then they did a triage of a mass casualty, and then brought back. Then, the hangar was set up with lots of cots and other triage and emergency care was done there, and then they were put in ambulances at various hospitals in Pittsburgh, really followed the whole way through.

And I want to say, do you think that with regard to these grant programs that gives us enough robust training? Because, obviously, when you have a mass casualty event--and as we heard Nurse Klein who also said--it is going to go to multiple hospitals.

It is a matter also--not only is there a tremendous value in having a military physician embedded in the emergency area and trauma areas, but also the cross-training that takes place with regard to we have got some military reservists who are trauma physicians, emergency physicians, and nurses, and we are going to have to be ready if we have a mass casualty event that is from

a terrorist attack or something else, to send teams into areas and pull patients out around the country.

Should we beef this up and add more robust parts to this? Bill? Anyone? Colonel, can you comment on that? Or--

Dr. Marcozzi. So just to harken back to your first question, and then I will just jump to your second. So the first question Dr. Schwab mentioned around the DOD leadership, and DOD leadership needs to be on two sides on the defense. We recognize that the Rangers did it right. The Rangers did it right because Colonel Kotwal talked to then-Colonel Stanley McChrystal and said, "Sir, you need to shoot, move, communicate, and do medical." And so the Rangers dropped their preventable deaths from 27 percent to 3 percent. Across the combat and commands right now, we don't have that, so there needs to be two ownerships to this discussion today, both the medical and the line.

Second, on the civilian side of the house, right now there is certainly an ownership from the CDC on preventing injury at the CDC. But owning potentially survivable deaths at HHS right now, to coin a medical phrase, is bradycardic. And I think that it requires some energy and motivation, either from the Congress or injected as a result of appropriations to help them improve this neglected area of delivery of trauma care, to that end, on mass casualty development between the civilian and the military sector.

I think that if we realize what the report describes and what

Dr. Schwab did a great job of kind of coining with regard to military coming into the civilian sector, they are standing shoulder to shoulder. I would be shoulder to shoulder with a civilian who has never been deployed. This trauma surgeon would be shoulder to shoulder with someone who has never seen the type of injuries we saw in Afghanistan and Iraq.

So I think that that hybrid model is joint. It is not joint just across all services. It is joint because it is a civilian-military construct to get right because both sides of that house need to reduce their potentially survivable deaths. So, and this doesn't require a lot of funding. It just requires two different systems and an encouragement and a nudge to have them work together to achieve this.

Mr. Murphy. I know we are out of time. I hope you will give us a response, Ms. Klein.

Mr. Chairman, this might be one of those areas I would recommend that perhaps the committee might want to go over to someplace like Walter Reed and some other areas and meet with the trauma teams there onsite and see what takes place.

Thank you very much. I yield back.

Mr. Pitts. The chair thanks the gentleman. I now recognize the gentleman, Mr. Cardenas, for five minutes for questions.

Mr. Cardenas. Thank you very much, Mr. Chairman, and thank you for having this hearing.

I am not a doctor, and I have never played one on TV, and

I don't pretend to play one in Congress. But I have been a 20-year veteran of being a legislator now, and I have played the role of being a budget chairman when I was the Chairman of the Conference Committee in California, where for the first time we oversaw a budget of $100 billion. Sounds like a lot of money but, unfortunately, it wasn't enough to do all the wonderful things that you are talking about here that we would like to do there.

But let's bring it back to our national situation. When it comes to our emergency room preparedness, why are you talking to Congress? Isn't this a free market issue? What does Congress have to do with increasing our capacity here? That is a smart aleck question. I am just--I just hit the softball right there, ladies and gentlemen. It is all yours.

Dr. Manifold. I think part of the address, without getting into specifics of financing, is we feel that the response component--

Mr. Cardenas. Call it resources, call it whatever you want--

Dr. Manifold. --the resourcing for response capabilities, the disaster, the contingency components are not adequately funded in today's environment. We have attempts, we have--

Mr. Cardenas. Is the free market going to pay for it? Come on, let's be honest. Is the free market going to pay for what you are asking us to have in the United States? The answer is no. Now continue.

Dr. Manifold. No. Yeah.

Mr. Cardenas. Okay. I was hoping one of you would say that, but go ahead.

Dr. Manifold. No, I am happy to say that. I was just trying to get around to that without getting myself in trouble in the Federal Register. I think that that is true. We have this piecemeal approach. And particularly from an emergency healthcare system, that is one of the things in the federal component of this that is very fragmented is that there is not a single federal agency responsible for emergency healthcare systems.

We have through--the medical care through the Health and Human Services, we have a response component primarily through Department of Homeland Security, we have a robust EMS component through Department of Transportation, and so there is not a coordinated federal effort to put those resources together. And so I think there is opportunity. It will not be a free market component to currently structure our response and disaster component with that.

Mr. Cardenas. Anybody else like to add? Nurse? Go ahead.

Ms. Klein. I was just going to comment that the free market in healthcare usually means that I am going to go and look for the patients who have some type of funding. And when you are dealing with disasters, not everybody has funding. And so there have been facilities who stood up and said, "Hey, I want to be

the mecca, I want to be this," and the first time there is a real event and they have uncompensated patients that they have in their hospital, sometimes not three months, five months, or six months, but a year, because there is nowhere to place them, they very quickly change their tune.

So it should be for all, not just the patients who have funding.

Dr. Marcozzi. Thank you, sir. Thanks for the question. I think a lot bubbles down to the economics of this. I mean, the truth is, a bomb affects a Democrat just as much as it affects a Republican, affects a payer, an insured patient just as much as a non-insured patient.

So, but I think that right now the current construct of our government is that we either have supplementals for the next latest disaster, or we have a $250 million approximately hospital preparedness program to try and influence a $3 trillion health delivery system.

The economics just aren't there, so I think that we have to figure out a more strategic way to blend what we do every day and prepare this construct in that, so that we are ready for the mass casualty and we deliver the right economically optimized, best outcome, delivery system that we are able to achieve. And, right now, I think that those two agendas are kind of--there is a chiasm between the two.

Mr. Cardenas. So right now, when it comes to the federal

funding component of everything you are describing today, we are woefully short on funding the various aspects of what we should be considering and hopefully potentially funding, so that we could bring to fruition all of the things that you are advocating today.

Dr. Marcozzi. I am speaking on behalf of myself, not the committee.

Mr. Cardenas. Sure.

Dr. Marcozzi. But I don't think we can grant our way to success. The $3 trillion industry is set up to be a head in the bed, and to try and shift to an outpatient market delivery system versus an inpatient system, and capitated systems. And certainly in Maryland that is where we are going.

So we have to think about the healthcare delivery system today, right now, and then figure out a way to weave in concepts of preparedness into that healthcare delivery system. But setting up isolated, individual systems that are disparate, one for preparedness and one for how we do things today right now, it just won't get us where we need us to be.

Mr. Cardenas. Yes.

Dr. Schwab. I just want to comment from the military point of view, and that is, you know, military health is a $50 billion a year--

Mr. Cardenas. Or so.

Dr. Schwab. --or more. What is interesting is is that almost all of that goes to beneficiary care. Beneficiary care

dominates what military physicians, nurses, must deliver every day. There is no direct appropriation for readiness trauma combat casualty care.

So maybe--believe me, I am a surgeon, I am not an economist, but maybe reappropriating or redirecting appropriations, one of which is talked about in the recommendation, saying to the military, "You must recognize that your funds have to go to have readiness force." And the reason is no one else can deliver this on the battlefield but the military health system.

Mr. Cardenas . Thank you for your perspectives. I appreciate it, ladies and gentlemen.

Mr. Pitts. The chair thanks the gentleman and now recognizes the gentleman from Texas, Dr. Burgess, for five minutes for questions.

Mr. Burgess. Thank you, Mr. Chairman. And, again, I want to acknowledge that Ms. Klein and I did work together a number of years ago. I won't identify how many years ago it was.

And I also want to acknowledge the presence of William Garner here in the committee room. William was on the committee staff when Chairman Dingell was chairman of the committee. And, William, we appreciate now your service at Parkland Hospital down in Dallas.

So we have the report that several of you worked on, and we appreciate your service in that regard, and now the recommendation of a civilian-military partnership. And I think we have heard

several different angles on some of the difficulties that will be inherent in starting this. At the same time, there are going to be difficulties on the scaling side.

But I wonder if, Ms. Klein and Dr. Marcozzi and Dr. Schwab, if you would all just try to summarize some of those inherent obstacles that will have to be overcome. And, Dr. Schwab, we will start with you and then move back down the line.

Dr. Schwab. Thanks very much. Let me just say that we are going to build on something. We have five military-civilian trauma training centers since 1998. We have three for the military, for the United States Air Force, we have one for the Army, we have one for the Navy. They have been the prototypes. They have been the pilot studies.

We know from interviewing both the military and the civilian leaders of the programs that many of the things that one might perceive have been worked through--licensing, state stature, state medical society authorization. They have been worked through.

We do know that each state is slightly different, and so, again, depending on what states the center went into, there would be certain things that had to be worked through through state statures and through licensing.

As far as the other thing that needs to be worked through--and, again, I didn't get a chance to go through this--is the capacity. We don't want these military teams to interfere

with post-graduate training for our doctors and nurses.

Now, if you think about it, we have 9 trauma centers that admit 5,000 patients a year. Some of them are safety net hospitals that are paying moonlighting fees for doctors, surgeons, and nurses just to staff. What is fascinating is is that both Rand and our study found that those would be centers where those military teams would supplement and possibly be cost effective in delivering care as well as training.

Mr. Burgess. Thank you.

Dr. Marcozzi?

Dr. Marcozzi. I don't have anything.

Mr. Burgess. Ms. Klein?

Ms. Klein. I would just comment from the nurse's perspective is, if you look at putting a trauma team in, let's say, Parkland, so there would be some significant advantages to Parkland. For example, we have, you know, 10 nurses vacant in the ICU, you know, 15 in the ER. The nurses that come from the military, obviously, we could plan in there and take that position, so we wouldn't fill that position.

If you look at our physicians, in the academic world, they want to do more publications, and they want to do more research. And so if there was another person there to take call, then that would give everybody a little bit more time to do that. So I can see where it would be a significant advantage to have these experts join us.

And somebody asked about disaster preparedness. When we do our drills, when we do actual responses, having the military there with us, we will all learn command and control and incident command and what we call, you know, disaster medicine, which means you are going to move them forward and do the minimal care to get them to the next echelon of care. We will learn it together.

Mr. Burgess. Ms. Klein, let me just ask you because you referenced it in your opening statement. Some of the first patients you got Thursday night were in automobiles, whether they were police cars or private cars, and then that affects your reimbursement down the line. Can you just kind of walk us through that and some of the inherent difficulties Parkland now is likely to experience from that?

Ms. Klein. Right. So, in the trauma center, the only fee that we can put--and we call it the readiness fee, to be honest with you. So that means that everything you have you have to have 24 hours a day, you know, to be a trauma center, we bill into our trauma activation fee.

So in our trauma activation fee, for every patient that comes in that arrives by transport, meaning from transfer or transported by our EMS agency, that trauma activation fee can be applied. If the patient arrives by private vehicle, then it doesn't.

So in this case, on that night, there were three patients critically wounded that we have to say we cannot bill that trauma activation fee for that patient. So we do that. We screen--CMS

spent a couple of years with this, as you are familiar with. And one of the things they looked at very carefully was our trauma activation billing. And so we are meticulous to make sure that we have validated whether that fee is applicable to those patients.

So if we could, we are allowed to do the appropriate activation fee for every patient that came through those doors, it would be a much more fair process for the trauma centers, and it would also make sure that that readiness fee is applicable across every patient that hits the door that meets the trauma criteria.

Mr. Burgess. Now, Mr. Chairman, I would just point out, that is a very important point because, as Ms. Klein pointed out, I mean, they are the court of last appeal in North Texas. They don't get to say, "We are full." They don't get to say, "We are tired." That is where you go when all the chips are down and everything is stacked against you.

Thank you, Mr. Chairman. I will yield back.

Mr. Pitts. The chair thanks the gentleman, and I now recognize the gentlelady from North Carolina, Mrs. Ellmers, for five minutes for questions.

Mrs. Ellmers. Thank you, Mr. Chairman, and I want to thank the panel for being here today for this subcommittee hearing. This is so vitally important. As a nurse, I understand that, and I just want to thank everyone--Ms. Klein, Dr. Marcozzi, Dr.

Schwab, Dr. Manifold, and Dr. Myers.

Dr. Myers, I did not realize until you started your testimony that you are in the Raleigh area. So thank you for what you are doing, and all of you. Your service is amazing, and so needed, and we do need to fix this problem.

Ms. Ward, I am going to--I will start with you. I just want to know--in particular, as we know, there are always inside politics in all hospitals. Do you find that hospitals are embracing the idea of a trauma military team coming in?

Ms. Klein. Well, I certainly haven't discussed it with all the trauma centers, but I know in our hospital I think it will be a welcomed addition. Again, I think the challenges, I mean, we all know about credentialing, licensure.

Mrs. Ellmers. Yes.

Ms. Klein. You know, all of that would have to be addressed by the regulatory system before it was ever implemented. But, you know, for our system, we are an academic hospital, just like Dr. Schwab, and we embrace education and have new people there frequently. I think one of the things that we would probably ask for is that the people who are sent there at least have 12 months and not a rotator of every 3 months, so then you are really doing orientation.

Mrs. Ellmers. So that it is more of a--

Ms. Klein. A consistent basis.

Mrs. Ellmers. --consistent issue.

Ms. Klein. Right.

Mrs. Ellmers. So that there is a consistency there. I agree. I agree.

Dr. Schwab, I just want to tell you, I represent Fort Bragg, and a couple of months ago I had the opportunity to actually go down and visit their combat training in the field, their trauma readiness, and I was amazed by what they were doing, and the evolution since being at war for so long, how things have changed over time, and the differences that I see in that ability.

So I just--I thank you, and I see the importance of this, and I hope that we can move forward with this. I think these are incredible ideas to move forward on.

And, Dr. Manifold, you spoke about the inventory, the controlled substances inventory process now, incredible, and absolutely--you know, I know we also talked about the fragmentation of all of these services. It sounds like an absolute nightmare. Can you expand a little more on what you were speaking about?

Dr. Manifold. The concerns with management of the controlled substance are we all have the same goal of effectively being able to administer those medications to our patients in need, at the same time balancing and minimizing any potential for diversion of these type of medications. And so we understand that component of wanting to be able to track medications through.

And so what happens currently in an ideal situation is a

medication is ordered on a special form. It arrives from the manufacturer. It may come to an office, what is directed on the physician's license, and that is then inventoried, put in a safe place. It may be placed in a vial or with a tracking number, and then be put in the place it would be administered to a patient.

In a physician's office or a hospital setting, that is the model that was placed for the Controlled Substance Act that was written in 1970. For emergency medical services, we have vehicles and personnel that are on the move continuously. They may not be at that brick-and-mortar station. They may be moving to the hospital, and they may have to go back to a supervisor or a central location, which takes them out of their response area to be restocked with those controlled substances.

And, again, from a medical director standpoint, when I have to have a direct--or a separate license for each one of those facilities, it can be very problematic in trying to manage and control that. If I have a license or a product that is sent to that facility, and the individual there doesn't recognize the name, doesn't understand the importance of this delivery, who knows where that goes to because it has not been entered into our system.

And, hence, we want to try to--with this legislation try and enhance that process of tracking and monitoring the control system.

Mrs. Ellmers. And I can see, Dr. Myers, that you very much

agree with that as well. And I can see how this probably contributes to a lot of errors. You know, absolute--you know, not that anyone would make those errors knowingly, obviously, but you can--I can see how there is just an incredible disconnect between efficiency and the ability to be in a controlled environment, because that is essentially what we are talking about here is trying to control chaos.

So, Dr. Myers, would you like to also, in just the few seconds that I have--

Dr. Myers. Sure. Just succinctly, 4365 does one thing that helps us all, and that is it creates a mechanism that actually applies to EMS that officers from the DA can utilize. The problem we have today is there is no mechanism, and so every person in the enforcement arm is trying to do the best they can under a law that just does not fit the practice. And so we end up with this disparate way of doing it, through no one's intention. This is the solution to that problem.

Mrs. Ellmers. Well, thank you, again.

And thank you, Mr. Chairman, for bringing this important subcommittee hearing. Thank you.

Mr. Pitts. The chair thanks the gentlelady.

I now recognize the gentleman from New York, Mr. Engel, for five minutes for questions.

Mr. Engel. Thank you, Mr. Chairman. The state of our trauma system is I think something that most of us have likely

given relatively limited thought to until a personal national tragedy brings it to the forefront. I would imagine every one of us has relied on our trauma system for care either for ourselves or for a loved one, so I would like to start out by saying thank you to all the healthcare professionals present today who have dedicated their lives to caring for those in trauma situations. Your work is truly lifesaving.

Ms. Klein, I found the portions of your testimony concerning trauma activation fees very alarming. If my understanding of your testimony is correct, a gunshot victim might have to wait in a trauma bay for a full half-hour before moving to an operating room in order to ensure that the trauma center receives the activation fee it needs to pay its bills. Is that true? Is that the case?

Ms. Klein. No. There has to be 30 minutes of critical care. It can be applied at any time, and, you know, you monitor that. So if a physician is there looking at the X-rays, putting in chest tubes, managing the airway, you can clearly see where that 30 minutes is addressed.

In our situation, I will be honest with you, if a patient is--what you described is in our trauma bays more than 30 minutes, then we have an issue with that. So most of our gunshot wounds to the chest or to the abdomen come into our trauma rooms and go straight to the operating suite.

Mr. Engel. Okay. Let me ask you about partnerships between

civilian trauma centers and the military. You contended that such partnerships might, and I am going to quote you, "enable a military team to be mobilized, not just overseas, but also to respond to a mass casualty event like the one we have just experienced in Orlando." Can you elaborate on how these partnerships would help facilitate such response?

Ms. Klein. Sure. So obviously, the expectation is that these military teams would be embedded in our trauma center, so they would become our colleagues, not, you know, people that were visiting us. And so when you go through a disaster response, everybody should be trained for the hospital response, as well as how they are going to work in the region.

So I will give you a perfect example. When Katrina hit, we had 21,000 people visit Dallas. Houston had the same amount. And so when you look at that, we activated a health care facility in the convention center. So that means that we had to take people from the hospitals, from our EMS off their normal jobs and put them in this convention center to take care of patients.

If we by chance had a military team embedded in us, that would give us additional resources to be able to do that. So we would have the opportunity as a civilian hospital to learn, but they would also have the opportunity to learn.

Now, in those situations there weren't a lot of critical, you know, gunshot-wound type of events like that, but had we had them embedded with us during the event that happened Thursday

night, they might have been the one that took the patient to the OR and the civilian trauma surgeon, wait for the next patient to come through. And that is the expectation that we see happening.

Mr. Engel. Thank you. Dr. Marcozzi, you cited a startling statistic during your testimony. And I quote you again. "Approximately 1,000 service members died of potentially survivable injuries from 2001 to 2011 in Iraq and Afghanistan. Here at home, nearly 150,000 trauma deaths occurred in 2014." Can you elaborate on that?

Dr. Marcozzi. Certainly, sir. So there was a study done and it was championed by a trauma surgeon who started to ask, well, of the lives that we lost in Iraq and Afghanistan, could I have saved any of those? So I asked the right questions and actually did a very unique way to look at were those lives lost and looked at the autopsy reports of those patients and then started to quantify how many of those patients could have had lives saved. And then he quantified that and found out that by his potentially survivable definition that approximately 1,000 service members from 2001 to 2011 were deemed potentially survivable.

The majority of those cases were in the pre-hospital sector, as I mentioned, and of those in the pre-hospital sector, the majority of those died of three different reasons. The first was hemorrhage, the second was airway, and the third was pneumothorax. So addressing those in the pre-hospital sector would certainly mitigate or decrease those number of potential lives lost, and

you saw a significant pivot by the Department of Defense to embrace some of that literature, although late. And you saw tourniquets being employed much more readily in theater to save some of those lives.

So that and Secretary Gates' 1 hour. Minutes matter in trauma care, and when the Secretary came out with the 60-minute golden-hour rule, that a patient needed to be transported back to a military treatment facility within 60 minutes, that changed and decreased our mortality in theater. So those two were significant changes to the way the military does things and speaks to that, 1,000 service members.

Mr. Engel. Thank you, Mr. Chairman. I see my time is expired. Thank you. Thank you to the witnesses.

Mr. Pitts. The chair thanks the gentleman. Is the gentleman Mr. Collins ready or do you want me to--the chair recognizes the gentleman from New York, Mr. Collins, 5 minutes for questions.

Mr. Collins. Yes, thank you, Mr. Chairman.

As the former county executive of Erie County, Eric County Medical Center is a trauma one. We are the go-to trauma center for anyone and everyone in western New York. And so I guess, you know, I am certainly familiar with how lifesaving a nearby trauma center--and you were saying minutes matter. One of the things--I know what we are talking about with the military, making sure we share best practices. What we have learned here, we share there.

And so I guess perhaps part of my question is we had a case with the Buffalo Bills several years back, a spinal cord injury on the field, and lo and behold, the--and it was a trauma surgeon who was the Bills' doctor went and used what they called moderate hypothermia, cold therapy, which frankly had probably never been used before on the football field. And the prognosis then of this player was night and day, night and day different than what a traditional therapy might have been, somebody thinking truly out of the box.

So I guess my real question is if anyone would want to weigh in on how we are in fact communicating one trauma center to another, whether it is military, civilian, or civilian or even with trauma physicians. You know, the best of the best save lives every day, and we know too tragically in some cases folks who might have been near Erie County Medical Center would have lived and those not near did not.

So, you know, I think that is a general thing of what Congress might be able to do to help move that along.

Dr. Schwab. Well, having been born and brought up in upstate New York, moderate hypothermia is present 6 months of the year.

But let me just say that your question is how well does communication take place. Communication on the civilian side actually in all of the disciplines I think proceeds fairly well. There are established academic societies where research, observation, data is presented, peer review is accomplished and

those that are felt worthy are published and people learn pretty quickly. And by pretty quickly I mean within a matter of years what is going on.

Where there seemed to be a wall that occurred and was really strengthened after Vietnam for whatever reason, probably just the adversity to the Vietnam War, where that all broke down was between the military and the civilian worlds. There is very little formal bidirectional way the military can communicate with civilians. It does occur, but it is much more informal.

Interestingly enough, one of the things that we are talking about that would be interesting to this committee is reusing and asking information technology, data people, software developers to make all of our electronic medical records and our decision-support tools proactive at the bedside so that we can be informed about the latest data at the bedside while we are making decisions. That would lead to some standardization and therefore decrease actually mistakes that are made and even potentially save more lives.

So I think one of the things and one of the reasons we were asked to serve on the committee was to increase and find ways to formally promote bidirectional flow across all disciplines but between the military and civilian sectors. Thank you, sir.

Mr. Collins. So another issue, we talk about NIH funding a lot, 21st Century Cures in particular, looking at increased funding, in my cases, you know, that leads to cancer and other

illnesses. Is there a way that trauma centers can access NIH funding of any significance, or is that not a normal pathway that we see?

Dr. Schwab. So, again, one of the things that the report really focused on is if you look at the burden of injury, both death, disability, and you look at long-term disability, especially because trauma is the leading cause of death and long-term disability in people under 46--

Mr. Collins. I have only got 30 seconds but--

Dr. Schwab. --you basically see that there is a disproportionate--there is very little funding.

One of the things I would invite your attention to on chapter 4, 33, is looking at NIH funding measured against the burden of disease for Americans and injuries at the bottom of the list. So the answer is there is no formal trauma funding in the NIH for trauma--

Mr. Collins. I think that whole issue is one we are going to have to look at because in many cases what was happening has just continued and maybe it is time to re-jigger that, the priorities.

Dr. Schwab. Yes.

Mr. Collins. Yes. Thank you.

Dr. Schwab. Thank you.

Mr. Collins. Thank you, Mr. Chairman. I yield back.

Mr. Pitts. The chair thanks the gentleman and now

recognizes the gentleman from Indiana, Dr. Bucshon, 5 minutes for questions.

Mr. Bucshon. Thank you, Mr. Chairman.

I was a cardiovascular and thoracic surgeon for 15 years prior to coming to Congress, so thank you all for what you do on behalf of your patients. It is appreciated. I know. I have been there. I was also a Navy Reserve officer from '89 to '99, never got called up but I was ready.

So my question is going to be maybe to Dr. Schwab and Dr. Marcozzi about manpower issues. First of all, I support this idea, this concept about integrating the systems. It is important. I think it makes sense.

That said, you know, even though I was in a community hospital, obviously I had had a lot of background in trauma surgery and still did a fair amount on the thoracic side. I would have been willing, had I been--I wasn't on IRR or anything but had I been called, I would have been willing to go in a heartbeat for a month or two to Afghanistan or to Iraq and helped if needed or somewhere else to support--you know, to Germany to support people from Germany that were going in theater. But that isn't really a possibility. And when I became a Member of Congress, I discussed that with the head of the Navy Reserve from the formal admiral, Admiral Debbink was his name. Any thoughts on that in not only helping train people that are active-duty in the trauma setting but having the ability to access potential people who you

may not think would be otherwise available to you if needed? Any thoughts?

Dr. Marcozzi. So, you know, as a reservist, you know, it is palpable to me that there is a better way to address these issues. I think that from a military standpoint this requires DOD, which is going to be kind of a change for them to make dedicated billets at some of these major civilian trauma--

Mr. Bucshon. Yes, I guess I should clarify. I wasn't also--not a reservist. I mean, I wasn't in the reserve. Through the reserve, I understand there was ways to access that. But for a variety of reasons, you know, I wasn't still in the reserve. I had been in and was out.

Dr. Marcozzi. Yes, sir. So I think that there is a way that DOD can help shape what these look like, these joint military civilian trauma centers look like. It requires dedicated billets and dedicated staffing. And the center itself has to understand, during a deployment, those assets will be removed from there, so building in a safety mechanism so that the care is kind of continuous when they get deployed, that system can absorb that loss because what will likely occur will be they will become part of the infrastructure of the center and then the center will just adopt them as part of their own. Unfortunately, they will get deployed and then the center will have to absorb that. So strategically thinking about how to employ them correctly is important.

And the second piece of this is how do you blend an approach between the reservist, the IRR, which I think are a potential untapped resource to actually achieve what we are trying to describe. Right now, I think that the Department of Defense doesn't do that entirely right. I think that there was a lot of testimony to the committee that says that reservists who are deployed went potentially before their training was complete on how to manage trauma care. So better training prior to deployment contiguous is going to be important.

Mr. Bucshon. I mean, because for me, just the economics of it and, you know, where I was in my practice and with my family it would have been difficult to, you know, rejoin the reserve, but to be called for 6 months or a year, it is just not a practical situation. But, you know, for a month or two, it would be something that I would have done in a heartbeat.

Dr. Marcozzi. One of the things that is not so apparent is that this is aimed across the DOD, the military health system, reservists, National Guard, and even some other contract people that work for the DOD.

But let's just look at this reserve thing. If you look at the map of the United States and you look at where our busiest trauma centers are and you just say that you are a reservist and I will pick on you and you are in a busy practice in a community and you want to do your 2 weeks and you want to re-certify or sustain in your trauma aspect, by creating this national network

with these centers regionally, you could do that and go home every night as opposed to now, which is reservists being stationed and sent for 2 weeks of training actually all over the Department of Defense. And so there is some real cost-efficiencies here for reservists that need to train or learn new or sustained skills by creating a national network of these training centers, especially among the high-volume centers. Thank you.

Mr. Bucshon. Thank you. I yield back.

Mr. Pitts. The chair thanks the gentleman.

That concludes the first round. We will have one follow-up per side. The chair recognizes Dr. Burgess 5 minutes for follow-up.

Mr. Burgess. Thank you, Mr. Chairman.

You know, we have been talking about the possibility of setting this up, scaling it, building on what has already been there. Let me ask a question from a different perspective and primarily I am directing this at Ms. Klein, Dr. Marcozzi, and Dr. Schwab. But is there a danger in becoming over-providered on the trauma side?

Dr. Schwab. One of the recommendations--let me back up. We asked the same question and were asked the same question on the committee. Currently, there seems to be a surge among the for-profit health corporations to establish level 2 and even level 3 trauma centers in the more affluent communities, therefore, decreasing the volume going to our level 1 trauma centers, which

are the training centers.

One of our recommendations, therefore, may be on the surface contradictory. One of our recommendations is that, where appropriate, a sample, a group of military treatment facilities--that is military hospitals--become American College of Surgeons verified trauma centers and participate in the civilian system.

We think that is doable and will not take away from the other trauma centers that are charged with the education and research of the civilian sectors and may be these training centers. The DOD would have to be selective, and they would probably have to follow a model that was created in San Antonio because San Antonio has the only level 1 trauma center in the military which is fully integrated into the civilian trauma and emergency system.

Dr. Marcozzi. Dr. Burgess, my comment would be, wouldn't that be a nice problem to have, was my first initial reaction. I think that when we start to try and strategize--

Mr. Burgess. It was difficult for me to ask the question. I just want you to know that. And I also want you to know that I can't believe I used provider as a verb.

Dr. Marcozzi. So I think that there is a deficit right now in our go-to-war mission for the Department of Defense, and it primarily revolves around the ability to care for soldiers on battlefields. And when I say soldiers, generally all services on battlefields. And that is a neglect that we need to address

as a nation, as a Congress, as a White House because we can't do our nation's--we can't ask young service members to go in harm's way and not provide them the best ability to save their life if they were injured on a battlefield.

So I think that I would like to have another congressional hearing on how do we reduce our trauma capability in 5 years for the Department of Defense when we get there from here, but right now, I think that there was a recognition from the committee that the current strategy that DOD uses to best care for soldiers on the battlefield is inadequate, and I think the report describes a vision on how to get there from here.

Mr. Burgess. The genesis of asking the question, I mean, a couple of years ago we had the Ebola crisis if you will in the Dallas-Ft. Worth area, and you did have patients showing up at one of these ancillary--they were actually not ancillary. They are full ERs. And how do you--scarce resource, the moon suits that were available, how do you deal with the distributional problems that when a patient--you can't control where the patient accesses. So that was, you know, one of the reasons that made me think in terms of is there going to be some problem with our designation.

So I realize it may be a good problem to have and I would obviously welcome working through that, but at the same time, from a planning standpoint where we are talking about planning being one of the primary foci of this, from the planning standpoint,

I think that is one of the things that we have to consider.

I am sorry, Ms. Klein. You wanted to say something as well.

Ms. Klein. There are two ways we can look at this. So, first, to take a patient to a facility that you know is going to have to turn around and transfer that patient to another facility in some ways to me doesn't make sense because they should go where they are needed to go in the first place. And so some of these facilities, especially in Texas we are having the standalone ERs--and don't get me wrong; I think there is definitely a role for the freestanding emergency departments--but to be engaged in some of these critical pieces, they need to be prepared, yes. But if you know you are going to take a patient there that is going to have to be transferred, there are some questions there. It doesn't mean it can't happen, but we just need to look at that.

But one of the things I really want to talk about is data management. So to answer your question and some of the other questions is that this should be a data-driven system. And the performance improvement process in a trauma center is the DNA of that trauma center. If it is a strong PI process, then you are going to have a strong program. And why? Because you are looking every day at what you are doing right, what needs to be fixed, what needs to be adjusted.

And so part of what this model that we are talking about is to bring together the civilian trauma center's data and performance improvement with the military and asking who is doing

it right and who is doing it best and how do we learn from you? We have a thing called Trauma Quality Improvement Program through the American College of Surgeons. We call it TQIP. And in TQIP we compare our hospitals. We call it benchmarking. And so the ideal is to provide that same opportunity in the military world so we can see where are our best performers and how do we get there? How do we follow their lead to be best performers ourselves?

Mr. Burgess. Thank you. Thank you, Mr. Chairman. I will yield back.

Mr. Pitts. The chair thanks the gentleman and now recognizes Mr. Green, 5 minutes for a follow-up.

Mr. Green. Thank you, Mr. Chairman. And as I said earlier, at University of Texas Health Science Center in Houston where Dr. Burgess went, we had an ER doctor who actually was the one who told me back before 9/11 that they were training a lot of their--they were doing rotations from the military through Ben Taub Hospital and Memorial Hermann, which is right next door to each other. And when I was in Iraq, I was surprised even at Landstuhl in Germany the military would call up neurosurgeons, you know, anesthesiologists, and they would serve their 90-day rotation so they could still have a practice back home.

But because of our issues with the lack of level 1 trauma centers in our country, I think it is a great idea to see if we can partner with the Department of Defense and say these are facilities that you can be trained in, and it helps us with the

funding, too, because, again, we have second and third level may be easy in some areas, but level 1 takes a big investment, whether it be Parkland or--in Houston. So I think that is a great idea to do that.

Dr. Marcozzi, you had the opportunity to participate in both the military and civilian trauma from so many vantage points, so do you believe this Federal leadership is important by improving our ability to serve both our military and our civilians in trauma? And to what extent does the military medicine for trauma differ for civilian trauma care?

Dr. Marcozzi. Yes, thank you, sir. I appreciate the question. So believe it or not, last night anticipating questions I actually did a back-of-the-envelope look on who would own this report from at least the congressional side. And in a quick look, the Senate Armed Services Committee, the Senate Finance Committee, the Senate HELP Committee, the Senate Veterans' Affairs Committee, House Armed Services Committee, the House Ways and Means Committee, the House Energy and Commerce Committee, the House and Senate Appropriations Committee, and the House Committee on Veterans' Affairs would have and has equities within this report.

Mr. Green. Yes.

Dr. Marcozzi. So to that end on the executive side not only does the White House and policymakers have ownership of this but so does OMB. And both of those, from an administrative

standpoint, have to embrace what we have described here because--

Mr. Green. Yes.

Dr. Marcozzi. And the only place to execute a multi-departmental effort has to be championed at the White House. What the committee realized is to have this be a successful effort, both need to be successful. If one arm of that fails, then both arms fail. So the White House needs to own this. Congress can certainly help the administration, encourage them to embrace some of the recommendations here. But if the White House does that and calls the Department of Defense and the Department of Health and Human Services to task on this and says create a nidus for leadership and accountability and data collection, then both will actually succeed in their efforts.

Mr. Green. Well, of course, in Congress the Energy and Commerce Committee would like to have all the jurisdiction, but you are right, Homeland Security, Armed Services, of course appropriators, and so that makes it sometimes difficult to be able to put these all together, and that is why there does need leadership from the White house, I guess, in doing that.

But you have given me some ideas and, like I said, Congressman Burgess and I for years have authorized funding for trauma care, but it is tough to get the money out of the appropriators. And so this gives us a way that maybe we can bring in other resources because a partnership between the private sector and the military has worked on medical research, breast cancer research. It has

helped us in the private sector as well as the military so there may be a way that we could do that on trauma. And again, I am more interested in level 1 trauma because of the need for it in our urban areas.

So, again, Mr. Chairman, thank you for the hearing. I think it has been real educational for members and I look forward to working with you on it.

Mr. Pitts. Thank you. The chair agrees. And we have heard some very good recommendations and issues that need to be addressed here today and some important information.

That concludes the questions of the members present. We will have some follow-up questions in writing, other members may have in writing. We will send those to you. We ask that you please respond. I remind members that they have 10 business days to submit questions for the record, so they should submit their questions by the close of business on Tuesday, July 26.

With that, this hearing is adjourned.

[Whereupon, at 12:04 p.m., the subcommittee was adjourned.]