

2015 MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM

MHSRS REVIEW



SYNERGY



"The MHSRS setting, simply put, is **CRITICAL TO WHAT WE DO**. Am I overstating things? No, I am not. It is absolutely critical."

*Alicia Crowder, PhD
Portfolio Manager, Nuerotrauma & Traumatic Brain Injury
Combat Casualty Care Research Program*

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MHSRS 2015 REVIEW

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"In short, this symposium is essential for all of us. This is where all the key players all military, academic, and industry stakeholders are present at a single conference.

The **OPPORTUNITIES TO NETWORK** and coordinate cannot be replicated at any other single meeting."

*Anthony Pusateri, PhD
Portfolio Manager, Hemorrhage and Resuscitation
Combat Casualty Care Research Program*



The Military Health System Research Symposium is, in so many ways, a direct reflection of its annual attendees: constantly changing, constantly growing, constantly adapting to the various challenges of military medicine. And yet within that change can also be found a consistency that is very much integral to the overall success of the MHSRS. Focus of mission. Attention to detail. Depth of desire. These are also hallmarks of the MHSRS, an event which has –perhaps unlike any other in the military or medical arenas– become synonymous with concept of “the leading edge.” Here is where we focus on immediacy. Here is where we focus on solutions. Here is where the brightest minds in the country focus on one, single person each and every day: the American warfighter.

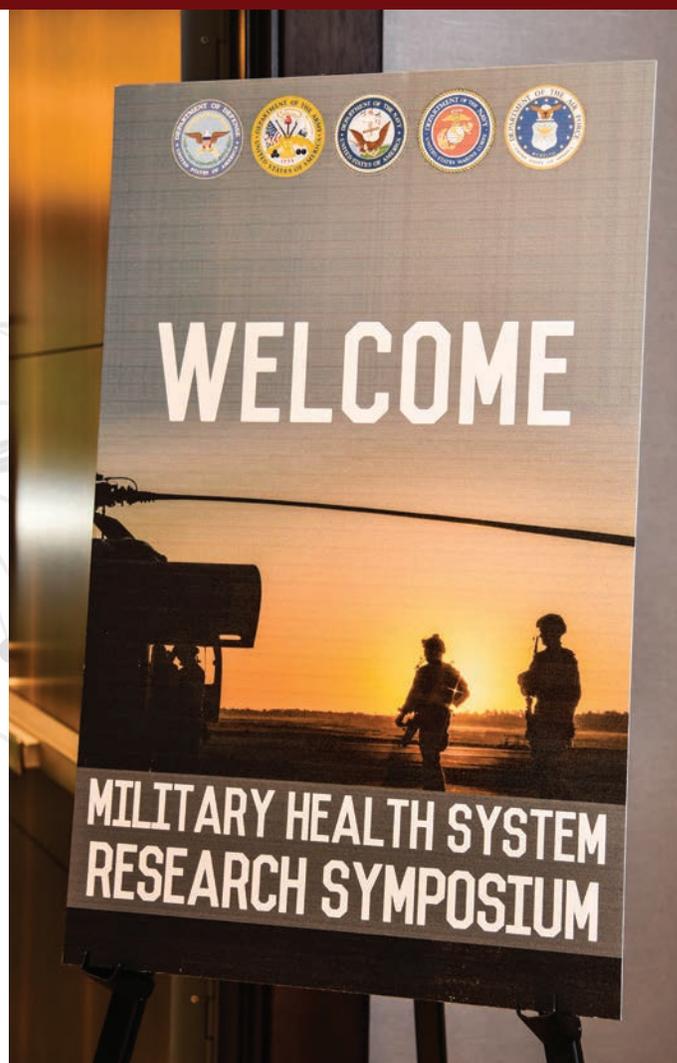
So it is in that vein that we present Synergy, a brief roundup of the sights, science, and reactions gleaned from the 2015 MHSRS. Held in August and featuring more than 1,700 high-profile attendees from across the military, scientific, and academic worlds, the 2015 MHSRS established itself once again as the crown jewel of the military medical event calendar; a place where modern science and endless possibility meld seamlessly into an individual effort that simultaneously expands the reach of both concepts in real and palpable ways. In short, the MHSRS is where tomorrow’s solutions truly begin.

By gathering here a small and varied collection of news articles, photographs, and first-person accounts of the benefits of MHSRS, we hope to give you a taste of all the symposium has to offer - a brief overview, if you will, of all the efforts, people, and successes this event has allowed us to highlight, meet, and applaud.

The material here has been presented previously, in one form or another, in more than two dozen other military and private sector news outlets. We bring it to you here, now, so that you may see more clearly where our research stands today, and where our research will focus tomorrow.

“We need to understand the future,” Assistant Secretary of Defense for Health Affairs –and 2015 MHSRS attendee– Dr. Jonathan Woodson likes to say. Perhaps by taking time for a quick look back at the 2015 MHSRS, we are already well on our way to achieving that goal.

INTRODUCTION





"Sometimes we truly need to step **OUT OF THE BOX** and be open to new products, new ideas, new faces. This is where the MHSRS comes into play. I cannot emphasize enough how important this setting is, the face-to-face synergy it provides us."

*Marcello Pilia, PhD
Assistant Portfolio Manager, Neurotrauma & Traumatic Brain Injury
Combat Casualty Care Research Program*



MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM KICKS OFF

By Steven Galvan, Public
Affairs Officer, U.S. Army
Institute of Surgical Research

More than 1,700 military medical clinicians and scientists joined academia and industry leaders to kick off the 2015 Military Health System Research Symposium in Fort Lauderdale, Florida, Aug. 17.

Assistant Secretary of Defense for Health Affairs Dr. Jonathan Woodson welcomed attendees during the opening session of the four-day conference Aug. 17-20, designed to highlight military-relevant research and development. Woodson spoke about future priorities for the military health system.

“We are in the midst of a major transformation in military medicine and as we pivot to the future -- as we come out of this decade plus of combat -- we need to understand what the imperatives are for the future,” said Woodson. “As we look to the future, it will be necessary to redesign how we do business across many domains to show that we are better, stronger and more relevant to the times and challenges that are before us -- and there will be many.”

MHSRS combined three previous conferences, including the former Advanced Technology Applications for Combat Casualty Care Conference; the Air Force Medical Service Medical Research Symposium; and the Navy Medicine Research Conference. By combining these conferences into one event, the meeting serves as a critical strategy session for leaders to set future milestones for the Department of Defense’s deployment-related medical research programs, centered on the needs of the Warfighter.

“All of our efforts are aimed at enhancing our abilities to support the Soldier, Sailor, Airman or Marine, who may be called in harm’s way in defense of this Nation,” added Woodson. “Readiness, producing a healthy, trained, equipped individual prepared to do their job in defense of this Nation, will be paramount. There is a lot more that is expected of us, a lot more that will be required, and many more questions that have not been answered. This is our job here today and going into the future.”

"Because of the setting, I am able to sit down in person with several different companies within the span of just a few days. In addition, the **TRANSLATION OF RESEARCH** into actual clinical practice and the informing of new research ideas is a particularly important benefit of MHSRS."

*Lt. Col. Jennifer Hatzfeld
Portfolio Manager, En Route Care
Combat Casualty Care Research Program*





FAST DRONES, FASTER DECISIONS THE FUTURE FOR COMBAT INJURED

By Ramin A. Khalili,
USAMRMC Combat Casualty
Care Research Program
Knowledge Manager

During a quick break between meetings at the 2015 Military Health System Research Symposium, Lt. Col. Jennifer Hatzfeld spoke candidly about the concept of innovation in the field of mobile trauma care.

“I’m excited, because I think we’re at a point where clinicians can see solutions,” said Hatzfeld, manager of the En Route Care Portfolio for the U.S. Army Medical Research and Materiel Command.

Tasked with developing both the knowledge and the tools required to help stabilize and transport warfighters injured on the battlefield, Hatzfeld points to four specific ongoing efforts that she says could help close a number of gaps in her portfolio.

The first development, according to Hatzfeld, is expanding medical capabilities for combat injured in a transport environment. This involves assessing and then delivering the correct therapies for a patient in a stabilizing environment. The second is the integration of so-called “intelligent tasking,” which uses factors such as physiology to determine patient need.

“Instead of ‘do we need to move this patient, yes or no,’” said Hatzfeld of such tasking, “it’s moving toward ‘what kind of care does this person need?’”

Telemedicine, too –specifically those cases involving virtual ICU environments– is another emerging care area, according to Hatzfeld, as well as “unmanned patient movement,” which may involve the use of drones and other types of automated equipment, including robotics.

Said Hatzfeld of the latter, “Soon, machines will be able to sense how the patient is doing, and act from there.”

With such strong and pointed direction, the En Route Care Portfolio under Hatzfeld’s management is constantly looking to leverage its unique lines of effort in order to stay on the leading edge of innovation.

Said Hatzfeld of those efforts, “We’re on the right track.”

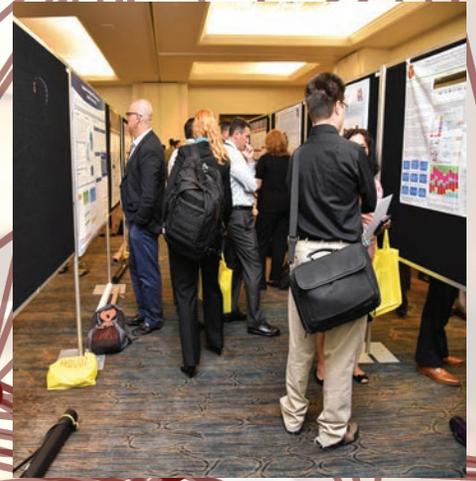


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"The MHSRS is unique in that it allows a forum for Joint Service medical personnel who deploy and provide **BATTLEFIELD CARE** to connect and communicate directly with their supporting research community."

*Lt. Col. Kyle Remick
Military Deputy
Combat Casualty Care Research Program*





After moderating a lengthy session on blood products at the 2015 MHSRS, Dr. Heather Pidcock summed up two hours of dense technological conversation into just five words.

“Ultimately, it’s about saving lives,” said Pidcock.

Simply put for such a complicated issue, and yet words that sum up decades of emerging research at the same time.

With the June 2015 ruling by the FDA clearing the use of cold-stored apheresis platelets for the resuscitation of bleeding patients, the effort to stretch the limits of cold platelet storage has gained renewed traction.

Platelets are the component in blood that team with red blood cells and plasma to form clots that can help stop or minimize blood loss. Medical teams can transfuse trauma patients with platelets to assist with blood coagulation if they are suffering from severe hemorrhage.

Pidcock, the deputy task area manager of the Coagulation and Blood Research Program at the U.S. Army Institute of Surgical Research, is one of the researchers leading the charge.

“Down the line,” she said, “extra ‘life’ from platelets could easily translate into fewer lives lost on the battlefield.”

Statistics show that blood loss remains the number one cause of death on the battlefield, a problem further exacerbated by the fact that up until the recent protocol change by the FDA only room-temperature platelets were allowed for use in trauma patients. Room-temperature platelets are stored for up to five days due to risk of bacterial growth and hospitals must test them prior to transfusion. Cold storage allows clinicians to use platelets immediately, without testing.

“A bigger, better supply of platelets could reduce health care costs,” said Kristin Reddoch, American Heart Association Graduate Research Fellow at the University of Texas, San Antonio.

In addition, Reddoch, who presented her findings during the same MHSRS session, also said emerging platelet additive solutions could extend the life of cold-store platelets for up to 15 days. Pidcock says without any additional aid, studies show the presence of active and functional cold-stored platelets after 14 days.

“At the start of the war in Iraq, we had almost no platelets on the battlefield,” said Pidcock. “We can see a scenario where that won’t be the case during the next conflict.”

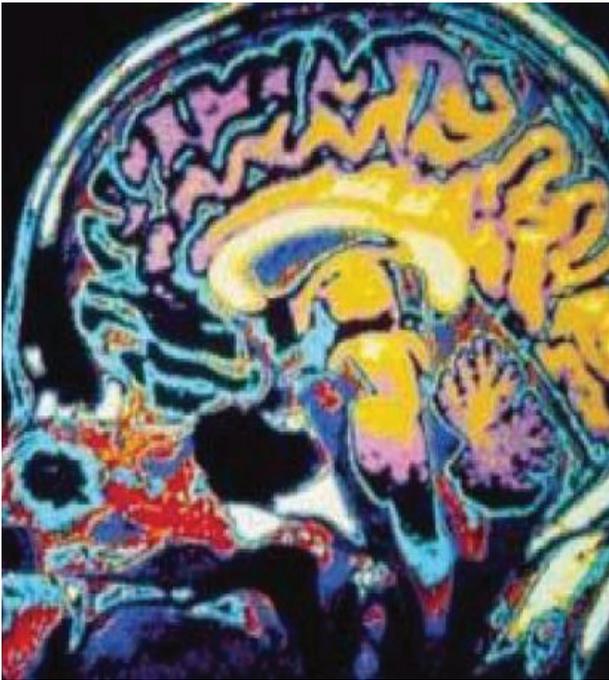
BLOOD WITHOUT BORDERS: THE EMERGING WORLD OF COLD-STORE PLATELETS

By Ramin A. Khalili,
USAMRMC Combat Casualty
Care Research Program
Knowledge Manager



"MHSRS got me very interested in a new brain cooling idea that has the **POTENTIAL TO REVAMP** the field. Small company, just a poster among hundreds of them, but this could have never happened if it wasn't for this meeting.."

*Marcello Pilia, PhD
Assistant Portfolio Manager, Neurotrauma & Traumatic Brain Injury
Combat Casualty Care Research Program*



BRAIN TRAUMA EXPERTS TALK IMPACT, EMERGING CARE OPTIONS

By Ramin A. Khalili,
USAMRMC Combat Casualty
Care Research Program
Knowledge Manager

The health and longevity of the human brain took center stage at the 2015 Military Health System Research Symposium during a media roundtable event Aug. 19 in Fort Lauderdale, Florida, featuring several of the country's premier experts on traumatic brain injury.

The roundtable, entitled "TBI Research Across the Spectrum of Severity: From the Battlefield to the Athletic Field," focused chiefly on emerging techniques in both diagnosis and care of TBI in both military and athletic settings.

"The mechanisms are similar," said Dr. Thomas McAllister, co-chair of the joint NCAA-Department of Defense Concussion Assessment Research Education Consortium, referring to a landmark \$30 million initiative to study head injuries in both student-athletes and military service members. "In both cases we're dealing with young, healthy, highly-trained people engaging in high-risk behaviors."

"These problems require large studies, and that's exactly what the military needs," said Col. Dallas Hack, Senior Medical Advisor to the Principal Assistant for Research and Technology for the U.S. Army Medical Research and Materiel Command.

Col. Todd Rasmussen, director of the Combat Casualty Care Research Program, added, "Historically, the major advances that have been made to improve the health and welfare of our society have often taken decades. They haven't just been short-term scientific projects."

With regard to emerging care options for people suffering from TBI, the assembled experts agreed with the DOD's current multi-pronged approach, which uses both pharmacological and materiel solutions to combat the effects of TBI. A clinical trial phase for the first-ever blood test for TBI is set for completion in March 2016, according to Hack.

"It's kind of like managing your 401(k) portfolio," said Dr. Terry Rauch, director of Medical Research for the Office of Health Affairs, regarding the multi-pronged strategy, "You want to be somewhat diversified in your approach."

According to the assembled experts, increased focus and attention on TBI will be just as important in the coming years as the systematic approach used to combat the problem.

Added Katherine Helmick, deputy director of the Defense and Veterans Brain Injury Center, "It's the brain that makes us who we are, even more so than the heart."

If a synopsis by definition is intended to be a brief summary of an event—a snapshot, a quick glimpse—then to provide a “closing” such as this one is almost derivative. The essence of the event having already been captured, a capstone can usually only offer an almost pointless redundancy. And yet here, when discussing the annual MHSRS, such a conclusion is necessary, almost a requirement.

For since the MHSRS exists in an almost constant state of evolution, no one, single snapshot can ever provide a full summary of the proceedings: the current iteration always so dependent on the previous iteration, the next iteration always so dependent on the current one.

And so on. And so on.

Such fluidity, then, demands an explanation, a sense of awareness, a point of reference. With so much of the annual MHSRS workload so dependent on new developments and obstacles, it is critical to know exactly where we’ve been before we can determine where we go next. And even then, once we arrive at our destination, we’re faced with challenges both new and old, all of them evolving just as we do, just as the people supporting the military medical research structure do on a daily basis.



So with that we offer the briefest of closings, the quickest of capstones. Because just as we drop the curtain on the 2015 Military Health System Research Symposium, the next version is just beyond the horizon line, waiting and ready to conduct new research, present new findings, turn over new earth; waiting to run the gauntlet once again for the good of the men and women of the United States military.

And in the end, perhaps it is that singular piece of knowledge—that the future we seek so desperately to understand is only ever the end result of the sum parts of our everyday efforts—that will serve us best as we carry out our mission.

**FOR MORE INFORMATION ON THE MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM, PLEASE VISIT
[HTTPS://MHSRS.AMEDD.ARMY.MIL/SITEPAGES/HOME.ASPX](https://mhsrs.amedd.army.mil/sitepages/home.aspx)**



CLOSING



**FOR MORE INFORMATION ON THE COMBAT CASUALTY CARE RESEARCH PROGRAM, PLEASE VISIT
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