

March 23 2015

# NISSC This Month

U.S. Army Garrison Natick Public Affairs Office



2013 Department of Defense Thomas Jefferson &  
U.S. Army MG Keith L. Ware Award-winning Digital Publication



# CSM's Corner

Command Sgt. Maj. Erika M. Gholar  
USAG-Natick Command Sergeant Major



# Table of Contents

March 23, 2015

# NSSC This Month

## New Column

Greetings, Natick Soldier Systems Center. I'm excited about my assignment to NSSC and humbled to be a member of the team.

Let me share a little of my background. I am coming from Fort Gordon, Ga., and have served in our Army for almost 29 years. I have worked with some great teams and had the honor of training our Soldiers as a drill sergeant.

I've initiated the "CSM's Corner" in NSSC This Month to highlight information changing around the Department of Defense and the Army, and how it will affect the Soldiers, civilians and families at Natick.

Some information will speak directly to the military, and I will share information that affects the Soldiers, civilians and family members who make up the Natick community.

One piece of news is the arrival of new Army Community Service director Kari Sharpe, who comes to us from Garmisch, Germany. Please give her a nice, warm welcome when you see her. ACS has a lot coming up.

The Army Emergency Relief campaign has started. It runs through May 15. Your points of contact on post are: Diane Magrane, ext. 5377; NSRDEC/HRDD POC Sgt. Christopher Washington, ext. 5826; and USARIEM POC Sgt. Andrei Loban, ext. 5650, and Private 1st Class Jiyo Torres, ext. 5950.

AER is a private, non-profit organization dedicated to providing emergency financial assistance to active and retired Soldiers and their families. Since 1942, AER has provided more than \$1.7 billion to more than 3.6 million Soldiers, families and retirees. Last year, AER provided nearly \$74 million in assistance to more than 51,000 Soldiers and families, including \$8.8 million for 3,500 scholarships. Visit [www.aerhq.org](http://www.aerhq.org).

ACS is also taking part in a joint military event on April 8 at the Hanscom Air Force Base Conference Center for White Ribbon Month. Contact Doug Lehman at ext. 4798.

I want this column to be a two-way platform for communication.

You will get to know me throughout the next two years. I plan to be out and about meeting the people here at Natick and learning about what you do. You will come to know that I love to learn about the great things being done here on behalf of our service members.

Finally, I would like to help you highlight the accomplishments of our NSSC workforce. This is a place to share if someone wins an award, is retiring, or has an issue to be resolved. Please feel free to come see me, email me or call me and tell me the great things that are happening or let me know how I can help.

Have a great day, and thank you for taking a moment to read the first CSM's Corner.

Command Sgt. Maj. Erika M. Gholar  
USAG-Natick Command Sergeant Major



## NSSC This Month

### NSSC

Senior Commander  
[Brig. Gen. William E. Cole](#)

Garrison Commander  
[Lt. Col. Brian Greata](#)

Command Sergeant Major  
[Command Sgt. Maj. Erika M. Gholar](#)

Public Affairs Officer  
[John Harlow](#)

### NSSC Social Media Sites

Facebook: <http://bit.ly/5tmSRD>  
Flickr: <http://bit.ly/7BntsV>  
Twitter: <http://twitter.com/natickssc>

### About this newsletter

NSSC This Month is a monthly newsletter covering NSSC news within the Army and commercial media.

NSSC This Month is maintained by the USAG-Natick Public Affairs Office.

Art Direction by Philip Fujawa, NSRDEC Strategic Communications.

To subscribe to NSSC This Month, please contact Bob Reinert at [robert.j.reinert.civ@mail.mil](mailto:robert.j.reinert.civ@mail.mil).

On the Web: [www.army.mil/natick](http://www.army.mil/natick)

Photos by Dave Kamm, NSRDEC Strategic Communications, unless otherwise noted.

Cover photo: Tech Sgt. Amy Lovgren



### NSSC This Month Feature Stories

**RDECOM commanding general visits Natick..... p.4**

Wharton calls installation 'national treasure'  
By Jane Benson, NSRDEC Public Affairs

**We Deliver.....p. 5**

Natick leads joint team of the year project  
By Jane Benson, NSRDEC Public Affairs

**What's in That MRE? .....p. 8**

New online Combat Rations Database can tell you  
By Bob Reinert, USAG-Natick Public Affairs

**'Speed Bag'.....p. 10**

Aerial resupply for troops on the battlefield  
By Jeff Sisto, NSRDEC Public Affairs

**Moneyball? .....p. 12**

Odierno hears about sabermetrics  
By David Vergun, Army News Service

**'City-in-a-Box'.....p. 14**

Providing shelters for U.N. peacekeepers in Africa  
By Bob Reinert, USAG-Natick Public Affairs

**Red Tails .....p. 16**

Tuskegee Airmen share their experiences at Natick  
By Tazanyia L. Mouton, USAG-Natick Public Affairs

**Suit Up.....p. 18**

Army researching uniforms that automatically decontaminate  
By C. Todd Lopez, Army News Service

**Good Chemistry .....p. 20**

USARIEM and Harvard team up against PTSD, mTBI  
By Bob Reinert, USAG-Natick Public Affairs

**TBI Awareness Month .....p. 22**

More than 313,000 service members diagnosed  
By Staff Sgt. Joseph C. Hill, Behavioral Health Care Services



## RDECOM commanding general visits Natick

Wharton calls installation 'national treasure'

By Jane Benson, NSRDEC Public Affairs / NATICK, Mass. (Feb. 17, 2015)

Senior leaders from the Army's science and technology community gathered Feb. 11-12 here.

Major General John F. Wharton, commanding general of the [Research, Development and Engineering Command](#), visited the [Natick Soldier Research, Development and Engineering Center](#). The center is part of RDECOM, which serves the joint warfighter through integrated research, develop-

ment and engineering solutions. Wharton's leadership extends to more than 14,000 researchers, engineers and support personnel command-wide.

Dr. Patrick Baker, NSRDEC's acting technical director, hosted the visit. NSRDEC subject matter experts briefed the commanding general on Natick's cutting-edge products and technologies in the areas of food, clothing, shelters and aerial delivery.

Wharton toured NSRDEC's world-class laboratories and testing facilities. He also witnessed a live demonstration of the Cargo Pocket Intelligence, Surveillance and Reconnaissance, or [CP-ISR](#). The center developed the pocket-sized, aerial surveillance device for Soldiers and small units operating in challenging ground environments.

"The Natick Soldier Research, Development and Engineering Center has proven itself indispensable to the Soldier and the Joint Warfighter over the years by doing great things for Soldiers every day," Wharton said. "The work going on here now shows that it will continue to be a national treasure."

Having lunch in the dining facility with Soldiers stationed at NSRDEC was another important part of Wharton's visit. Wharton and the Soldiers discussed everything from

**"We need to approach the Soldier holistically. We need to look at the cognitive piece, the physical piece, and the equipment piece."**

Maj. Gen. John F. Wharton

the snowy weather to the importance of finding out more about sleep deprivation and nutrition, which are two factors that greatly influence human performance.

Throughout the visit, Wharton asked many nuanced questions about NSRDEC's products, projects and ongoing research and development, leading to detailed and enthusiastic discussions.

"Today, I was given the opportunity to brief Major General Wharton on Natick's [High Performance Fiber and Textile Facility](#), including its capabilities, our previous and ongoing projects utilizing the facility, as well as our plans moving forward," said Megan Hoey, an NSRDEC research chemical engineer. "Major General Wharton was an especially engaged visitor, and his enthusiasm for and interest in our work was refreshing and exciting to experience. It was an honor to share with him our successes to date and future goals for the HPFTF in addressing warfighter needs."

Photo: Courtesy Yuma Proving Ground



## We Deliver

Natick leads joint team of the year project

By Jane Benson, NSRDEC Public Affairs / NATICK, Mass. (Feb. 23, 2015)

The High Speed Container Delivery System Joint Capability Technology Demonstration, or HSCDS JCTD, Team has been chosen by the [Office of the Secretary of Defense](#), or OSD, for the 2014 JCTD Team of the Year award.

The JCTD Program encourages joint service efforts to effectively and efficiently meet the needs of the joint warfighter.

The HSCDS JCTD Team technical manager was Mike Henry, a research aerospace engineer in the [Aerial Delivery Directorate](#) at the [Natick Soldier Research, Development and Engineering Center](#), or NSRDEC.

"Airdrop, by nature, is a joint effort, and HSCDS is no different," Henry said. "[U.S. Transportation Command](#) and [USAF Air Mobility Command](#) work closely together to support the airdrop mission. While the Air Force executes most of the airdrops, it is common for the Army to be the recipient on the ground and can be viewed as the end user."

The new system is more efficient at faster aircraft speeds and lower aircraft altitudes than standard airdrop and enhances the safety of ground forces.

"By flying faster, the aircrew is exposed to the ground threat for less time, the aircraft is more maneuverable, and it has a greater rate of climb to fly out of terrain, enabling access to more drop zones and reducing the need

for ground convoys," Henry said. "Also, the automated release sequence greatly reduces the variance seen during a manual release process, resulting in a more consistent and accurate delivery of payloads on the ground. More accurate payloads means the ground forces need to secure a smaller area on the ground and can recover the bundles faster, reducing their exposure to threats."

The system benefits the Army and the Air Force.

"HSCDS provides an airdrop capability that is low and fast to enhance aircrew survivability and effectiveness while also making it more accurate for the users on the ground, meeting the needs of users from both services," Henry said.

The HSCDS JCTD Team included people from multiple services.

"Our operational manager was from USTRANSCOM, who also supported this effort with funding," Henry said. "Our deputy operational manager was from the Air Mobility Command. In addition, Air Force Test and Evaluation was our independent assessor for the effort. NSRDEC was the technical manager for the effort, while Product Manager Force Sustainment Systems was the transition manager for HSCDS. All of the organizations worked to develop the HSCDS capability, in addition to keeping our USSOCOM users in the loop on the development."

The High Speed Container Delivery System Joint Capability Technology Demonstration, or HSCDS JCTD, Team has been chosen by the Office of the Secretary of Defense for the JCTD Team of the Year. Mike Henry, a research aerospace engineer in the Aerial Delivery Directorate at the Natick Soldier Research, Development and Engineering Center, or NSRDEC, served as the technical manager for the award-winning team.

The resulting product integrates several different technologies that enhance airdrop for aircrews and ground warfighters.

The Aerial Delivery Directorate at NSRDEC has an excellent track record of successful joint aerial delivery project execution across DOD. The directorate has now executed three ACTD/JCTDs for OSD as technical manager and has garnered "Team of the Year" awards for all three efforts, including the Joint Precision Air Drop System, or JPADS, in 2009, the Joint Medical Distance Support and Evaluation, or JMDSE, in 2011, and now HSCDS in 2014.

"I'm extremely proud of the HSCDS Team being recognized with the JCTD Team of the Year award," said Richard Benney, director of the Aerial Delivery Directorate at NSRDEC. "This OSD/USTRANSCOM-funded JCTD required a significantly challenging technical design and schedule, coordination with many partner organizations, and an enormous dedication of time and effort by all team members to meet this warfighters' joint challenge. We look forward to supporting the PM-FSS formal program of record, which has just started to formally field the HSCDS capability to the joint warfighter."

"The team had great people who stayed focused on who we were all there to serve: the joint warfighter," Henry said. "Everyone recognized that fact, and it helped inspire a can-do attitude. The team had a great mix of experience and expertise to develop a product that provided new capability but was also usable in the field."

For Henry, seeing great ideas become a reality for the warfighter is what it's all about.

"I like being able to see a project over the course of various phases of development within S&T," Henry said. "I like the fact that I can be in a room with folks drafting up an idea and then I can follow that idea through to fabrication, lab testing and, when that idea fully comes to fruition, I can be in the back of the plane, watching it go rolling out."

# Cold Truth

USARIEM returns to Norway to study arctic conditions

By Ms. Kelly Field, USARIEM Public Affairs / NATICK, Mass. (March 3, 2015)



The [U.S. Army Research Institute of Environmental Medicine](#), or USARIEM, once again partnered with the [Norwegian Defence Research Establishment](#) to study nutrition and physiological responses to cold-weather training.

For the second time in three years, researchers from USARIEM traveled to Norway to study Norwegian soldiers participating in cold-weather training. About 75 Norwegian soldiers, from the 2nd Battalion, Brigade North, Norwegian Army, stationed on Skjold Garrison enrolled in this randomized controlled trial.

“The results of our last study showed that short-term winter training alters nutritional requirements,” said Dr. Stefan Pasiakos, a nutritional physiologist with USARIEM’s [Military Nutrition Division](#). “We observed decrements in several markers of nutritional status, including protein retention, suggesting muscle mass is compromised during short-term military training in the cold.”

Pasiakos said this gave researchers the information they needed to design a targeted nutrition intervention to attenuate those effects in Soldiers participating in a similar winter training program. The research team expected to produce physiological decrements that mirrored those observed in their last study.

“Our primary objective was to determine the efficacy of an optimized recovery food product designed for combat rations,” Pasiakos said. “We were trying to identify ways to effectively use nutrition to promote recovery and resistance to muscle loss during military operational stress.”

Pasiakos said that often times Soldiers can experience severe calorie decrements during training because they either quickly strip down rations and remove food with nutritional value because they do not want to carry the extra weight, or they simply do not have the time to eat all the

food they are given. For example, Soldiers threw away about a third of their food rations, causing a severe calorie deficit throughout training during Pasiakos’ previous study in Norway.

Researchers divided the Soldiers into three intervention groups, aimed at testing whether supplementing existing rations with a protein or carbohydrate-based snack product would improve these various markers of nutritional status. USARIEM partnered with [Natick Soldier Research, Development and Engineering Center’s Combat Feeding Directorate](#) to develop and create nearly 5,000 snack products for use in this study.

“The groups were each given their standard combat ration allotment for their training exercise. One

group served as the control and received no additional food,” Pasiakos said. “The other groups received their three rations plus, either four carbohydrate or protein-based snacks, like a First Strike Ration bar or a crispy rice bar.

“By providing easily accessible snacks, we were trying to see to what extent we could actually offset the physiological decrements that occur during severe calorie deficit. If we are able to develop a food product that Soldiers like to eat and also promotes recovery, this would allow us to make some positive changes to our combat rations,” Pasiakos said.

USARIEM researchers also examined the risk of frostbite on peripheral areas such as the fingers, wrists, calves and toes. Dr. John Castellani, a research physiologist with USARIEM’s [Thermal and Mountain Medicine Division](#), said that these areas are the most susceptible to frostbite, but they are the least understood.

“Currently, we have limited information on finger and toe skin temperatures in the field or in an operational setting,” Castellani said. “The information that we collected is important because it will allow us to build biophysical models that will enable Soldiers to choose the correct cold-weather clothing ensembles as well as evaluate if the Army’s cold-weather doctrine for injury prevention is accurate.

“This study will enable USARIEM to provide Soldiers with practical solutions in extreme environmental temperatures so that they continue to perform their mission with a low risk of cold injury,” Castellani said.

Both Pasiakos and Castellani said that these types of field studies are extremely important for them

**“This study will enable USARIEM to provide Soldiers with practical solutions in extreme environmental temperatures so that they continue to perform their mission with a low risk of cold injury.”**

Dr. John Castellani, USARIEM

as scientists because they provide a level of reality that can not be re-created in the laboratory. While the information collected during this trip is just beginning to be analyzed, USARIEM researchers are excited for the results.

“Typically, field studies give us the most realistic model to test our hypotheses. When military units provide us the opportunity to conduct a study, our mission is to execute strong science without being disruptive to their operations,” Pasiakos said. “USARIEM has a long history of doing just that and, most importantly, it gives us the operationally relevant evidence we need to improve science and, ultimately, warfighter health and performance.”

# What's in That MRE?

## New online Combat Rations Database can tell you

By Bob Reinert, USAG-Natick Public Affairs / NATICK, Mass. (March 16, 2015)

When Soldiers rip open [Meals, Ready-to-Eat](#) in a combat zone, most probably are thinking more about flavor and filling their stomachs than about the nutrition.

That doesn't mean nutrition isn't important, however. The new online Combat Rations Database, or ComRaD, formally launched earlier this month by the Department of Defense's [Human Performance Resource Center](#) (HPRC), provides warfighters, military dietitians, food service officers and leaders the opportunity to learn more about the nutritional value of what's inside those packages. The interactive website can be found at <http://hprc-online.org/comrad/>.

ComRaD is the result of a collaborative effort between HPRC, the [Natick Soldier Research, Development and Engineering Center](#) (NSRDEC), and the [U.S. Army Research Institute of Environmental Medicine](#) (USARIEM) at [Natick Soldier Systems Center](#). The database contains nutrition information about the MRE, First Strike Ration, Meal, Cold Weather, and Food Packet, Long Range Patrol.

Before ComRaD, military customers needed to contact experts at NSRDEC's [Combat Feeding Directorate](#) (CFD) to obtain accurate nutritional information. The lack of public access to this information has left customers to obtain nutritional information from alternate sources that are sometimes unreliable and inaccurate.

Today's increased emphasis on performance nutrition in the military provided the boost needed to get the website up and running.

"Military dietitians expressed a need for publicly available nutrition information that could be used to help educate warfighters on how to properly fuel themselves before a mission, during a mission and post mission,"

said Julie Smith, senior food technologist with the CFD.

In the past, one had to rely on the Nutrition Facts Labels provided on the food component packages to have any idea what was in them. Holly McClung, a research dietitian at USARIEM, said those labels aren't always accurate.

"That's why the website's so important," McClung said. "That's where we want the warfighter and the dietitians to go to, because we know that the nutrition info is accurate and up to date."

How does McClung know this?

"The nutrition information that feeds into the database comes from actual chemical analysis of the food component," McClung said. "That's ... where USARIEM came in. We funded the chemical analysis of food components in the 24-menu MRE and other ration lines, which is difficult, expensive and time consuming."

"This is why it's taken us so long to complete the process. At this website, the user will be able to get nutrition on every individual component, the composition of complete ration lines, and individual MRE menus that are 100-percent chemically analyzed, so we feel confident in the nutritional data."

A quick look at the website would seem to reveal that warfighters are consuming too many calories and that their intake of ingredients such as sodium is too high. The numbers are deceiving, however.

"A civilian might look at what the energy needs are for a warfighter, or look at how much is provided in a ration, and think the rations are providing too many calories and/or fat, etcetera," McClung said. "What they have to realize is that the rations are con-

structed to meet the energy and nutritional needs of physically active warfighters. So, while there may be excessive energy available in the ration for a Soldier sitting at a desk, the ration may just meet the requirements of a physically active Soldier (who is) on (his or her) feet for a 12-hour patrol.

"That's why we hope the warfighter will use the website, as it will help them to figure out how many calories they need and guide them to make good decisions on what they should be choosing to eat," McClung said.

Combat Feeding developed the ComRaD website in collaboration with HPRC, but it's hosted by HPRC.

"Part of their mission is to educate the warfighter," said Smith of HPRC. "Their website provides warfighters and their families with a one-stop clearinghouse for evidence-based information and key resources in all aspects of performance to achieve total fitness and, ultimately, human performance optimization."

The ComRaD website will change over time, Smith said.

"We're already working on ... additional features to the website that will provide ComRaD users with Unitized Group Ration nutrition information, as well as a cart feature that will allow users to track what they have eaten by adding and removing ration components in order to view their overall daily nutritional intake."

"I think that it will be an evolving website (with) future improvements based upon the feedback that we get from users," said Smith, "which is really going to be invaluable."

For more information about ComRaD, email [usarmy.natick.nsrdec.mbx.nati-amsrd-nsc-ad-b@mail.mil](mailto:usarmy.natick.nsrdec.mbx.nati-amsrd-nsc-ad-b@mail.mil).

A Soldier digs into a First Strike Ration in the mountains of Afghanistan. Nutritional information about the First Strike Ration and other individual rations is now available at the online combat rations database.



Photos: Michael Stepien, Combat Feeding Directorate

The U.S. Army is streamlining efforts to provide squad- and platoon-level ground Soldiers operating in austere environments with an organic aerial resupply capability that will empower and sustain them on the battlefield.

The Enhanced Speed Bag System, or ESBS, fills this capability gap by drastically increasing the survivability rate of critical resupply items such as water, ammunition, rations and medical supplies, which must be air-dropped from helicopters to small units on the ground. The system includes a hands-free linear brake, rope, and a padded cargo bag that can hold up to 200 pounds and be dropped from 100 feet.

ESBS was originally developed by engineers from the [Natick Soldier Research, Development and Engineering Center's Aerial Delivery Directorate](#) and the [Armament Research, Development and Engineering](#)

the rounds and conducted a live-fire to determine the ammunition system's effectiveness.

The results were a 98-percent survivability rating of ammunition dropped with the ESBS — a vast improvement from the 50-60 percent experienced with ad-hoc methods.

Subsequent evaluation at Army Expeditionary Warfighting Experiment Spiral I 2014, prompted ARDEC to “recommend the immediate fielding of ESBS to deployed Soldiers,” Forrester said.

“What we have done is taken resupply to the lowest possible level — the squad and platoon levels,” Tabor said.

“Soldiers at unit level are trained

voys, were not practical due to environmental factors and threats,” said REF project manager Todd Wendt. “The unit was aware of NSRDEC's Enhanced Speed Bag System and identified it as a possible technology solution. Upon mission analysis and further market research, REF identified ESBS as a good candidate solution.”

*Continued page 23*

how to get the system

packaged, loaded in the aircraft, and delivered,” Tabor said. “In this way, ESBS provides an organic resupply capability.”

Advancement of the system gained increased momentum through the involvement of the U.S. Army's Rapid Equipping Force, or REF, an organization uniquely chartered to combine requirement validation, acquisition authority and flexible funding under one roof.

REF's mission to “harness current and emerging technologies to provide immediate solutions to the urgent needs and capability gaps faced by Soldiers deployed globally” led it to the ESBS.

“REF received a 10-liner requirement from a unit that needed a safe and reliable way to resupply water and other critical items to ground Soldiers, in a location where traditional resupply options, such as con-

[Center's Logistics Research and Engineering Directorate](#) to standardize the improvised airdrop methods used in theater to resupply units in remote locations where traditional resupply methods, such as truck convoys, are too impractical or threat laden.

“The goal was to standardize ad-hoc techniques used with body bags and duffle bags by providing a material solution and giving units enough knowledge and training to utilize it,” said Dale Tabor, NSRDEC's Aerial Delivery Design and Fabrication team leader.

“We originally received this need from the field, specifically for emergency ammunition resupply,” said Bob Forrester, an engineer with ARDEC's Logistics Research and Engineering Directorate at Picatinny Arsenal, New Jersey. “We received the requirements, found the funding, and teamed with Natick as the technical lead.

“Essentially, we worked the ammunition survivability piece, and NSRDEC worked the aerial delivery piece,” Forrester said.

At an evaluation conducted in July 2013 at [Fort A.P. Hill](#), Virginia, teams packed six ESBS cargo bags with 12,720 rounds of ammunition, each distributed based on a squad-level basic load, and dropped from a 100-foot crane. They thoroughly inspected



Photo: Patrick A. Allright, U.S. Army

# ‘Speed Bag’

Aerial resupply for troops on the battlefield

By Jeff Sisto, NSRDEC Public Affairs / NATICK, Mass. (March 10, 2015)



The “Moneyball” effect for the Army on using advanced analytics would be that it could better place people, reduce disciplinary problems, make better decisions on promotion and reduce turnover. “The Army spends over \$1.5 billion a year alone on retraining people they can’t retain,” said Capt. Sean Clement. An analytics system would easily pay for itself with a lot less money than that.

## Odierno hears about sabermetrics at Solarium 2015

# Moneyball?

By David Vergun, Army News Service / FORT LEAVENWORTH, Kan. (March 3, 2015)

When Capt. Sean Clement saw the baseball film, “Moneyball,” it was not Brad Pitt’s performance that he remembers most. He said it was the sabermetrics that knocked the ball out of the park for him.

Could sabermetrics - applying advanced metrics to team statistics - also be applied to the Army to make a winning team even more winning, Clement wondered aloud as he spoke to [Army Chief of Staff Gen. Ray Odierno](#).

The venue for that discussion was [Solarium 2015](#), hosted by the Center for Army Leadership at the [Command and General Staff College](#), Feb. 24-26.

The chief and other senior leaders listened, Feb. 26, as several of the 84 captains discussed how optimizing Soldier performance can give them an edge when operating in an increasingly complex world, as described in the Army Operating Concept.

To understand Clement’s rationale, a brief overview of “Moneyball” is required.

“Moneyball” was adapted from the book by that same name, written by Michael Lewis. The premise of the story is that the collective wisdom of baseball players, coaches, managers, and so on is flawed.

Clement said “maximizing the performance of sport’s teams based on statistically provable metrics might be completely different than what we think might actually cause success” and that the Army is striking out on doing that.

According to Lewis and a number of statisticians, statistical analysis demonstrated that in baseball, on-base and slugging percentages are better indicators of value than stolen

bases, runs batted in and batting average.

That premise had an impact, as a number of baseball teams subsequently hired sabermetric analysts and saw improved performance.

What the Army needs to do to get into the “Moneyball” league, Clement said, is “design a multi-attribute performance appraisal system to support personnel decisions and predictions.”

The Army assesses about 10,000 Soldiers a month, he said, quoting [Gen. David G. Perkins](#), commander of [U.S. Army Training and Doctrine Command](#), who spoke to the captains several hours earlier.

That is an enormous sample size from which one can gain incredible statistical data with personalized ratings scores, said Clement, adding that sample sizes that big would make statisticians salivate.

Human resource analytics are used by 40 percent of the top corporations in the United States. However, just two percent do it really well, he said. One of the main reasons these large corporations do not get good data is their sample sizes are not large enough to get statistical significance.

The “Moneyball” effect for the Army on using advanced analytics would be that it could better place people, reduce disciplinary problems, make better decisions on promotion and reduce turnover. “The Army spends over \$1.5 billion a year alone on retraining people they can’t retain,” he said. An analytics system would easily pay for itself with a lot less money than that.

Clement said that the Army already developed such a system, which is now being used by the Mayo Clinic. It is called the Total

Surgeon Concept, used to evaluate of all their surgeons, with “fantastic results.” The system was developed and is used by Army Operations Research/Systems Analysis Functional Area 49.

As it stands now, metrics and even ratings on the Army’s largest population group, privates through specialists, is lacking. When one of these Soldiers checks into a unit, leaders have “no concept of who they are as a person” because of the lack of measurable data other than height, weight and physical fitness scores.

For non-commissioned officers and officers, the picture is not much better, he continued.

To bring clarity to the complexity of evaluating personnel, Clement suggested scoring Soldiers on three aspects: human, cognitive and physical. The human aspect would include such conceptual things as will-to-win, motivation and perseverance.

Each of the three aspects would then be broken down to three to five subcategories. Weightings would be given to each subcategory, based on its importance to branch, position and rank.

The ratings would be given by the person responsible for reviewing the Soldier and filling out his or her non-commissioned officer evaluation report or officer evaluation report, assuming relevant behaviors were observed. If a particular rater inflated scores or tended to hammer people, that anomaly could easily be statistically factored into the scoring, he said.

The result of such a system would distinguish between Soldiers’ levels of performance and

*Continued page 23*

# ‘City-in-a-Box’

## Providing shelters for U.N. peacekeepers in Africa

By Bob Reinert, USAG-Natick Public Affairs / NATICK Mass. (March 11, 2015)

While they protect civilians during their stabilization mission in the [Central African Republic](#), or CAR, [United Nations](#) peacekeepers are living and working in [Force Provider](#) base camps procured from Product Manager Force Sustainment Systems at [Natick Soldier Systems Center](#).

In June 2014, U.N. representatives approached the PM FSS Force Provider Team about base camps for the CAR mission. Working with the [Army G4](#), the [Office of the Secretary of Defense](#) and the U.N., PM FSS contracted with the U.N. for six Force Provider Expeditionary 150-person camps at a cost of \$19 million.

It was a new experience for PM FSS, much more accustomed to working with the U.S. military.

“We’ve never done anything thing like this with ... the U.N.,” said Mike Hope, Combat Field Service Equipment Team leader for PM FSS at Natick. “We’ve done some homeland (security) ... and disaster relief work.”

Three Force Provider base camps, pre-positioned in Italy, were established just four months later by a PM FSS technical assistance team and are fully operational, affording U.N. personnel a better quality of life during their deployment to CAR. Three more are in the process of being set up there.

“There was a concerted effort to make this (deployment) go through faster than normal channels,” said John MacDonald, lead production manager for the Combat Field Service Equipment Team. “The need was there. They had to get the capability.”

The U.N. had begun its critical mission to CAR earlier in 2014.

“(We’re) supporting the United Nations peacekeeping effort there that’s trying to prevent genocide in the region,” said Army Capt. Matt Porter, Force Provider assistant product manager. “The timeline it got done was pretty impressive.”

Early feedback from U.N. personnel about the base camps, which feature airbeam shelters, showers, latrines, laundry, and air conditioning, has been nothing but positive, Hope said.

“To have a ‘city-in-a-box’ show up and be able to rapidly deploy and everything hooks together quickly, to provide that quality of life, is just (great),” Hope said. “Having that plug-and-play system, and they can actually take out any system and put it anywhere they want, even independently? That was big for them.”

Still, trained PM FSS personnel are needed to help foreign nationals operate and maintain the camps in remote, hostile locations. Three are deployed now in CAR.

“It’s not a safe place,” Hope said. “All your protection is by the U.N. There’s no U.S. military presence there. It’s a touchy (situation).”

“This was one we were really looking at, and we were really worried about it. There’s been some concerning moments. There’s a lot of fighting going on over there.”

As MacDonald pointed out, Force Provider has given the U.N. troops an unusual level of comfort in the field.

“Living conditions tend to go along with the living conditions they’re used to in their military and their country,” MacDonald said. “We’ve got a pretty good, high standard ... of living in the field. It’s fulfilled a need that maybe they didn’t even realize they had.”

“Now they’ve got Force Provider, which is a premier camp. They’re doing much better and living much better.”

According to Hope, U.N. officials were so impressed with the camps that they now want to purchase more for use in other missions worldwide.

“They’re looking to tailor Force Provider to their requirements,” Hope said. “It’s been really positive. We’ve got a thumbs-up from everybody.”



Shelter photo: PM FSS Background photo: U.S. Navy



Essentially, the Tuskegee Airmen were fighting two wars: a military war in a foreign country they knew little about and the war against racism in a country they called their own.

# Red Tails

Tuskegee Airmen share their experiences at Natick

By Tazanyia L. Mouton, USAG-Natick Public Affairs / NATICK, Mass. (Feb. 20, 2015)

Members of the [Tuskegee Airmen](#) spoke Feb. 19 at the [Natick Soldier Systems Center](#) during the African American/Black History Month observance.

Willie Shellman, president of the New England Chapter of the Tuskegee Airmen, gave valuable history before introducing the program's guests for a question-and-answer session with the audience.

"Beginning in World War I, and throughout the history of the United States, blacks have participated in every armed conflict and served with honor and valor," said Shellman. "Moving into the World War II period, the law of the land was quite different than that."

Lynchings were common in places throughout the states and [Jim Crow Laws](#) were used to deny American citizens of color equal rights and equal protection.

"Conditions back in the North were not much better, where the law was separate but equal, but the practice was separate and unequal," Shellman said.

Having defended America, blacks wanted the opportunity to join the [Army Air Corps](#), but they were denied.

City organizations such as the [National Association for the Advancement of Colored People](#) and the [Urban League](#), politicians and senators lobbied for the elimination of discrimination within the U.S. military.

In April 1939, Congress passed a law that authorized the Civilian Pilot Training Program, and soon after, six Historically Black Colleges and Universities were allowed to participate in the program.

"In spite of blacks participating in the [Civilian Pilot Training Program](#), they still were not entered in the Army Air Corps," Shellman said, "so in late 1940, a lawsuit

was brought by a student from Howard University for admission into the Army Air Corps."

Under pressure from the media and the NAACP, the War Department was compelled to set up a program to allow blacks into the Army Air Corps, and a separate but equal training program was established at Tuskegee (Ala.) Institute.

In March 1941, the 99th Fighter Squadron was formed.

The Tuskegee Airmen participated in major campaigns through Italy and Germany and were soon requested as escorts by white bomber pilots. The Airmen flew more than 2,000 missions, were well decorated, and had aviation records far superior to other groups of flying squadrons during WWII.

Although the Tuskegee Airmen were tackling amazing feats, they still faced an enormous struggle.

Retired Lt. Col. Enoch Woodhouse and Dr. Harold May shared their stories of when they first joined the military.

"When I volunteered to go into the Air Corps, (and) I got on the train from Fort Devens to Cincinnati, and the train crossed the Ohio River going into Kentucky, I knew I was going into a new country," said May. "I had never been in the South before, but I had heard about the South and about Jim Crow, and I knew that I better not get off that train."

Woodhouse told a story of when he was yelled at by a conductor stating that he could not ride the train he was on, while on his way to training.

"What really hurt me — and it still bothers me — I felt embarrassed in front of my friends (and) high school classmates, because I felt I wasn't good enough," Woodhouse

said. "So I got off the train, with \$3.40 in my pocket and a duffle bag."

He remembered later that a black gentleman explained that blacks were not allowed on that train and that another would be coming along. Twenty hours later, and with a dirty uniform, Woodhouse finally arrived at training.

Essentially, the Tuskegee Airmen were fighting two wars: a military war in a foreign country they knew little about and the war against racism in a country they called their own.

One audience member inquired about advice the Tuskegee Airmen would give on how to begin a dialogue involving serious issues such as the ones they had tackled.

"Just be sure of yourself and don't worry about comparing yourself to anyone else," said May. "The fact of the matter is that we are all fellow members of the human race."

With the benefit of hindsight, would they have still forged ahead with their mission of integrating the military?

"Hell, yes!" Woodhouse quickly responded.

Soon after the war ended, Jackie Robinson broke into the major leagues and President Harry S. Truman established Executive Order 9981, which outlawed segregation in all branches of the military service.

"The Tuskegee Airmen were a vital element as our society moved from a prejudicial, segregated society towards a more open society," said Shellman.

In July 1949, the last of the all-black flying organizations in the Air Force were inactivated at Lockbourne Air Force Base, Ohio. Later, *Brown v. Board of Education* found that separate but equal laws were unconstitutional, Rosa Parks refused to give up her seat on a public bus, and Dr. Martin Luther King Jr. began work on what would become the beginning of the [Civil Rights Movement](#).



# Suit Up

Army researching uniforms that automatically decontaminate

By C. Todd Lopez, Army News Service /  
ABERDEEN PROVING GROUND, Md. (March 11, 2015)

Photo: C. Todd Lopez

One day, Soldiers may wear uniforms and chemical protective suits that decontaminate themselves and are cool enough to wear for extended periods.

Researchers, such as chemist David McGarvey, Ph.D, at the Army's [Edgewood Chemical Biological Center](#), or ECBC, on Aberdeen Proving Ground, Maryland, are part of a team led by the [Natick Soldier Systems Center](#) that is developing just those technologies.

The idea is that uniform items are pre-treated with a chemical that can render things harmless including nerve or blister agents.

"We have collaborators at the [Air Force Research Laboratory](#) that design reactive chemical components that can be placed on fabrics," McGarvey said. "If Soldiers are in the field, they may not know they have been contaminated. They might be going through a foliage area that had been previously contaminated, something might brush off on the uniform, or they might be in a position where logistically they can't get to a decontamination area - either because of the mission or because there isn't a decontamination setup available. We are trying to increase Soldier survivability through that type of capability."

In such cases, McGarvey said, the chemicals built into the Soldier's uniform begin working immediately to neutralize that contamination.

McGarvey is not developing those reactive components himself. Instead, he is taking swatches of uniform fabric - just one centimeter square - that have been treated with those reactive chemicals, applying one milligram of simulated chemical warfare agent - or the real thing - and then using a nuclear magnetic resonance spectrometer to determine what those chemical warfare agents are broken down into when they come in contact with the fabric treatment.

What he wants to determine is how the reactive agents work, and what is created as part of the reaction - and if the byproducts of that reaction are themselves dangerous to Soldiers.

"We are able to observe the chemical weapon material and we are able to identify the breakdown products and determine how well it works for decontamination," McGarvey said. "We determine how effective the fabrics are at doing their job, and determine what the breakdown products are. We explain the mechanism of how

these agents work, so the fabric developers can change their formulation and then make better fabrics."

It is not just regular Army uniforms that may one day be pre-treated with such chemicals. At the forefront of the effort are replacements for chemical warfare protective suits that not only decontaminate themselves, but which are also lighter weight so they put less burden on the Soldiers who wear them.

Any Soldier that has worn the "Joint Service Lightweight Integrated Suit Technology," or JSLIST, knows how uncomfortable the uniform can be. The ensemble usually includes the JSLIST suit itself, which is designed to keep chemical warfare agents from ever reaching a Soldier's body, along with rubber gloves, rubber boots, a gas mask, and a hood.

The JSLIST suit is a challenge for Soldiers. For one, the suit decreases Soldier mobility. Additionally, while the suit provides chemical protection, it also comes with a significant heat burden - especially in warm climates - that greatly decreases the effectiveness of Soldiers.

"A lot of our theater operations are taking place in very hot climates," McGarvey said. "The main problem the Army is worried about is, even if they don't run into a chemical weapon, the Soldier could be rendered combat-ineffective just by wearing the suit. Within a few hours, for the JSLIST suit that is being currently used, there is a heat burden. In the desert sun it gets to be a problem."

McGarvey said development is underway for a new product called the "Uniform Integrated Protective Ensemble," or UIPE. The UIPE is meant to one day replace the JSLIST. Important requirements for the UIPE include a different design so that it is easier for Soldiers to move while wearing the suit: improved mobility. Also, the fabric used is meant to be thinner. Additionally, he said, the UIPE is being designed with specially designed vents that provide some breathability to the uniform.

The first iteration of UIPE - UIPE 1 - has already undergone field testing at Aberdeen Proving Ground, though it is not yet fielded, McGarvey said.

The UIPE 2, the follow-on design, is expected to include self-decontamination features as well, and will be a boon to those units that are most likely to come into contact with chemical warfare agents.

"We're looking at Special Operations and things like that," McGarvey said. "They want people to maintain a high level of mobility. There is less certainty that they are going into a contaminated area. So the idea is to have something that is flexible, lightweight, and which provides a certain level of protection."

For Soldiers in the rest of the Army - non-Special Operations units - the UIPE could be equally effective.

"They have the possibility, even if they are not aware they have been contaminated, that they can remain safe in that circumstance," McGarvey said. "It is a way to reduce the logistical burden to the Army and a way to protect Soldiers who have been contaminated."

On the horizon, McGarvey said, is UIPE 3. He said goals there include more efficient chemicals built into the fabric that can handle a wider variety of chemical warfare agents as well as a larger volume of such agents.

"We are always looking for something that is faster, more effective, and that can handle a higher amount of agent," he said. "It's also important that the materials be compatible with human skin."

McGarvey said that some of the chemicals in testing now are already approved for human use. Some, for instance, are related to chemicals found in hand sanitizers.

"They've been [Food and Drug Administration] approved, approved for consumer use for human skin contact. And they've already been shown to be biocidal - one of the points of the suits is to protect against biological threats as well as chemical threats," he said. "Since these compounds are known to be biocidal, it's a good starting point. And we've also seen very good results against chemical weapons with some of them."

The ECBC is not alone in developing agents that can be incorporated into the fabric of both regular military uniforms, as well as chemical warfare protective suits. The ECBC is part of a team that includes the U.S. Army Natick Soldier Systems Center, the Air Force Research Laboratory, the Massachusetts Institute of Technology, and the Defense Threat Reduction Agency.

# Good Chemistry

By Bob Reinert, USAG-Natick Public Affairs / NATICK, Mass. (March 12, 2015)

Call it good chemistry.

Researchers from the Army and [Harvard Medical School](#) are collaborating on a Department of Defense-funded study to identify chemical biomarkers that could differentiate between [post-traumatic stress disorder](#) and [mild traumatic brain injury](#).

The study, which began five years ago with a Harvard Catalyst pilot grant, involves personnel from the [U.S. Army Research Institute of Environmental Medicine](#) and [Brigham and Women's Hospital](#), the teaching hospital of Harvard Medical School. They're working to find better ways to treat warfighters returning home with one or both of the conditions.

"We're hoping that by looking at subtle differences in brain chemistry, we might be able to more easily, more efficiently, differentiate the conditions, which ultimately will help us direct treatment approaches more efficiently and effectively," said Dr. Kristin Heaton, a research psychologist at USARIEM.

Dr. Alexander Lin, director of the Center for Clinical Spectroscopy in the Department of Radiology at Brigham and Women's, is using magnetic resonance spectroscopy to non-invasively measure chemical concentrations in the brains of 330 study subjects, including active-duty service members, National Guardsmen, Reservists, veterans and civilian controls.

The subjects were broken into four groups — those diagnosed with either mTBI or PTSD,

those with both, and those who were never diagnosed with either.

"One of the key things for us coming in and talking with Kristin was to better understand what is the main problem here, what are the things that we could do to solve the problem that the military has?" Lin said. "We look at different brain regions and what kind of changes we see in chemistry there. We call it chemical topography."

USARIEM is overseeing neurocognitive assessments of participants, according to Heaton.

"We're using some tests that are commonly used for screening for mild traumatic brain injury and for post-traumatic stress," Heaton said. "I'm using those tests to help validate the brain chemistry data that we're getting."

"Using the cognitive tests as indicators of function, and then linking this data up with the brain chemistry results, we can create a more complete picture of brain health to work from."

The study's data will be used by [Draper Laboratories](#) for modeling.

"They're the number crunchers," Lin said. "Their role is to take all this data that we're giving them from the chemistry standpoint, as well as ... all neuropsychological information that Kristin is bringing into this, and fuse it together."

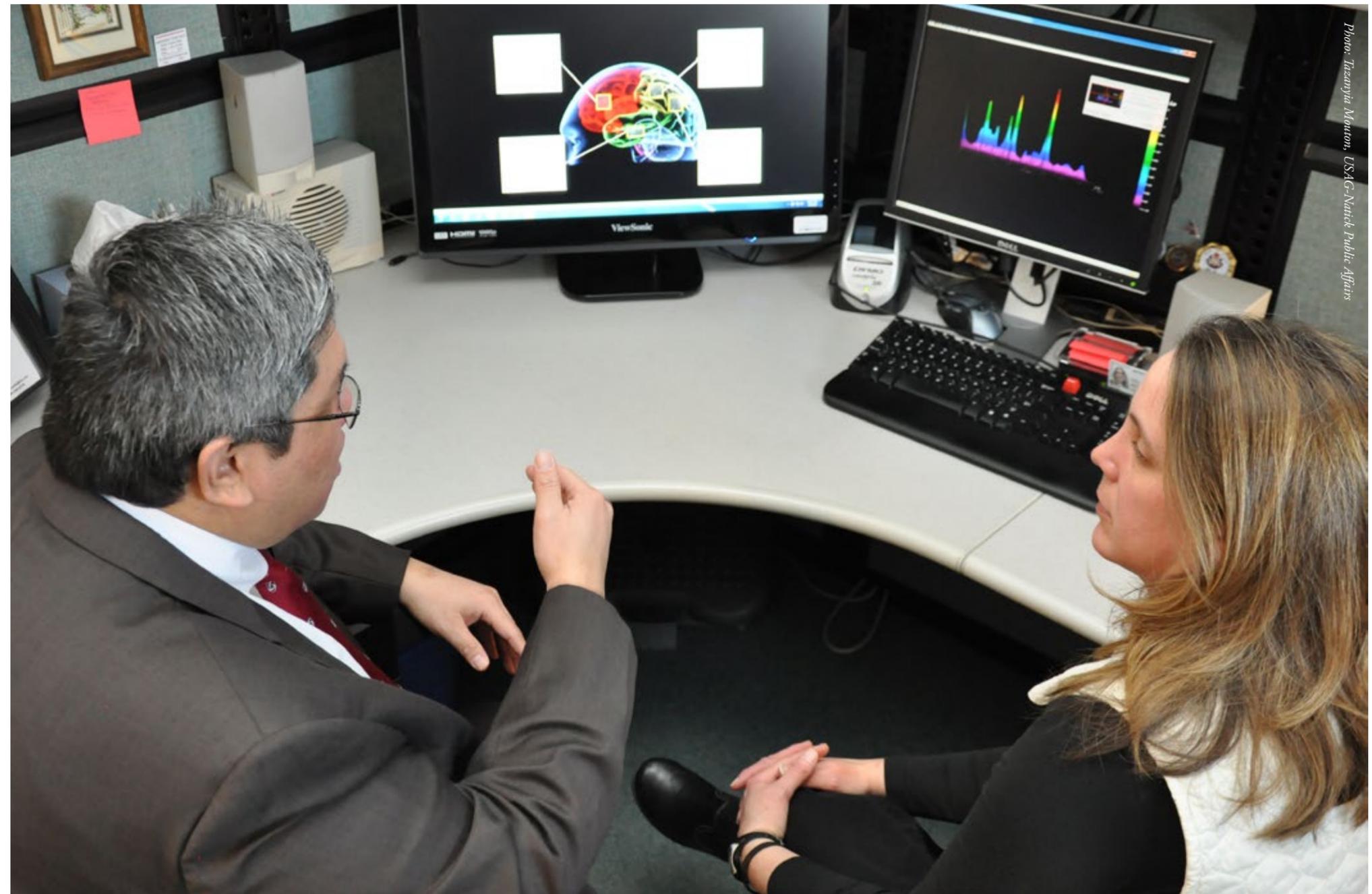


Photo: Tazayia Morton, USAG-Natick Public Affairs

Lin pointed out that it will take input from all the study partners to make this a successful effort.

"This is not going to be the silver bullet," Lin said. "It's got to be everything kind of coming together that forms the picture of what is going on in the brain."

Heaton said that she and Lin are about halfway through their data collection.

"It is difficult finding (participants) who meet our inclusion criteria, and we knew that going into the study," Heaton said. "We knew that was going to be a challenge."

Separating out mTBI and PTSD has impor-

tant implications for future treatments.

"We can look at this chemistry and target certain medications for treatment," said Lin, adding that such applications could be as close as five years away.

Heaton added that this research might help identify potential preventive measures for warfighters before they deploy.

"If we can predict in advance who might be more vulnerable to injury or to functional changes ... that would then provide us with information as to how we might be able to intervene with training programs or pharmacotherapies," Heaton said. "It's like body armor. It's brain armor."

USARIEM's proximity to Brigham and Women's has made for a smooth collaboration between Heaton and Lin.

"Kristin and I talk back and forth constantly," Lin said. "We see each other all the time."

"It's absolutely critical," Heaton said. "We are close to so many high-level academic institutions, hospitals. The biomedical activity in the Boston area is world renowned."

"We're just so well situated, and taking advantage of that is a priority, because we can leverage so much more through these partnerships than if we were, I think, anywhere else."

Dr. Alexander Lin of Brigham and Women's Hospital in Boston and Dr. Kristin Heaton of the U.S. Army Research Institute of Environmental Medicine are working to identify chemical biomarkers that could differentiate between post-traumatic stress disorder and mild traumatic brain injury.



## TBI Awareness Month

### More than 313,000 service members diagnosed since 2000

By Staff Sgt. Joseph C. Hill, NCOIC, Behavioral Health Care Services / ABERDEEN PROVING GROUND, Md. (Feb. 12, 2015)

Throughout the year, we designate specific months to remind us of varying topics that are important to our well-being and/or culture. Often times we forget or overlook the significance of these awareness months due to their repetitious nature.

March is intended to remind us of the serious impact of [Traumatic Brain Injuries](#), or TBI, throughout our population. You may ask yourself, “Why is this important to me?”

The [Center for Disease Control and Prevention](#), also known as CDC, reports that approximately 2.5 million emergency room visits, hospitalizations, or deaths were associated with a singular TBI or a combination of a TBI and additional sources of injury.

Traumatic Brain Injuries in itself are responsible for an estimated 50,000 deaths per year. The [Defense and Veterans Brain Injury Center](#), or DVVIC, tracks the total number of Service members throughout the [Department of Defense](#) whom have been diagnosed with a TBI. Since 2000, over 313,000 Service members have been diagnosed with a TBI. These statistical numbers reflect the relevance of TBI. But why should we be concerned about a TBI?

Traumatic Brain Injury-associated costs within the United States are estimated at a staggering \$56 billion annually. The DoD spends an estimated \$1.1 billion dollars annually on TBI education and treatment. There are more than five million Americans living with a TBI that has resulted in a permanent need for assistance in daily functioning.

These TBI survivors are left with severe behavioral, cognitive, and communicative impairments. TBIs pose a significant public health problem especially for children aged 5 years and younger, male adolescents and young adults ages 15 through 24, and the elderly who are 75 years or older. This form on injury is the most common cause of death and acquired disability among children and adolescents in the United States.

Dr. Carolyn Caldwell, a neuropsychologist assigned to [Kirk U.S. Army Health Clinic](#), is far too familiar with the effects that TBI has on an individual and their loved ones. On a daily basis she treats the survivors of these traumatic injuries and the aftermath it creates within their occupational, social, family, and interpersonal environment. She

has published multiple peer-reviewed articles on the subject.

Caldwell said the mechanism of injury in a mild TBI, the most common severity type, may be different. For example, a Service member might be involved in an improvised explosive device, or [IED](#), blast, an adolescent might take a hard hit in a football game, or an elderly person might experience a fall, but the impact on the individual is similar.

The nerves or neurons in our brain can be compared to silly putty. They are very elastic and stretch easily; however, if they are stretched too far, they can break. When neurons are stretched too far, the normal chemical and electrical functions of the brain are disrupted. This disruption can cause an individual to experience physical cognitive and emotional symptoms.

For example, following a mild TBI, it is common for individuals to experience headache, sleep disturbance, difficulty with balance, reduced attention/concentration, reduced memory ability, irritability, and/or mood swings. Regardless of age or type of injury, there is one common treatment for everyone following TBI, physical and cognitive REST! With adequate rest, the brain will recover its normal chemical and electrical balance. Most individuals will recover from a mild injury within days to a few weeks.

“The nerves or neurons in our brain can be compared to silly putty. They are very elastic and stretch easily; however, if they are stretched too far, they can break,” Caldwell said.

Traumatic brain injuries poses a serious health concern not only for us as individuals, but our loved ones as well. As a community we must remain cognizant of the seriousness of a TBI. It is within this awareness that we find a greater chance of preventing these injuries.

If you are in need of resources for education, treatment, and prevention please visit the Centers for Disease Control and Prevention’s website at <http://www.cdc.gov/Traumatic-BrainInjury/index.html> and the Defense and Veterans Brain Injury Center’s website at <http://dvbic.dcoe.mil/resources>.

Some wonderful Maryland resources can be found on the Brain Injury Association of Maryland’s (BIAM) website at <http://biamd.org> in addition to Kennedy Krieger Institutes website at <http://www.kennedykrieger.org>.

### Moneyball

provide a good picture of strengths and weaknesses, which leaders would then use to grow and develop their Soldiers, he said.

Perkins said the Army typically uses assessments to select, not to develop a Soldier.

The Army’s metrics for selecting are at best a guess, Clement said. “We’re excluding people for the wrong reasons.”

Perkins then asked, “What if a person scored high” on such a system, despite having no high school diploma or failing a urinalysis?

In corporate America, 60 percent of software engineers and computer programmers have no formalized education, Clement responded.

Odierno said he sees “a lot of uses for this and it’s something we want to do to have a better understanding,” but to do it, the data must first be collected and tracked. “It will take some time to do, but it’s worth it.”

Regarding criminal background, urinalysis, high school diploma and other criteria that would cause deselection, Odierno said it is governed by “legacy” law that would need to be reviewed for possible change.

### Speedbag

The ability to directly engage with deployed units and access business practices across the Army’s functional areas allowed the REF to facilitate a comprehensive approach to ESBS validation.

“By leveraging an existing Army effort, REF is able to give deployed Soldiers solutions even faster than if we started a project from scratch. This also means we can help our friends at NSRDEC Aerial Delivery Directorate, by getting their design into the hands of Soldiers and collecting operational feedback. It’s just one example of how REF can address an urgent need, but at the same time, also help advance a technology and support a big Army solution,” Wendt said.

In December 2014, Tabor’s team led a Train-Up event at the Rhode Island Air National Guard base in Quonset Point, Rhode Island. The multi-organizational event included personnel from NSRDEC, ARDEC, U.S. Army Mountain Warfare School, Vermont National Guard, Rhode Island Air National Guard and the REF. The purpose was to train REF tiger teams and members of the Army’s MWS on the proper use and deployment of the ESBS.

The training focused on receiving the ESBS kit, unpacking it, setting up the rigging in the aircraft and learning the packing procedures

Soldiers discussed a number of other topics that had relevance to the Army Operating Concept besides “Moneyball.”

Capt. Jed Hudson said the Army is not providing realistic training. For example, in Iraq, when Soldiers went on a humanitarian mission to deliver school supplies to a village, they would interact with a large number of entities including non-governmental organizations, school administrators, religious and cultural leaders, tribal chiefs, local government and police and so on.

While a certain level of that type of training is provided at combat training centers, it is lacking in home-station training, he said. Training should include local entities around the post, police, government and so on, similar to the Iraq scenario just described.

Capt. John Barrington pointed out that maneuver aspects of training are now being emphasized, although counterinsurgency roles are still important. Soldiers need to more effectively integrate land, air, sea, space and cyberspace into their training.

— skills that will be passed on to Soldiers who will use the system.

The ESBS training will provide the MWS instructors a period of instruction on small unit resupply that meets the needs of mountain Soldiers, while the REF trainers will take the knowledge they gained directly in theater to train units requesting the capability.

“The initial info seemed complex, but today, I definitely feel sufficient to train Soldiers on this system,” said Dusty Hunt, training consultant, Rapid Equipping Force, Tiger Team, at Fort Benning, Georgia. “With the old methods, they were losing 50 to 60 percent of the supplies. Finally, there is a good solution in the ESBS, which we will take to Afghanistan to train the unit’s trainers.”

“We rehearsed on the ground, and conducted a final check for rigging and spotting,” said Jason Miller, training consultant, REF, Tiger Team, at Fort Bragg, North Carolina. “From the aircraft, we looked at how the bundles fell and responded to the drop.”

In an after-action review, or AAR, the REF trainers had positive and insightful comments about the system.

“We learned that rigging the system is key to a successful drop. So attention to detail in how it’s rigged is important,” Miller said.

That is important, he said, because if the other services or coalition partners can’t provide that, the Army needs to be able to do it.

Odierno said the integration of those domains is an important but complex task for the Army, particularly space and cyber.

Cyber is talked about from a national perspective like protecting infrastructure. However, there might be ways to use cyber tactically, Odierno said. For example, can cyber operations be coupled with manned and unmanned air and ground capabilities? “We have to become experts” on this, but it will take time. “We don’t even yet think like this.”

Perkins offered that a lot can and has been done in newly developed live-virtual-constructive simulations. A number of captains who have participated in these new, blended simulations agreed that they were realistic and had value.

Odierno said the captains’ efforts and findings “exceeded expectations” for Solarium 2015.



Photo: Patrick A. Albrigh, U.S. Army

“Also, more elaborate communication with the pilot and the aircrew should be explored.”

“There were weather limitations, but the job went well,” Miller said. “We lost only one water bottle out of more than 240 and additional five-gallon jugs dropped. It was an outstanding result — we had no issues.”

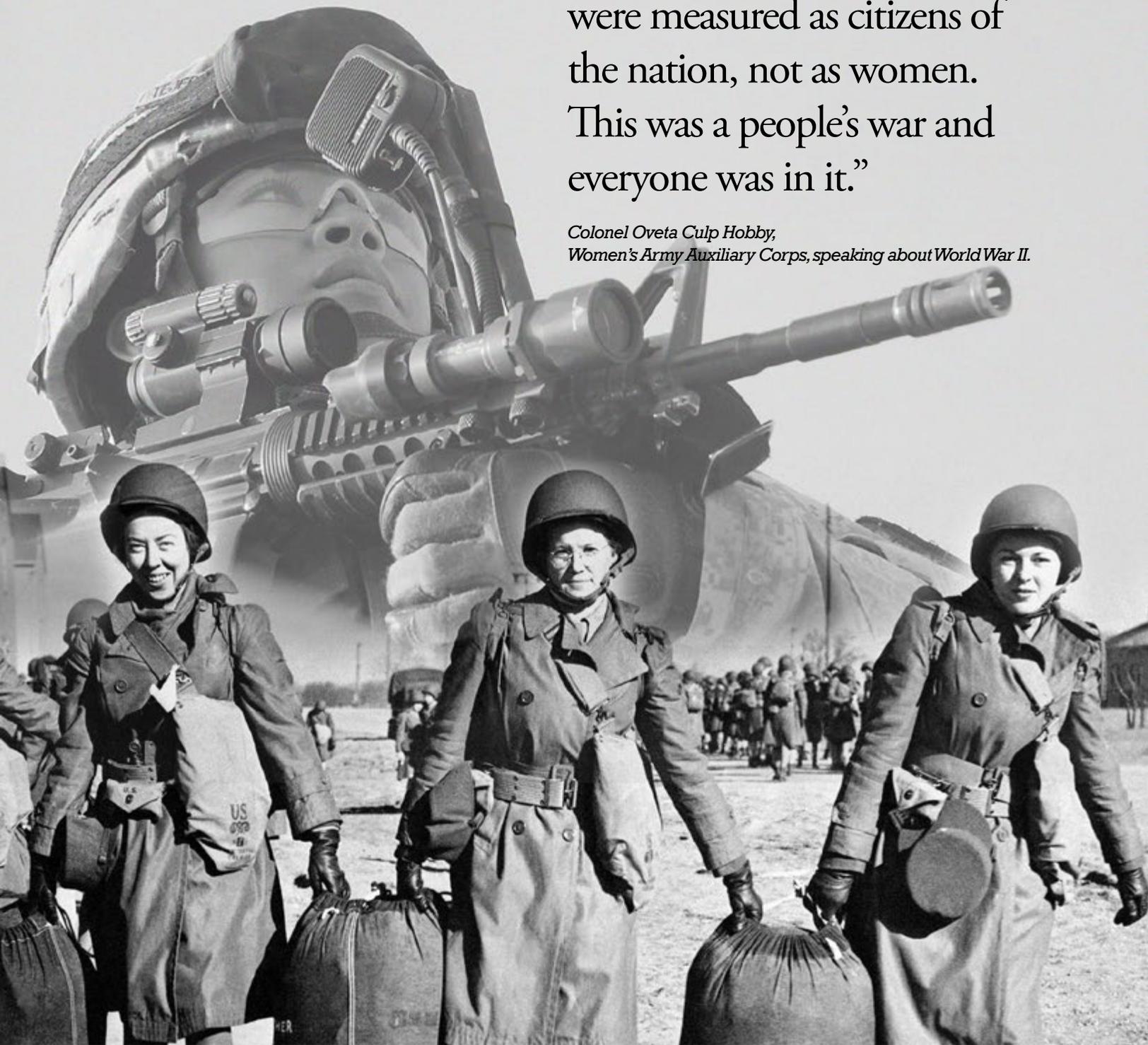
“The benefit is the simplicity of it,” Hunt said. “You can take a regular Soldier and train them on ESBS, as long as they are comfortable in the aircraft.”

“Aerial resupply also means one less convoy needed on the road, and that’s a good thing,” Tabor said.

The ESBS will undergo further testing throughout 2015. If the system is selected for fielding, a formal program of record, or POR, will be established, and the REF will have met the immediate need.

“Women who stepped up  
were measured as citizens of  
the nation, not as women.  
This was a people’s war and  
everyone was in it.”

*Colonel Oveta Culp Hobby,  
Women’s Army Auxiliary Corps, speaking about World War II.*



# Women’s History Month

**Members of the Women’s Auxiliary Army Corps prepare to board a ship Jan. 29, 1943. They were bound for North Africa.**