



THE INNOVATOR

OPTIMIZING COMBAT CASUALTY CARE



JULY 2015

THE NEWSLETTER OF THE U.S. ARMY INSTITUTE OF SURGICAL RESEARCH



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Juarez takes command of USAISR Company

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CDR's Corner



Col. (Dr.) Michael D. Wirt
Commander, USAISR

"Optimizing Combat Casualty Care"

Greetings ISR,

It has been another extremely busy month at the Institute and from what I've seen this past year the tempo will continue all the way through MHSRS as we continue to optimize combat casualty care through your hard work and dedication to the mission.

First, I'd like to once again welcome Capt. Jose Juarez Jr. as the new ISR Company Commander and wish good luck to Capt. LaShawna Ray as she moves to BAMC. The change of command ceremony was impressive and is a testament to the hard work you all put into making it a success. A big thank you goes to everyone who was involved in putting it together and to our Soldiers in formation who performed flawlessly.

Second, I would like to congratulate Lt. Col. Kevin Chung for earning the Gold Headed Cane Award presented

by the San Antonio Uniformed Services Health Education Consortium. This prestigious award is very competitive and Lt. Col. Chung was among five highly qualified nominees under consideration. Please see the full story in this edition of *The Innovator*.

You may have noticed some youngsters throughout our two buildings. That's because we are hosting young students for the Gains in Education of Mathematics and Science program also known as GEMS. Dr. Kathy Ryan and Ms. Stephanie Truss have put a lot of effort into this program and for the first time since we've been hosting this program, we are able to offer it to high school students. Thank you both for your superb effort into making this important program flourish.

Dr. Ryan has also been instrumental in working with Dr. David Burmeister

to enable the Institute to host college students for a 10-week internship program. This program is made possible through the Oak Ridge Institute for Science and Education (ORISE). These two great programs provide an opportunity for our students to experience the important science we complete at the ISR and we are proud to have these students learning alongside our staff. Thank you all for supporting these two programs.

As we move into the hot summer months, I ask that you always keep safety in mind in everything you do. As you can see, the heat has arrived. Enjoy your much deserved time off, but please stay safe. Pay special attention if your plans for the long weekend include fireworks, water and beach

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Col. (Dr.) Michael Wirt, right, presents Capt. LaShawna Ray with an Army Commendation Medal prior to the Change of Command ceremony June 26. Ray's husband, Ben and daughter Addison were present during the award presentation.



ARMY MEDICINE

Serving To Heal...Honored To Serve

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SGM Says



Sergeant Major Quinton Rice Jr.

Protect - Project - Sustain

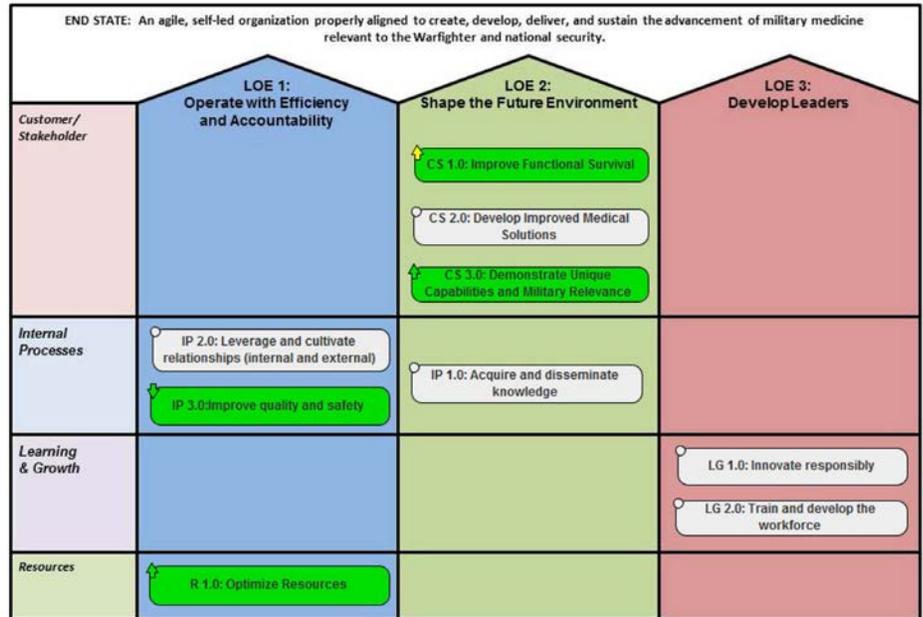
Understanding the Strategy Map

Team,

We already know that the strategy map is an integral part of the balance scorecard and that it is intended to help improve the decision making process in an organization. The strategy map is designed to show the employees of the organization how they connect with helping to get to the desired end state of meeting the mission and vision. This powerful management tool also is used to formulate the cause and effect relationship between work performance and strategic outcomes. I have spoken to several people who have been somewhat intimidated about the concept of understanding the logic behind the components of this important document. Therefore, here is another meaningful way to explain this document.

The strategy map begins by identifying our mission which is the overall purpose for our existence as an organization. It depicts our core promise to the constituencies that we serve. The vision comes next and provides the picture of our future aspirations. It gives the framework for articulating our long term performance target objective. This gives our organization a practical perspective on which research and development projects and

Mission: Optimizing Combat Casualty Care
 Vision: The Nation's premier Tri Service research organization that integrates safety into planning and executing registry-based and translational research providing innovative solutions for burn, trauma, and combat casualty care from the time of injury through rehabilitation.



programs will favorably receive long term capital investments. The next area is the strategic themes or line of efforts (LOE) as displayed on our strategy map. The strategic themes are the things that we must be successful at in order to reach the desired outcome.

A good strategy map can be read and understood from the top down or the bottom up. The best way to read our document is to begin at the bottom and read up. The resources are our catalyst. They are the enablers needed to help maximize our organizational capacity. In other words, it helps to identify the people, tools, technology and infrastructure necessary to support the foundation of the strategy. Learning and growth is the next building block of the process. This very important aspect deals with our commitment to develop our lifeline, the heartbeat of our organization which is our staff. Under learning and growth we invest in our personnel giving them tools to become subject matter experts. The intended result is to have very competent and well trained personnel who clearly understand our mission and vision.

The internal processes support the overarching strategy primarily with process improvement. The perspective is to capitalize on process efficiency

and shared knowledge and skills. We look to showcase the diligence of our work effort and resilience while improving communications and sustaining mutually beneficial partnerships. One focal point in this knowledge exchange is identifying and capturing best practices that will ultimately improve the entire enterprise. The final area is from the viewpoint of our customers and stakeholders. The end state

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On the Cover



Col. (Dr.) Michael Wirt, right, passes the unit guidon to the new USAISR Company Commander, Capt. Jose Juarez during a Change of Command ceremony June 26.

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Company Notes



Company Commander
Capt. LaShawna N. Ray

First Sgt. and I would like to take a moment to welcome to the ISR family: Maj. Melissa Kottke; Logan Corey born June 17 to Sgt. David Corey and his wife—all are doing well.

We would like to say farewell to the following Soldiers: Col. Anthony Johnson, Lt. Col. Sandra Escolas, Lt. Col. Stuart Tyner, Staff Sgt. James McAlister, and Spc. Martha Rodriguez. Thank you for your contributions to the organization and best wishes in your future endeavors.

Congratulations to Lt. Col. Kevin Akers, Sgt. Matthew Winans, Sgt. Micah Korff, and Spc. Isaiah Land on their promotions and Sgt. Christopher Kay on his reenlistment.

We would also like to say congratulations to Staff Sgt. Jaffster Daus and Pfc. David Watson for being selected as NCO and Soldier of the Month for June 2015, respectively. Their photographs will be on display in the company area.

The last congratulations goes to Sgt. 1st Class Alan Moloy for graduating from the Senior Leadership Course.

Thank you EO Team for your contributions to the BAMC/ISR Lesbian, Gay, Bisexual and Transgender Pride Month Observance. Also a big thank you to the Blood Drive team for their successful execution of the Armed Service Blood Drive at SAMMC.

As my last entry into The Innovator, I just want to express that I have

genuinely enjoyed my time here at the ISR. It has been an amazing and humbling experience. This organization has always made me feel as a member of the family since day one. I will miss walking through the Institute having great conversations and seeing everyone's smiling faces.

There are many people within the organization, both past and present,

who have helped to make my time here pleasant, educational and ultimately successful. Know that you are all deeply appreciated and cherished.

The Change of Command ceremony was a great success, and I want to thank Staff Sgt. Olarewaju Magreola and all the NCOs who put it together.

Thank you for all that you do!



NCO of the Month
Staff Sgt. Jaffster Daus



Soldier of the Month
Pfc. David Watson



Staff Sgt. Pablo Sierra, right, presents Capt. LaShawna Ray with a guidon as a going-away gift from the USAISR Company during a luncheon June 19.

Juarez takes command of USAISR Company



Capt. Jose Juarez salutes the USAISR Commander to report the Change of Command ceremony was complete.

Story and photos by Steven Galvan
USAISR Public Affairs Officer

The U.S. Army Institute of Surgical Research (USAISR) Company welcomed a new commander during a change of command ceremony June 26 as Capt. Lashawanna N. Ray relinquished command to Capt. Jose A. Juarez Jr. Col. (Dr.) Michael D. Wirt, USAISR Commander hosted the ceremony and commended Ray for her leadership and accomplishments.

“The ISR’s success has a great deal to do with the leadership of Captain Ray who enables our staff to perform at a high level driving everyone around her to be the best,” said Wirt.

During her remarks, Ray thanked the USAISR leadership for the mentorship, support and believing in her and the Company. “I can’t tell you how much I’ve learned from you,” said Ray. “Thank you for being exceptional role models.

“The success of this Company goes far beyond the Company leadership, far beyond the section leadership, and right down to the individual Soldier. I’ve said it before—you are the best collection of Soldiers I know. You’ve

made me proud to serve with you.”

Juarez reports from Alpha Company, 187th Medical Battalion at Joint Base San Antonio-Fort Sam Houston, Texas where he served as an instructor/writer. He thanked Wirt for giving him the opportunity to command and Ray for setting the standard and setting the ISR up for success.

“I promise to build on that success

moving forward,” said Juarez. “Over the last week I have had the opportunity to see what a great organization you are turning over to me and I can honestly say that I am excited.”

A graduate of Cameron University, with a Bachelor’s of Science Interdisciplinary Studies, Juarez earned his commission through the Army Reserve Officers Training Corps in 2008. His military experience includes serving as an Army Medical Recruiting Officer, 5th Recruiting Brigade, JBSA-Fort Sam Houston; Brigade Security Officer, 1st Medical Brigade, Fort Hood, Texas; Treatment Platoon Leader, 546th Medical Company, Fort Hood; Executive Officer, 583rd Medical Logistics Company, Fort Hood; Ambulance Platoon Leader, 546th Medical Company, Fort Hood; and Executive Officer, 61st Headquarters and Headquarters Detachment, Multifunctional Medical Battalion, Fort Hood.

“We gain a truly great leader in Captain Juarez,” said Wirt. “He values and respects the power of teamwork and I have no doubt that he’ll bring great ideas and enthusiasm to the ISR. The Company and the ISR can feel confident that you’re getting an outstanding new Commander.”



First Sgt. Natasha Turrell, right, takes the unit guidon from the new USAISR Company Commander, Capt. Jose Juarez during a Change of Command ceremony June 6.

Chung earns prestigious Gold Headed Cane Award



Lt. Col. (Dr.) Kevin K. Chung, left, is presented the Gold Headed Cane Award June 5 during the San Antonio Uniformed Services Health Education Consortium Awards and Graduation Ceremony at the Lila Cockrell Theatre at the San Antonio Convention Center. Presenting the award were, left to right: Keynote Speaker, retired Air Force Gen. Ronald R. Fogleman, former USAF Chief of Staff; Maj. Gen. Bart O. Iddins, Commander, 59th Medical Wing; and Col. (Dr.) Evan M. Renz, Commander, Brooke Army Medical Center. Photo by Staff Sgt. Jason Huddleston, 59th Medical Wing Public Affairs.

By Steven Galvan
USAISR Public Affairs Officer

For the second year a member of the U.S. Army Institute of Surgical Research (USAISR) has earned the San Antonio Uniformed Services Health Education Consortium (SAUSHEC) Gold Headed Cane Award. Lt. Col. (Dr.) Kevin Chung, USAISR interim director of the combat casualty care research directorate was presented with the prestigious award during an Awards and Graduation Ceremony June 5.

The SAUSHEC award was established at Wilford Hall Medical Center at Joint Base San Antonio-Lackland Air Force Base in 1999 and focuses on four areas of excellence: patient care, education, clinical research and operational medicine. The award was given annually to a Wilford Hall Medical Center faculty member who was voted by his/her peers and was expanded in 2009 to include the faculty at the San Antonio Military Health System and

the USAISR Burn Center.

Chung has been at the USAISR since 2005 as a critical care physician at the Burn Center where he has served as the medical director of the Burn Intensive Care Unit and task area manager for Clinical Trials in Burns in Trauma before being assigned to his current position. He said that he was honored and humbled to receive this esteemed and competitive award.

"I'm very grateful to the ISR for setting me up for success," said the 1995 West Point graduate.

Being recognized for his outstanding achievements since earning his Doctor of Medicine degree from Georgetown University School of Medicine seems to be the norm for Chung. He received the Walter J. Moore Award for the most outstanding graduating resident after completing his residency in Internal Medicine at Dwight D. Eisenhower Army Medical Center and the Alexandra S. Xenakis Award for the overall most outstanding graduating resident. Chung has also been

presented the Association of Military Surgeons of the United States Rising Star Award, the Army Surgeon General's Physician Recognition Award, and the William Crosby Superiority in Research Award, among others, since completing a fellowship in Critical Care Medicine at Walter Reed Army Medical Center to become an intensivist.

"I decided to specialize in critical care because I found caring for the sickest patients in the hospital to be very challenging and rewarding at the same time," said Chung.

With deployments to Iraq and Afghanistan, Chung has cared for the most critically injured warfighters and earned a Bronze Star and Combat Action Badge. He said that he was proud of his personal achievements, but that the achievement by the team that he has worked with has by far been more gratifying. Chung was a co-inventor of the Burn Resuscitation Decision Support System (BRDSS) that was recognized as one of the Army's top inventions in 2009. Also known as The Burn Navigator, the decision-assist algorithm helps restore the right amount of fluids to burn victims and was approved by the Food and Drug Administration in 2013. The BRDSS team earned the Army Medical Department's Quarterly and subsequently the Annual Wolf Pack Award in 2014.

"I am very fortunate to be part of a great team," Chung said.

Chung is also an associate professor for the Department of Medicine at the Uniformed Services University of the Health Sciences and adjunct associate professor for the Department of Surgery at the University of Texas Health Science Center at San Antonio. He was also appointed to be the critical care consultant to the Army Surgeon General in 2014.

During his time at the USAISR, Chung has authored more than 120 research manuscripts in peer-reviewed journal, authored five medical book

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chapters and has been a guest speaker at 65 national lectures. During his spare time he enjoys spending time with his wife and three children.

“We are all very proud of Dr. Chung’s accomplishments during his Army career and his time at this Institute,” said Col. (Dr.) Michael Wirt, US-

AISR Commander. “It is an incredible achievement to be selected and honored by his peers in this manner. Dr. Chung has truly earned every award given to him and I have no doubts that more are coming his way.”

The original golden head cane was carried from 1689 until 1825 by six renowned British doctors who cared

for royalty and is now prominently on display at the Royal College of Physicians in London. Medical schools throughout the world present the Gold Headed Cane to recognize outstanding students. The former Director of Professional Services, Dr. John Sharp, established the tradition in San Antonio to honor faculty members.

USAISR Soldiers Participate in the 1st Annual Gen. Ulysses S. Grant Quadrangle Sprint



Left to right: Pfc. Raymond Calzada, Staff Sgt. Pablo Sierra and Spc. Tae Kim participated in the 1st Annual Gen. Ulysses S. Grant Quadrangle Sprint June 12 at Joint Base San Antonio-Fort Sam Houston, Texas to celebrate the Army’s 240th Birthday. All military units from JBSA were invited to form a three-person team to sprint a half mile. The USAISR Team ran the half mile in: Sierra 2:42, Kim 2:38 and Calzada 2:40. Photos by Spc. Sarah L. Sierra

Young runner motivates birthday run participants



Maj. Gen. Jimmie O. Keenan, MEDCOM Deputy Commanding General (Operations) and Chief, U.S. Army Nurse Corps presents Pablo Sierra IV with a command coin June 5 for his participation and motivation during the Army birthday run at JBSA-Fort Sam Houston June 3.

By Steven Galvan
USAISR Public Affairs Officer

It is often said that “big things come in little packages.” That expression was witnessed firsthand by Soldiers at Joint Base San Antonio-Fort Sam Houston, Texas during a post-wide three-mile installation run June 3 to celebrate the Army’s 240th birthday. Less than four feet tall and weighing less than 60 pounds, 10-year-old Pablo Sierra IV joined his dad Staff Sgt. Pablo Sierra III and Soldiers from the U.S. Army Institute of Surgical Research (US-AISR) as they ran in formation with the U.S. Army Medical Command (MEDCOM) and other major commands on post.

During the run, the MEDCOM 1st Sgt. noticed the young runner in the formation and asked him to run alongside her.

“She took him and they were running circles around the formation and motivating runners who were falling behind to keep up,” said proud father of the young runner. “That was pretty

cool.”
“She told me to yell at them and tell them to ‘fall back in,’” said the fourth grader. “It made me feel special and important.”

“Imagine as I was leading the run for our MEDCOM headquarters seeing this phenomenal young runner with a big smile running around with our first sergeant encouraging our Soldiers to keep focused,” said Maj. Gen. Jimmie O. Keenan, MEDCOM Deputy Commanding General (Operations) and Chief, U.S. Army Nurse Corps. “Pablo truly represented us well and motivated our entire MEDCOM Formation.”

This may be a sign of things to come.

“He has been telling me for a few years now that he wants to join the military,” said Sierra IV. “Like any kid, his favorite color or other things may change, but him telling me that he’s joining the military has never changed.”

“I’ve known since I was seven that I wanted to join the military when I grow up,” Sierra IV said. “The uniform and the people wearing the uniform are special. I’m very proud of my parents. They are both in the Army and are special and I want to continue the **SIERRA continues on page 9**



Col. (Dr.) Michael Wirt presents Pablo Sierra IV with a command coin June 5.

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tradition.”

While it may be several years before he can join the military and wear the uniform, Sierra IV will continue to run with his dad whenever possible, for this wasn't the first time he ran in formation—he'd run with his dad a couple of time before.

“I like running and playing sports,” said Sierra IV.

The young runner's willingness to

run and participate with the 1st Sgt. didn't go unnoticed. Keenan asked to meet the young Sierra at the MEDCOM headquarters a couple of days after the run.

“She gave me a coin and told me that I did a good job and that she was proud of me,” said Sierra IV.

Not only did he get a coin from the general, he was also coined by the USAISR Commander, Col. (Dr.) Michael D. Wirt.

“It's funny because he now has two

coins like my wife,” said Sierra IV. “Except that his are from higher ranking Army officers than hers. That doesn't matter though. What matters is that we are both very proud of him and we know that whatever he decides to do in the future he'll do a great job and continue making us proud of him.”

“When his parents brought him over to MEDCOM headquarters so that I could recognize him, he asked if we could get a selfie,” said Keenan. “It made my day.”

Training for Rock 'n' Roll Marathon to begin in July

By Steven Galvan
USAISR Public Affairs Officer

The Combat Casualty Care Marathon Training Team at the U.S. Army Institute of Surgical Research (USAISR) at Joint Base San Antonio-Fort Sam Houston, Texas will begin preparing for the San Antonio Rock 'n' Roll Marathon. The training program will commence with a four-week “prep program” July 20 and roll into the marathon training August 17.

Staff Sgt. Jaffster Daus and Spc. Melody Sandoval are leading the training programs and encourage runners of all levels to participate and get ready for the half or full marathon slated for Dec. 5 in San Antonio.

“The prep program is designed for people who are interested in participating in the marathon, but not quite ready to start a full-blown training program for it,” said Daus. “This program gradually works you up to run three miles and gets you ready to begin the marathon training.”

Daus added that runners who participate in the Rock 'n' Roll Marathon have a choice of the distance to compete in—a full, half or mini marathon, 10 or 5k run.

“Running with the Combat Casualty Care Marathon Team is a good way to get in shape and donate to a good cause as well,” Daus said. “Every year the team gets to opportunity to raise funds and donate to the Susan G.



Komen for the Cure Foundation.”

The prep program is scheduled from 5 to 6 a.m. Monday through Fri-

day at the McCarthy track on post. All interested runners can contact Daus or Sandoval for more information.



Spc. Melody Sandoval and Staff Sgt. Jaffster Daus are set to start preparing runners for the San Antonio Rock 'n' Roll Marathon scheduled for December 6.

Safety Notes



By Stephanie L. Truss
Health, Safety and Environmental Specialist

Family Summer Safety Tips

Enjoy the summer sun, but make sure your safety efforts shine just as bright. Here are some tips for keeping kids and adults safe this summer. Summers in San Antonio summer can be quite warm, and with it you can expect the occasional bicycle accident, skinned knee or sunburn. We're usually so focused on the dangers in the "outside world," that it's easy to forget that injuries can occur in our own backyards and neighborhoods. Read on to learn how to recognize and remove these common safety hazards.

Block the sun

The sun's intensity is at its peak during the summer, so it is more critical than ever to apply sunscreen before going outside. Not just on sunny days either; the sun's rays can still damage your skin when it's cloudy. Be sure to apply sunscreen (SPF 15 or higher) at least 20 minutes before going outdoors.

Stay afloat

Teach your children never to enter the water without an adult, and watch them at all times when you are near a pool or beach. Don't allow floaties or other flotation devices to take the place of close supervision. Try to swim at beaches with a lifeguard on duty. When boating, insist on a life jacket.

Wear a helmet

Unfortunately, many parents still do not insist that their children wear

In the Spotlight

Spc. Melody Sandoval

Job title: Bioscience Specialist

How long have you worked at the ISR? 10 months

What or who has been an inspiration to you in your work?

You! The work that we do in itself inspires me. I thoroughly enjoy the research that we do and what our results could mean for not only the Soldiers that have suffered traumatic ocular injuries but for humanity as a whole.

What is your favorite part of your work? My team! The people I work with in Ocular Trauma, civilian and Soldiers alike, are not only brilliant in their own areas of study, but they are incredible educators as well. They have helped me to realize what my true potential is.

What is your proudest achievement? My proudest achievement by far has been my children. They are the reason why I strive to be a better person. I want to make them proud.

Short- and long-term goals: Short-term goal right now is to finish up my degree in Biological Sciences as far as the long-term is concerned, I one day wish to travel the world with my children.

Hobbies: Hiking, camping, beaching (anything outside with my boys).

Favorite book: *Deception Point* by Dan Brown

Favorite movie/TV show: *The Princess Bride*/*The Big Bang Theory*

Favorite quote: "There are 3 C's in life: Choice. Chance. Change. You must first make the Choice to take a Chance, if ever you want anything to Change." ~ Unknown



a helmet every single time they ride a bike. According to the U.S. Department of Transportation, 85 percent of bicyclists killed in 2003 reportedly were not wearing helmets. Do you promote helmet safety within your family?

Roll with caution

In addition to helmets when inline skating, skateboarding and scooting, kids should always wear elbow, wrist and knee pads to prevent injuries associated with falls. Make sure the safety equipment fits properly and is worn correctly. Teach your child to stay away from cars and other vehicles, and use the sidewalk and paved off-road paths. Never allow your child to wear headphones while riding; the music will block traffic sounds.

Practice car care

Don't ever leave your kids or pets in the car while you are running errands, even for just a few minutes. Even on mild days, the rising temperature of a vehicle can be dangerous because a young child's body temperature rises three to five times faster than an adult's, which can lead to injury or death.

Stay hydrated

If spending time outside in hot weather drink plenty of fluids and take frequent breaks in the shade. Severe dehydration can take the form of heat exhaustion and heat stroke – two serious conditions that require immediate

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Health News

By Maria G. Dominguez, R.N. COHN-S/CM Occupational Health



The dog days of summer begin in early July, when the hot sultry weather usually begins. Independence Day in the U.S. is July 4. Traditionally, the Fourth of July is the deadliest holiday. There are more alcohol-related fatalities than New Year's Day. July 4 is the number one beer drinking holiday. With that said, summer is a great time to enjoy the great outdoors, swim, hike, travel and barbecue. But we want to steer clear of accidents and injuries.

July is UV Safety Month. It's time to be aware of the sun's good and bad qualities. Remembering to wear sunscreen is only part of the equation that will help lower your risk of developing a form of skin cancer such as melanoma. Skin cancer is the most common type of cancer, but it's also the most successfully treated if found early. It's hard to say what has made skin cancer prevalence increase in recent years. People aren't necessarily getting more sun; in fact, Vitamin D deficiencies have increased significantly as well. Meaning people actually aren't getting enough sunlight. Spending 10 to 15 minutes a day in the sun is enough to balance your Vitamin D levels, and not enough to get you severely sunburned. Keep in mind that a moderate amount of time spent in the sun can be good for you, but don't let your sun exposure get out of hand, and keep the sunscreen in hand. Learn your ABCs of skin cancer screening: Asymmetry, Border, Color, Diameter, and Evolving. Any change, see a doctor.

Then there is a little known fact with big importance. July is Bladder Cancer Awareness Month. Bladder cancer is the sixth most commonly

diagnosed cancer in the U.S. Bladder cancer is three times more common in men than in women and has a recurrence rate of 50-80 percent because it requires life-long surveillance. It is the most expensive cancer to treat on a per patient basis.

Bladder cancer receives far less public notice than prostate or breast cancer, and this trend is reflected in lower research funding. Nevertheless, urologic nurses maintain a keen interest in the prevention, diagnosis, and management of bladder cancer because of its proclivity for local invasion and metastasis, leading to subsequent morbidity and mortality unless successfully treated at an early stage.

Smoking is the most important risk factor for bladder cancer. Smoking is a modifiable behavior. Other risk factors are a family history of or gene mutations linked to bladder cancer, occupational exposure to certain chemicals used in processing paint, dye, and metal and petroleum products, taking certain chemotherapy drugs, drinking well water contaminated with arsenic, and taking the Chinese herb Aristolochia fangchi. Aristolochia is unsafe because it contains aristolochic acid, which is toxic to the kidneys and causes cancer.

Although there is no standard or routine screening test for bladder cancer, cystoscopy (a procedure used to see inside the urinary bladder and urethra) and urine cytology (a test to look for abnormal cells in urine) are used in patients who have previously had bladder cancer. Standard treatments for bladder cancer are surgery, radiation therapy, chemotherapy and biological therapy.

The carcinogen most responsible for this risk is not known. Aminobiphenyl is undergoing intense scrutiny because it has been identified in cigarette smoke as well as multiple industrial chemicals associated with bladder cancer. Occupational factors also influence bladder cancer risk. Occupational risks may account for 21-27 percent of bladder cancers among men in the U.S., an estimated 40,000 cases in 2001, and 11 percent among the

estimated 15,000 cases in women in 2001. Arylamine compounds, used in synthetic dyes, are associated with an increased risk of bladder cancer. Occupational exposure to aromatic amines has been known to cause bladder cancer as well as biphenyls, naphthylamine, chlorinated hydrocarbons, coal soot, and aldehydes used in mining and the manufacture of rubber and textile products along with aluminums, paints, solvents and diesel engines. Prolonged exposure (30 to 50 years) is needed to significantly alter risk, but these factors are estimated to contribute to as many as 20 percent of bladder cancer cases in the U.S.

The National Institute for Occupational Safety and Hazard currently reviewed its cancer (carcinogen) and related Recommended Exposure Limit (REL) policies to ensure that they reflect current scientific and risk management practices.

NIOSH is requesting assistance in preventing bladder cancer in workers exposed to toluidine and aniline, both of which have been shown to induce tumors in experimental animals. Toluidine and aniline are aromatic amines used as intermediates in the manufacture of a variety of dyes, pharmaceuticals, pesticides, and chemicals employed in the manufacture of rubber.

The World Health Organization considers hairdressing work probably carcinogenic, since hairdressers tend to be at higher risk for bladder cancer. The new results could help narrow down specifically where the cancer-causing agents are coming from.

Toluidines were long used as the basis for many dyes and are confirmed carcinogens in animals, according to the American Conference of Governmental Industrial Hygienists.

A recent study of nearly 300 hairdressers, 32 personal dye users and 60 non-dye users for comparison was completed. The participants, all non-smoking women, had their blood tested for several potentially carcinogenic compounds called aromatic amines. Specifically, toluidine compounds in the blood increased with ex-

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Around the ISR



Top left: Col. (Dr.) Kirby Gross and Pfc. Raymond Calzada cut a celebratory cake June 12 in honor of the Army's 240th birthday.



Top right: Col. (Dr.) Anthony Johnson is presented with a going-away gift June 25 from the Ocular Trauma team by Capt. Elaine Por.

Center right: Sgt. Micah Korff gets his cover with his new rank June 10 by his wife Ashlie as their daughter Leighanne looks on.



Bottom right: Lt. Col. Stuart Tyner is presented with the Texas state flag that was flown over the Alamo June 22 as a going-away gift June 26.

Bottom left: Sgt. Polly Busman donates blood June 17 at the San Antonio Military Medical Center medical mall. The USAISR sponsored the blood drive for the Armed Services Blood Program.



Around the ISR Continued

Top right: Lt. Col. (Dr.) Kevin Akers is pinned with his new rank June 12 by his wife Molly and father-in-law, retired Lt. Col. Bill Mize, as his daughter Alexandra looks on.

Center right: Andy Wallace, a registered nurse at the Burn Center Progressive Care Unit briefs Civilian Aides to the Secretary of the Army June 17 on the equipment and capabilities of the Burn Flight Team.

Bottom right: Members of Ocular Trauma pose for a group photo June 17 with Dr. Basil Pruitt, upper right.

Bottom left: Capt. Elaine Por, left, presents Sgt. Christopher Kay with an Honorable Discharge Certificate and a Reenlistment Certificate during his reenlistment ceremony June 8.

Center left: Sgt. Matthew Winans is pinned with his new rank June 1 by his wife.



High school students attend inaugural GEMS II camp

Story and photos by Steven Galvan
USAISR Public Affairs Officer

For the first time in four years the U.S. Army Institute of Surgical Research (USAISR) hosted GEMS II, or Gains in the Education of Mathematics and Science, camp for high school students along with GEMS I for middle school students. The Army-sponsored camps held at Joint Base San Antonio-Fort Sam Houston, Texas are designed to spark interest in students to study science, technology, engineering and mathematics or STEM.

The four-day camps were packed with hands-on activities designed to expose the students or interns to subjects in sensory and cardiovascular physiology; neuromuscular reflexes; blood typing; types of bacteria; DNA structure and function; surgical knots and suturing techniques; dentistry; and hair, fiber and fingerprint analysis. The classroom instruction and laboratory hands-on events were facilitated and led by two resources teachers (Texas licensed teachers) and five college students known as near-peer mentors.

"We are very excited to be offering the camp to high school students this year," said Stephanie Truss, a GEMS program coordinator. "Not only do we get to expand our curriculum and offer new and challenging activities, but students who attended the GEMS I camp can now return and attend GEMS II."

Hunter Strating was one of the first returning interns. She attended the camp in 2013 and said that she was thrilled to learn that she could come back for the next level camp.

"I really liked it [GEMS I] so I wanted to do it again," said Strating. "This one is more advanced, but like the first time, it's interesting, fun, and I'm making new friends."

New activities were added to the GEMS II curriculum that were not previously offered in GEMS I. The new activities included dissecting bovine eyes and sheep brains, and working



Near-peer mentor Ricardo Vargas, center, looks on as Karen Vargas and Christian Brough, GEMS II interns dissect a sheep brain June 16.

with live crickets. Additionally, after performing hands-on activities, the students learned from USAISR investigators about their research in these areas. Other interesting firsts that occurred this summer were two sisters working together as near-peer mentors, and a brother working as a near-peer mentor while his younger sister attended the camp as an intern.

Teresa and Heather Hall are both students at Texas A&M and worked together as near-peer mentors. At only 15 months apart in age, they have had the opportunity to work together before and were delighted to have the chance to work together again this summer.

"Working with Teresa is a lot of fun because getting to collaborate with her in our areas of interest is a unique opportunity," said Heather.

"Heather and I work really well together," said Teresa. "Being so close in age has meant that we have been able to work together on other things in our lives. It was great to find a summer job where we could continue to do that."

Teresa is a pre-medical student

working on a double major in Biochemistry and Genetics with minors in Psychology and Women's and Gender Studies. She said that being able to participate in GEMS as a near-peer is not only beneficial on a personal level, but as a premedical student.

"Medical schools [administrators] love to see that students have this type of experience," she said. "It has also prompted me to enhance my own understanding of the nervous system."

Her sister also believes that being a near-peer is beneficial as she pursue a degree in Elementary Education.

"Since I want to pursue teaching, this is an excellent opportunity to gain experience and exposure to the field."

Ricardo Vargas is also a near-peer who earned a Bachelor's Degree in English from Texas A&M San Antonio this year and will be returning as graduate student to complete his prerequisites for medical school in the fall. He said that GEMS is a great opportunity for him to be involved with science on a personal and engaging level, but is even more rewarding since he's able to

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CDR continued from page 2

activities, and barbecuing over the Fourth of July.

In addition to the Fourth of July, other significant days in July include: Canada Day on July 1st for our neighbors up north. Originally it was called Dominion Day to mark the day Canada became self-governing; World Youth Day is also celebrated in July, but the specific day is yet to

SGM continued from page 3

or the desirable outcomes and their impact at reaching the expectations of the customers and stakeholders are an important aspect of the feedback loop. Did we successfully reach the objective? Were the investments worth the outcomes? Did we create, develop, deliver and sustain the advancement of

SAFETY continued from page 10

action.

Symptoms of heat exhaustion include fatigue, dizziness, headaches and nausea. Your skin may become pale, cold and clammy and your breathing and heart rate may be faster than normal.

Prevent bug bites

Insist your child wear shoes outside to minimize the risk of a bee or insect stings on the feet. Never use insect repellent on infants. For older children, bug spray can be used sparingly, but wash it off as soon as your child comes indoors. Also, check your child for ticks after being outside. If you find one, talk to your doctor about how to remove it. If your child develops hives

HEALTH continued from page 11

posure to perm chemicals and permanent light hair dyes. The NIOSH says the compounds are potentially carcinogenic in humans and recommends occupational exposures to toluidine be kept to the lowest feasible amounts.

Finally, July truly is National Picnic Month. Is it more than getting a day off from work? It is more than celebrating at a cookout eating hot dogs and

be announced; and July 30 is International Day of Friendship. Other not so serious observations during the month of July are: July 7—Chocolate Day; July 12—Pecan Day; and July 23 is National Hot Dog Day as well as Vanilla Ice Cream Day, all are good in moderation!

Thank you for all that you do. Your work is making a difference for our Wounded Warriors and their families. Serving to Heal... Honored to Serve!

military medicine relevant to the Warfighters and national security? The effective fulfillment of meeting these strategic outcomes are the deciding factor on mission accomplishment. The next time you look at the strategy map focus on using the map for clarity. Anticipate the results to be strategically advantageous!

or wheezing after an insect sting, he or she may be allergic. Seek prompt medical attention.

Play safely

Always supervise your kids when they are playing on equipment. Teach them safe play habits, including sitting on the center of a swing and not twisting the swing chains, which can reduce their strength. Keep kids away from areas where lawn mowers are being used, and never allow children to ride with you on a lawn mower.

These are just a few safety tips to get you started for the summer. I do challenge you to incorporate risk management and safety training into your home life. Safety should be a way of life a natural part of your culture.

hamburgers. It is more than watching a parade and fireworks. And surely it is more than catching all the sales at a shopping mall! When you are celebrating with your family and friends; remind them why they are celebrating July 4. Teach your children what this day means as far as our freedom is concerned. Then remind yourself that while it is great to celebrate, it is even greater to know why you are celebrating.

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share this experience with his younger sister.

“GEMS has been helping me on my career goals by reigniting my passion for Science,” he said. “Working with my sister has been fun because it changes the atmosphere for me. I can’t take myself too seriously when she’s around because she always makes me laugh.”

“Having my brother as a near-peer is pretty cool,” said Vargas’ sister Karen. “It’s different telling someone of your experience when they actually live and experience it with you.”

Karen also stated that she enjoyed meeting and working with the other interns because it gives everyone the opportunity to share their knowledge and participate in activities that are not offered during the school year.

“My favorite part of GEMS is seeing all of the actual scientists work around me,” said Vargas. “Being surrounded by so many professionals is inspiring because it shows that a love for learning pays off.”

“I highly recommend this to all kids interested in Science,” said Strating.



GEMS II intern, Logan Drake dissects a bovine eyeball June 16. Drake was one of the first high school students to participate in the inaugural GEMS II session offered at the U.S. Army Institute of Surgical Research.

Back When...



Last Month's Answer:



Can you guess who this ISR staff member is? This photo was taken in 1971 when he was six years old in the first grade at Hellenikon Elementary School, Hellenikon Air Base, Athens, Greece.

Sarah Shingleton
BICU Burn Care
Clinical Nurse Specialist

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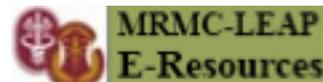


By Gerri Trumbo
Library Manager

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June Awards

Certificate of Achievement
Sgt. Kenneth Venable
Spc. Melody Sandoval
Pfc. Stephanie Doyle
Pfc. David Watson

Army Physical Fitness Test - 300 points
Staff Sgt. Pablo Sierra

Army Physical Fitness Test - 90 points/event
Spc. Melody Sandoval - 295
Staff Sgt. Gina Chang - 290
Sgt. Jessie Rodriguez - 290
Sgt. Polly Busman - 280