

NCO UPDATE

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A Quarterly Report from AUSA for Noncommissioned Officers

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SMA Preston Named AUSA Vice President

Sergeant Major of the Army (SMA) Kenneth O. Preston, USA Ret., was promoted on 30 January 2017 to Vice President for NCO and Soldier Programs by the Council of Trustees of the Association of the United States Army (AUSA). SMA Preston had been AUSA's Director for NCO and Soldier Programs since he joined the nonprofit educational association in 2013.

The vice president title was approved by the trustees on the recommendation of General Carter F. Ham, USA Ret., AUSA's president and chief executive officer, who had elevated Preston's position in 2016. Preston had been reporting directly to Ham; the vice president title makes this official.

"I am so proud to have retired SMA Ken Preston now serve as AUSA's Vice President for NCO and Soldier Programs," said Ham. "Eighty-three percent of all Army Soldiers—Regular, Guard and Reserve—are enlisted. They

now have a strong, strong voice representing them every day at AUSA."

The promotion makes Preston the fourth vice president at AUSA. The others are Lieutenant General Patricia E. McQuiston, USA Ret., Vice President for Meetings and Membership; Lieutenant General Jerry Sinn, USA Ret., Vice President for Finance and Administration; and Lieutenant General Guy C. Swan III, USA Ret., Vice President for Education.

Preston is well-known and respected in the Army. He served for more than seven years as SMA, the longest tenure since the position was created in 1966. He also was inducted into the U.S. Army Sergeants Major Academy Hall of Honor as part of the Class of 2011. Additionally, the Army's NCO Writing Excellence Program, created last fall as part of an effort to improve Soldiers' writing skills, is named for him.

Top 10 Army Modernization Efforts of 2016

The Army must ride the wave of technology or risk being left behind. With consumer electronics advancing at an incredibly rapid pace—the average time to obsolescence of some devices is as short as 24 months—the right technology can ensure overmatch against future adversaries in an increasingly complex and dangerous world. Fortunately for Soldiers and the American people, Army researchers, scientists and industry partners made great strides in modernization in 2016. Listed below are their top ten advancements.

30mm cannon for Stryker. The first

prototype Stryker infantry carrier vehicle outfitted with a 30mm cannon was delivered to the Army on 27 October 2016. The prototype features a new fully-integrated commander's station, upgraded drivetrain components and hull modifications.

Army leaders in Europe identified a capability gap following the 2015 Russian invasion of Ukraine; existing Stryker weaponry places U.S. forces at unacceptable risk. An urgent operational needs statement submitted in March 2015 resulted in a directed Stryker lethality requirement, one that included an



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accelerated acquisition effort to integrate the 30mm cannon on the vehicles. Fielding to the 2d Cavalry Regiment in Europe will begin in May 2018.

Lightweight ballistic shirt. When Army engineer Robert DiLalla set out to develop a new design for Soldier protection, he knew he had to break the mold. The result of his revolutionary approach is the ballistic combat shirt, a new lightweight body armor system. The invention is a departure from the interceptor body armor system, developed for the Marine Corps in the late 1990s. Over the years, that armor system has increased in complexity and bulk. In contrast, the new ballistic combat shirt is easy to put on. It also has three panels in the deltoid section instead of only one, increasing range of motion, and it weighs 35 percent less than its predecessor.

Doubled howitzer range. Engineers at Picatinny Arsenal, New Jersey, have been working to create a longer, newly-modified M777A2 howitzer that has the potential to double the system's current artillery range. The modification, called the extended-range cannon artillery (ERCA), adds six feet to the cannon but less than 1,000 pounds to the overall system. A mobility demonstration is the first step to determine if the howitzer can be modified in such a way, or if a new system is required. Mobility testing will be conducted at Aberdeen Proving Ground, Maryland, in the near future.

New hand grenade. Engineers at Picatinny Arsenal, New Jersey, are working on the first new lethal hand grenade in more than 40 years. It will provide both fragmentation and blast overpressure more effectively and safely than its legacy counterparts. Once it is fielded, Soldiers will be able to select and use a hand grenade with different effects simply by flipping a switch. The new grenades are also designed for ambidextrous use. The current plan is to transition the new grenades to Project Manager Close Combat Systems in Fiscal Year 2020.

JLTV debut. The first seven joint light tactical vehicles (JLTVs) were turned over for testing to the Army and Marine Corps in late September 2016 by



Oshkosh Defense. The JLTV is a tactical wheeled vehicle with a chassis that offers protection from underbelly blasts and a suspension system that can be raised and lowered for off-road conditions. It also boasts greater fuel efficiency than current tactical vehicles. About 100 of the JLTV production vehicles will be provided to the Army and the Marine Corps for testing over the next year.

Entangled photons. At the Army Research Laboratory (ARL) in Maryland, scientists are looking at new ways to exploit the smallest component of light—the photon—to enhance communications, sensing and cryptography and anything else they can think of. Michael Brodsky, a physical scientist at the ARL, has boxes that generate entangled photons. A single photon can be captured in a memory unit and subsequently measured. But when two entangled photons are captured and measured in the same way, they yield the same measurements every time. Those same two entangled photons could be split up, on different sides of the lab, on different sides of a research campus or on different sides of the country, and still, because they are entangled, behave in the same way and yield the same measurements. Using entangled photons for secure networking is just one of the challenges that the ARL team is currently working on; they are researching other ways to use entangled photons, such as enhancing sensors and quantum computing.

New armored vehicle. The first armored multipurpose vehicle (AMPV) was handed over to the Army on 15 December 2016 to begin a 52-month engineering

and manufacturing development phase. At least 29 of the vehicles will be manufactured for this phase of the procurement process. The AMPV is meant to replace the armored brigade combat team's M113 family of vehicles and addresses the M113's shortcomings in survivability and force protection as well as size, weight, power and cooling. The AMPV has a brand new hull but maintains some of the Bradley legacy design, allowing for some compatibility efficiencies. The AMPV also has space inside to allow for the addition of new systems in the future, and it comes with an improved power train. The hull is also stronger from a force protection perspective. If the low-rate production option for the AMPV is approved, several hundred of the vehicles will be manufactured for testing over the next four years.

Hydrogen-powered vehicle. The Army Tank Automotive Research, Development and Engineering Center and General Motors unveiled an energy-efficient tactical vehicle that could one day save lives on the battlefield. The ZH2 hydrogen-fuel-cell electric vehicle prototype was rolled out on 3 October 2016 during the Association of the United States Army Annual Meeting. The ZH2 operates on hydrogen fuel instead of traditional diesel, which means it uses much less fuel than traditional tactical vehicles. It is extremely efficient and much quieter than other tactical vehicles. It also has a radically reduced thermal signature because its engine doesn't run as hot as a diesel engine, meaning that enemy thermal sensors will be less likely to pick up the heat signature.



New tourniquet. One of the latest advances in treating hemorrhaging on the battlefield is the junctional tourniquet. A medic or fellow Soldier can apply a traditional tourniquet to a person’s limb but cannot use it to stop hemorrhaging in the abdomen, chest, groin, waist, pelvis or armpit. This new tourniquet, however, can be applied to wounds in ways not possible with conventional tourniquets. It is essentially a belt with one or more inflatable air bladders that can be puffed up, somewhat like a blood-pressure cuff, to apply pressure to a wound and stop hemorrhaging in about 60 seconds. It is currently being fielded to Soldiers in harm’s way.

Improved turbine engine. The improved turbine engine program (ITEP) will develop a completely new engine that will likely one day replace those currently in use by the AH-64 Apache and UH-60 Black Hawk helicopters. Years ago, four Black Hawks could move a platoon. Now, because of increased protective gear, ammunition, new technologies and so on, it takes eight or nine Black Hawks to move the same number of Soldiers. By 2020—assuming the linear weight increase continues at the current rate—it will take 15 to 20 Black Hawks. ITEP will return much of that lost capability. It also has the potential for achieving future vertical lift—if not by means of the actual motor, then by pieces associated with the development of the technology. Ideally, ITEP will one day be resident in about 85 percent of Army platforms.

Information for this article adapted from “The top 10 Army modernization efforts of 2016” by David Vergun with Army News Service.

Army NCO Balances Duty and Writing Career

Army Sergeant 1st Class Ruth Hunt is known at the Uniformed Services University (USU) of the Health Sciences as the Army senior enlisted advisor and noncommissioned officer-in-charge of laboratory animal medicine (LAM). Few people are aware that she is also a published author. Her most recent publication is the poem “End of Watch,” which she wrote to cope with the passing of some of her peers. Her poem appears in the fifth volume of *Proud to Be: Writing by American Warriors*, an anthology series of writings from servicemembers.

Hunt said she enjoys writing, because “you can get every thought, feeling and experience out on paper without feeling judged. It’s your choice to share your writings, and you choose which specific works you wish to make public.”

Originally from Corpus Christi, Texas, Hunt enlisted in the Army 16 years ago. She’s always cared for animals; she decided to pursue a career in the Army because it is the only branch with veterinary technicians. A writer since grade school, she has been pursuing this interest alongside her military career. Currently, she is enrolled in the Bachelor of Arts degree program at the University of Maryland University College, majoring

in English. She is scheduled to graduate in May 2017 and plans to begin her master’s degree immediately after.

Her first publication was in college. “More Than a Soul Mate” was a non-fiction short story about herself and her adopted son as they dealt with her upcoming deployment. It appeared in *Mothers and Other Creatures*, a Biostories Magazine Anthology.

“Part of the final for my college course was to submit a work somewhere for publication. Whether we got in or not, we had to show the teacher that we had done all the steps and sent it in. . . . So, I just searched for a journal that kind of fit the story, submitted it and, sure enough, they got back to me and told me they’d like to publish it.”

“I’m very impressed by Sergeant 1st Class Hunt’s creative talent and her ability to achieve this and other professional and personal goals,” said Army Lieutenant Colonel Larry Shelton, Jr., director of LAM at USU. “Very inspiring, above and beyond accomplishment!”

Information for this article adapted from “Face of Defense: Army NCO Balances Duty, Writing Career” by Christopher Austin with DoD News, Defense Media Activity.



Ongoing Importance of Cyber Capabilities

Cyber is an operating domain that is real, complex, dynamic and contested. In recent years, the Department of Defense (DoD) has pursued a comprehensive strategy for maintaining the necessary strategic dominance in this domain. In early January 2017, Marcel Lettre, Under Secretary of Defense for Intelligence, appeared with Navy Admiral Michael S. Rogers, commander of U.S. Cyber Command and director of the National Security Agency, before the Senate Armed Services Committee to address emerging cyber challenges and to clarify a plan of attack to meet them.

“We confront no fewer than five immediate but also distinct and evolving challenges across all operating domains,” Lettre said, explaining that DoD has named the efforts “4-plus-1,” for the four state-based challenges and an ongoing condition of battling terrorism. “Each of these security challenges—China, Russia, Iran, North Korea and global terrorist groups such as ISIL [the Islamic State of Iraq and the Levant, also known as the Islamic state of Iraq and Syria, or ISIS]—presents a significant cyber threat dimension to the U.S. military.”

Former Defense Secretary Ash Carter pressed for DoD to change, adapt and

innovate not only to meet today’s challenges, but to ensure effective defense against cyber threats well into the future.

The U.S. government’s cyber policies reflected in presidential policy directives and executive orders provide guidance on the absolute necessity of a whole-of-government approach that is critical to protecting the United States.

Currently, DoD has developed and refined cyber mission objectives that include defending defense networks, providing cyber options for military commanders and defending the nation against cyberattacks. Since 2009, DoD has matured the cyber command to ensure clear command responsibility, authority and growing capabilities essential to cyber operations. Cyber command is doing more to protect the nation and support global operations than ever before. A vital aspect

of this is a deepened partnership between the government and the private sector and between the U.S. government and allies.

Rogers warned of taking for granted the interconnectivity built into every facet of users’ lives.

“Those who would seek to harm our fellow Americans and our nation utilize the same Internet, the same communications devices and the same social media platforms that we, our families, and our friends here and around the world use.

... We must keep pace with such changes in order to provide policy makers and our operational commanders the intelligence and cyber capabilities they need to keep us safe.”

Information for this article adapted from “Pentagon Officials Describe Ongoing Importance of Cyber Capabilities” by Amaani Lyle with DoD News, Defense Media Activity.

DoD Honors Army Efforts in Acquisition

Deputy Defense Secretary Bob Work and his acquisition chief, Frank Kendall, honored an Army organization and joint Army effort in early January for excellence in acquisition, innovation and cost savings. The 2016 David Packard Excellence in Acquisition and the Should Cost and Innovation Awards recognize extraordinary achievements that represent the “best and brightest of acquisition” and of the Department of Defense (DoD).

Among the recipients of the 2016 David Packard Excellence in Acquisition awards—DoD’s highest acquisition team honor—was the Army’s Project Manager Maneuver Ammunition Systems. Other recipients of the Packard Award were the Next Generation Jammer Increment 1 team and the Special Operations Command’s Acquisition Rapid Response Light Tactical Vehicle team. The Should Cost and Innovation Award went to the Joint Program Office, Joint Light Tactical Vehicles (JLTV) team, for the Army and Marine Corps. The winners demonstrated superior program management and accomplishment in the successful execution of one or more of the “Better

Buying Power” efficiencies and associated initiatives.

The Project Manager Maneuver Ammunition Systems was presented with the Packard Award for its innovative acquisition strategy and rapid delivery of non-DoD standard ammunitions to Iraq, Afghanistan and domestic and other allied partners engaged in counterterrorism. Requirements with delivery times of 12 to 24 months were reduced to six months and sometimes less than three months.

The JLTV team was awarded the Should Cost and Innovation Award for implementing initiatives that resulted in significant cost savings. They used competitive prototyping to provide cost and performance data. The data were then used to develop innovative source-selection criteria to inform industry’s design decisions. In total, the competitive strategy and vehicle design are estimated to save \$7.9 billion across the final JLTV fleet.

Information for this article adapted from “DoD honors Army efforts in acquisition” by Lisa Ferdinando with Army News Service.





Affordable Care Act Mandates Reporting Minimum Essential Health Care Coverage

As tax season approaches, Department of Defense (DoD) civilians, military members, nonappropriated funds employees and their families will need to validate their minimum essential health care coverage as reported to the Internal Revenue Service (IRS), the Pentagon's top health official said in a phone interview in late December.

Dr. Karen S. Guice, the Principal Deputy Assistant Secretary of Defense for Health Affairs, said the Affordable Care Act extends the availability of health care insurance to ensure that people are covered through health insurance marketplaces or employers. "The relevance to us is the requirement to report minimal essential coverage to the IRS," Guice said. "It's important for us to review all of the rules as we move into tax season."

DoD members and employees will receive a 1095 form, designated B or C. Servicemembers and DoD civilians will use the 1095-B or 1095-C to answer health coverage questions on their

federal tax returns. These forms are used for TRICARE, the continued health care benefit program and the federal employee health benefits plans. The 1095 form is not intended to be filed with taxes, but rather is used as a validation of information that the IRS has already received from DoD.

"Any one of our DoD families, active duty military, retirees, civilians or contractors may see a mixture of these, depending on how the people in their household are covered by health insurance," Guice said. "It's a way for individuals in the household who are covered by insurance to validate the information and correct erroneous information through the entity that sends the 1095 form. . . . It's really important for everyone to look at this information and validate it as correct, because that's the information that the IRS will act on."

Lacking the minimal health care requirements or failure to report can bring a cost penalty. "The Affordable Care Act expectation is that every citizen will

have health insurance or they will pay an individual shared responsibility payment," Guice said. "If you've elected not to have minimal essential coverage, you may face a payment requirement which is based on a percentage of your income or a fixed amount, depending on the individual's or family's circumstances.

For questions about how to obtain the 1095 form or to inquire about the information it contains, contact servicing pay centers or visit <http://www.tricare.mil/about/MEC/ProofMEC>. For questions about the Patient Protection and Affordable Care Act's individual coverage mandate and potential tax penalty following a lack of health care coverage, visit <https://www.irs.gov/affordable-care-act> or the nearest IRS service center.

Information for this article adapted from "Affordable Care Act Mandates Reporting Minimum Essential Health Care Coverage" by Amaani Lyle with DoD News, Defense Media Activity.

STEM Program Reaches More Military Children

Colonel David Raugh's 13-year-old daughter aspires to work in aviation someday, possibly as an astronaut. But being uprooted six times from schools as her family has moved around the world has not made it easy. Pursuing academic interests can be a struggle for military children in situations like hers, her father admitted, especially in the STEM fields of science, technology, engineering and mathematics. Military family life can teach children useful skills and values such as loyalty and patriotism, said Raugh, the 502d Force Support Group commander at Fort Sam Houston in San Antonio, Texas. But it is also true that those constant moves can impact their access to some educational opportunities.

One way to improve STEM performance among military children is through the National Math and Science Initiative's College Readiness Program. Launched in 2007, the nonprofit

program is now in more than 1,000 schools across the country. As a result, the performance among students in these schools on Advanced Placement exams has exceeded 10 times the national average. Schools serving military children have also jumped on board, with more than 150 military-connected schools already signed up.

Recognizing the need for more skilled professionals in STEM-related fields, DoD has granted \$23 million in Fiscal Years 2015 to 2016 to bring the program to more military-connected schools. The program first came to military bases in 2010 after former Army Secretary Pete Geren voiced concerns about Soldiers at Schofield Barracks, Hawaii, being forced to send their children to private schools due to inadequate public schools.

Burnie Roper, superintendent of the Lackland Independent School District, said he is interested in rolling out the program at his schools, but first he wants to

get buy-in from the teachers. Under the initiative, teachers who instruct students from third grade to high school can take part in a Laying the Foundation Teacher Training Program, which coaches them on knowledge and instructional best practices and gives them classroom-ready materials and resources.

Research shows that greater emphasis on STEM-related courses is helpful when students reach those middle and high school years when their enthusiasm tends to dip. "This potentially allows us to stop this troubling trend," Raugh said about the program coming to San Antonio. "This is a great opportunity, and we need to grab onto it with bulldog tenacity and not let go until this program is in place."

Information for this article adapted from "STEM program expanding to reach more military children" by Sean Kimmons with Army News Service.

Free Financial Advice for Soldiers

The Army has enlisted the help of personal finance expert Suze Orman to educate Soldiers and their families on money matters to aid in preventing them from falling victim to predatory loans, mounting credit-card debt and other financial issues. Orman, a best-selling author and television personality, plans to offer her services free of charge to Soldiers, including a seven-step online course (normally \$54) and an upcoming video detailing the military's new retirement system.

"There comes a time in life when everybody has to serve their country, and they have to serve those that are giving us our freedom," says Orman. "If anybody deserves the best financial advice in the world, which I am more than capable of giving, it's the men and women who are serving all of us."

Orman tries to simplify personal finance tips to make them easier to understand. For instance, she noted that if a 25-year-old Soldier began placing \$100 a month into a Roth Thrift Savings Plan,

the account would grow to roughly \$1 million by the time that Soldier reached the age of 65. But if the Soldier waited until the age of 35 to invest the same amount, he or she would only have \$300,000 by retirement.

Besides retirement planning, her course covers a variety of topics, from learning how to live debt-free, to tackling financial obstacles, to purchasing big-ticket items like a home or car. Any military member can enroll in the course at SuzeU.com, using gift code "USA."

This is not the first time Orman has partnered with the Army. In May 2016, she signed a four-year gratuitous services agreement with the Army Reserve to improve the financial readiness of Reservists with informational videos, written material, town hall discussions and base visits. She said she plans to devote herself to these partnerships since she ended The Suze Orman Show on CNBC in 2015. It is her goal to serve as an impartial financial advisor to Soldiers who are unable to find help elsewhere.

Information for this article adapted from "Army partners with finance guru to offer free financial advice to Soldiers" by Sean Kimmons with Army News Service.

Letters to the Editor

NCO Update would like to hear from you. We want to know your opinions and possibly publish them in future issues. Please send your letters to Editor, NCO Update, AUSA, 2425 Wilson Blvd., Arlington, VA 22201. Letters are also accepted via e-mail at etoner@ausa.org with the subject line "Letters to the Editor."

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