The AMEDD Historian

Army Medical Department Center of History and Heritage, Fort Sam Houston, Texas Number 52 Winter 2025

Contents

Welcome to issue #52 of the *AMEDD Historian Newsletter*! In this edition we focus on each of the corps of the Army Medical Department. There are six Congressionally-designated AMEDD corps: Medical, Medical Service, Medical Specialist, Dental, Nurse, and Veterinary, plus two unofficial corps, Enlisted and Civilian. Each of these groups has a strong history within the AMEDD, and provides critical support to the Army. Highly specialized, they work together every day to keep the Army healthy and ready.

The articles provide an overview of the history of each group. There are space limitations, and we cannot list all of the achievements, heroes, specialties, and important dates for each particular corps. Instead, we can offer a good starting point for further inquiry, and if you are not a member of the corps in question, a better understanding of its origins and historical background.

I highly recommend saving or book-marking this issue to have a handy reference for all upcoming AMEDD Corps Anniversaries! Who knows when you will need to write or recall a tidbit on Medical Specialist Corps history for example? Now, let's start in chronological order...

A Brief History of the US Army Medical Corps

The history of both the Army Medical Department and the Medical Corps branch began when the Continental Congress established the hospital department on 27 July 1775. This establishment during the early days of the American Revolution marked the Medical Corps as one of the earliest branches in the U.S. Army. The Continental Congress established a hospital department for the fledgling Continental Army with physician leadership under a Chief Physician. Medical doctors at this time were not commissioned officers, and therefore, did not hold military rank. The Director General and Chief Physician had authority only over the hospitals set up to support the Army.

Following the obvious need for a permanent standing army after the British attempted to retake her previous subjects in 1812, the position of US Army Surgeon General was created in 1818. This established a permanent Medical Department with physicians. Eventually military rank was given in 1847.

The term "Medical Corps" was used informally for many years prior to its official designation in 1908. Finally, in 1884, Congress passed an act stating that "officers of the Medical Department shall take rank and precedence in accordance with date of commission or appointment and shall be so borne on the official Army Register."

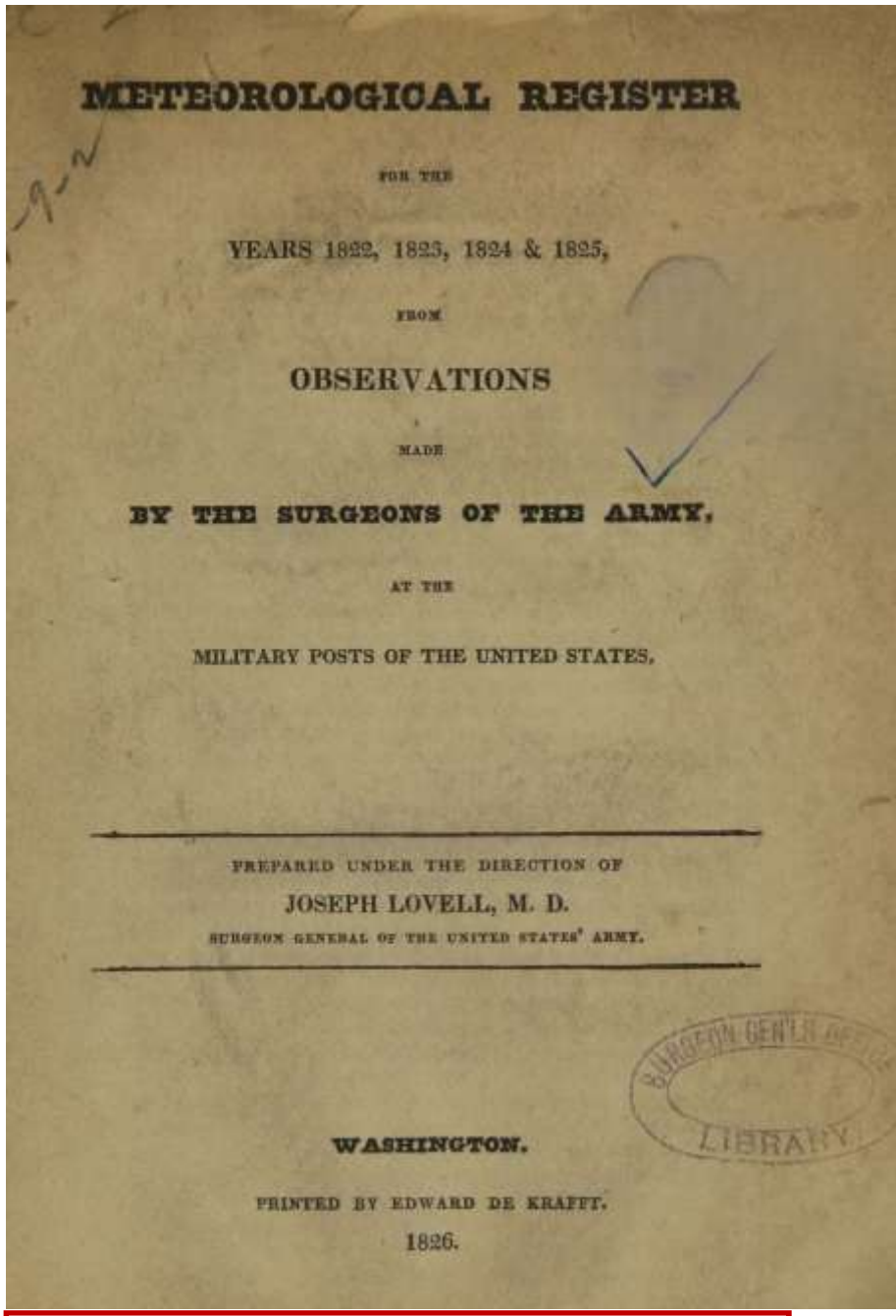
In the 19th Century, conflicts and disease would pave the way for incredible discovery. Army physicians were responsible for saving countless lives directly and through their discoveries. It is a noble tradition that continues today.

Many accomplishments by members of the Army Medical Corps went beyond the Army Medical Department, affecting both military and worldwide health:

An image of early medical care, a physician bandaging a soldier's foot. Illustration by Don Troiani, courtesy National Park Service.

- In 1814, surgeons in the Medical Department began tracking and reporting weather conditions at various locations. This was the beginning of a systematic recording of meteorological conditions on a national level—records which would eventually become the U.S. Meteorological Service.
- For his actions in 1861, Assistant Surgeon Bernard Irwin performed the first act for which the Medal of Honor was awarded, although the actual award ceremony took place much later in his career. Irwin received the Medal of Honor for bravery in a fight against the Apaches led by Cochise.
- Jonathan Letterman was appointed Medical Director of the Army of the Potomac in 1862. His insights resulted in today's field medical service system: an ambulance evacuation system, an echeloned surgical resuscitation and treatment system, a centralized field medical supply system, a preventive medicine inspection system, a field medical records system, and a tented field hospital system.
- From 1876 the Surgeon General's Library, headed by John Shaw Billings produced the *Index Medicus* and *Index Catalogue* that organized medical knowledge, a significant contribution by America to the medicine of the world.
- Surgeon General, and early microbiologist, George Sternberg established the Army Medical School in 1893, the first institution in the world dedicated to teaching public health and preventive medicine, including laboratories for studying chemistry, bacteriology, anatomy and physiology, and one of the first X-ray machines in the United States. Later it became the Walter Reed Army Institute of Research.
- While assigned to the Army Medical School in 1910, Carl Darnall developed a method for sterilizing water using anhydrous chlorine. This technique made clean water available for much of the world's population.
- Captain Bailey K. Ashford was the first person to both describe North American Hookworm disease and develop an effective treatment for the disease. Ashford, working with Pedro Gutierrez, and with the support of the governments of Puerto Rico and the U.S., implemented programs to identify and cure the disease.
- During World War I, H. Winnett Orr an orthopedic surgeon with the AEF improved the plaster cast method for the treatment of broken bones. Faced with immobilizing fractures for patients during a long and potentially unstable voyage from Europe back to the United States, he researched and pioneered techniques to shorten healing times and improve recovery of limbs. Although supplanted by newer material (nylon, etc.) the use of plaster in this manner has assisted countless people recovering from broken bones and degrading the seriousness of the injury.
- Captain Edward Vedder working with Robert Williams from the Bureau of Science in Manila, Philippines, and Major Weston Chamberlein, as a member of the Army Tropical Disease Board, identified Beriberi in Philippine Scouts as resulting from a dietary deficiency. Vedder continued to research various diseases throughout his military career, including scurvy and dysentery. He also published a volume on the Medical Aspects of Chemical Warfare in 1925.
- In 1906 Captain Percy Ashburn and Lieutenant Charles Craig identified the cause of dengue fever as a filterable virus spread by mosquitoes.
- In 1900 Lieutenants Richard Strong and William Calvert, along with Contract Surgeon Joseph Curry, began studying plague while working for the Army Tropical Disease Board. Their findings included the history, symptoms, and means of transmission of plague, including differentiating between bubonic plague and pneumonic plague.

- The Army Shoe Board, formed in 1908 and headed by Colonel Edmund Munson studied troops' feet to determine how to best construct shoes that would prevent injury and properly fit their feet.
- The physical standards for pilots established by Lieutenant Colonel Theodore C. Lyster, the founder of aviation medicine. The War Department established the Aviation Medical Research Board in October 1917.
- Expanding upon British work which recognized "shell shock" as an acute situational stress, Dr. Thomas W. Salmon (Colonel, USAR) developed a therapeutic system in World War I for treating patients in their forward units. As a result of further experiences with "battle fatigue" in World War II and "combat exhaustion" in Korea, Colonel Albert J. Glass, in 1959, codified the three principles of treatment - proximity, immediacy, and expectancy.
- Beginning in 1940, some of the earliest studies of whole blood preservation and the use of plasma in treating experimental shock were performed at the Army Medical School by Captain Douglas B. Kendrick, Jr. The program developed kits for the closed, sterile collection of blood from donors; developed the first system for the mass collection and shipment of liquid and dried plasma; was the first to use human albumin to treat shock; and made major contributions to the development of the system for collecting and refrigerating whole blood and shipping it overseas, and for production of standardized kits for rapid typing of blood.
- In 1942 after the vaccine to prevent epidemic typhus was shown to have lost its potency, Lieutenant Colonel Harry Plotz, working at the Army Medical School, began a study of the problem. During his investigation, he isolated a specific soluble polysaccharide antigen from rickettsial cultures which restored its potency. His work produced an effective vaccine that decreased mortality from epidemic typhus in American troops during World War II.
- The United States of America Typhus Commission, was founded to attack the problems of typhus fevers in 1942. Under the direction of Colonel Leon A. Fox (and later Colonel Stanhope Bayne-Jones) Army, Navy, and civilian members of the Commission investigated epidemic and scrub typhus outbreaks all over the world.
- From 1944 to 1945, an AMEDD team, led by Colonel Edward D. Churchill was established in the Mediterranean theater to study shock and the resuscitative process. By applying the latest laboratory technologies to the problem, the team documented the need for whole blood use and made seminal observations on renal, hepatic, and muscle response to shock. The data from this work not only were applied in World War



METEOROLOGICAL REGISTER

FOR THE

YEARS 1822, 1823, 1824 & 1825,

FROM

OBSERVATIONS

MADE

BY THE SURGEONS OF THE ARMY,

AT THE

MILITARY POSTS OF THE UNITED STATES.

PREPARED UNDER THE DIRECTION OF

JOSEPH LOVELL, M. D.

SURGEON GENERAL OF THE UNITED STATES' ARMY.

WASHINGTON.

PRINTED BY EDWARD DE KRAFFT.

1826.

Army surgeons were required to record weather data, trying to test the theory that environmental conditions caused diseases.

II, but also laid the groundwork for new therapeutic and research approaches used in military and civilian medicine ever since. Documentation of the need for large amounts of whole blood after acute trauma revolutionized the civilian practice of traumatic surgery after World War II.

- Beginning in 1945, Captain Edwin J. Pulaski began a lifetime of research studies on the use of antibiotics in treating surgical patients. Captain Pulaski established the U.S. Army Surgical Research Unit which transferred from Halloran General Hospital, Staten Island, NY, to Brooke Army Medical Center, Fort Sam Houston, TX, in 1947. This was the first American center for the study of patients with burns. The Unit - now the U.S. Army Institute for Surgical Research was the prototype for the many burn centers now established throughout the country.
- Beginning in 1950, vascular reconstruction of arteriovenous fistulas and false aneurysms in patients from Korea was begun at Walter Reed General Hospital by Lieutenant Colonel Robert G. Rate and Major Carl W. Hughes. More than 300 lesions were repaired, formerly in World War II such lesions had been treated by ligation, often followed by amputation.
- From 1950 to 1953, Colonel Kenneth D. Orr led a Cold Injury Research Team in Korea that secured the first prospective epidemiological data on frostbite. As a result of these studies, both military and civilian cold weather living have been made safer and more functional.
- Beginning in 1951 through 1953, the Army Medical Department Graduate School sent a Surgical Research Team to Korea led by Captain John M. Howard and supervised by Colonel Richard P. Mason. Two members of the team, Major Edward Jahnke and Lieutenant Colonel Carl Hughes, developed and taught newer methods of repair of vascular injury that markedly reduced the amputation rate. A Renal Insufficiency Center established by Captain Paul E. Teschan and Major William E. Meroney, used the first artificial kidney ever brought to a combat zone; this work made fundamental contributions to the treatment of patients with Korean Hemorrhagic Fever and did the first studies which permitted clinicians to understand the separate contributions of uremia and sepsis to septic shock.
- In 1965, Sulfamylon, an antibacterial cream, was developed by Colonel John A. Moncrief, Dr. Arthur D. Mason, Jr., and Colonel Robert B. Lindberg, MSC, at the U.S. Army Institute of Surgical Research, Brooke Army Medical Center, Fort Sam Houston, TX, for the treatment of patients with extensive burns. Its use has resulted in a marked reduction in mortality from sepsis secondary to infection of the raw burn surface.

Today's Medical Corps consists of physicians representing the various specialties and subspecialties found in civilian medicine. Physicians may be assigned to executive leadership positions, fixed military medical facilities, deployable combat units or field hospitals, or military medical research and development laboratories. Wherever there are soldiers in the world, Army Medicine is there.

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An overview of AMEDD Enlisted Corps History and Training
By Ronald F. Still, Robert L. Ampula, and Lewis L. Barger III

Enlisted soldiers have been a part of the AMEDD since its beginning. Their history is one of dedication and also increased development. Although currently not an official corps through Congressional action, enlisted personnel serve with all the AMEDD's Corps members in a variety of occupational specialties. With these specialties and lifesaving skills they continue to be a crucial part of Army Medicine.

On 17 July 1776, Congress authorized the employment of "Hospital Stewards" which were the forerunners of AMEDD NCOs. Although not authorized prior to this legislation, Hospital Stewards were assigned to hospitals as early as December 1775. In April 1777, a "Hospital Steward" was allowed for every hundred sick or wounded. Their responsibilities were to receive, dispense, and maintain accountability of articles of diet from the hospital commissary. By September 1780, Hospital Stewards were given the added responsibility to purchase whatever was necessary for use in the care of sick and wounded. Their role in the hospital was rapidly expanding and they were expected to handle administrative and logistical functions in the hospital.

At the end of the war, Congress reduced the size of the Army. From 1784 to 1789, there was no organized Medical Department. Permanency for the Army and its supporting medical personnel was gradual. By March 1799, a hospital steward was authorized for each military hospital. While the Hospital Steward had no official rank in the Army and were largely soldiers detailed from the line, they played a key role in providing healthcare for the troops. They had to be able to read and write, with some background in mathematics, chemistry, or pharmacy. Few soldiers of this era had these abilities.

A Hospital Steward serving at Fort Sam Houston in the late 1800s. The chevrons and pant stripe would have been green to represent Army Medicine before 1902.

During the War with Mexico (1846-1848), Hospital Stewards accompanied the surgeon into battle, dressing wounds and dispensing medicine. In 1847, the Surgeon General requested several times to authorize positions for Hospital Stewards, however, his requests were turned down. Later, the Army supported his efforts and in 1851 issued an addendum to the Regulations for the Uniform and Dress of the U.S. Army that authorized a "Half Chevron" consisting of a green background with yellow trim and a Caduceus to denote the rank of the Hospital Steward. In 1856, Congress authorized the Secretary of War to appoint as many Hospital Stewards as needed in the Army and mustered onto the hospital rolls as "NCOs". This action permanently attached the stewards to the Medical Department.

During the American Civil War, the Hospital Steward was responsible for assisting the surgeon in minor surgical procedures, dispensing medicine and supervising the attendants and other civilians who worked in the hospitals. They were charged with procuring vegetables, meat and bread from the local area when the normal supply system was interrupted. Some stewards worked in the government laboratory supervising the production of medicine.

In 1885 the Surgeon General recommended established a "Hospital Corps". On 1 March 1887 the Hospital Corps was finally established. New chevrons denoting the ranks of the hospital stewards were introduced, similar to the chevrons worn by all NCOs in the Army. Hospital stewards wore full sized chevrons that had three stripes below and one on top with a Red Cross in the center. Acting hospital stewards wore the same chevrons except for the stripe on top. After one year of service with the Hospital Corps, privates were eligible for appointments as acting hospital stewards. After one year of probation and passing another examination, they could be appointed permanent hospital stewards. In its first year 600 privates transferred to the new corps, with only 24 passing their exami-

nations and promoted to acting hospital stewards.

To ensure that the privates of the newly formed corps had the necessary skills to perform their duties, Companies of Instruction were established in 1891. Under this concept, infantry drill regulations were integrated with medical training in the areas of anatomy and physiology, nursing, pharmacy, and first aid. They were also rotated through the post hospital. The Hospital Corps Knife was issued as standard uniform equipment and used for making litters or small triage areas in the field.

Despite dedicated service on the frontier and during the Spanish-American War, on 2 March 1903, the Hospital Corps was disestablished, later replaced by the Enlisted Force of the Medical Department (1916-20). The terms Hospital Steward and Privates of Hospital Corps were replaced by the terms Sergeant and Private, with an exception for the Master Hospital Sergeant which was used until 1920.

World War I demonstrated changes in technology and increased troop numbers. During the war, enlisted personnel of the Army Medical Department began training at Fort Oglethorpe, Georgia. Laboratory, radiology, dental, veterinary and psychiatric classes were established with some courses taught at civilian universities. Training was also implemented for NCOs to ensure that they could perform their duties on and off the battlefield. This would be crucial later as enlisted personnel were increasingly closer to the battle and would later become embedded with units in the next war. World War I clearly established the need for enlisted soldiers to be trained in each new specialty that resulted from the evolution of military medicine.

Building up before World War II, Medical Replacement Training Centers were established at Camp Lee, VA and Camp Grant, IL. These camps conducted basic and specialized training for medical and surgical technicians. Even with the accelerated training at these camps, the shortage of medical personnel on the front lines remained critical and sometimes additional personnel were drawn from line units. World War II was also the first conflict using embedded medical aidmen, now known as combat medics. The term "doc" became a common form of respect used by all soldiers for medical personnel.

An aidman serving on the frontlines during World War II. AMEDD enlisted personnel serve in a variety of specialties to include combat medic.

There were other changes as well. In 1944, enlisted female soldiers of the Women's Army Corps (WAC) were trained as pharmacy, laboratory and x-ray technicians. The availability of trained female soldiers in the United States reduced the critical shortages overseas. After the war, in 1946, the Medical Field Service School (MFSS) was relocated to Fort Sam Houston, TX and all specialized training for enlisted personnel was consolidated with the exception of the line medic. In 1950, the Surgeon General directed that a 48-week course in practical nursing for enlisted soldiers be established at Walter Reed Army Medical Center.

In Vietnam, personnel who volunteered to become flight medics received their training on the job, gaining experience with each mission. Medical personnel assigned to combat elements were scheduled to spend six months as a platoon or company aidman. The NCOIC of the Battalion Aid Station was responsible for ensuring that new medical personnel were capable of performing their duties prior to accompanying units by themselves. The Medical Training Center (MTC), Fort Sam Houston increased training capacity due to the shortage of enlisted medical personnel.

The most significant change to Military Occupational Specialties (MOSs) by the time of the Vietnam War were changes to numeric codes. This codified increased focus and training. The majority of medical MOSs were contained in the 91 series. A combat medic was a 91A, a medical NCO was a 91B, a practical nurse was a 91C. MOSs in ancillary medical services were aligned with similar functions in the Army. Some new specialties were added for enlisted medical soldiers like 91V, Respiratory Specialist.

Beginning in the 1980s the Army Medical Department began a series of steps designed to improve the fundamental unit of the AMEDD enlisted force, the combat medic. The first step was the establishment of the 91-Bravo school for NCOs. All newly trained medics received the MOS 91A following Advanced Individual Training. Following their promotion to non-commissioned officer, they received the MOS 91B. In the late 1980s, the Medical Department created a school for those not yet assigned the MOS 91B that they were required to attend prior to receiving their new MOS designation. NCOs previously awarded the 91B MOS were not required to go back through the school.

The Advanced Medical Specialist Course, which was designed to train medics for combat in advanced

emergency medical skills for use in field and fixed facilities. This course was known colloquially as the "Super B" course and its graduates were "Super Bs," differentiating them from the NCOs who had received their MOS under the old system. Beginning in 1989 a pilot course was run to train enlisted medics during AIT to the National Registry Emergency Medical Technician-Ambulance (NREMT-A) standard. As this course was implemented for the Army as a whole, the 91A MOS was eliminated and all medics became 91Bs.

In 2001, the combat medic MOS was revised again with the creation, initially, of MOS 91W, which combined MOSs 91B and 91C by requiring certification to standards set by the National Registry of Emergency Medical Technicians, the American College of Surgeons and Emergency Physicians in Basic Trauma Life Support, and the AMEDD Center and School's Trauma AIMS (Airway management, Intravenous Therapy, Medication, and Shock management) course. This would be followed by a larger reorganization of the enlisted medical MOS establishing the 68 series of medical MOSs with 68W replacing the former 91W and other MOSs being transferred to 68 series MOSs or included in 68W with an additional skill identifier to designate particular skills training.

Enlisted soldiers constitute the largest portion of the Medical Department, and without their knowledge, skill, dedication, and selfless service the AMEDD could not function. They are the first medical soldier to treat the wounded and the sick, the first to inspect the food, water, to ensure the soldier's health. Medical soldiers assist the surgeons as they work to repair the wounded, rehabilitate the injured, and care for the animals that serve the Army. They are a vital part of the Medical Department with a proud tradition of healing and serving our nation's Army.

— 27 July 1775 —

A Brief History of the Army Nurse Corps
Richard M. Prior, COL (Ret)

The history of many Army officer corps is one of stability over time – key structures, roles, functions and even units persist over time, providing soldiers a historic framework for their own service. The history of the Army Nurse Corps, however, is one of 125 years of transformation and is a story of continuous evolution.

Founding

The impetus for founding the Army Nurse Corps began during the Spanish-American War, with the sinking of the USS *Maine* in Havana Harbor on February 15, 1898, killing 261 men. There was significant morbidity and mortality during the war – but not from combat wounds. Troops suffered greatly from disease associated with squalor in the camps, which was somewhat ironic given that the Surgeon General at the time, BG George Sternberg, was a leading expert in field sanitation and one of the world's first infectious disease physicians.

Sternberg was convinced in the first months of the war that trained nurses (hired as contractors, since no law authorized them in the Army) would make a difference if assigned to the Army's base and general hospitals, which were far from the front lines. He appointed Dr. Anita Newcomb McGee, a prominent obstetrician, to screen and hire 1,500 contract nurses for the Army. Throughout the war, the Medical Corps officers and line officers who worked with the nurses became convinced of their value in reducing morbidity and mortality.

Over 20,000 soldiers were infected with typhoid fever, and 1,590 of them died—while only 400 died from combat wounds. The public became outraged over the deaths caused by the squalid conditions — particularly in the stateside camps. News reports revealed that soldiers died in the camps before even reaching the battlefield. This public outcry over poor sanitation and inadequate field medical practices was one reason President McKinley established the "Dodge Commission," led by Civil War Major General Grenville Dodge, to conduct a thorough after-action review of the war. The Dodge Commission Report was released in February 1899. It found that the "nursing force" was "neither ample nor efficient" due to the "nonrecognition in the beginning of the value of women nurses." The report called for "a reserve corps of selected trained women nurses, ready to serve when necessity shall arise." This report served as the impetus for establishing the Nurse Corps (Female) in the Army Reorganization Act (Section 19) of 1901.

Care of Combat Casualties

World War I was the first war that included the Army Nurse Corps and over 10,000 served in France. Nurses were not assigned to the field hospitals that were located near the front, largely serving in the camp hospitals and base hospitals that operated many miles behind forward lines. As the war developed, nurses were integrated into specialty teams (gas teams, shock teams, surgical teams) and mobile surgical hospitals that would augment forward deployed units during heavy workload, placing women near the front lines for the first time. Army nurses received awards for valor, such as the Citation Star (which became the Silver Star Medal) and the Distinguished Service Cross, marking the first that women in the Army had been commended for bravery in combat.

Nurses at Reserve Hospital No.1, Manila, Philippine Islands, c.1902.
Image courtesy National Museum of Health and Medicine.

Over 57,000 nurses served in the Army in World War II (half serving overseas) , representing around 20% of all nurses in the United States. In WWII, it was common for nurses to serve in field hospitals and evacuation hospitals that were as close as three miles to the front. Care was more complex, adding blood and antibiotics to treatment regimens. Hospitals were designed and staffed for continuous, high-volume surgery. Advances in infection control led to better outcomes, including much better limb-saving care. Evacuation from the battlefield improved significantly. Dependable vehicles significantly improved evacuation time. WWII brought the era of flight nursing, as over 1,000 Army nurses were formally trained to provide care on C-47s. Improved care, including antibiotics and improved evacuation times, brought low mortality.

Sixty-six nurses were captured in the Philippines in 1942 after the fall of Bataan and Corregidor, and were held as prisoners of war in the Santo Tomas Internment Camp until 1945. Flight nurse Lieutenant Reba Whittle was taken prisoner Germany and held prisoner for several months in Stalag IX-C. Four Army nurses were the first women to receive the Silver Star Medal for gallantry in combat for their service at the Anzio Beachhead in Italy while continuing to provide care under intense artillery fire.

At the beginning of the Korean War, Army nurses found themselves deployed from Japan to South Korea on 24 hours' notice in hastily assembled mobile army surgical hospitals. Ultimately, over 500 Army nurses would serve on the Korean Peninsula in mobile, field, and evacuation hospitals. Nursing care in the Korean War was defined by caring for patients with multiple trauma and cold injuries. The first war to employ widespread use of helicopter evacuation, wounded patients were able to receive surgery, antibiotics, and blood quicker than ever. Army nurses often performed treatment independently, such as closing wounds after surgery. Army nurses served on teams that provided the first rudimentary dialysis to combat casualties in renal failure. Rapid evacuation to Japan required massive expansion of Tokyo General Hospital. Army nurses worked several weeks without a day off, and the hospital had to hire Japanese nurses to assist in the care of patients evacuated from Korea.

Two short years after the conclusion of the Korean War, the Army engaged in operations in Vietnam. In 1965, the Army deployed combat units into Vietnam and began large-scale, sustained operations. At the end of that year, there was 1,627 beds in Vietnam. Bed strength would peak in 1968 at 5,283 beds. The evolution

of the MEDEVAC system ensured that patients could receive care sooner than ever before, as the average flight time from the field averaged 35 minutes, achieving a 97.5% survival rate.

The nurses in Vietnam tended to be very young and inexperienced. Sixty percent of nurses had less than six months of active-duty experience upon arrival. Vietnam was the first war in which the Army Nurse Corps included male officers. The male Army Nurse Corps officers in Vietnam tended to be preferentially assigned to forward deployed units in direct support of maneuver units "in anticipation of increased enemy activity". Army nurses cared for large numbers of trauma patients. Like other wars, scope of practice rapidly expanded to include procedures not normally performed by nurses, such as chest tube insertions, tracheotomies, removal of shrapnel, assisting with amputations and closing wounds. On June 8th, 1969, Lieutenant Sharon Lane died of wounds received during an enemy attack at the 312th Evacuation Hospital in Chu Lai.

Lieutenant Cordelia Cooks was the first nurse wounded in the fighting against Germany, hit by shrapnel at the 11th Field Hospital in Italy. U.S. Army photo via National Archives.

Rank and Command

When founded in 1901, the first members of the Nurse Corps (Female) lacked rank or status. Its members were simply referred to as "Miss" or "Nurse". Although the initial grassroots campaigns supporting a corps of Army nurses called for military rank for its members, support within the Army Medical Department was not robust. Newcomb-McGee stated that "when I was writing the original law of the nurse corps, I talked to (Sternberg) about the rank question and he absolutely refused to admit that nurses were as useful or should rank be as high as the trained hospital sergeants." A lack of military rank or official status was problematic, particularly during World War I. There were over 21,000 nurses who served during the war. Upon their return, the issue of rank surfaced as a major topic of discussion among veterans in professional nursing journals. Some nurses felt that a lack of rank equated to a lack of status, creating ambiguity, a barrier to directing care, and put Army nurses in a position where they were ignored or disrespected. Additionally, a lack of rank proved to be a complicating factor for getting the nurses home from France, as they did not fall into the same categories as the officers and enlisted soldiers. The passage of the 19th Amendment in 1920, granting women the right to vote, provided a newfound momentum in obtaining additional status. There was much debate about nurses' rank in the immediate postwar period. Former superintendents of the Army and Navy Nurse Corps supported rank. Many physicians and line officers did as well. One compromise proposed granting nurses "relative rank" which allowed nurses to assume the title and wear the insignia, but lacked the status, pay, benefits and ability to issue lawful orders associated with full legal rank. Ultimately, relative rank was enacted as a part of the Army Reorganization Act of 1920, authorizing Army nurses the relative rank of lieutenant to major.

Relative rank would be the practice for the next 27 years. At the conclusion of World War II, Congress passed the Army-Navy Nurses' Act of 1947. The act ensured that pay and allowances were equal to male officers of the same rank and increased the grades of those who could serve up to Colonel. Colonel Florence A Blanchfield, the Chief of the Army Nurse Corps, was the first woman to hold a permanent commission and the first to hold rank of colonel.

The final evolution of rank came in 1967, when President Johnson signed Public Law 90-130, which limited each service to one female colonel and removed prohibitions to women serving as general officers. On June 11th, 1970, Army Nurse Corps Chief Anna Mae Hays became the first woman to achieve the rank of brigadier general. She was joined that day by Brigadier General Elizabeth P. Hoisington, the Director of the Women's Army Corps. Regardless of the fact that there were nurses who were general officers, Army nurses remained ineligible for command.

In the early 1990s, LTG Alcide LaNoe, the Surgeon General, acted on suggestions from the Defense Advisory Committee on Women in the Service top increase leadership roles for women and to provide Army Nurse Corps officers the opportunity to command. Additionally, the Leader Development Decision Network recommended that the Army Medical Department adopt branch immaterial command. LaNoe had already placed Army Nurse Corps Chief BG Nancy Adams in the command of the Center for Health Promotion and Preventive Medicine (Provisional). General Adams was selected for MG and placed in command of Tripler Army Medical Center in March 1998, becoming the first non-Medical or Dental Corps officer selected for Major General and command.

Branch immaterial command created the opportunity for Army Nurse Corps Officers to command at every level, ultimately culminating in MG Gale Pollock serving as the acting Surgeon General and LTG Patricia Horoho serving as Surgeon General.

Expanded Roles

Throughout its history, the Army Nurse Corps quickly adopted new nursing roles developed in the civilian community that expanded scope. The Army Nurse Corps' first advanced practice nurses emerged during World War I, when the Army sent twenty nurses to Mayo Clinic to receive six weeks of anesthesia training. The pioneer nurse anesthetists provided care to combat casualties with surgical teams and mobile hospitals at the front and served as a catalyst to spreading the movement in civilian community in the postwar period.

CPT Andrew Kontowicz, ANC, helps care for a patient at the 452d Combat Support Hospital, FOB Salerno, Afghanistan, May 12 2010. Photo courtesy DVIDS.

In 1965, former Army nurse Loretta Ford and physician Henry Silver created a new program at the University of Colorado to utilize nurses to address the healthcare needs of underserved children, calling the new role "nurse practitioners". Just a few short years later, Lieutenant Colonels Ruth Kulvi and Mary Condit attended the same program. Kulvi's success piloting the role at Walter Reed Army Medical Center in 1968 resulted in the creation of the Army Nurse Clinician Program, the Army Nurse Corps' initial name for the advanced practice role.

Early nurse practitioner education provided a certificate of completion. The Army created its own nurse practitioner certificate programs in the 1970s and 1980s. Eventually, the certificate programs were replaced with graduate programs and Army nurse practitioners received their education as funded participants in these programs.

At the same time the Army Nurse Corps began training nurse practitioners, it also instituted a midwifery program in conjunction with the University of Kentucky in 1972. The midwives were part of the same nurse clinician program as the nurse practitioners. By 1974, four midwives at Ft. Knox managed approximately 25% of the deliveries.

The advanced practice roles proliferated throughout the 1980s and 1990s and eventually transitioned into a Master of Science in Nursing program. During the deployments of the 90s and throughout the early part of Operations Iraqi Freedom and Enduring Freedom, Army nurse practitioners deployed in generic nursing roles, leaving decisions about how to utilize personnel at the unit level. In 2005, a policy shift allowed nurse practitioners to doctrinally deploy in the role for the first time. This policy shift resulted in a multitude of nurse practitioners deploying in roles that were atypical and were often in direct support of field units.

In the 1960s, the Army Nurse Corps incorporated nursing research into the organizational mission by creating a dedicated nursing research department at the Walter Reed Army Institute of Research. Research was conducted on important nursing care topics such as oral hygiene, the care of decubitus ulcers, and patient satisfaction. Nursing research moved to Walter Reed Army Medical Center and the Army Nurse Corps developed a formal plan for focusing research activities. In the 1990s, the Tri Service Nursing Research Program was created to collaboratively fund nursing research in the three services. Nursing research evolved into the

deployment environment. In 2006, the Army attached combat casualty research teams to busy combat surgical hospitals in Iraq to manage trauma registries and to provide oversight of medical research conducted in theater. The team included one PhD prepared Army Nurse Corps nurse scientist.

The expansion of clinical roles continues. Some roles, like women's health nurse practitioners, pediatric nurse practitioners and clinical nurse specialists have not endured despite positive outcomes. Currently, the organization fields 12 military occupational specialties and seven clinical skill identifiers.

Diversification of the Army Nurse Corps

When the Nurse Corps (Female) was established in 1901, the Army was segregated and men were prohibited from joining its ranks. During World War I, the American Red Cross served as the primary recruiters for the Army Nurse Corps. As a shortage of nurses emerged during the war, the War Department authorized 18 African Americans to serve at Camp Sherman, Ohio and Camp Grant, Illinois where they were permitted to care for African American soldiers.

In WWII, there were concerns that the 57,000 nurses serving in the Army Nurse Corps was insufficient. In 1945, President Roosevelt used his State of the Union message to call for a draft of 10,000 (female) registered nurses. Throughout the war, the Surgeon General's office slowly allowed 600 African Americans to serve in the organization. One of those nurses was Margaret E. Bailey, who was commissioned in 1944. Bailey served for 27 years and was the first African American nurse to be promoted to both Lieutenant Colonel and Colonel.

Despite personnel shortages in WWII that were such that a draft was considered, men continued to be forbidden from serving in the Army Nurse Corps until 1955, when HR 2559 was signed into law by President Eisenhower, and Edward T. Lyon became the first man to receive a commission. The men who served in the Army Nurse Corps received reserve commissions and were not eligible for regular Army commission until 1966.

BG Hazel W. Johnson became the first African American Chief of the Army Nurse Corps in 1979. BG William T. Bester became the first man to serve as Chief of the Army Nurse Corps in 2000.

Conclusion

The Army Nurse Corps has evolved into a diverse organization of highly educated officers who lead, command, and practice in advanced roles across the continuum of military care. Army nurses have consistently expanded scope and provided increasingly comprehensive care that is closer to the point of injury. These developments demonstrate how the organization has transformed into one of clinical innovation and leadership in support of the Army's readiness.

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U.S. Army Dental Corps History

Dental care in the Army, like other medical specialties, has had a long road to official recognition. We know that dental health is an important part of overall health and that Army Dentists are needed to ensure Soldier readiness. Less well-known are the important forensic, research, and oral surgery missions that dental personnel perform.

Dental specialization advanced in America in the 19th Century. At first there were dental lectures at medical colleges, and dental specific courses. Then in 1840 the Baltimore College of Dental Surgery was established as the first dental school in the world. The college's opening elevated the profession as well as produced a growing body of graduates. A push began for the U.S. military to recognize dentistry as a specialized medical requirement, but it would take decades. The American Dental Association (ADA) held its first convention in Washington D.C. in 1860. One of its first orders of business was to adopt a resolution to support the appointment of dental officers for the Army and Navy. Organized dentistry continued to press for military dentistry throughout the American Civil War, but the efforts were unsuccessful.

Slowly, personnel with dental training became more available. Since the Army did not recognize their profession with a corps or rank, they were scarce and were often serving in other capacities. William Saunders, a hospital steward at the U.S. Military Academy at West Point became the first soldier to be recognized as a U.S. military dentist. In 1872 he was directed by Special Orders to provide dental service for cadets and staff. He had provided dental care as part of his duties since 1858.

The Spanish-American War (1898) and Philippine Insurrection (1899-1902), when American troops were deployed to Cuba, Puerto Rico, and the Philippines, far from any civilian dental care, furthered the cause of dental commissioning. A significant number of trained dentists served in the capacities of hospital steward, and some were appointed by local command authorities to focus their service on dentistry. Still dealing with the need to support deployed troops at war in the Philippines, Congress passed legislation directing the Army Surgeon General to employ thirty civilian contract dentists to provide dental care in 1901. The dentists had to be graduates of a medical or dental school and pass a qualifying dental examination. Dental school graduates who were already in the Army Hospital Corps were excused from the exam. These dental surgeons held no rank but wore the same uniform as medical officers, except for silver "DS" insignia on the shoulder boards.

The movement to commission gained momentum, and on 3 March 1911, the U.S. Army Dental Corps (DC) of commissioned officers was established with the passing of H.R. 31237, Amendment 49, with President William Taft signing it into law. Dr. John Sayre Marshall, M.D., considered the father of the Army Dental Corps, had continuously lobbied for an Army dental service. He became the Army's first commissioned dental officer in April. He was the first contract dentist, senior supervising contract dental surgeon, and president of the first Army Board of Dental Examiners. His career had already included private practice (1876-1901), book publications, and establishing the Dental Department at Northwestern University (1886).

A WWI-era dental clinic combines mobility and practicality. Most procedures of the time were indoors. ACHH collection.

After this big change, Army dentists provided continuous support during the many conflicts that soon followed. Although America did not enter WWI until April 1917, there were precursor efforts. The Preparedness League of American Dentists, composed of 1,700 civilian dentists, provided free dental service for men wishing to enlist. By 1918 Preparedness League dentists had provided approximately a million pro bono dental procedures to men selected for military service. The group also donated dental ambulances to the Army. When the United States entered World War I the Dental Corps had 86 Regular officers. By 30 November 1918, the number of active-duty dental officers peaked at 4,620 from the Regular Army, Army Reserve, and National Guard, with 1,864 stationed in Europe.

Following a troop drawdown after the "Great War" the need for dental support dwindled but remained. Numbers increased in the late 1930s. As the United States entered WWII in December 1941, Dental Corps numbers were 316 Regular Army and 2,589 reserve Dental Corps officers. Personnel numbers and procedures would greatly expand as the Army grew to a huge size during WWII, over 18,000 dentists. From 1942 to August 1945, the Army Dental Corps completed the following procedures: 16,231,264 extractions, 69,546,560 restorations, 579,473 full dentures, and 2,032,684 partial dentures. Twenty dental officers were killed by enemy action. In addition to these 20, five later succumbed to their wounds, ten died in captivity, and 81 lost their lives to disease and nonbattle injury. Dental Corps officer CPT Benjamin L. Salomon earned the Medal of Honor posthumously during the battle on Saipan.

During the war, the Army was faced with a shortage of glass artificial eyes. Research minded Army dental officers in three widely separated locations experimented with clear synthetic resin and fashioned a plastic eye which was adopted for routine use by the Army. Army dental personnel were also important in the development of improved custom hearing-aid adapters and fabrication techniques of tantalum plates for the repair of skull defects.

With smaller numbers of Army personnel in service after WWII, Army planners considered how to provide dental care for the force. The concept of area dental support, as opposed to unit dental support, was introduced during the Korean War. This would evolve into the KJ Detachment of the Vietnam War era, redesignated the HA Detachment in the early 1970s, and subsequently the Dental Company of the post-1991 Gulf War era. The decline in Army dental professionals serving continued. Peak strength of the Dental Corps during the Korean War (1950-1953) was 2,641 officers with 370 serving in Korea. In the Vietnam conflict (1962-1973), 2,817 dental officers were on active duty with 290 stationed in Vietnam. The concept of support was revisited during the war with a combination of unit support (approximately one dentist per brigade), hospital support (usually an oral surgeon per hospital), and area support (fourteen dental service units and one dental command and control unit).

Similar to other branches, Army-wide changes in the years after Vietnam affected Army dental services. In an all-volunteer force, soldier numbers would be smaller, but dependent care would increase, and there would be fewer Army dentists. In 1975, new Army Dental Corps Chief, MG Surindar N. Bhaskar pushed for more control for dental officers. This control included separation from hospital commands. At this time there were 1,856 Dental Corps officers. It took time but by the end of 1977 changes were in place to establish Dental Activities (DENTAC), which were under the command of dental officers.

A saber-toothed cat (smilodon) is a fitting symbol for the 673d Dental Company sign in Afghanistan in 2011. ACHH collection.

During Operations Desert Shield and Storm (1990-1991) readiness issues in relation to dental health rose in prominence. American forces utilized many reserve units that had to quickly update medical records and treatments to have personnel ready for deployment. Although the conflict was short in duration, the large numbers mobilized required a significant dental support footprint. Mobilization and deployment dental processing was provided to 243,829 DoD personnel. Five reserve dental units and a number of Individual Mobilization Augmentees were activated to

help with the massive dental workload. 550 dental reservists were activated: 223 DC officers, 5 MSC officers, and 322 enlisted Soldiers. In February 1991, 300,000 soldiers were supported in Southwest Asia by 25 oral and maxillofacial surgeons, 96 other dental officers, as well as dental enlisted personnel.

The next twenty years would see first organizational changes and then another war. On 1 November 1993 the U.S. Army Dental Command (DENCOM) was provisionally activated in San Antonio, Texas, as a major subordinate element of the U.S. Army Medical Command. There were other organizational movements, but dental command over dental personnel remained in place. After the attacks on September 11, 2001 Army dental professionals assisted in forensic operations. Army oral pathologists and support personnel from the Armed Forces Institute of Pathology were sent to Dover Air Force Base to participate in the identification of remains. Three weeks into the mission, dental identifications were performed in over 63% of the cases, and in 30% of cases dental evidence served as the sole method of identification.

Army dental soldiers deployed world-wide in support of the follow-on conflict, the Global War on Terror. Early in Operation Iraqi Freedom (2003-2011) the 93d Medical Battalion (Dental Service) from Heidelberg, Germany, commanded by Colonel (later MG) Russell J. Czerw, provided dental command and control to most of the dental companies in theater. In the early stages of OIF, elements of the 93d supported V Corps and theater missions in Kuwait and Iraq. Although it was designated as a medical battalion (dental service) the 93d was task organized to also provide command and control to subordinate units with functions other than dental.

Change in the Army is inevitable, and there will always be reorganization efforts. Recently the Dental Commands for Europe and other areas were inactivated and consolidated with other regional medical units. Although oral health within America has improved and the number of Army dental personnel has decreased, there is still a great need to continue providing quality dental care to ensure soldier health and readiness.

Abridged from Highlights in the History of Army Dentistry. Falls Church, VA: Office of The Surgeon General, 2012.

— 27 July 1775 —

U.S. Army Veterinary Corps

Although the names and duties have changed, veterinary personnel have been a part of the Army since its inception and are still an important part of the force. Medical knowledge has greatly changed since the Revolutionary War; animal health is still part of the mission, but food inspection and food safety, public health, and research that affects humans and animals are also mission areas.

Building the American Army, General George Washington wrote of the inclusion of “farriers” in proposed regiments of horse-borne troops. Although we think of farriers as horseshoers, the term was a catch-all for animal care at the time. Reliance on animals for transportation and nutrition were essential to early army operations and logistics. While there were farriers and other “horse tenders” attached to the American Army from the time of the Revolutionary War, medical expertise and official recognition did not occur until much later. It should be noted that horses then (in the 1800s) mules were the animals of focus.

Veterinary medicine, similar to other scientific disciplines in the United States, expanded during the 19th Century. In the 1840s veterinary colleges appeared in a few larger cities, producing graduates with improved knowledge of animal maladies. The colleges were often part of local animal care businesses and didn’t last very long. American university-based veterinary education began in the late 1860s. Before the Civil War outbreaks of disease were generally localized, but maintaining healthy army animals was still of importance. A few civilian veterinarians were hired to support the Army during the War with Mexico (1846-1848).

Later, the rank of veterinary sergeant existed briefly at the beginning of the Civil War to support some cavalry regiments, but the position was dropped in 1862. In 1863 each regiment of cavalry was authorized a regimental veterinary surgeon ranked as a regimental sergeant major. To supplement the need for assistance, civilian veterinarians were again hired in large numbers.

After the Civil War the smaller army still had mobility requirements and increased standards of its veterinary care. Army veterinarians, who were often uniformed contractors or physicians specializing in animal care, served in varied locations and on the “frontlines” of the day. Six existing cavalry regiments were still authorized one veterinary surgeon, and four newly formed cavalry regiments were authorized two veterinary sur-

geons, one of which would be designated the "Senior Veterinary Surgeon." In a step forward demonstrating confidence in the profession, Army General Orders of 1879, later also included in Army Regulations of 1881, provided that all appointed veterinary surgeons "be graduates of established and reputable veterinary schools or colleges."

Following the Spanish-American War (1898), there were new changes for the Army's veterinary service. Congressional legislation in 1899 improved the status of senior veterinarians in the cavalry regiments, when they were accorded rank between cadet and Second Lieutenant. An investigation of "embalmed meats" at the close of the Spanish-American War mirrored the spirit of the time (foundation of the FDA) and established the use of Army veterinarians for government food inspection. From 1901 to 1906 a handful of veterinarians were detailed from the U.S. Department of Agriculture to the Subsistence Department of the Army for meat inspection. Later, post commanders were able to utilize veterinarians to inspect locally purchased beef. Additional changes included veterinary instruction at the U.S. Army School of Hippology at Fort Leavenworth, a part of the larger Infantry and Cavalry School. Veterinary instructors were in a quasi-contractor status, with uniforms and insignia but not rank. Their instruction was on the care, maintenance, and purchase of horses for future Army leaders.

A WWII Army dog exam. Although associated with military working dogs, Army veterinary personnel also ensure food safety, perform research, and work on numerous public health issues. Army photo.

Even before the build-up of the American Army for WWI, early planners saw the wisdom of increasing the size and permanency of the Army veterinary service. On 3 June 1916 the National Defense Act in Section 16, specified the appointment, duties, and implementation of veterinarians in the Army. This act also provided for an official Veterinary Corps with officer rank and a promotion structure.

During WWI (1917-1918), due to the continued reliance on animal transportation, the U.S. Army veterinarian gained status within the American Expeditionary Force. Similarly their efforts in "remounting" and treating horses and mules assisted the war effort in Europe, where animal stocks had been greatly depleted. The veterinarians would also begin a mission of great importance as they enhanced camp conditions through better sanitation. Food safety and inspection was massively expanded as an Army of 4 million soldiers had to be fed. Centralized instruction and inspection began adjacent to the meat packing hub of Chicago. Courses that later evolved into the U.S. Army Meat and Dairy Hygiene School would remain in the area until the early 1970s. The Veterinary Corps and veterinary services peaked in the war with 2,300 Veterinary Corps officers and 18,000 enlisted personnel serving.

After decreasing from the large force of WWI, new challenges arose. The Veterinary Corps which had only been in formal existence for two years at the close of the "Great War," still had the mission of providing treatment and support service to equines and also to expand laboratory and research capabilities.

The newly formed Veterinary Corps was greatly reduced as many of its members rejoined practices in civilian life or returned to the reserves. Army veterinarians were maintaining equine health and studying diseases in laboratories or in jungle environments. One veterinary scientist, Raymond A. Kelser (1892-1952), would rise to prominence during the inter-war period for his steadfast laboratory work. Although Kelser joined the Army in 1918 during WWI, he did not see service overseas. In 1928, while in the Philippines, he developed a vaccine for rinderpest in cattle. His pioneering lab work led to a test for detecting botulism in canned foods, the first "killed virus" vaccine that utilized chloroform as an inactivating chemical, and important observations in equine encephalomyelitis. He also improved the rabies vaccine of the time. Recognized for his achievements, Raymond Kelser was selected as Chief of the U.S. Army Veterinary Corps in 1938 and its first Brigadier General later during WWII.

WWII marked three large changes for Army veterinary personnel. Food inspection became the foremost mission, equine acquisition and utilization rapidly declined, and dogs became an official part of the military inventory. BG Kelser oversaw the changes as the Veterinary Corps expanded from 126 veterinary officers

to over 2,200 from 1941-1945. Veterinary Corps personnel served in all theaters of the war with some on the frontlines and captured as Prisoners of War. One Veterinary Corps officer, CPT Clayton Mickelsen, earned the Distinguished Service Cross. The food inspection and food safety mission was again greatly expanded as the American Army grew exponentially. From 1940 to 1945, 142 billion pounds of meat and dairy products were inspected by Army veterinary service personnel.

Five years after WWII, veterinary personnel rapidly deployed to Korea to inspect rations and provide care for military working dogs. They also worked on sanitation issues and curbing endemic zoonotic diseases. Although it was more gradual in build-up, their work had a similar pattern during the war in Vietnam. The length of the war allowed for more laboratory work and research into regional disease monitoring. Despite their hard work, there were calls by some to eliminate veterinary personnel from the Army since animals were no longer of primary importance.

CPT Dwayne Overby gives a camel an injection during a veterinary civic action program in Djibouti in 2006. Image courtesy DVIDS.

These arguments came to a head in the 1970s as Congressional hearings reviewed the relevancy of the Veterinary Corps as the Army underwent significant change. While animals were no longer the prime movers of the military, the food inspection, research, military working dog, and public health missions were deemed significant enough to preserve the Veterinary Corps. The scrutiny brough an additional change as the U.S. Army Veterinary Corps became the executive agent for all veterinary functions for the Department of Defense. With the increased food inspection mission Warrant Officers became part of the veterinary team in 1981.

Veterinary personnel were also on a different type of frontline during this time, discovering and preventing the spread of deadly and damaging diseases. In the 1970s they assisted in halting Newcastle Disease, a deadly poultry illness and stopped Venezuelan Equine Encephalitis from spreading through a massive vaccination campaign. U.S. Army Veterinary personnel also assisted in pioneering efforts to eliminate screw worms (cochliomyia hominivorax) from North America. Veterinary Corps members continued to be of vital importance as global health threats surfaced. In 1989 U.S. Army veterinary personnel contained and studied animals infected with a strain of Ebola in Reston, Virginia. The incident became the basis for both the book and movie *The Hot Zone*. Later veterinary personnel would work on Ebola containment within Africa.

As one can see from early origins to present day, veterinarians are of vital importance to the Army, insuring both animal and human health. Their expertise has expanded, and horses are no longer the primary focus. Instead, they have grown with technological advances and in many cases are at the forefront of important research.

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The Medical Service Corps, 30 June 1917

During the Revolutionary War the AMEDD was composed of physicians and surgeons, but they employed storekeepers to manage supplies and apothecaries to prepare and manage pharmaceuticals. After the war the Army was greatly reduced in size and with it the Medical Department, something that would happen during peacetime with regularity until the second half of the Twentieth Century. From the end of the Revolutionary War until the War of 1812 the Medical Department ceased to exist entirely.

During the War of 1812 the haphazard medical support provided to the Army resulted in the appointment of a Surgeon General in 1813 and in 1818 the permanent establishment of a Medical Department which included an Apothecary General, a doctor tasked with improving the department's supply system and the Medical Department wouldn't have a permanent corps to relieve doctors from administrative responsibilities until after World War I. Hospital stewards provided some support, managing supplies and pharmaceuticals, caring for facilities, and keeping order on hospital wards, but these soldiers were detailed from the line and subject to recall if the line commander thought it necessary. A uniformed Ambulance Corps was created during the Civil War to oversee removing the wounded from battlefields and increased the efficiency of medical support during the war, but the Army again reduced in size afterwards and the Ambulance Corps was abolished. By the time of the Spanish-American War the science of medicine was becoming better understood. The development of the germ theory of disease and of bacteriology as a scientific discipline led to an increasing role of laboratory sciences in the practice of medicine, but those positions were still largely filled by doctors who also were responsible for supply and administrative activities. With the rapid expansion of the Army, many of the doctors who recently had been civilians were unprepared for these responsibilities which led to predictable failures, a post-war investigation, and the beginnings of departmental reform.

Precursors to the Medical Service Corps began to emerge as organic parts of the Medical Department's officer corps during the First World War. Hundreds of Americans volunteered to serve as ambulance drivers in France before the United States entered the war in April 1917. After the U.S. entered the war the Army formed the U.S. Army Ambulance Service which absorbed many of those volunteers who continued to support foreign armies in France and Italy throughout the war. The Army formed an Ambulance Corps on 23 June 1917 to relieve Medical Corps officers from service with those ambulance units so they could best use their skills in hospitals.

The Sanitary Corps was established on 30 June 1917 as a catchall for commissioning officers in specialties that the AMEDD history of the war listed as including "sanitary engineers, psychologists, chemists, laboratory technicians, office experts, adjutants, epidemiologists, mess officers, etc." At the end of the war there were nearly 3,000 officers serving in the Sanitary Corps, largely as lieutenants and captains. 73 were serving as field grade officers. After the war the Ambulance Corps was discontinued and a greatly reduced Sanitary Corps was placed in the Reserves, but its continued service is the basis for the Medical Service Corps' claim to its existence since 30 June 1917.

With the loss of officers in non-clinical specialties after the war the Medical Department assigned physicians, dentists, and veterinarians to administrative duties. In September 1919 Surgeon General Merritte Ireland asked Congress to create a

Major (later MG) Patrick Brady, MSC, receives the Medal of Honor for heroism in Vietnam. Cover of the Medical Service Corps September 1971 recruiting bulletin.

corps to oversee supply, serve as pharmacists, command ambulance units, and perform administrative duties. The Army Reorganization Act of 4 June 1920 established the Medical Administrative Corps, commissioned primarily from AMEDD enlisted soldiers, with captain as the highest grade available for MAC officers. The Act also specified that the Army Reserves would include both a Medical Administrative Corps and a Sanitary Officers Reserve Corps.

During the Great Depression opportunities for promotion and force structure growth were limited. Beginning in 1928 the American Pharmaceutical Association (APA) lobbied to create a separate Pharmacy Corps which the AMEDD resisted. In 1936 Surgeon General Charles Reynolds supported legislation that reduced the number of MACs to 16 but permitted commissioning pharmacists as MACs.

During WWII the Medical Department had to expand rapidly. In June 1940 there were only twelve MAC and Sanitary Reserve Corps officers on active duty. Over the following twelve months that number would grow one hundred-fold. The urgent need to place experienced medical, dental, and veterinary officers in the growing number of senior leadership positions in the department led to increased reliance on MACs to execute the administrative, supply, and sanitary duties of the Medical Department. Two officer candidate schools commissioned more than 17,000 MACs during the war. With increased responsibility also came the opportunity for increased rank, opening the path to field grade and one MAC, Edward Reynolds, would be promoted to brigadier general in June 1945. The war also expanded opportunities for non-administrative, scientific specialties. Before the war the Sanitary Corps expanded from 8 to 227 officers on active duty. By December 1943 there were nearly 2,400 officers. Many had been civilians with specialist training who were directly commissioned as first lieutenants.

Sanitary engineers and entomologists were the Medical Department's front-line troops for force health protection and also played important roles as U.S. forces established military control over enemy cities whose sanitation and water systems had been devastated by combat. Entomologists were essential to controlling the insects that carried disease. Nutritionists developed guidelines for Army diets and worked with the Quartermaster Department to ensure that Army rations were nutritionally adequate. They were also directly involved in relief efforts in Germany developing diets to aid the recovery of concentration camp survivors and refugees. Laboratory officers supported physician's increased reliance on diagnostic tests. When the need exceeded the available manpower pool the AMEDD sought permission to commission women into the Sanitary Corps to serve in laboratories, but the request was denied. Qualified women were instead commissioned in the Women's Army Corps and detailed to serve in laboratories. In 1943 the pharmacists finally achieved their desire for a separate corps. Congress voted to approve the new corps and the President signed the Act into law authorizing 72 new pharmacists.

By the time WWII ended the inclusion of large numbers of administrative and scientific specialists had changed the culture of the Medical Department which no longer viewed these officers as a wartime necessity but as an integral part of the AMEDD. In January 1946 The Surgeon General requested the formation of a single corps that would accommodate the scientific, administrative, and pharmaceutical needs of the Medical Department. With less than three years passed since they had successfully argued for the creation of a Pharmacy Corps, the American Pharmaceutical Association opposed this idea. After negotiations the two factions eventually reached détente with Surgeon General Kirk agreeing that pharmacists would constitute 80% of the Medical Service Corps and the chief of the corps would be a pharmacist.

Congress passed the act on 4 August 1947 which ended the Medical Administrative, Sanitary, and Pharmacy Corps. The new MSC included three sections, each headed by a section chief, which absorbed the officers from the old corps and included Pharmacy, Supply, and Administration; Medical Allied Sciences; and Sanitary Engineering. A fourth section was added, Optometry, creating a group of officers with that specialty who previously had served as enlisted men.

The first test for the Medical Service Corps would be the Korean War and MSCs served with distinction. 1LT Raymond "Bodie" Adams, MSC, served as the assistant battalion surgeon for Task Force Smith, the

first U.S. force engaged during the war. COL Charles McAllister arrived in Korea with the Eighth Army Advanced Section as the Executive Officer for the Eighth Army Surgeon. Shortages of physicians opened some command positions to MSCs during the war and the use of helicopters to evacuate casualties would create a new specialty for MSCs after the war when the Army began training MSCs as aviators. Laboratory officers proved their importance to the medical team as soldiers came down with endemic diseases including malaria and hemorrhagic fever. Preventive medicine teams led by MSCs fought their own battles against lice, mosquitoes, and vermin to protect soldiers' health. Although the corps had a new name, the officers in its specialties once again proved their value to the Medical Department.

In 1953 the Army-Baylor program in hospital administration graduated its first four students. The course was open to all AMEDD corps and MSCs were some of the earliest to take advantage of this new program with two in the first class earning master's degrees in healthcare administration. Many MSCs during this period did not hold baccalaureate degrees which limited their ability to pursue graduate degrees but by the late 1960s stricter educational requirements for commissioning resulted in greater opportunities and more MSCs enrolled in the renamed Army-Baylor Program in Health Care Administration than any other corps.

During the decade between the Korean and Vietnam wars the most significant change for how the MSC would support the AMEDD in future wars came in the form of the UH-1 Iroquois, better known as the Huey. During the war the Huey was used by Medevac units to carry thousands of wounded men to lifesaving care. MAJ Charles Kelly, who commanded the 57th Medical Detachment in Vietnam, personified the Medevac ethos and through his leadership the unit developed a reputation for braving any danger to rescue wounded soldiers. Kelly was also the first MSC killed in Vietnam. After being told to leave a landing zone because it was too dangerous, he replied "When I have your wounded" shortly before being fatally shot. Kelly's dedication to the mission lived on through the legacy of heroism earned by Dustoff crews. The only recipient of the Medal of Honor for actions while commissioned as an MSC was another Medevac pilot, MAJ (later MG) Patrick Brady.

Psychologists and social workers were increasingly important members of the MSC, first in Korea, and later in Vietnam as the profession gained greater understanding of the causes of and treatment for combat related stress. Optometrists demonstrated their value by conducting eye exams and replacing lost or broken eyeglasses in theater, preserving combat power. MSCs worked on the team that developed Sulfamylon cream in 1965, improving the survivability of severely burned soldiers. A significant milestone for the MSC was reached when in 1966 Congress passed an act authorizing the rank of brigadier general for the corps chief.

The U.S. Army Surgeon General LTG R. Scott Dingle meets MG Dennis P. LeMaster, Commanding General of the U.S. Army Medical Center of Excellence (MEDCoE) and 19th Chief, U.S. Army Medical Service Corps at Medical Command on Joint Base-San Antonio, Texas 2020. U.S. Army photo.

The period from the end of the Vietnam War until the fall of the Berlin Wall was relatively quiet for the Army, but was also a period of personnel and resourcing constraints with the move to an all-volunteer Army. MSCs continued to serve in the peacetime Army and leadership of the corps shifted towards officers in administrative fields. In 1984 MSC Millie Hughes-Fulford was selected by NASA as a mission specialist for the space shuttle program. She was followed by MSC Kathleen Rubins, a microbiologist, who made her first of two trips to the International Space Station in 2016,

eventually spending over 300 days in space. In 1984 when MSC Chief BG France Jordan was selected to fill a DoD 2-star billet COL Walter Johnson was selected as corps chief and promoted to brigadier general the following year, the first time two MSCs served simultaneously as general officers.

Conflicts in Panama, Iraq, and Somalia offered brief opportunities for combat during the late 1980s and early 1990s, but the Cold War ended without direct superpower confrontation and the Army's focus shifted to peace keeping and humanitarian relief. Force structure cuts in the early 1990s resulted in a smaller MSC and changes in technology in the 1990s led to the creation of a new specialty for the MSC, biomedical information management officer.

During the post-Vietnam period MSCs had been given opportunities for command of TO&E organizations, although the command position was authorized for a Medical Corps officer who worked in a hospital and only reported to the unit if it were to deploy. During Desert Storm, line commanders were in many cases hesitant to replace the MSC commander they knew for a doctor they didn't. Afterwards, the Medical Department faced criticism for designating wartime commands for doctors who didn't serve in that position in peacetime. This resulted in the 1996 revision of command policy in the AMEDD and the creation of AMEDD branch immaterial commands. This opened the path for greater professional development of MSCs and eventually to selections of MSCs to serve as general officers in positions other than branch chief. In 2006 David Rubenstein was promoted to brigadier general while BG Sheila Baxter was serving as Corps Chief. Two years later he was promoted to major general and served as Deputy Surgeon General and then Commanding General of the AMEDD Center & School while concurrently serving as Corps Chief. In 2019 R. Scott Dingle was promoted to lieutenant general and was the first MSC to serve as The Surgeon General.

Following the 9-11 attacks the Army was engaged in Afghanistan and Iraq for the following two decades. MSCs continued to command units in the field and provide the supply, administration, force health protection, and other specialties that enabled the AMEDD to provide unprecedented medical support for soldiers in the field and wounded warriors recuperating in Army hospitals. During the COVID-19 epidemic MSC researchers participated in the race to find a vaccine that could protect against the disease.

Today the Medical Service Corps consists of 1 warrant officer and 22 officer specialties. The MSC provides the enabling services that enables other corps in the AMEDD to deliver world-class healthcare efficiently and effectively and is integral to ensuring the Army Medical Department maintains a ready, capable force, trained, equipped, and led to support the Army during peace and war.

— 27 July 1775 —

The Army Medical Specialist Corps

The Army Medical Specialist Corps was established in 1947 but has roots in 1917. As soon as the U.S. entered WWI, Surgeon General William Gorgas requested permission to hire Hospital Dietitians and Reconstruction Aides (an umbrella for PT and OT), and from May 11, 1917, he could hire them as civilian employees. At the time, those were overwhelmingly female occupations, and the U.S. public did not accept women as soldiers or sailors. But they were needed to speed return to duty of the wounded, ill, and injured and to maximize function for those who would not return to duty. The compromise was thus to hire them as civilian employees; they would still wear uniforms, and would still be deployed, but would work in rear-area hospitals. Well over 1,000 served, and four died from disease or accident.

Their work was important and varied, including work with shell-shock patients, and they pushed professional boundaries. Using RAs and HDs proved how much their skills improved patient outcomes, and women who'd been with the Army were key leaders in getting professional organizations off the ground in the 1920s. The Army saw value as well: it not only continued to employ them at all large Army hospitals worldwide, it trained them in the 1920s and 30s.

In WWII the work was broadly the same, but the circumstances changed. The war was not just in Eu-

rope but truly worldwide, with major hospitals on Pacific islands, in Australia, India, Persia, Egypt, Italy, France, England, the Caribbean, and of course in the U.S. and on hospital ships traveling between any of these places. Physical therapy and occupational therapy equipment often had to be improvised with the help of carpenters and welders; dietitians got to work on menus with a wide range of powdered ingredients and others locally procured. At first the women were still civilian employees, and as civilian employees, three dietitians and a physical therapist were captured in the Philippines in 1942. Others volunteered to deploy into combat zones because they were needed. Late that year the Army began to offer pay and benefits equal to officers (what was called "relative rank") and in June 1944 the women received full commissions in the Army.

Recovering soldiers are assisted by physical therapy aides at Walter Reed General Hospital following WWI. U.S. Army photo.

After WWII the military was overhauled, and the AMEDD reassessed what skills it needed. One change was establishing the Medical Service Corps. The Army Nurse Corps also had some changes. But the Women's Medical Specialist Corps was established, and as a part of the Regular Army. That was recognition that the Army needed the physical and occupational therapists and dietitians every day – they were not reservists to be activated when there was a need, then sent home. During the Korean War WMSC officers supported operations in Japan, and further forward in Korea itself, moving forward to Role III hospitals. Dietitians took over responsibilities from mess officers, including feeding the hospital staff and budgeting, while frostbite patients drove innovative treatments from the physical and occupational therapists. Moreover, they helped build the Republic of Korea Army Medical Corps, almost from scratch, building alliance capacity and capability.

In 1955 Congress ironed out some discrimination, allowing males to serve in the Army Nurse Corps and revising the Women's Medical Specialist Corps into the Army Medical Specialist Corps because males could serve there as well. Previously, qualified males could only serve as enlisted OT or PT aides, and at least one male dietitian had served as a Quartermaster Corps officer. Now they could serve in the AMSC, and there were enough to keep Corps strength high. Until 1966 there were no deployments more demanding than humanitarian deployments for earthquakes and the like, and international staff assistance visits to teach other military medical services about dietetics or physical therapy.

In 1966 that changed, when AMSC officers began to be deployed to Vietnam. Since the Army established a 30-day evacuation policy (patients expected to return to duty within 30 days stayed in Vietnam) PT and dietetics would definitely help patients. Over the years, 47 PTs and 26 dietitians served at various U.S. Army hospitals and the convalescent center in Vietnam, and supervised enlisted personnel at other hospitals. They treated tens of thousands of patients, supervised millions of patient meals, and helped speed up patients returning to duty. One OT was assigned to Vietnam, working at the convalescent center with drug abusing patients. Other AMSC officers served in Japan, where the Army established several thousand hospital beds for offshore support to Vietnam. The hospitals in Japan had a 60-day evacuation policy, so they were treating more acute patients (including burn patients) and thus had more need for the AMSC officers. And as patients were evacuated to the U.S. for rehabilitation, AMSC officers were involved in their care for months and sometimes years.

After Vietnam, the AMEDD and Army changed, especially due to the end of the draft. Without doctors being drafted, the AMEDD had to change how it cared for patients and how it prevented problems. AMSC officers had been hospital-based, and that changed to have more community outreach. Sports medicine, smoking cessation, and improving diets were among the added responsibilities. In clinic, with fewer physicians

around, AMSC officers showed they could evaluate and begin treatment for many musculo-skeletal problems. AMSC officers consulted in the exercise programs, weight control program, and the new over-40 health screenings. In the 1980s AMSC officers were assigned to positions further away from hospitals: combat divisions had dietitians to oversee the dining halls; PTs and dietitians were assigned to fitness centers, not unlike the Holistic Health and Fitness program now. More officers were sent to professional military education, previously largely done by correspondence or ignored because they were seen more as clinicians than as officers. Positions were also established at Forces Command and other commands for force developers, to better tie the AMSC to deployed force structure. OTs began to be assigned to combat stress control units, for instance. Internally, there were more males, from 23% in 1966 to 37% in 1970 to 42% in 1989. Clinical challenges increased as well, with AMSC officers supporting the Exceptional Family Member Program from its inception.

The Army had Physician Assistants since 1973, serving as Warrant Officers in the Medical Corps. In 1992 they transitioned to commissioned officer status, and were assigned to the AMSC. That further changed the Corps: now it was majority-male, and there was further change out of the hospitals and clinics towards field units. In the 1990s the AMEDD changed policy, allowing officers to compete for commands regardless of their branch, and AMSC officers built off their previous experience and their leadership skills were soon recognized with commands, at detachment/team, company, battalion, brigade, and MTF levels.

1LT Robert Blume, a physician assistant for 187th Infantry Regiment, 101st Airborne Division, treats a civilian contractor at Combat Outpost Champkani, Afghanistan 2013.
U.S. Army photo

Operations in Iraq and Afghanistan provided new challenges to AMSC officers. Deployable hospitals had been optimized for only short-term patient hold, meaning rehabilitation roles in theater were minimized. The prevalence of musculo-skeletal injuries soon led to PTs (and enlisted aides) being deployed, while OTs performed their combat stress role, and PAs were heavily engaged in battalions. All specialties were engaged in deployed leadership. In the U.S., rehabilitation took on new meaning at the Military Advanced Training Center and the Center for the Intrepid, where multiple-amputees and others with complex injuries had lengthy recovery times, and AMSC officers were part of care teams. One somber note was the first AMSC officer killed in action, as CPT Sean Grimes (and three others) was killed by the blast from improvised explosive device in 2005.

Over the years, PTs, OTs, Dietitians, and PAs have shown their clinical and leadership value to the Army. They broke out of hospitals and now work with troops and families in the military communities, in research, and varied clinical roles. They surpassed their clinical responsibilities and showed their leadership - so far, PA, OT, and PT officers have been promoted to general officer. What is the ceiling for the people of the Army Medical Specialist Corps? Unknown, but they have greatly advanced in their 108 years of Army service.

The Army Medical Department Civilian Corps
By Kenneth M. Koyle

Civilians have played a vital role in Army medicine from the very beginning. Virtually all medical functions were provided by civilians in the first few decades of the Army's existence. The history of civilian support to the Army Medical Department (AMEDD) is an integral and inseparable component of our overall history.

On 27 July 1775, the Continental Congress established a medical department to provide care for the Continental Army. Although it outlined a system of care for the military, the legislation did not designate military rank for medical personnel. This ambiguity left a corps of quasi-civilian medical providers to carve out their own place in the Army structure.

Despite the challenges, the civilian cadre of the early AMEDD made significant strides in planning and organizing battlefield medicine, preventive care, and basic logistical support for the Army. Under the purview of a Director General (antecedent of the Surgeon General), the surgeons, assistant surgeons, apothecaries, and purveyors worked tirelessly to overcome obstacles and provide the best care possible. These personnel served in an indeterminate state—not exactly soldiers, but not exactly civilians, because they were subject to the Army's regulations. The conditions of service were arduous. According to one surgeon who served on the Canadian frontier during the War of 1812, most medical men were only willing to serve for a single year in these circumstances, and then only because of curiosity and a thirst for adventure.

In 1818 Congress established a permanent Medical Department with a Surgeon General. By 1840 the military surgeons had a standardized uniform and their pay was approaching that of the line officers. Although they were commissioned, they still held no military rank and were not entitled to salutes. This indistinct status was clarified in February 1847, when Congress granted official rank to medical personnel.

The contract surgeon was the most obvious manifestation of civilians serving the AMEDD in the 19th Century. These civilian doctors were hired to fill shortages throughout the medical system, often with service at isolated frontier posts or other austere locations. Field commanders were authorized to hire contract surgeons as needed to provide adequate medical care for their units. Their numbers rose steadily over the ensuing years, and during the Civil War more than 5,500 civilian doctors served with the Medical Department.

At the end of the 19th Century the Army continued to augment its regular medical force with civilian doctors, nurses, dentists, veterinarians, and purveyors serving under contract, and laborers hired as needed. The 20th century ushered in significant changes as many of these professionals traded their contracts for commissions with the creation of the Army Nurse Corps, Dental Corps, Veterinary Corps, and the Sanitary Corps from 1901-1917.

When the United States entered WWI, the AMEDD was inadequate for the colossal task of supporting over four million troops. Army hospitals were typically staffed with civilians in a wide variety of positions. Civilian reconstruction aides (later termed physical therapists and occupational therapists), dieticians, X-ray technicians, and other medical specialists helped bring state-of-the-art medicine to the soldiers. Civil Service personnel, including psychologists, also aided in screening new recruits and draftees.

As WWII loomed, the Medical Department again found itself desperately undermanned. Persistent shortages of military personnel meant that half of some hospital staffs were civilians. By 1943 the need for military personnel overseas compelled the AMEDD to reverse its policy limiting the percentage of civilians. In the last year of WWII, the War Department established a goal to increase the number of civilian employees to half the total force. By March 1945 there were approximately 11 civilian employees for every 10 enlisted soldiers in the AMEDD.

After the war ended, the rapid discharge of personnel led to shortages that induced the AMEDD to resume the practice of hiring contract surgeons and dentists again. The personnel shortage became critical, and Congress passed a "doctor draft" law in September 1950 and funneled money to the AMEDD to hire even more contract surgeons and dentists. In 1959 the Medical Department began formal career management programs for civilian employees in 12 career fields: civilian personnel administration, comptroller, safety, supply management, procurement, education and training, equipment specialist, librarians, information and editorial, automatic data processing, intelligence, and engineers and scientists.

In 1964, Congress dealt government civilians a harsh blow with the Dual Compensation Act. This act imposed heavy financial disincentives for military retirees wishing to continue serving as government civilian

employees. In order to take a Federal Civil Service job after retiring from the military, the retiree would have to forfeit some or all of their retirement pay during the period of employment.

The end of the Vietnam War initiated a period of significant change in the Army, most evident in the AMEDD by a complete reorganization of the department in 1973 and the establishment of the U.S. Army Health Services Command (HSC). Many of the people affected by the new organization were AMEDD civilians—over 22,000 belonged to HSC at the end of its first year, most of whom were brought into the command via "Mass Change" directives. Additional civilian positions were added over the next few years as part of a vigorous "civilianization" program that converted thousands of jobs from military to civilian.

Army Chief of Staff GEN Dwight D. Eisenhower receives treatment from a civilian dental hygienist at Walter Reed Army Medical Center. U.S. Army photo.

Civilian recruiting was almost as difficult as military recruiting for the Army in the early 1970s. The new HSC Civilian Personnel Director, William R. Bruce, reported in March of 1974 that "with less than six months of the fiscal year remaining, only 42% of the civilianization vacancies have been filled." The AMEDD felt that the dual compensation restrictions on retirees had a negative impact on civilian recruiting, and obtained authority for retired military physicians to take civilian jobs at the GS-11 through GS-14 level.

During the summer of 1975 the Army's Deputy Chief of Staff for Personnel briefed the Vice Chief of Staff of the Army (VCSA) on the status of civilian personnel management. The VCSA's response was "very positive and supportive," and he asked "how the Army Staff can get more involved in the civilian area and how we can better make civilians a part of the Army team." It seemed that senior Army leaders were increasingly aware of the contributions of Army civilians, largely because the transition to an all-volunteer force had driven a civilianization effort that converted nearly 10,000 active Army positions to civilian status.

By the end of 1982 there were 23,700 civilian employees in HSC, nearly half the command's total strength. The civilians, proud of their affiliation with the AMEDD but not officially recognized as a corps, sought their own identity. The December 1982 edition of the *HSC Mercury* (the official newspaper of HSC, and later U.S. Army Medical Command) announced a contest to design a new insignia to represent HSC civilians. The winning design, submitted by Esiquio Gonzales of the Academy of Health Sciences, was unveiled in the June 1983 edition of the *Mercury.* This design, featuring the AMEDD caduceus backed by a shield, with the word "CIVILIAN" in a banner across the front and a smaller "HSC" banner at the top, was later adopted by the AMEDD Civilian Corps (with "HSC" removed) and still represents the Civilian Corps today.

The Department of the Army implemented a civilian personnel proponency plan in 1991, with The Surgeon General designated as the civilian personnel proponent for health care occupations. The Surgeon General, in turn, relied on the HSC Civilian Personnel Director to oversee lifecycle management of AMEDD civilians. As early as 1988 the term "civilian corps chief" was used in the Medical Department to refer to the HSC Civilian Personnel Director, but the title was merely colloquial.

An AMEDD Personnel Proponency Steering Committee (APPSC) was formed to establish the personnel proponent policies for the Medical Department and deliberated the idea of a Civilian Corps Chief. AMEDD civilians were deemed too diverse to be managed by a single corps chief. However, the term "Corps Chief"

continued to be applied to the Civilian Personnel Director. An article in the December 1996 *Mercury* hailed the arrival of a new AMEDD Civilian Corps Chief, Ms. Sharon Coleman Ferguson. The article compared the Civilian Corps to the other corps of the AMEDD, stating that, "By the mid-1990s… AMEDD civilians had a designated chief like other corps." Ferguson noted that the 27,500 AMEDD civilians outnumbered the other corps in the AMEDD, and listed her goals for making the Civilian Corps "act like a real corps by boosting civilian professional standards, utilization, training and career development."

The legitimacy of the Civilian Corps Chief title received a boost when Army Surgeon General Ronald R. Blanck included Sharon Ferguson in a *Mercury* article concerning the roles of the AMEDD Corps Chiefs. Ferguson, MEDCOM's Assistant Deputy Chief of Staff for Personnel, was listed as "Chief of the Civilian Corps." Ferguson had been serving in that position since March of 1996, and it is because of the Surgeon General's public recognition of her as Corps Chief that we now celebrate 26 March 1996 as the founding date of the AMEDD Civilian Corps.

On 12 November 2009 Charles G. (Gregg) Stevens was appointed as the Chief of the AMEDD Civilian Corps. He was the fourth person to hold the title of Corps Chief, following Sharon Ferguson, Dian Jamison, and Jo Ann Robertson, but he was the first to receive a written duty appointment order for that position from the Surgeon General. Stevens was the first Civilian Corps Chief in the Senior Executive Service (SES), putting the Civilian Corps Chief position at the Flag Officer level.

AMEDD civilian Nolan A. Watson with the author in Afghanistan, 2011. ACHH collection.

Throughout the history of the Army Medical Department, civilians have proudly served alongside uniformed service members to provide the best possible medical care and support to the Army. Over the course of 250 years, they have become trusted partners and colleagues in the AMEDD. A corps of dedicated and loyal professionals working diligently to accomplish essential missions. Army Surgeon General Leonard D. Heaton (1959-1969) said that the responsibility of his medical administration was "to forge the separate elements into a perfectly balanced team." The recognition of the AMEDD Civilian Corps as an essential part of the Army Medical Department has brought our team into balance.

This is abridged from "The Army Medical Department Civilian Corps: A Legacy of Distinguished Service"

Can you guess the AMEDD Insignia?

Be sure to read the previous articles for hints.
Images and information courtesy of the AMEDD Museum

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Answers on page 29.

Book extract: Dr. Sterling Bunnell: From Son of the Gold Rush to Founding Father of Hand Surgery. Anthony A Smith MD and Steven J McCabe MD. American Society for Surgery of the Hand, 2025.

Dr. Sterling Bunnell served in uniform in WWI, and as a Civilian Consultant in WWII, overseeing the Army's hand surgery ceneters. This biography covers his life, not just his military service. The authors, and the American Society for the Surgery of the Hand, shared this extract about his uniformed service.

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Sterling Bunnell arrived in Beaune, France at Base Hospital No. 47 on July 31, 1918. Base Hospital No. 47 was the first of four base hospitals occupying the site in Beaune. When the team arrived, construction was still underway, being quickly completed. The hospital consisted of several type A barracks, large rectangular buildings suitable to contain 1,000 beds with the capability of expansion to include another 1,000 beds.

On August 1, General Pershing paid a quick clandestine visit to Base Hospital No. 47. The first American nurses arrived at the hospital on August 13, followed soon thereafter by several hundred convalescing and lightly wounded patients. While Bunnell spent the bulk of his time in France at Base Hospital No. 47, far from the front, his initial stay was short-lived, when he received new orders putting him to lead Operating Team No. 101.

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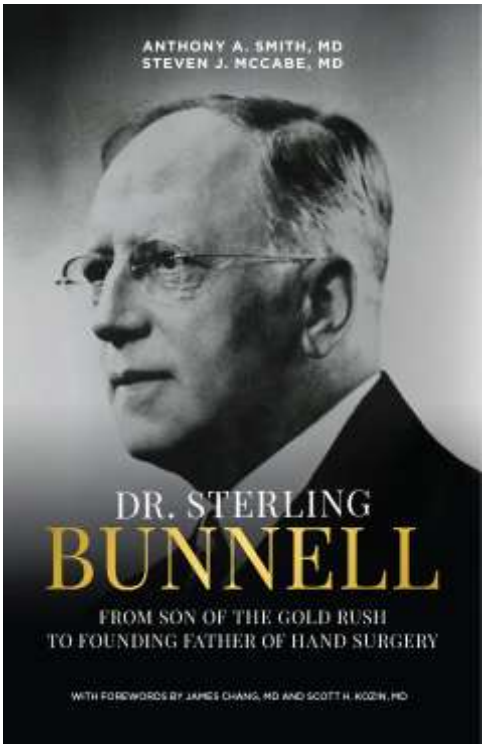

Above right: Bunnell, pictured farthest to the right, with two other members of the AEF. Courtesy Dr. Smith/American Society for the Surgery of the Hand.

Bunnell hadn't anticipated getting this close to the action. Base Hospital No. 47, where he was Chief of Surgery, was miles from the front. This all changed when he received new orders putting him on Operating Team No. 101.

> I was ordered to take an Operating Team of seven to the Front. We worked there in Evacuation Hospitals for three months both in the St. Mihiel and Argonne drives. Had to work very hard as there was a continual stream of wounded booming in by ambulance both night and day for most

> of the time. Did however get many chances to around in the front regions and see a lot of the Big Show. Was right in the battlefield in the taking of Grand Pre.

[During World War I, "Big Show" was military jargon for the front. On Operating Team No. 101, Bunnell was close to the front and taking care of casualties coming right from the battlefield, just as his mentor George Crile was doing at Remy Station. He was right in the middle of everything.]

> In the Evac. Hospital we did a great amount of excising of wounds, removing of foreign bodies and splinting of dreadfully shattered bones. Had also many cases of injury to brain, chest, abdomen, and knee joint. All these we would open, remove foreign debris, and close leaving drainage only down to the pleura, peritoneum, or capsule and none in the scalp . . . Had to do a great many transfusions and many amputations.

The sights, sounds, and smells of the battlefield filled the air.

> Will never forget the wonderful scene and noise. It was in a long valley. The River Aire separated the Yanks and the Germans. The whole valley was a mass of explosions and clouds of smoke from bursting shells were everywhere. It was interesting to see the flash and then the puff of smoke from the German guns on the opposite hill and then hear the report.
>
> Very soon the very business-like shriek of the shell would be heard coming right toward us and in a crescendo terminating in a loud explosion in our vicinity.

There were many changes on the battlefields of World War I as compared to previous wars. Mechanized warfare was introduced with the development of the tank. Armaments changed as heavy artillery was developed, as was the rapid-fire machine gun. The biggest change in how battles were conducted was the introduction of the airplane, which served as a means of reconnaissance, in air-to-air combat, to carry bombs, and to aid in the evacuation of the wounded.

> The machine guns rattled in the floor and also in the blue sky where about fifty airoplanes could be seen circling amid bursting shrapnel from the anti aircraft guns. This would show as many new crisp black or white clouds all around an airoplane.

Bunnell's fascination with everything going on around him affected his judgment, nearly to his undoing.

> A couple of us very foolishly showed ourselves in a meadow and were seen by Fritz. He sent 7 shells (size 77) in quick succession in our same acre before we could get out. It was just fool's luck that we were not even hit. ***

Interior of Base Hospital No. 47. Patients in Thomas splints with blankets draped over the splints can be seen in the immediate foreground on the right and farther back on the left. Courtesy of Vanderbilt University History of Medicine Collections.

Answers to the insignia quiz...

1. Shoulder knot, Medical Department Major: c. 1896-1902: Knots replaced epaulettes in 1872, and physicians used the Old English letters “MD” (for Medical Department) until 1890. In 1896 a gold-colored Maltese cross replaced the federal shield as a medical officers’ insignia. Knots lasted until the uniform changes of 1902.

2. Sanitary Corps insignia c. 1930s: The Sanitary Corps was authorized by Congress on 18 May 1917. This Corps performed medical administrative tasks and also provided a variety of scientific specialty officers who could not be commissioned in the Medical, Dental, or Veterinary Corps.

3. Contract Surgeon’s insignia, World War I: The number of contract surgeons greatly increased during World War I and in July 1918 they were authorized a dark bronze caduceus with a gilt “CS” superimposed. This was worn until September 1920.

4. Dental Surgeon collar insignia c. 1901-1911: Congress approved the use of contract Dental Surgeons in April 1901. Their insignia was a large block “D.S.” worn on their coat collar. In 1911 these men became acting dental surgeons and began wearing a caduceus with a “D.S.” monogram.

5. Veterinary insignia c. 1902-1916: In December 1902 the War Department prescribed a horse’s winged and shod foot to be worn by veterinarians. The horse foot forming a “V” was located in the lower angle of either a cavalry or field artillery insignia. This design was used until the formation of the Veterinary Corps in 1916.

6. Army Nurse Corps insignia: In the wake of the Spanish American War, Congress on 2 February 1901 authorized an Army Nurse Corps, and the Army issued this as the first insignia. This Cross of Saint John or Maltese Cross was worn on their “indoor” (aka hospital duty) uniform until 1907. Green was the color of Army Medicine at the time.

7. Physical Therapist insignia: On 22 December 1942, Congress passed Public Law 828 which authorized relative military rank for Dietitians and Physical Therapists for the duration of the war plus 6 months. This change in status was enthusiastically welcomed and between March 1943 and December 1947 Army Physical Therapists wore this unique insignia. It’s hard to discern, but “PT” is on the caduceus.

8. Sergeant rank chevron for the white dress uniform, 1902-1904: The rank chevrons worn by the Hospital Corps from 1887-1902 included the branch color of emerald green. In 1902 the AMEDD branch color was changed to maroon, so chevrons changed accordingly.

This composite portrait shows MG Norman Kirk (Surgeon General 1943-47) with his many of his general officers. Almost all were Medical Corps. There were only a handful of Dental Corps and Veterinary Corps generals, and a single Medical Administrative Corps general officer at the time.
AMEDD Museum.

Writing for *The AMEDD Historian*

We are seeking contributions! We believe variety is the way to attract a variety of audiences, so we can use:

- Photos of historical interest, with an explanatory caption
- Photos of artifacts, with an explanation
- Documents (either scanned or transcribed), with an explanation to provide context
- Articles of varying length (500 word minimum), with sources listed if not footnotes/endnotes
- Book reviews and news of books about AMEDD history

Material can be submitted usarmy.jbsa.medical-coe.mbx.office-of-medical-history@army.mil Please contact us about technical specifications.

The opinions expressed in The AMEDD Historian are those of the authors, not the Department of Defense or its constituent elements. The bulletin's contents do not necessarily reflect official Army positions and do not supersede information in other official Army publications or Army regulations.

AMEDD Center of History and Heritage

Chief, Mr. Nolan Watson

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