The AMEDD Historian

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Welcome to issue #34 of the AMEDD Historian Newsletter! What are the origins for AMEDD training? Who has oversight? In this issue discover how the AMEDD has utilized different locations, organizations, and devices since the 1890s to train its Soldiers.

While medical professionals receive an education on their specialty, once they join the Army further training and assimilation is required. Historically, early on-the-job training evolved into formalized courses and institutions. Later, training included more tactical and field settings to build skills for medical care on the battlefield. Technology, medical advances, and possible battlefield scenarios all continue to make changes in the effort to have a prepared medical force.

We welcome contributions from our readers and we would like to hear your comments!

In addition to this publication, please visit our websites, and social media feeds: These websites serve as great resources for the history of Army Medicine. Peruse our documents online, exploring valorous awards and medical advances as well as interesting biographical information.

The Army Medical School
Sanders Marble, ACHH

The AMS was originally squeezed into the building at Independence Avenue and 6th Street, sharing space with the Army Medical Library and Army Medical Museum. Image courtesy National Library of Medicine.

The Army Medical School was the AMEDD's first training institution. The goal was to make sure that new medical officers knew the things the Army needed them to know, not just what they needed for private practice. That meant some Army-specific things, such as the procedures for ordering supplies or military courtesies. It also meant the latest theories on how to build hospitals, since a doctor had to explain to the post commander what was needed. And it meant things like microscopy and preventive medicine that were not necessary for treating individual patients, but were needed to protect the health of a unit. In June 1893 Surgeon General George Sternberg persuaded his friend, the Secretary of War, of the need and was readily granted permission. It probably helped that Sternberg promised to staff it 'out of hide,' with instructors double-hatted from the Army Medical Museum (which handled pathology, and thus many of the clinical topics) and other medical officers in Washington DC, and it also used available space in the Army Medical Library. Later, one of the Hospital Corps training companies was located in Washington DC, where the trainee officers could observe enlisted drill that they would have to command later. Sternberg summed it up:

> There is no need to teach medicine and surgery to graduates of our medical colleges, but there are certain duties of an Army medical officer — which the college course has not prepared them — which are more important than the clinical treatment of individual cases of disease and injury….A special education is needful to prepare a military man to undertake the protection of the public health. The course at the army medical school will prepare him to cope with the questions of practical sanitation that will be presented to him at every turn in his military career.

The first class ran from November 1893 to March 1894, with only nine students, and some of them already experienced. They studied bacteriology, chemistry, pathology, military surgery, military medicine, military hygiene (preventive medicine), and drill of the Hospital Corps so they could instruct the enlisted men. Military law was taught, and those who needed it received instruction in riding. By 1897 the course had lengthened to five months and surgery was added, demonstrated at the hospital at Washington Barracks (now Ft. McNair). Although the Army did not use this terminology, it was the first school of public health in the U.S.

The AMS had taught only a few classes before it was closed so the few staff could be sent to the Spanish-American War. After the fighting was over, one key faculty member, MAJ Walter Reed, was diverted to study typhoid, which had killed more in the training camps than the Spanish had in battle. The school did not reopen until November 1901. In 1904 the new Surgeon General, Robert O'Reilly, changed the legal status of students so they paid more attention. Previously, they had been commissioned, then sent to the school, so some students were desultory and aimed for a minimum pass. O'Reilly hired the students as contract surgeons (a legal status like contractor today, meaning they could be quickly terminated for poor performance) and then offered commissions to the satisfactory graduates. The course was lengthened to accommodate new material, such as tropical medicine and radiology.

By 1916 student numbers had grown substantially, with classes over 100 students and two classes per year. Larger facilities were needed, and the 'out of hide' instructors would have to be supplemented with officers assigned as faculty. Soon WWI would explode training requirements as the AMEDD expanded to a force larger than the whole pre-war Army. The AMS added courses, increased the size of courses, shortened courses, changed teaching methods to speed up courses, started courses for enlisted men, and started training deployable laboratory units. This may have been the first time "Officer Basic Course" was used; previously it had been the only course, and lasted a rigorous eight months. There was a new course on orthopedic surgery, one for hospital ship surgeons, and hundreds of medical officers did their paperwork (and gas mask training) in a new "Foreign Service Department" that needed more clerks than anything else.

Several of these new activities were because of the School's laboratory. While the Army Medical Museum also dealt with pathology, the AMS laboratory had started as a teaching tool, and was also used as a referral laboratory, but thanks to having smart people and few students to teach had further expanded into experiments. The AMS had developed the Army's typhoid vaccine (mandatory from 1911), and produced all that the pre-war Regular Army used, plus vaccine for paratyphoid, dysentery, pneumococcal pneumonia, meningitis, streptococcal infections, and cholera. Experimental vaccines were produced for influenza and gonorrhea, neither of which was effective. It also produced a veterinary vaccine for strangles, a respiratory infection.

The AMS at its second location, circa 1918.
Image courtesy National Library of Medicine

In the 1920s there were substantial changes, largely because medical education had changed. Medical schools now taught the clinical material that the AMS had taught, and the Army's Medical Field Service School (see *Historian* issue 33) taught the other topics. Surgeon General Ireland kept the AMS, but changed it. The AMS laboratory gained personnel and equipment from the Army Medical Museum, and dental and veterinary labs joined in 1921. The classes shifted towards shorter post-graduate

ones, often taken several years into an officer's career after they had shown aptitude. Having patients available for clinical teaching meant that location at a hospital was desirable, and in 1923 the AMS moved to Walter Reed General Hospital in Washington, DC. The Army Veterinary School and Army Dental School also moved there, and with the hospital they formed the Army Medical Center, the first post-graduate medical center in the country. The AMS became the Medical Department Professional Service School in 1935. Courses for enlisted men continued, training laboratory and X-ray technicians for four months.

The change of emphasis was complete by the early 1930s, when new medical officers went to the MFSS, and only came to the Army Medical Center when appropriate for advanced training. The laboratory still produced vaccines, and performed research and development work, but overall the MDPSS was an institution for research and specialty courses. Reflecting that, the name would be changed to Army Medical Department Research and Graduate School, then Army Medical Service Graduate School, and finally the Walter Reed Army Institute for Research.

Building 40 at the Army Medical Center, later Walter Reed Army Medical Center, was the last home of the Army Medical School as it changed into the Walter Reed Army Institute of Research. DoD photo

As the Army mobilized for WWII, quantity was more important than quantity and courses were shortened from three months to two, then one, then finally wide-spectrum courses were suspended. They were replaced with specialty courses in surgery, clinical medicine, ophthalmology and otorhinolaryngology, and roentgenology. However, in mid-1941 the need for tropical medicine courses was exploited: the Army accepted the need for a four-week tropical medicine course, and the AMEDD then lengthened that to eight weeks and made it Tropical and Military Medicine, covering the previous courses but obviously in less depth. During WWII, the MDPSS focused on preventive medicine short courses. There was no way the 50,000 doctors who served in the AMEDD could be pushed through either the MDPSS or the MFSS, even though both schools expanded their classes. A few courses on oral and maxillofacial surgery were taught, and plasma and blood banking was taught, but most clinical training courses were moved to civilian institutions rather than military ones.

Surgeon General Sternberg had identified gaps in medical education, and got Army training started. Over time, medical education changed, and Army medical career paths changed, so the institution changed over time. Eventually what had been ancillary functions had become the main focus. The concentration of knowledge and inquisitive minds at the school, library, museum, and eventually with the hospital at the Army Medical Center addressed the Army's needs and also supported research useful to the Army and beyond.

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Training the Hospital Corps
Grant Harward, ACHH

Medical enlisted men, long known as hospital stewards, existed in the Army since the creation of "an [*sic*] hospital" for it in 1775. However, for over a century hospital stewards received on the job training with some lessons in medicine and pharmacology by the post surgeon, and could be transferred back to line units whenever the post commander decided. Starting in 1847, successive Surgeons General repeatedly asked that hospital stewards be placed under the Army Medical Department (AMEDD) and a school be created to train them, but these requests were denied. The Civil War beginning in 1861 resulted in a massive expansion in the number of hospital stewards as well as efforts to improve and standardize training, including publishing a manual for hospital stewards, however, the Army's rapid demobilization after 1865 resulted in a return to the status quo. In 1887, the increasing complexity of medicine, the medical needs of the Army's far flung posts, and the concerns that the Army needed to be ready to fight a war against a foreign state rather than Indian tribes on the frontier finally convinced Congress to listen to the Office of the Surgeon General (OTSG) and create a Hospital Corps for enlisted men alongside the Medical Corps for officers.

In 1885, Surgeon General BG Robert Murray reported, "The growing necessity for a regular organized hospital corps to provide trained cooks, nurses, and attendants for the service of Army Hospitals becomes, yearly, more apparent…I strongly recommend the organization of a hospital corps." He proposed three ranks: hospital steward, acting hospital steward, and private. The Hospital Corps should constitute 2 percent of the Army in wartime. In peacetime, it would train hospital corpsmen as litter-bearers, ward attendants, nurses, and cooks. Moreover, the Hospital Corps would train line soldiers who were assigned as additional-duty company litter-bearers. Congress agreed and created a board of medical officers to study the issue. Meanwhile, Murray ordered surgeons at every post to begin teaching informal classes to officers and enlisted men about treating diseases and administering first aid. On 1 March 1887, Congress authorized the Hospital Corps. It took a year to establish the Hospital Corps with 614 privates transferred from the line to its ranks (only 24 initially qualified for acting hospital steward). In January 1888, *The Medical News* hailed the creation of the Hospital Corps as long overdue. "The [Civil War] demonstrated the necessity for a special body of trained hospital men; but year after year has passed, and not until even the police of some large cities have been educated and drilled in the methods of giving first aid in accidents has the Army of the United States been provided with a set of men qualified to perform such duties." The OTSG had quickly introduced a "system of lectures upon, and practical demonstrations in, first aid to the wounded." For the next few years, the Hospital Corps focused on training privates and acting hospital stewards to become acting hospital stewards and hospital stewards respectively. A hospital corpsman needed a year in grade before he could qualify for a promotion exam given by a board of surgeons.

Some in the AMEDD believed more needed to be done. In March 1888, CPT John van Rensselaer Hoff, the post surgeon at Fort Reno in Indian Territory (today Oklahoma), wrote an article for *The Medical News*. He reminded readers that the Regular Army was "but a nucleus" around which the "greater army of the people" would be built in wartime. The article cited the catastrophic experience for the British Army in the Crimean War (from 1853 to 1856) and the near disaster for the Union Army in the Civil War before advocating that state militias should organize their own hospital corps and local medical schools should help train militia medical personnel. "Great advantage would result to the country as well as to the individual, could there be a general dissemination among medical men of a practical knowledge of all these subjects, which make the army medical officer a specialist, in the broad meaning of the word." Hoff's words held weight because he was a scion of the van Rensselaers, an old and wealthy New York family. He

Hospital Corpsman, circa 1898. ACHH collection.

would later become an assistant surgeon general in large part because of his tireless efforts to improve the AMEDD. Nevertheless, Hoff's plan fell on deaf ears because civilian physicians were reluctant to incorporate militarized training as part of their profession. State militias did not adopt the Hospital Corps model either. Regular medical officers could only advise militia medical officers on how to train their hospital corpsmen.

The AMEDD found it difficult to train its own hospital corpsmen assigned to frontier posts, which were ill equipped for medical training purposes, to a consistent standard. In 1890, maneuvers tested an experimental divisional hospital. Surgeon General BG Charles Sutherland summarized, "Unknown to each other or to their commanding medical officer, trained by different methods, gathered together in haste and under adverse circumstances, these [medical soldiers] had to be molded into homogeneity just when complete organization was most needed." The next year, he asked for and received authorization to create companies of instruction to improve training in the Hospital Corps west of Mississippi River.

Sutherland wanted to create three companies of instruction, but only received funding for two. By 1892, a company of instruction (also commonly referred to as a school of instruction), fully equipped with field equipment for training, had been established at Fort Riley in Kansas, under the command of Hoff, with another one at Fort D. A. Russell in Wyoming. The AMEDD had three main goals for the companies of instruction: first, and foremost, form a trained body of hospital corpsmen; second, build a training school through which all hospital corpsmen (including those in the East) must pass; and third, act as the foundation for an organized, trained, and equipped medical company ready to support a division in the field. Each company consisted of three officers, seven noncommissioned officers (NCOs), forty privates, one bugler, one artificer, and one tailor. The four-month training curriculum was built upon a foundation of drill, both common drill to instill discipline and litter-bearer drill to evacuate casualties. It also included recitations, lectures, and demonstrations on elementary anatomy and physiology, theoretical nursing, rudimentary (even for the time) pharmacology, first aid, bandaging, surgical instruments, dressings, preparations for operations, field work, dispensary work, and clerical work. There was no riding or veterinarian training because the schools had no animals available for this purpose. After this theoretical and practical training, hospital corpsmen received special training in various departments of the post hospital. Finally, soldiers who showed an aptitude for cooking attended a six-month course in practical cookery that taught them how to manage rations and prepare food for the mess table or the sick. These companies of instruction were not permanent but experimental.

While the companies of instruction trained some hospital corpsmen, on-the-job training continued for the rest because it was too expensive to send hospital corpsmen recruited in the East to be trained in the West. Funding was too tight to even ensure all hospital corpsmen in the West could attend a school of instruction, especially those recruited on the Pacific coast, because of the distances involved. Therefore, post surgeons conducted most of the training for hospital corpsmen as well as soldiers detailed as litter-bearers. Litter-bearer training was spotty since post commanders seldom made it a priority.

In 1894, the company of instruction at Fort D. A. Russel was moved to Washington Barracks in Washington, D.C., so hospital corpsmen in the East could receive standardized training. With approximately 115 hospital stewards, 80 acting hospital stewards, and 530 privates in the Hospital Corps, the two schools of instruction combined trained on average 75 privates and 70 acting hospitals steward each year. Surgeon General BG George M. Sternberg reported trained men were "gradually reaching the posts throughout the country." However, he knew many posts did not yet have any school-trained hospital corpsmen.

The level of training in the Hospital Corps remained uneven. In May 1895, during a conference of army surgeons, CPT W. C. Borden provided suggestions to improve the on-the-job training for hospital corpsmen. The existing regulations for the Hospital Corps only required medical enlisted men to train for four hours each month in litter bearing and first aid, with any additional training at the discretion of the senior medical officer on post. Borden argued that the regulations were too vague and that "each medical officer commanding a detachment is a law unto himself as to how and how much he shall instruct in each of the prescribed subjects. The consequence is that the practice varies with the man." He classified post surgeons into three categories. First, the military enthusiast who drilled soldiers in litter bearing and first aid until they worked like robots. Second, the medical enthusiast who kept litter-bearing drill to a minimum, did a medium amount of first aid drill, and concentrated on a maximum of nursing training. Third, the lackadaisical post surgeon who only implemented the mandatory four hours of training each month. "In this way with varying quality and quantity and with equally varying results, the requirements of the Regulations, but not the needs of the service are fulfilled." Borden proposed a more detailed training scheme that was primarily medical and secondarily military

and (in descending order of importance) taught hospital corpsmen: nursing and caring for sick or injured; field evacuation of wounded by litter or ambulance; military duties like marching, inspections, etc.; and first aid. The Army did not adopt his recommendations, but Borden continued to urge Hospital Corps training standards as he became one of the Army's outstanding physicians.

Sternberg found another solution for the problem of insufficient "instructed" hospital corpsmen. In 1896, the OTSG disbanded the company of instruction at Fort Riley and distributed its personnel to medical detachments across the West, particularly to posts on the Pacific coast, hoping these soldiers would raise on-the-job training standards. This left the Hospital Corps with just one school of instruction at Washington Barracks in the East. It trained roughly 45 new recruits every year. Consequently, the Hospital Corps was woefully short of trained personnel when the Spanish-American War broke out in April 1898.

The training program of the company of instruction "was practically suspended" during the short conflict. The Hospital Corps expanded to a peak strength of 163 hospital stewards, 445 acting hospital stewards, and 5,980 privates (nearly a tenfold increase) by the middle of the year. Post medical detachments were overwhelmed. There was very little time to give new recruits anything but the most cursory training in medical matters. Commanders tried to find volunteers with medical training or experience to fill out the Hospital Corps' ranks, but only with mixed success. The company of instruction at Washington Barracks operated as a replacement center during the fighting and most medical enlisted men only stayed for two weeks before shipping out to Cuba. The campaign abruptly concluded in August 1898. Afterwards, the company partially resumed normal training operations as a school.

The United States had defeated Spain in a few months, but the Army only partially demobilized because it now had to occupy Cuba, Puerto Rico, and the Philippines for many years. The Hospital Corps shrunk by half to 189 hospital stewards, 287 acting hospital stewards, and 2,892 privates. A second company of instruction was established in Havana, Cuba, to act as reception center and provide newly arrived hospital corpsmen rushed training before assignment to the occupation forces. The Philippine-American War that erupted in 1899 required a steady supply of trained medical personnel. Cooks especially were in short supply in the Philippines because unlike in Cuba or Puerto Rico the situation was too dangerous to employ female nurses from the United States or local women. An accelerated cooking course at Washington Barracks developed and administered by Miss Elisabeth Stack, a graduate of St. Mary's Hospital in Brooklyn, New York, during the Spanish-American War, continued to train hospital corpsmen as cooks for the Philippine-American War. A third company of instruction was created on Angel Island in San Francisco Bay, acting as a transit center for hospital corpsmen who received some training before being rushed to the Philippines. The schools at Washington Barracks and Angel Island collectively trained approximately 1,400 hospital corpsmen in less than a year. During 1900, the company in Havana closed, but another opened in Manila, the Philippines, with the same mission as a reception center where hospital corpsmen finished (or in many cases started) their training before joining their unit.

After the initial demand for hospital corpsmen in the Philippines declined, the companies of instruction returned to a more normal routine. MAJ F. P. Reynolds, commanding the school at Washington Barracks, now attached to Army General Hospital, developed a three-month training program. It covered drill and field work, anatomy and physiology, nursing and war management, bandaging, first aid, cooking, pharmacology, clerical work, care of animals, and elementary hygiene. He argued for a fourth month of training and added it as soon as he could. It included more drill, care of animals, pharmacology, and clerical work, plus a field graduating exercise. Reynolds recommended after hospital corpsmen finished that they be transferred for "special duty" at a hospital for another 10 months of on-the-job training. He argued that 14 months of total training for hospital corpsmen compared favorably with 12 months for infantrymen or 24 months for cavalrymen, but the Army did not adopt his scheme. The school at Angel Island, recently rechristened Fort McDowell, had difficulty implementing even a three-month training program because hospital corpsmen stayed for such a short time. During 1901, nearly 1,100 hospital corpsmen transited on their way to the Philippines, so truncated training focused on regulations, drill, and some lectures on medicine. The school in Manila did its best to fill the gaps in the training of hospital corpsmen before they left for the battlefield.

As part of the reforms in the Army Act of 1901, the Hospital Corps' rank structure was revised to the regular rank structure of sergeants first class, sergeants, corporals, privates first class, and privates. In 1902, the occupation of Cuba ended and remaining U.S. forces withdrew. The Philippine-American War also concluded. The Philippine Constabulary took responsibility for suppressing guerilla and bandit activities, but the

Army still maintained an occupation force in the country. The company of instruction in Manila was disbanded, but the other two finally received designations. Company No. 1 at Washington Barracks and Company No. 2 at Fort McDowell. The Hospital Corps now had 602 NCOs and 2,430 privates.

The wars had revealed serious deficiencies in the Army's readiness. Although the Army had focused on establishing a general staff and reforming the militia, the AMEDD also used the opportunity to improve itself. In 1903, a board of medical officers convened to revise Hospital Corps regulations, decide on training standards for companies of instruction and post medical detachments, and alter the special knife with which hospital corpsmen were equipped. A new knife was quickly approved, but regulations and training standards took several years to finalize. Ultimately, the board adopted a slightly altered version of the schools' existing four-month training scheme for all post medical detachments. The new regulations also required that hospital corpsmen who were to be assigned to support cavalrymen to spend one hour each week training with a medical troop. In 1904, the companies of instruction finally became permanent, rather than experimental, units. The following year, the OTSG redesignated them Company A, still at Washington Barracks, and Company B, which had moved from Fort McDowell to the Presidio of San Francisco. Surgeon General BG Robert M. O'Reilly estimated the Hospital Corps needed to train 1,000 recruits annually, but the two companies could only train 400. While post medical detachments could pick up some of the slack, O'Reilly argued for a third company of instruction. Events overtook the Army that helped realize the AMEDD's goals.

In 1906, the Cuban government collapsed and the United States intervened to prevent a civil war that might harm U.S. interests. This time Companies A and B were reorganized and sent to support U.S. forces in Cuba. Meanwhile, the newly established Company C continued training hospital corpsmen at Washington Barracks. The following year, Company D was formed at Fort William McKinley in Manila to act as both a training and a field unit, depending on the situation in the Philippines. In 1908, after new elections in Cuba, Company B returned to San Francisco, and in 1909, after the U.S. intervention ended, Company A returned to Washington Barracks. Company C moved to the recently established Walter Reed General Hospital, also in Washington D.C. The AMEDD had finally realized the OTSG's goal of using Hospital Corps companies of instruction as field medical companies.

Drilling at loading a litter patient on an ambulance at an unidentified base, early 1900s. ACHH Collection.

Individual training had caused the companies of instruction to be organized, but unit readiness caused them to be disbanded; they could not really be companies and schools at the same time. In 1911, Surgeon General BG George H. Torney reported, "It has been perfectly apparent for some years that our companies of instruction, Hospital Corps, should be abandoned and field hospitals and ambulance companies organized in their stead." The quick succession of wars and interventions resulting from American imperialism had shown how inefficient it was to completely reorganize a school of instruction into a field hospital and ambulance company each time it was needed in the field. Companies A, B, C, and D transformed into Field Hospitals No. 1, 2, 3, and 4 and Ambulance Companies No. 1, 2, 3, and 4. Torney wanted to organize more, a field hos-

pital and an ambulance company for every post that boasted a brigade, but the OTSG had to wait until the AMEDD was authorized more officers and enlisted men. In 1914, the Hospital Corps had 772 NCOs and 4,240 privates, but it was reduced by 1,000 men the next year. The National Defense Act of 1916 reorganized the Army and militia, turning the Hospital Corps into the Medical Department (Enlisted Force), which was supposed to make up 5 percent of the Army's strength in wartime.

During the Hospital Corps' nearly 30 years of existence, the training of medical enlisted men made great strides. Simply creating the Hospital Corps meant standards improved because training was not lost whenever unit commanders transferred soldiers to and from medical duty. Successive Surgeons General' efforts to create and maintain companies of instruction added to the professionalism of the Hospital Corps. The training pedagogy remained largely the same for this whole period, consisting of drill, lectures, and practical demonstrations, and emphasized rote memorization. The OTSG eventually transformed companies of instruction into field hospitals and ambulance companies. This meant collective training could begin to reach the same standard as individual training for hospital corpsmen to be ready for the battlefield of the future.

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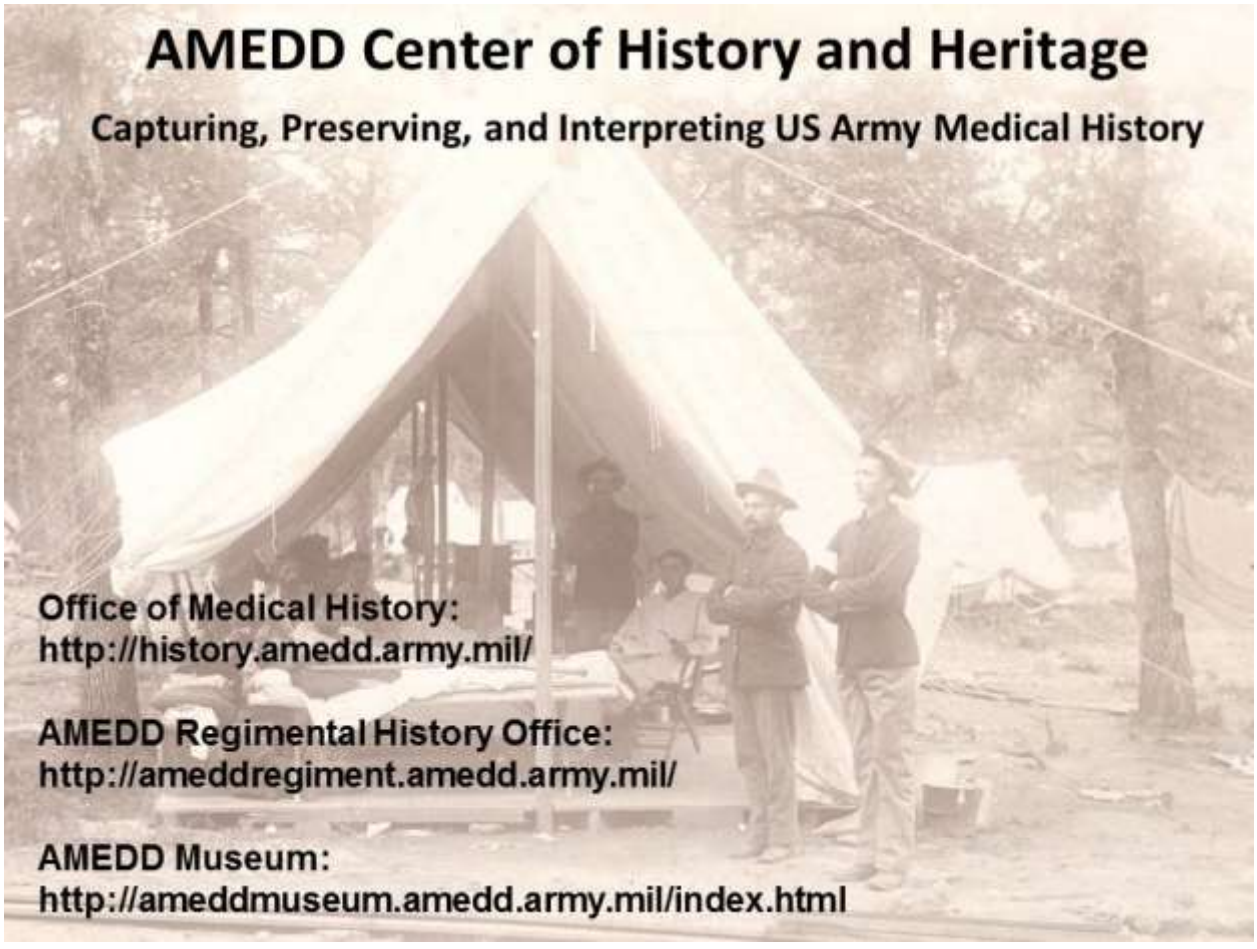
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Medical and Army Training, an Organizational Overview of "The School"
By Nolan A. (Andy) Watson, ACHH

A trained medical force is needed to maintain the health and readiness of the Army. Although medical training is available outside of the military, military situations are different, both for battlefield injuries and maintaining a large force. The need to blend military and medical knowledge, providing fully-trained personnel to improve and maintain the health of the Army, was recognized roughly one hundred years ago with the creation of the Medical Field Service School, and continues today with the Medical Center of Excellence.

Medical Field Service School (MFSS)

The origin of the MFSS begins at the close of World War I. The structure of medical training for the Army needed improvement. Training military medical personnel had expanded during the 1800s from improvised methods to course work and even an Army Medical School in Washington, D.C. from 1893. However, more changes were needed especially for the larger American Army of the 1900s.

Medical support during World War I proved that medical skills of incoming medical professionals and volunteers (large portions of university-based hospitals joined) were not issues. However, field craft, tactical experience, and the assimilation into the military profession needed work. The U.S. was in World War I from April of 1917 to November of 1918, and the training camp for medical officers at Camp Greenleaf (Fort Oglethorpe) Georgia, was only able to cover a limited amount of material. To improve military skills, the Medical Field Service School (MFSS) was approved in 1920, and established at Carlisle Barracks, Pennsylvania. The MFSS welcomed its first students in 1921.

Field exercises amid cornfields were a part of the course work, but classroom time was also important. Lectures included subjects like sanitation/military hygiene, medical fitness standards, military rations, first aid in forward areas, officer duties, and numerous other items. It is interesting to note that medical evacuation by aircraft was already a lecture point in the 1920s.

OCS training at the MFSS, Carlisle Barracks, 1943.
U.S. Army image.

At this time training was largely focused on officers and their understanding of AMEDD and Army procedures, but there was a Department of Enlisted Training which initiated an annual Noncommissioned Officers Course in 1924. The 1st Medical Regiment served as a demonstration unit at the Medical Field Service School and provided some tactical experience for students. As a later "Center" function, research in relation to transport, equipment, and other aspects of Army medical capabilities also took place at the MFSS.

The students and cadre that worked to maintain knowledge and experience in a small Army were faced with a new challenge with the buildup for World War II. Fortunately there had been some instruction on mobilization. The expansion provided trained medical support for an Army that would ultimately number over 8 million service members. The MFSS and Army Medical Center provided academic training, but there were also satellite training stations for specialties, and Medical Replacement Training Centers to provide medical training to thousands of newly inducted medical soldiers.

The MFSS continued to train officers in forming and managing larger units, and all Medical Department cadre officers (except the division surgeon) attended the Special Cadre Course for Divisional Officers. The wartime expansion had demonstrated capacity issues at Carlisle Barracks. As an example, the Medical Administrative Corps OCS training began at the MFSS, but was moved to Camp Barkeley, Texas in 1942. By the end of the war the MFSS had to relocate.

Fort Sam Houston

Fort Sam Houston became the Army's principal medical training installation at the close of 1945 and the MFSS was transferred to Fort Sam Houston at the beginning of 1946. The post met several criteria. It could expand with more facilities; there was already a connection to medical training (2d Medical Regiment,

and Enlisted Technician's School); Camp Bullis was nearby for field training; and Fort Sam Houston had a large hospital for clinical instruction. Concerning the last point, Brooke Army Medical Center (BAMC) was activated on 1 February 1946 to command various medical activities at Fort Sam Houston.

These "various medical activities" would combine officer and enlisted training in one area, as well as have clinical and field facilities available. At Fort Sam Houston the MFSS, Army Service Forces Training Center Medical (AFSTC Medical), Medical Department Enlisted Technician School, and Brooke Army Hospital were under BAMC's command. A WWII holdover, the ASFTC Medical was inactivated in December 1946. The MFSS designation was changed to the Army Medical Service School (AMSS) in 1946, but the name reverted back to MFSS in 1947 to avoid confusion with training at Walter Reed Medical Center. Regardless, the MFSS continued its mission of instruction. One course from 1947, the Hospital Administration Course, changed in 1951 to become the Army-Baylor University Program in Hospital Administration.

Laboratory Specialist training, AMSS, 1958.
U.S. Army photo.

The conflict in Korea increased the number of students for the MFSS and led to increased focus on evacuation systems in the curriculum. In July 1952, the MFSS became the first Army medical installation to add helicopters to its training facilities. With the Cold War in the background, student numbers remained steady even after the Korean War. Another change in designation occurred in 1955, when the MFSS was renamed the Army Medical Service School (AMSS). The AMSS name was in place until 1961, when it was again renamed the MFSS.

1961-1973: Medical Field Service School (MFSS)

By 1961 Brooke Army Medical Center was composed of: Brooke General Hospital, Army Medical Service School (enlisted specialty training), U.S. Army Medical Training Center (basic medical enlisted training), 67th Medical Group (field training), U.S. Army Surgical Research Unit (surgical and burn research), and the U.S. Army Central Dental Laboratory (regional support). In July of 1962 the MFSS, indeed all components of BAMC, were assigned to the Fourth Army, a geographical command including Texas.

The MFSS continued working to improve medical knowledge and increase training realism. In keeping with the MFSS' tactical origins, post-nuclear exchange exercises were held at Camp Bullis, training for possible injuries, diagnosis, and treatment. As the war in Vietnam escalated, more students trained at the MFSS. Mock Vietnamese villages were constructed at Camp Bullis for tactical familiarity, and new mobile hospitals were tested in field conditions. The MFSS trained six mobile military medical teams for the Military Provincial Hospital Assistance Program in Vietnam. In September 1971, all medical training of Special Forces medics moved from Fort Bragg to the MFSS.

Academy of Health Sciences (AHS)

Army medical activities altered significantly in 1973. The U.S. Army Health Services Command (HSC) was activated on 1 April 1973 and became fully operational on 1 July 1973. The MFSS was renamed the Academy of Health Sciences (AHS), and it became a subordinate unit of the HSC, so BAMC was no longer in command of the AHS. The new AHS incorporated all existing MFSS training and supervised all medical training previously conducted under the U.S. Army Medical Training Center (MTC) for enlisted medics, the Walter Reed Army Institute of Nursing, the U.S. Army Veterinarian School, and the training mission of the Medical Optical and Maintenance Agency. Additionally, an Academy or "school" brigade was created in 1972 through the combination of two existing onsite training battalions. There had been associated training battalions since the move to Fort Sam Houston.

It took time to complete the phases of transformation. The MTC formally deactivated and officially became part of the Academy of Health Science on 1 July 1973. All elements of the U.S. Army Veterinarian

School would not be at Fort Sam Houston until 1975. Construction of the new facilities began in 1970 and were completed and dedicated in December of 1972. These buildings, 2840 and 2841, still serve as the primary academic and staff locations. The first class to utilize the new instructional building was the Army Medical Department Noncommissioned Officer Course on 9 Jan 1973.

The post-Vietnam Army had to work through restructuring, racial and societal strife, and recruiting an all-volunteer Army, all while maintaining a deterrent force for the Cold War. Medical education was stressed not only to provide health care for the Army and military dependents, but also to encourage medical professionals to continue to serve. New training and programs also appeared, such as the Physician Assistant Course, which completed training in February of 1973. Toward the end of the decade the Army put more emphasis on tactical operations, and in the 1980s the Army's operational tempo increased.

Upgrades at the AHS continued. The 16-week Medical Noncommissioned Officers (91B) Course began at AHS in 1983.The AMEDD NCO Academy was established in 1987. Also in 1987, the 1st and 2d Battalions of the Academy Brigade were re-designated as the 187th and 232d Medical Battalions, receiving historic lineages with their numbered designations. Converted from various battalions, the Academy Brigade or the School Brigade became the 32nd Medical Brigade in 2002.

AMEDD Center and School (AMEDD C&S)

The Army continuously reorganizes, and after DESERT STORM there were more changes. The quick build-up of the Army for the Gulf War was followed by a draw-down that reduced a Cold War-sized Army. The AMEDD and AHS altered as well. The AHS was designated the AMEDD Center and School in July of 1991. The AMEDD Center continued the functions of the AHS (school), but had additional world-wide missions and proponency for career development duties. It would promote the many AMEDD specialties, just as other Army schools promoted their specific branches.

Prompted by post-Cold War studies, the U.S. Army Medical Command (MEDCOM) was officially activated in September 1994 and MEDCOM replaced the Health Services Command's oversight of the AMEDD C&S. It did not last, but on October of 1995 the U.S. Army Garrison Fort Sam Houston was transferred to MEDCOM and MG John J. Cuddy, commander, AMEDD C&S, became the Fort Sam Houston installation commander.

In the 21st Century, the changes to the AMEDD C&S were steady. The Global War on Terrorism again increased the need for a larger medical force, and point-of-injury care was of particular focus. The 91B MOS completed transformation to the 68W Health Care Specialist MOS in 2010. The new MOS qualified medics as EMTs trained in advanced skills, hemorrhage control techniques, shock management, and evacuation. On 30 June 2010 the Medical Education and Training Center (METC) was opened. The METC was created through the findings of the 2005 Base Realignment and Closure Commission, and combines medical enlisted training for the Army, Air Force, Navy, and Coast Guard.

In 2015 the AMEDD C&S received the Health Readiness Center of Excellence (HRCoE) designation. Also in in 2015, the AMEDDC&S Academy Brigade (Provisional), was officially established. It was renamed the Medical Professional Training Brigade (MPTB), and was inactivated in 2020. The National Defense Authorization Act (NDAA) of 2017, which seeks to combine military medicine under the Defense Health Agency, brought about further change when the AMEDD C&S HRCoE was realigned from MEDCOM to TRADOC in 2019, and redesignated the Medical Center of Excellence (MEDCoE).

Although never abandoned, the emphasis on tactical training and an accompanying mindset to assimilate into the Army was reinforced in recent years with the movement to instill *vigor* to students and cadre at the MEDCoE. Despite the challenges and numerous name changes, the MEDCoE continues to be the "school" for Army medicine, providing tactical and professional training.

Medic training, U.S. Army MEDCoE, August 2020.
U.S. Army photo.

Designations

1920-1946: Medical Field Service School (MFSS)
1946-1947: Army Medical Service School (AMSS)
1947-1955: Medical Field Service School (MFSS)
1955-1961: Army Medical Service School (AMSS)
1961-1972/1973: Medical Field Service School (MFSS)
1973-1991: Academy of Health Sciences (AHS)
1991: Army Medical Department Center and School
2015: Health Readiness Center of Excellence (HRCoE) added to AMEDD C&S designation
2019: Medical Center of Excellence

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AMEDD Training in Civilian Institutions
Sanders Marble, ACHH

Often the Army has not had either capability or capacity (or both) in its training facilities for certain AMEDD needs. Generally this has been for clinical training, but more recently it has extended to unit training. The origins extend into the 19th Century, when Army doctors were allowed to attend civilian medical schools and see patients in civilian hospitals to deepen and broaden their experience. This was done deliberately, sometimes with officers coming up on their promotion examinations (which were a thing then), sometimes with officers who had been in administrative positions who needed a clinical refresher, and sometimes to deepen an officer's clinical experience. It was, however, rare because there were few assignments that needed a doctor but had that much free time for one to have almost a second job.

WWI

There was a dramatic change during WWI. In 1917 the Army had only about 100,000 soldiers on active duty, and another 125,000 in the National Guard, and the plan was for a million soldiers in the American Expeditionary Force in France with another million in the U.S. to support the expeditionary force. That meant major infrastructure projects, and through the spring of 1918 Surgeon General William Gorgas hoped to train AMEDD personnel in Army facilities so that they would get the clinical training and experience at doing things the Army way. Shortly thereafter plans changed: the AEF would be doubled, and the support base needed substantial increases as well. Army facilities were suddenly inadequate. So numerous clinical short courses (all were short due to the pressure of deploying forces) had to be conducted in civilian hospitals. These included orthopedic surgery; oral and plastic surgery; neurosurgery; roentgenology; fractures and war surgery; and a neuropsychiatric course. There was also a course for female laboratory technicians, an unusual case of the Army hiring civilian employees who were not fully trained. These courses were at various places around the country, but Cornell Medical College and Yale University played large roles. Yale actually established the Army Laboratory School. An Army facility at Fort Leavenworth was too small, and there were not sufficient funds to build facilities at an AMEDD training base. Yale built a $40,000 building at its own expense, although the Army did buy supplies and most equipment, and the military students paid rent for their housing.

Between the World Wars

Between the World Wars a few officers a year attended civilian schools. Sometimes this was getting a degree over several years, or it might be some other kind of credential, or just a few days training. For instance, James Simmons (already with substantial laboratory and public health experience) studied at Harvard and received a DSc in Public Health. Norman Kirk, on the other hand, had what amounted to short courses in surgery at both Johns Hopkins and Massachusetts General Hospital. Since he had written a textbook on surgery, he may have been as much faculty at those hospitals as student. However, these opportunities were rare, only about 30 per year for all branches in the AMEDD, and that number included short courses and multi-year degree programs. Dentists got a substantial number of the slots, and nurses were trained as anesthetists.

Brady Laboratory at Yale, newly opened in 1917, was used as the Army Laboratory School in 1918.
Image courtesy Yale University.

Reserve doctors also received some training at civilian institutions under a "Skinner Plan." To save the

Army money, it counted as inactive duty training and the institutions charged no fee; thus the students paid their own way. They spent mornings on clinical matters and afternoons on military topics. The prestige of the civilian institutions involved – including the Mayo Clinic and Western Reserve University – meant doctors were willing to spend their own money to attend. Of course, their clinical knowledge also benefited, and their participation met requirements to stay active in the Reserves, and doubtless helped their promotion prospects. By 1939 courses of two- four- or six-weeks were offered in Cincinnati, Cleveland, St Louis, Boston, Kansas City, Chicago, New Orleans, Nashville, and Rochester MN.

WWII

During WWII the need for much larger number of specialty trained doctors caused much use of professional short courses at civilian hospitals. In January 1942 the AMEDD leveraged the National Research Council, telling the NRC that it needed courses to train doctors, and leaving it to the NRC to establish curricula and find civilian institutions to provide the training. The subjects were: general surgery, orthopedic surgery, thoracic surgery, maxillofacial plastic surgery, neurosurgery, pathology, roentgenology, anesthesiology, epidemiology, tropical medicine, venereal disease control, and sanitary engineering. It might have been easier to list what the Army did not need.

The NRC made projections of how many trainees would be needed (which suggests how rushed the Army's request was) and by the end of June found 22 medical schools that would teach 8 of the courses. That was more than the Army could handle; there was a shortage of doctors to send to school, and courses did not really start until September 1942. By June 1943 just over 2,000 doctors had graduated from various courses, and the numbers were cut back to about 1,000 students for 1943-44 and under 400 for 1944-45. For reasons that are not clear, the Army transferred almost all technical training to Army hospitals.

Civilian institutions taught three other categories of students during WWII. Dietitians, physical therapists, and occupational therapists all started the war as civilian employees, largely with civilian training. The Army's need for more of all those groups exceeded the very limited Army training programs, and civilian institutions provided the classroom instruction, although the Army often had the practical instruction done in Army hospitals.

Cold War and after

After WWII, the AMEDD started residency programs in Army hospitals, but not in every specialty and sub-specialty. So the Army could provide a comprehensive medical service (and retain doctors who wanted to train in those fields) it funded a stream of individuals through the Cold War. There were also short courses, and gradually more programs were added to what is now Long Term Health Education and Training. These were training programs for individuals, and for Active Duty personnel. After the Cold War, the growth of medical specialties such as trauma surgery at a time when the reduced size of the military meant there were fewer military hospitals and fewer patients that would give wartime-like experience caused a re-evaluation. Routine garrison healthcare did not provide enough experience to (for example) cardio-thoracic surgeons. But legislation was needed to change the rules.

In 1996 Congress responded to a series of reports that military trauma surgery was not fully ready for war. With their duty stations at military hospitals, they did not see enough trauma patients to sustain their skills. The pilot program was between the Navy hospital in Portsmouth VA and a local hospital, but that was only for surgeons; the Army and Air Force began rotating full surgical teams to Ben Taub hospital in Houston TX from 1998. There were administrative hurdles, and in 2001 the Army transferred the program to Miami, at the Ryder Trauma Center, creating the Army Trauma Training Center. Forward Surgical Teams, largely from the Army Reserve, rotated through, getting both clinical and unit training, the first time unit training had been done in civilian institutions.

Unofficial patch of the Army Trauma Training Center.

Operations in Afghanistan and Iraq brought military and civilian trauma personnel into greater contact, for instance with a 2014 Military Health System Strategic Partner-

ship with the American College of Surgeons. In 2017 Congress mandated that combat trauma teams (not further defined, so the services could adapt to circumstances) should train in civilian hospitals under military-civilian partnerships. An AMEDD Military-Civilian Trauma Team Training task force was established, and MEDCOM published an operations order in 2018, and forecasts are for up to fifteen sites around the country. Similarly, civilian hospitals are being used to train small groups of AMEDD enlisted soldiers under Strategic Medical Asset Readiness Training.

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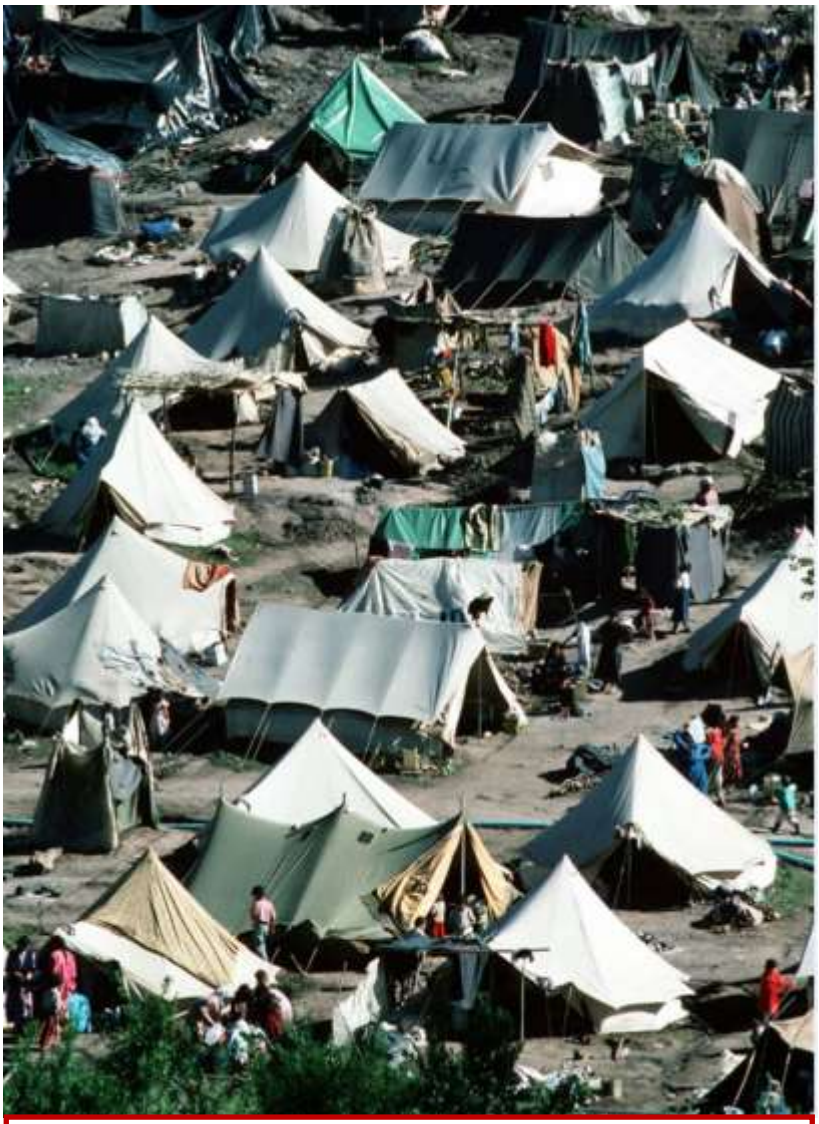
Health Service Support in Operation Provide Comfort, 1991
Scott C. Woodard, ACHH

Operation Provide Comfort initiated early April 1991 in response to a reported 3 million Iraqi ethnic Kurds fleeing into the mountains between Iraq and Turkey escaping Iraqi military forces following the cessation of major combat operations in Desert Shield/Desert Storm. The U.S. action came following the United Nations (UN) Security Council Resolution 688 calling on "member states… to contribute to these humanitarian relief efforts." The humanitarian assistance mission was tasked to relieve the reported 1,000-2,000 deaths occurring daily in the harsh, snow covered mountains within the 206-mile border of northern Iraq and southern Turkey. The military coalition comprised of thirteen nations with humanitarian supplies from thirty countries. Combined Task Force (CTF) Provide Comfort, Joint Task Force-Alpha, originally comprised of special operations forces, maintained control over the mountainous regions, while the majority of combat forces were organized under Joint Task Force-Bravo with the mission of maintaining a safety zone and relocating the Kurds from the mountainous border area. The intent of military intervention was to create the conditions which would allow transfer operations to the UN and non-governmental organizations (NGOs). The lack of a centralized medical authority proved to be problematic.

Elements of U.S. Army Europe (USAEUR) 7th Medical Command deployed a six-member medical survey team to assess the situation on 8 April 1991. The security issues rising from varying tensions between Kurdish factions, the Turkish Army, and the Iraqi Army posed a serious threat to any forces in the region. Humanitarian assistance could only be effective with security. In their initial security measures, elements of the 10th Special Forces Group (Airborne), SFG (A), utilized questionnaires developed by the medical survey team to determine medical priorities in the 43 separate locations and 8 major camps. The initial team from the 7th Medical Command begin integrating U.S. Navy preventive medicine personnel and the Office of Federal Disaster Assistance experts. The newly formed CTF sur-

Kurdish refugees help U.S. military personnel dislodge a light vehicle from a rut. U.S. Army photo.

geon cell began the process of developing medical support for both the refugees/ displaced persons and coalition forces. However, unlike the engineers who formed an engineer brigade command, the medical mission lacked the command and control required for a truly comprehensive medical support plan with the proper assets and command status inherent in an assigned medical brigade. Thus, there was no centralized command structure of a medical commander with a medical staff. The JTF-B commander would later remark that the absence of a brigade-level medical headquarters was a major planning deficiency. The CTF surgeon's plan included over 50 international aid organizations and medical forces from 12 national armies. In addition to the inherent mission organic medical units have within combat forces, they provided medical support to the Kurds in their area of operations. The medical company of the 3d Forward Support Battalion, 3d Infantry Division treated 2,971 patients (45 percent under age 18) during the 23 days the medics operated an aid station along the southern route from the mountains. The diverse, and often severely independent, civilian aid organizations were organized under the UN High Commissioner for Refugees.



Tents cover the mountainside in the Kurdish refugee camp of Yekmel. U.S. Army photo.

With the analysis of the surveys conducted by the 10th SFG (A), the JTF-B medical elements attacked malnutrition and diarrheal diseases as priorities, focusing on treating the very old and very young. Secondly, sanitation conditions were addressed with acute medical issues confronted once medical supplies increased on the ground. JTF-B medical personnel screened and treated the returning inhabitants as they processed through newly established transit centers. Additionally, medical infrastructure was reestablished as the medical personnel worked to re-open hospitals and clinics. In concert with the UN Children's Fund (UNICEF) and the U.S. Center for Disease Control, measles immunization occurred in addition to preventive medicine disease investigations. Forward deployed medical logistics detachments from the U.S. Army Medical Materiel Center, Europe (USAMMCE) provided direct support to every nation in the coalition while also supporting medical resupply distribution to civilian relief agencies. The USAMMCE medical logistics detachments managed Class VIII donations from over thirty countries and excess medical materiel from Desert Shield/Desert Storm supporting coalition forces and NGOs on the ground. Even though there was initial pushback by multifunctional logisticians, the separate medical supply system was a resounding success in its dual support mission and enabled CTF logistics planners to focus on all other classes of supply without having to prioritize them over medical. The issue of command and control over medical evacuation was tenuous because there was no centralized command authority. Communication failures hampered operations– unnits lacked standard equipment and did not follow procedures– there were numerous layers duplicated and errors. In the absence of a central medical authority, communication and control were not corrected until the aviation brigade was directed to take command of aero-medical evacuation assets.

The mission was complete on mid-July 1991 following the joint military, multi-agency and multi-

national coalition exit and handoff to the UN and civilian relief organizations. As Operation Desert Storm proved the U.S. Army could destroy an enemy force in a joint and multinational environment, Operation Provide Comfort I showed how the Army could work to provide humanitarian assistance in a complex coalition and unstable environment. Despite the absence of a medical command authority, there was success in medical aid to the Iraqi Kurds. However, the lack of a designated medical command could have proved detrimental to coalition forces if conflict had occurred with Iraqi forces.

Unofficial patch from Operation Provide Comfort, donated to the AMEDD Museum by BG (Ret) Gerald Griffin, who was in charge of clinics in the operation.

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~~~ July 27, 1775 ~~~

Rodriguez Army Hospital: from Spanish Infantry Barracks to U.S. Army General Hospital and Beyond

J. Edwin Nieves MD, LTC Joseph W. Walker, Mrs. Grissel Rosa, COL Enrique Gaitan

In 1854 the Spanish Royal Engineer Corps began building the *Cuartel de Infanteria de Ballaja* or the Ballaja Infantry Barracks in San Juan, Puerto Rico. Finished in 1864, its primary purpose was to house one of the three Spanish infantry battalions stationed in Puerto Rico at the time. The block-size neoclassic three story building was the last major Spanish structure built in Puerto Rico. It was built with a central courtyard, large enough to accommodate a battalion on parade. It also had kitchens, offices, clinical areas, and other facilities needed to support a regimental size force.

U.S. troops on parade in the central courtyard of Ballaja Barracks, 1900. U.S. Army photo

Although it was not designed to serve as a hospital, it would soon be used as a "receiving casualty center" for local Spanish soldiers sent to fight in the Cuban insurrection known as the "Ten Year War," 1868-1878. Puerto Rico served Spain as a forward staging and deployment area for the Cuban theater. Like in the Spanish-American War ten years
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later, most of the medically-evacuated casualties were infectious. Spanish soldiers had no defenses against mosquito-borne diseases, such as malaria and dengue fever rampant in the southern rural swampy areas, which accounted for most disease cases. Battle casualties during this period included gruesome lacerations from the insurgent cavalry mounted machete charges in addition to bullet wounds. As the insurrection dragged on and casualties increased, eventually a neighboring building, the *Asilo de Beneficencia* or Beneficence Asylum would be annexed for casualty care.

1898-1939: 65th Infantry to WWII

In 1898 the U.S. went to war with Spain over Spanish activities in their Cuban colony. With a Spanish fleet heading to Cuba, the U.S. Navy attacked Puerto Rico, also a Spanish colony, to deny San Juan harbor as a logistics base. On 12 May 1898 a U.S. Navy bombardment of San Juan Fortresses, found that the Spanish squadron was not there, but some "long rounds" landed on the northeast corner of the Ballaja Barracks. After the armistice, damage to the northeast corner of the building was repaired and American casualties occupied the medical facilities vacated by the Spanish. Among the first U.S. soldiers to receive care were members of the 11th Regiment who participated in the Western Campaign in Puerto Rico. Soon they were joined by others convalescing and pending evacuation back to the U.S.

In 1903, President Theodore Roosevelt signed a proclamation establishing the San Juan Military Reservation. This area included the Barracks, Forts El Morro and San Cristobal, and adjoining formerly Spanish army and navy buildings and facilities. (In 1943 the installation would be renamed Fort Brooke after MG John R. Brooke, the first military governor of Puerto Rico.) The Ballaja Barracks reverted to more or less the same uses it had during the Spanish era. The Porto Rico Regiment (after WWI redesignated the 65th Infantry Regiment) was headquartered in it, and the existing medical facilities were considered a station hospital for the 65th. Many of those soldiers would contract the "flu" in the 1918-1919 epidemic and malaria while serving in Panama in WWI, and would be treated at the Barracks. The next 20 years would be largely uneventful until 1939.

1939-1947: WWII and a General Hospital

As the winds of war picked up in Europe, a gradual build-up of military facilities in Puerto Rico included increasing the bed capacity of the Ballaja Barracks station hospital, which was redesignated the 298th Station Hospital. About $1 million would be invested in modernizing and transforming the facilities into a medical compound, and its use as a barracks ceased. Improvements included modern medical equipment and quarters for nurses. The 298th would be the largest military hospital facility, and highest level of care for all Caribbean Theater military neuro-psychiatric patients, all cases requiring lengthy hospitalization, and all those destined for medical evacuation to CONUS during WWII. By 1942 it had expanded to 750 beds, and about 2200 personnel under the command of COL Clyde C. Johnston. It also acted as the induction station for Puerto Rican recruits.

Recognizing its role in definitive treatment, in June 1944, the 298th became the 161st General Hospital. It would remain the definitive highest level of care for all U.S. Army personnel in the Antilles Command. By this time, the threat to the Caribbean had declined and thus the number of medical personnel began to decrease; bed space was reduced to 600, and would remain fairly constant for the duration of the war and shortly thereafter. With no ground combat in the area, there was no pressing need for evacuation to CONUS, and about half the patients were Puerto Rican soldiers who would not normally have been evacuated to the mainland under any circumstances. Like in other military medical facilities in the Caribbean Theater, infectious febrile illnesses like malaria and dengue fever accounted for most of the clinical contacts. To a lesser extent, helminthic parasite infestation, sexually transmitted diseases, and occupational and military training traumas were also significant factors.

MAJ Fernando Rodriguez, DC. U.S. Army photo.

1947-1978: Peacetime, Korea, Vietnam, and Transfer to Fort Buchannan

In 1947, the 161st was inactivated and the facility was renamed Rodriguez General Hospital, in honor of Major Fernando E. Rodriguez, Dental Corps, U.S. Army. He was a pioneer in oral bacteriology research and identified the bacteria causing tooth decay. Rodriguez was a native Puerto Rican and had served as post dental surgeon at Fort Brooke during the 1930s.

Rodriguez Army Hospital would remain active as an induction center for Puerto Rican recruits through the Korean and Vietnam Wars. It served as the main military medical facility for all of Puerto Rico and the Antilles well into the early 1970s.

In 1971 Rodriguez Army Hospital was deactivated and clinical services were transferred to Fort Buchannan, and the local medical treatment facility still bears MAJ Rodriguez' name as Rodriguez Army Health Clinic, RAHC. When the AMEDD left Ballajas Barracks, the building had been in service for 107 years. In 1978 the building was transferred to the Government of Puerto Rico for use as a cultural and educational center.

Main entrance to Rodriquez Army Hospital, 1965. Courtesy Lehman photo.

Hurricane Maria & Present Day Rodriguez Army Health Clinic

Once moved to its present location in Fort Buchannan, RAHC continued its tradition, serving as a readiness and mobilization support installation for the Caribbean. It was propelled again into the front lines when Hurricane Maria hit the island of Puerto Rico in 2017.

A category 5 major hurricane with winds in excess of 155mph, Maria arrived on 20 September 2017 leaving a path of natural and infrastructure destruction. RAHC was not be immune; the building sustained severe structural damage to the roof and walls, with flooding causing severe damage to other internal infrastructure. It was one of those rare circumstances in which the hospital staff, while themselves being victims of the natural catastrophe, were first responders and expected to provide services to others. Within a few days, it would become the epicenter of a massive federal uniformed and civilian interagency relief force, providing direct and logistical medical support not only to the local force and their dependents, but also to those deployed to provide humanitarian assistance relief and reconstruction efforts.

Today, Rodriguez Army Health Clinic endures as the only Department of Defense military treatment facility in the Caribbean. Its core missions remain readiness; forward platform support for multi-component mobilization; and the delivery of five-star healthcare to a community of over fifteen thousand Active Duty, Reserve Component, and National Guard Joint Service Personnel and Beneficiaries throughout Puerto Rico. RAHC maintains three patient-centered medical home teams, 59 clinical and administrative staff, and RAHC endures on Fort Buchanan, Puerto Rico.

RAHC today. U.S. Army photo.

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Supporting the Healers: Training Aids in the AMEDD Museum Collection

By Charles Franson & Paula Ussery, AMEDD Museum

The Army Medical Department Museum's mission is to support the training and education at the MEDCOE, an altogether fitting mission as the AMEDD Museum began as a component of the Medical Field Service School (MFSS) when it was located at Carlisle Barracks. Opened in 1920, the MFSS had a Museum of Field Equipment that included period issue equipment used for training and teaching aids used in the classes. When the MFSS moved from Carlisle Barracks to Ft. Sam Houston in 1946, this collection came with it.

The collection of then-current equipment was used to familiarize the students, and provide hands-on training with what they would be using in the field. Other pieces were used in a classroom environment as essential visual aids.

Examples of the equipment for hands-on training include teaching sets and kits, developed through the Medical Equipment Laboratory, This group of now historical artifacts forms the nucleus of the AMEDD Museum's present collection. Among the World War II artifacts are dental field chests, used in the training of Dental Corps officers and enlisted technicians. Field medical staff were trained using materiel which included field surgical lights and surgical instrument sets for a wide range of procedures as well as medical panniers which could be transported by pack animals.

Clinical training requires a diverse assortment of detailed visual aids for the study of anatomy and physiology. Since the body is three dimensional, the visual aids include three dimensional models of the human body.

Among the equipment used around WWII were detailed anatomical models made of papier-mâché. Produced by the Auzoux Company in France, these models were first created in the 1820s to teach anatomy without the need for cadavers. These were constructed using a blend of paper pulp, plaster, and a special glue, forced into extremely detailed molds. After casting, details were painted on and the whole thing was glazed. The anatomical details (nerves, blood vessels and important structures) were marked by letters or numbers, with a key accompanying the model. Production continued through WWII, after which the papier-mâché was replaced by resin.

Among the mid to late 20th Century training aids are models made of wood covered with plaster. Although not as detailed as the earlier papier-mâché, they still can be dissembled into the component parts of the body being studied, such as an eye, ear, scalp or heart.

Anatomical models for training. Left: a plaster model of the eye and associated muscles. Right: a papier-mâché model of the brain.

For individual self-study the AMEDD began using a form of virtual technology during World War II. View Masters began commercial production in 1939. The View Master system is basically an updated Victorian stereograph that allows the viewer to see an image in three dimensions. The View Master slide set that has been donated to the AMEDD

Museum was produced in 1959 and is entitled, "Surgery of the Oral Cavity and the Technique of Controlled Tooth Division." The set is complete with 100 slides, the viewer and a booklet describing each slide.

Instead of sending powerpoint briefings, the Army used View Master stereo-vision imagery and accompanying textbooks.

Field training for AMEDD personnel is improved by the introduction of realistic battlefield and trauma scenarios. Moulage is one way to simulate traumatic injuries. Moulage, or the making of wax models for the teaching of anatomy and/or the study of wounds and disease processes, flourished in Western Europe, Japan and Russia for centuries. The U.S. Army has used moulage models since at least the American Civil War as teaching aids. Moulage also includes the use of special effects makeup to replicate various disease processes and injuries for application to live subjects, or manikins to simulate victims in realistic settings. Additionally, a kit containing prepared Moulage, made of rubber or soft plastic may be used to provide trauma training. The Museum has in its collection such a kit, "Moulage Set, War Wounds", which consists of 19 prepared appliances. The stock number on the wooden carrying case indicates that the kit was made no earlier than 1961. It includes atomic burns, frost bite foot, and trench foot simulations, reflecting America's concern with preparing for a potential nuclear war with the Soviet Russia.

Cold War-era moulage kit for more realistic field training.

Sometimes, it is necessary to create training aids for a unique situation for which none exists, or is not available. The Museum is fortunate to have a few unique handmade training aids. In 1961 Army nurse Ianthe Swope was teaching a course at Fitzsimons Army Hospital on Operating Room procedures. She commented, "It was difficult for the students to understand the difference between the scrub and the circulator [nurses], so I used this method to help differentiate." This method was a training aid she made from dime store dolls, dressed in surgical clothing with a handmade operating room table with a patient and surgical personnel arranged in their proper positions.

Another example of improvised teaching models are three Vietnam era G I Joe action figures in handmade beds rigged for different types of traction. These were used in the practical nurse training classes at Fitzsimons. The G. I. Joe action figure "patients" are the talking models, which were produced between 1967 and about 1970. The beds are complete with traction frames with "weights" attached to

Two of the G.I. Joe teaching models.

the patients' "splints."

The search for more realistic trauma training led to an experiment with an interactive model patient, the precursor of modern simulated patients. Developed by Samuel W. Alderson, inventor of the crash test dummy, and patented in 1962, it was referred to as a "Synthetic Casualty." The device consists of a life-size male body form, made from foam, on a cart, resembling a gurney. The body has numerous wounds, including an avulsed jaw. The wounds can be made more realistic, in that they can be made to "bleed". The bleeding is controlled by an elaborate system of pumps, with tubes carrying stage blood to the wound sites. The figure has two interchangeable heads, with different wounds. The controls for setting up the bleeding wound sites are hidden behind a flap in the torso of the figure. The cart base contains the pumps and the controls for the intensity of the hemorrhage, which were operated by an instructor. The cost ($18,300 per device) was so expensive, however, that the Army only purchased the prototype. It was, however, very heavily used in training, as evidenced by considerable wear and soiling on the "skin" of the casualty. This was the beginning of ever more complex training simulators, some very lifelike, that are used today at MEDCOE.

A view of the 1960s synthetic casualty, forerunner of today's training mannequins, and (right) the control panel for it's bleeding.

Training aids such as these continue to enhance the educational outcomes of Army medical personnel during their initial training, and as they continue their career, enabling them to maintain a high level of readiness.

Matchless Organization: The Confederate Army Medical Department, by Guy R. Hasegawa. Carbondale: Southern Illinois University Press, 2021. 262 pp. $26.50 softcover. Book review by "Scotty" Knight.

A former Confederate surgeon, in a postwar reminiscence, praised "the matchless organization of the medical department of the Confederate Army, as developed by the surgeon- general's office." (p. 183) This exhaustively researched study looks at the organization of that office and its key personnel; its functioning under the leadership of COL Samuel Preston Moore, the army's surgeon general during most of the short life of the Confederacy; and his impact on the practice of military medicine by the doctors, hospital stewards and nurses. This is also the story of the ultimately ill-fated association of the secessionist states endeavoring to create an effective military medical system to support the operations of the Confederate Army which rapidly found itself at war. It chronicles the impediments Moore faced resulting from the often less-than-cooperative roles played by President Jefferson Davis and numerous Confederate legislators.

The author notes the extent to which the department led by Moore adopted, almost verbatim, most of the existing regulations, policies and practices of the U.S. Army Medical Department as the most expeditious approach. Moore, a former long-serving U.S. Army surgeon, also benefitted from a number of other former U.S. Army medical officers joining the Confederacy. He assigned many of these personnel to the most important positions throughout the department, usually as medical directors of corps, departments, and of general hospitals. He valued professional competence, administrative ability, and familiarity with the practice of medicine in a military organization.

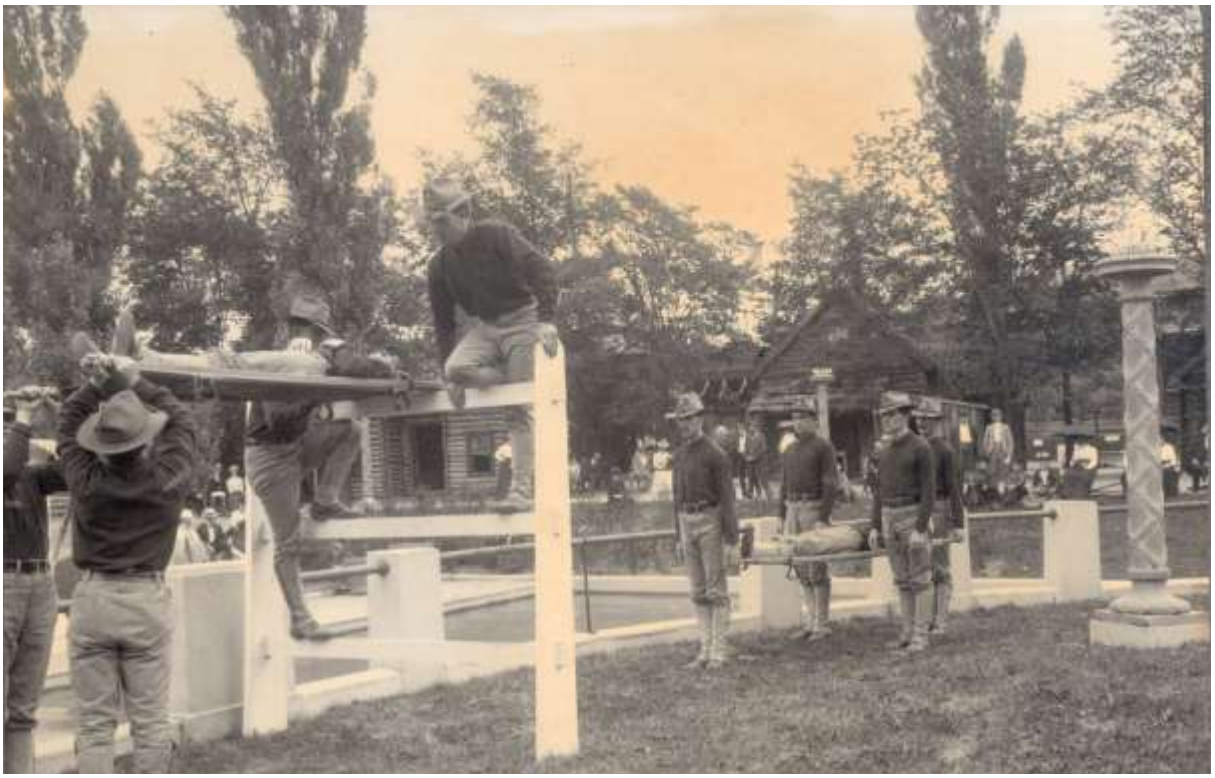
Moore displayed significant administrative talent, was able, and often innovative in adapting quickly to changing circumstances, but he was also an inveterate micromanager and disciplinarian and exhibited what some referred to as an abrupt and brusque personality. In many ways a traditionalist, his expectations for medical officers, based on his many years of U.S. Army experience, were often not met by many in new officers, most coming from civilian life. His traditionalism also made him reluctant to be especially assertive in dealing with the Confederate legislature, the adjutant general/inspector general who was the ranking Confederate general officer and a close confidante of President Davis, and the president himself.

Starting as acting surgeon general on 30 July 1861, Moore faced the immediate need to prevent recurrence of a medical debacle that had just happened, that of First Manassas (Bull Run). The Confederates had demonstrated they were ill-prepared for casualties and the evacuation and care of the wounded was poor. He also faced other daunting challenges, including: shortage of medical officers; inexperienced medical officers; their unfamiliarity with surgery and wound care; shortage of ambulances, hospitals, and medical supplies; an unreliable medical supply chain; and transportation shortfalls. Additionally he had to contend with the influence and actions of the Adjutant General/Inspector General, and the heads of the quartermaster and subsistence departments. The quartermaster general and his department exerted an undue degree of control. These would remain problem areas throughout his tenure as surgeon general.

Moore established a system of general hospitals, including a huge pavilion-style facility, Chimborazo General Hospital at Richmond, and smaller facilities of this type elsewhere. He developed specialty hospitals and specialty wards in general hospitals, brought state-run general hospitals under direct control of the government's medical department, and established a system of medical depots headed by purveyors. He also created a reserve surgical corps of appropriately trained surgeons at the general hospitals who could be "pushed" forward after battles; created an effective examination system to evaluate candidates for Medical Corps appointment, promotion, and elimination of the incompetent; emphasized detailed record-keeping and documentation of patient care; established medical laboratories; recognized the importance of dentistry and had dentists treat patients in general hospitals; and provided medical school attendance at the Medical College of Virginia for selected hospital stewards and soldiers who had been providing medical care.

Although evidence of the results is difficult to locate, in 1863 Moore instituted examinations of hospital stewards and their categorization into three classes, the top class comprising those whose skills included knowledge of pharmaceutical drugs, the compounding of same and their dispensing. With some success and somewhat innovatively, he traded cotton for medical supplies and had personnel of his department assume operation of some distilleries dedicated to the production of medicinal alcohol.

Matchless Organization will be of interest both to students of the Civil War but also to those interested in the history of the development of American military medicine. Though written for the general reader, is extensively end-noted and indexed, contains a useful bibliography, and is replete with an array of photographs, including COL Moore, other key players, and some medical department buildings.



Hospital Corps men taking a simulated casualty over obstacles on the way to the hospital at the AMEDD exhibit at the Pan-American Exposition, Buffalo NY, 1901.
Courtesy National Museum of Health and Medicine

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 to **usarmy.jbsa.medcom.mbx.hq-medcom-office-of-medical-history@mail.mil**
Please contact us about technical specifications.

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