American Pediatricians at War: A Legacy of Service

American pediatricians have gone to war for almost as long as pediatrics has been a specialty. A decade after Jacobi, Osler, and Forchheimer founded the American Pediatric Society in 1888, pediatricians, or “pediatrists” as they were sometimes called, were serving with the American military on foreign soil. Across more than a century of service, the role of pediatricians in armed conflict has often been unclear to military and civilian leaders, fellow physicians, and at times even to members of their own specialty. In a 2003 site inspection of an overseas US military treatment facility, the assistant secretary of defense for health affairs was briefed about pediatricians. “Why would we need pediatricians here?” was his reply. Despite the confusion, every major conflict since the Spanish–American War has witnessed American military pediatricians serving in a variety of roles. From Cuba to Kandahar, the beaches of Normandy to Mosul, the century of service continues around the globe and forms the fabric of the story of America’s uniformed pediatricians today.1–3

ROOTS

At the close of the 19th century, pediatricians played a very different role than in today’s society. Pediatricians were considered specialists rather than primary care providers for children. There were very few pediatricians in America, and they mostly served in large academic centers or in urban hospitals. Because accurate records of medical specialists were not routinely kept at the time of the Spanish–American War, it is unclear how many pediatricians served in the US military during that conflict.

Samuel Walter Kelley was one famous pediatrician whose record of service is known. Dr Kelley spent most of his adult life in Cleveland, where he was a professor of diseases of children in the Cleveland College of Physicians and Surgeons. He worked in Cleveland as both a pediatrist and a pediatric surgeon. He was commissioned as a brigade surgeon with the rank of major on August 17, 1898. After the war, he served as chairman of the Diseases of Children Section of the American Medical Association from 1900 to 1901. In 1909, he published The Surgical Diseases of Children, which was the first text of its kind published by an American author.4 He continued his military affiliation as a member of the Association of American Surgeons and later volunteered his services as a member of the Medical Reserve Corps of the United States Army to both the French and American armies in the World War I, although he was barred re-entry upon active duty due to age5 (Fig 1).

Dr John Amesse, a future vice president of the American Medical Association from 1943 to 1944 and a charter member of the American Academy of Pediatrics (AAP), served during the brief period of fighting in Cuba and the Philippine Insurrection that followed as an assistant surgeon in the Marine Hospital Service—the forerunner of the US Public
activities for which their specialized training was unsuited."

Dr Phillip Moen Stimson, soon to be recognized nationally for his work in contagious diseases, joined the US Army Medical Corps in 1917 after completing his residency at the St Louis Children’s Hospital. He recalled that “In the United States Army in the World War, pediatrics were enrolled in great number, but comparatively few had opportunities to work on the contagious diseases.”

Dr Stimson served initially with the British forces in Flanders and was wounded in action when a piece of shell fragment hit and dented the brim of his helmet. He is thought to be one of the first American medical officers wounded in World War I. After his recovery, he served with the British 25th Stationary Hospital in Rouen, France, and finally with the American Red Cross Military Hospital in Paris. He later authored A Manual of Common Contagious Diseases, one of the classic infectious-disease texts of the time until its final edition in 1956.

A number of other pediatricians stood out for their individual service. Dr John Amesse continued his wartime service begun in the Spanish–American War by serving as a lieutenant colonel in the Army Medical Corps. He first commanded Base Hospital No. 29 organized by the Medical School of the University of Colorado, then was transferred to Base Hospital No. 15 in France where he served until the war’s end. Major James H. McKee, a pediatrician from Philadelphia, became one of this country’s first military flight surgeons serving in the United States Army Air Service. After the war ended, he also became one of the first Americans to fly from coast to coast, with a squadron commanded by Colonel “Hap” Arnold, who was later to become the only 5-star general in the history of the Air Force.

Dr Edward Clay Mitchell, a busy pediatrician in Memphis, Tennessee, was appointed commanding officer of Base Hospital No. 57 in Rheims, France, where he served in the Army Medical Corps in the rank of colonel. He later established the first American military hospital in Paris and gave lectures on pediatrics at the Sorbonne. For his efforts in France, he was awarded the French Croix de Guerre with Palm medal. Returning to the United States, he resumed his pediatric practice and became a charter member of the AAP. He later served as its president and as the chairman of the Pediatric Section of the American Medical Association.

Two other future founding members and presidents of the AAP served in the “War to End All Wars.” Phillip Van Ingen enlisted as a captain shortly after the declaration of war by the United States in 1917. By war’s end, he had been promoted to lieutenant colonel serving in France and Italy in command of Field Hospital No. 331, receiving La Croce al Merito di Guerra from the Italian government for his meritorious service.

Dr Borden Veeder, a St Louis pediatrician who was on staff at the Washington University Medical School, deployed with Base Hospital No. 21, becoming the hospital’s commander by war’s end (Fig 2). Dr Veeder would later direct the wartime efforts of the AAP as one of its presidents during World War II, then go on to become editor of the Journal of Pediatrics during the postwar years.

One of his staff physicians and fellow pediatricians at Base Hospital No. 21, Captain Hugh McCulloch, would later go on to be the founding editor of Pediatrics.

Two other pediatricians who were soon to be nationally known, Dr A. Graeme Mitchell and Dr Rustin McIntosh, served early portions of their medical careers during World War I. Dr Mitchell, soon to publish one of the preeminent texts on pediatrics, Diseases of Infants and
Children, served with the American Expeditionary Force in France and Germany, finishing the war in the rank of major. Dr McIntosh, who would go on to be a long-term director of the Columbia-Presbyterian Medical Center in New York City, served for 3 months on the front lines with the 5th Marines before the war ended. He was then assigned to a translation bureau of the American Commission to Negotiate Peace.

Detailed records of wartime experience were left by other pediatricians. Captain Marshall Pease joined the American Expeditionary Force in April 1917 with a group of fellow physicians from the New York Post Graduate Hospital. His letters home and the tales they contained were later chronicled in book form, including his care of a French child dying of tuberculosis. In a letter to his old college newspaper, the Beloit Alumnus, he reported that "meningitis, diphtheria, pneumonia, dysenteries, and the many other infectious diseases, some of which are rare and some of which are feared, call for much investigation and instant action." The story of Wilburt C. Davison, who was to become the founder and first dean of the Duke University Medical School, as well as one of the nation's most well known pediatricians, may be the most incredible of the wartime doctors' tales. Davison won a Rhodes Scholarship in 1912 and entered Oxford's Merton College as a medical student in 1913. At Merton, he became a friend of Sir William Osler and was often a guest at his home for dinner. With a letter of introduction from Osler and a year of medical school under his belt, Davison was given a position at the American Red Cross Ambulance Hospital in Neuilly, France. Over the course of his 6-week winter vacation of 1914–1915, he worked his way from being an orderly to being a wound-dresser to being an anesthetist. Taking a leave from classes at the end of his vacation, Davison accompanied a volunteer medical group to go to Serbia and care for patients during the worst typhus epidemic of modern times. Traveling back through Italy and Austria, he was later detained and interrogated when his group reached the German border. Allowed to leave with 2 soldiers as guards, Davison and his other American colleagues were able to slip their escorts and travel through Germany freely. In this time period before the American involvement in the war, they were even able to visit German military hospitals.

From a German officer, the group learned of imminent German plans to use poison gas on the battlefield. Making their way through Holland and secretly back to England, Davison reported this information to the British authorities, but the threat was not acted upon. Ten days later, the Germans used chemical weapons successfully for the first time at Ypres, Belgium. Dr Davison returned to and graduated from Johns Hopkins in 1917. He returned to France as a first lieutenant with the American Expeditionary Force serving for the remainder of the war.

In the presidential address before the Twelfth Annual Meeting of the AAP in Chicago on November 7, 1942, then-president Mitchell remarked that "The history of World War One records great accomplishments by the medical profession and certain specialist groups. The contributions of pediatricians, however, not as individuals, comprise an unwritten chapter in that history. Future historians may be able to pass on to posterity a better record of achievement on the part of the pediatric group of this era." Sadly, no complete record of pediatricians serving in the military during this conflict was ever compiled, and much of the story has been lost forever.

PEDIATRICIANS IN WORLD WAR II

The world was again engulfed in war two decades later, and America mobilized its resources for its seemingly inevitable involvement. There was dispute as to how pediatricians could best serve their country. Several of the founding members of the AAP and a number of past presidents were veterans of military service in World War I. Not all believed that their medical expertise had been used wisely in that
conflict. The pre–World War II Army had no pediatrician serving on active duty. Care was provided to dependent children in the local community or in some instances by Army general practitioners as a part of their additional duties.

One potential role for pediatricians became clear as soldiers were inducted into the Army and exposed to a range of infectious diseases. In an address before the Tenth Meeting of the AAP in Memphis in 1940, World War I veteran Dr Philip Stimson discussed what he had witnessed in his time in the service in that war: “It is not widely known that mumps, measles, scarlet fever and diphtheria between them caused a loss of almost six and a half million days of availability of United States soldiers in the last World War. . . . In fact, in 1918, the speaker was on duty at a British hospital for Contagious Diseases at Rouen, in France where at one time he had soldiers from eleven different nations as his patients in a single large ward for mumps.”

In discussing the American experience, he related that “Boys who have grown up in backwoods districts, on farms, or in other rural communities have usually never been exposed to any such infections, and when thousands of these rural young men are first massed together in army camps, contagious diseases are apt to be very common. Therefore, in 1918 some army camps actually had relatively 100 times as many cases of a disease as did other army camps. It is in the hospitals of such camps where pediatricians can be useful.”

An anonymous editorial published as the lead article of the February 1941 issue of the Journal of Pediatrics suggested that AAP members should serve their country in a different manner. “In this time of national organization for the defense of American life and freedom, the question is frequently asked among ourselves as to what the pediatrician can do to help. On every side we find colleagues in other special fields, as surgery and its subspecialties and psychiatry, organizing to give their best knowledge to the new army which is being developed and to prepare technically for a war we do devoutly hope will never take place. The early days of American participation in the World War in 1917, when army medical preparedness was quite a different thing than it is today, found many pediatricians entering army service, and name after name of men of the older group comes to mind, who served in the field, or with field ambulances and hospitals, both abroad and at home. Not a few rose to positions of responsibility . . . . While in case of war, a number of pediatricians will enter military service either for the element of adventure, or in order to maintain a certain necessary self-respect arising from the dictates of their emotions, clear, hard, unemotional thinking leads definitely to but one conclusion. The trained pediatrician has a much more important function in the warfare of today than military service with the army or navy. It has been demonstrated clearly in the last year that war today is a total war; involving the civilian population as much as the troops in the field. To win a war, it is as essential to maintain the morale and health of the civilian population as it is to maintain the health of the troops or to care for the wounded after battle. Here, we sincerely believe is the field in which the pediatrician, because of his particular training and sphere of work, can be of most service. It is along these lines that our thoughts should be directed and our organization be pointed. The problem of the child and child health has been a major one in every country so far involved in the war. The pediatrician with his store of technical knowledge relating to child health and welfare can best help the nation as a whole by directing his efforts toward meeting the terrible situations which the warfare of today brings to the children of a nation at war or overrun by the enemy.”

Also recognized were the problems of human migrations that the war was causing, both for service members and for wartime plant workers and their families. An article in the Journal of Pediatrics in winter 1941 summed up the problem: “Migration of families has increased very greatly, with all its concomitant hazards to the health and welfare of children. . . . I do not need to tell you what life in a trailer camp means to children or to their mothers when a one room trailer becomes their permanent family dwelling place. . . . Add to this the withdrawal of physicians, including pediatricians, and the civilian population to enter the Army or Navy, and the situation becomes still more difficult to handle.”

At the AAP’s annual meeting in Boston, a “Symposium on the Role of the Pediatrician in National Defense” was held in October 1941, just 2 months prior to the attack on Pearl Harbor. Dr Stimson remarked that “It seems advisable to try and have pediatricians spared from being used as regimental medical officers, hospital supply officers and the like in the present emergency, but rather to keep them available to support civilian needs. Men especially trained in contagious diseases and in the field of nutrition could be of value to the armed forces. . . .”

Dr Davison, at that time the chair of pediatrics at Duke University, spoke from experience on how pediatricians could fit in the national defense program. In his article “Reduction of Communicable Diseases among Troops and Children during National Defense Program” published in the American Medical Association’s new journal War Medicine, Davison commented: “One in every 133 in the military services (of the United States in WWI) died of
infectious disease. Judging by the experience of the last war, the best and most efficient way of utilizing a pediatrician is as a medical officer in the field of infectious disease. Training in pediatrics does not fit the physician for any other type of military duty unless as a mess or lab officer . . . . Therefore, whether pediatricians serve as medical officers with troops or practice as civilians with children, they must concern themselves with the reduction of communicable diseases, or preventive pediatrics.”

“To reduce this incidence of infectious diseases in troops, pediatricians would recommend the adoption of the preventive measures which have been found to be efficacious in children. Some of these precautions at present are being used in the Army and Navy, but more of them should be applied. To be specific, as soon as a recruit is inducted into service he should have Schick, Dick, tuberculin and Wassermann tests, be vaccinated against smallpox and be inoculated with typhoid-paratyphoid vaccine and tetanus toxoid . . . . Alternate recruits should receive influenza vaccine in order that data on its immunizing value may be collected.”

Dr. Davison closed his treatise with this recommendation, “During the last war, Brig Gen J.M.T. Finney served as consulting surgeon and Brig Gen W.S. Thayer as consulting physician. Perhaps in the present emergency, a consulting pediatrician who has had experience in preventing communicable diseases should be appointed. In the light of the figures on the frequency of children’s diseases in the Army and Navy during the last war, this suggestion is not as foolish as it may seem.”

By 1942, in the aftermath of Pearl Harbor and America’s declaration of war on the Axis powers, any hope that pediatricians could choose their assignments in the military had disappeared. AAP president-elect and war veteran Borden Veeder summed up the consensus feelings in his remarks at an AAP luncheon in summer 1942: “The first duty of the medical profession in a war such as this, whose outcome will determine our survival, is to the military forces . . . . Some sixteen months ago, almost a year before Pearl Harbor, before either you or I or anyone else knew what was in store for us, an editorial was drafted, approved by the Editorial Board, and published in the February, 1941, issue of The Journal of Pediatrics which stated that warfare today was a total warfare and that the pediatrician would probably be of more value in civilian life than in service. None could foresee at that time the extent to which this world madness would reach. Today the situation is different. I am sure, although I have not consulted with them, that the group who thought as I did then, would agree that our first essential duty is to win the war and that only an overwhelming military force can bring this about, and all else must be subordinated.”

A second speaker, Major Robert Bier, member of the AAP and an assistant in the Medical Division of the Office of Selective Service, added these remarks: "The Army is in dire need of thousands of additional physicians to serve in their forces, and a somewhat smaller number is needed by the Navy . . . . It would appear to be unwise for any young physician, especially for the pediatrician, to attempt to start practice . . . . There are a few permanent stations where the attending physician is called upon to care for children of the post, but the needs in this respect are either filled or so small as to be discounted. For all practical purposes, there will be no pediatricians in the Army. Many of the younger pediatricians in practice and postgraduate training have complained that if they go into the Army for several years, they will forget their special training. If a pediatrician forgets in a few years of Army medicine all of the pediatrics he has learned to date, it does not speak well for his mental ability or interest in the specialty.”

By late fall 1942, 162 of the 1496 members of the AAP were serving in the military, along with “many pediatricians who are not yet eligible to the Academy who are now in the Army or Navy.” Dr Edward Clay Mitchell, Great War veteran and outgoing president, pledged “to offer the services of pediatricians to our country with no restrictions.”

From June 1942 until June 1947, the Journal of Pediatrics, then the “Official Organ for the American Academy of Pediatrics,” published a monthly to bimonthly listing of AAP members in the service. Never before and never since has the AAP seen so forthright with its support of its members serving in the military. AAP dues were not to be assessed against fellows while they were on active duty and for 1 year after their release from the service. Fellows in the military could continue to receive the Journal of Pediatrics for a discounted annual fee of $5.00 per annum. Candidates for examination for the American Board of Pediatrics could substitute 1 year of military service for 1 of the 2 required years of pediatric practice or continued study.

For the first time in its history, the annual meeting of the AAP was cancelled in fall 1943 “in order to help the railroad transportation problem brought about by the war and the shortage of physicians in civil life.” Dr Veeder’s presidential address, published in the December issue of the Journal of Pediatrics, updated the situation of pediatricians in the war effort. “Pediatrics, we must realize, is not a medical specialty closely related to military medical efforts. Despite the fact that there is no particular place for the pediatrician as a pediatrician with the Armed Forces, 310 Fellows of the Academy, nearly 22 per cent of our
membership are in the service. This is a high figure when we consider that only between 3 and 4 per cent of our membership are under 35 years of age, and 35 per cent are in the 35 to 45 year age group. There are, of course, many more pediatricians than this in service, as over 2,100 pediatricians have been certified by the American Board of Pediatrics. A very large portion of the 600 odd certified by the Board and eligible to Academy membership but are not members are in service. Of the men in service, a few have been assigned to contagious disease and sanitary service, and a very few are actually practicing pediatrics in Army and Navy camps. Letters from all over the world have crossed my desk from pediatricians doing a wide variety of medical duties. Even if pediatrics is a specialty that does not fit directly into the medical picture of military organization, there has been ample demonstration of the spirit of the physician whose medical work is with children, and we can look with pride on our associates who have entered service.”

The roles that individual pediatricians played in the war effort were quite varied. Some pediatricians had small roles in the conflict but later went on to prominence nationally. Dr Benjamin Spock, rejected for Army service due to a previous pneumothorax, joined the Navy in 1944 and served as a psychiatrist at military hospitals in the United States until 1946. During his free time in the service, he wrote what was to become one of the best-selling American books of all time, *The Common Sense Book of Baby and Child Care*, published in 1946 just in time for the postwar baby boom. Dr Julius Richmond volunteered his efforts and served as a flight surgeon stateside in the Army Air Forces Training Command from 1942 until 1946. He later was appointed as the first director of the national Head Start program and went on to become the 12th Surgeon General of the United States.

Other pediatricians played more substantial roles during the war. Captain George Lyon served as the chemical warfare officer on the staff of Commander, United States Naval Forces, Europe. He was “chiefly responsible for the training in defense against chemical warfare of the Naval forces organized in the United Kingdom for the assault on North Africa, and organized the program of instruction for all Naval personnel engaged in the operations against the coast of France.” He was awarded the Bronze Star by the commander of United States Naval Forces, Europe, for his efforts. Dr Harry Gordon served as the assistant chief of the Medical Service and was in charge of the tropical disease section of the sprawling 3000-bed Harmon General Hospital near Longview, Texas. Dr Gordon went on to serve on the editorial board of *Pediatrics* and to publish more than 100 papers in neonatology and developmental pediatrics.

Dr Horace Hodes served as the officer in charge of the Virus Laboratory, US Naval Medical Research Unit No. 2 in Guam. In Guam he did seminal work with Japanese encephalitis and later in civilian life was a part of the research group to isolate the first known cause of viral diarrhea in humans, now known as rotavirus.

In this conflict, the first female pediatricians served on active duty in the military. Dr Anna Hays and Dr Joyce Hartman both served as lieutenant commanders in the United States Naval Reserve (USNR). Dr Marion Josephi finished her career as a commander in the USNR. Several other physicians served whose names, but maybe not wartime careers, are familiar to members of the Section on Uniformed Services of the AAP. Dr Leo Geppert was commissioned as a second lieutenant in the US Army in 1941. During the war, he served as both the executive officer then commander of the 309th Medical Battalion, which was attached to the 84th Infantry Division during the Battle of the Bulge. After the war, Dr Geppert had a distinguished career in Army pediatrics. He established the first pediatric service at an Army hospital at Brooke Army Hospital in 1946. He later served as theater consultant in pediatrics, Armed Forces of the Far East, then after stints as chief of pediatrics at Walter Reed and again at Brooke, he retired from the service in 1964.

One of the most recognizable names in military pediatrics is that of Ogden Bruton. In 1940, he was conscripted as a reserve officer to serve 1 year in the expanding peacetime Army. His conscription launched a 21-year career in the Army that took him around the world, from Washington, DC, to Germany to Panama and to Hawaii. In 1946, he became the consultant to the Army Surgeon General for pediatrics and was tasked with improving the health and safety of the infants of “war brides” as they made their passage to the United States from Europe. The importance of this mission was made even more urgent as an epidemic of diarrhea sickened 19 and resulted in the death of 6 infants on the US Army transport ship *Zebulon B. Vance*.

In spring 1948, again at the behest of the Army Surgeon General, Dr Bruton inspected the pediatric care facilities of the US Army in occupied Germany and Austria. Returning to the United States, Dr Bruton led the efforts to create the Army’s first pediatric training program at Walter Reed. It was during his time at Walter Reed that he published his landmark work on the disease that now bears his name, Bruton X-linked agammaglobulinemia, based on observations he made in the care of a “military dependent.”

Much of the historic record of the pediatricians who bravely served in World
War II has departed with the memories of those of the “Greatest Generation.” There are a few who served whose heroic wartime exploits have been documented. Dr William Wallace, a future driving force in the expansion of the Rainbow Babies and Children’s Hospital in Cleveland, served 4 years as an infantry battalion surgeon and took part in the North African Campaign, the invasion of Sicily, the landings in Normandy, and the Army’s final push into Germany. Saul Krugman, who would go on to be one of the most well-known pediatric infectious disease physicians in America, joined the US Army Air Corps in June 1941. He served until 1946 as a flight surgeon earning the Bronze Star. In one 13-month period alone, from August 1946 issue of the Journal of Pediatrics gives an account of the Bronze Star awarded to Lieutenant Harold A. Rosenberg of the USNR. The citation was made for meritorious services in connection with operations against the enemy as a medical officer attached to a Marine Air Base in the Ryuku Islands, during the period April 5 to June 7, 1945.” Lieutenant Rosenberg, the citation read, “rendered extremely valuable service in the treatment evacuation of wounded personnel, frequently facing great danger in the performance of such duty. His courageous devotion to duty, tireless efforts and high professional skill contributed materially to the success of the Okinawa campaign and were in keeping with the highest traditions of the United States Naval Service. The most highly decorated pediatrician to ever serve in the US military was Dr John Connell (Fig 3). Dr Connell grew up in Iowa and then graduated from Washington University in St Louis in 1937. He joined the National Guard as a medical officer and then entered active duty in the Army Medical Corps in 1941. By 1943, he had become the commanding officer of Company “C,” 109th Medical Battalion, which was then attached to the 34th Infantry Division. After the Allied Invasion of Italy, German forces had set up defensive positions south of Rome, the southernmost along the Volturno River forming the so-called “Volturno Line.” In 2 short days, Captain Connell’s actions would earn him the US military’s third-highest award for valor, the Silver Star. The citation for his award tells the story: “In action on 13 and 14 October 1943 . . . during an attack by an infantry regiment over the Volturno River . . . Captain Connell followed the infantry across the river and by his own ingenuity organized routes of evacuation of battle casualties. All through the attack which lasted two days Captain Connell supervised the proper function of new routes and constantly reconnoitered to improve, shorten or hasten the evacuation, even though the routes were under enemy fire. He made several trips across the river which was still under enemy observation and heavy artillery and mortar fire. Undoubtedly the ingenuity and perseverance of Captain Connell, and the calm and courageous manner he performed his duties, saved the lives of many battle casualties and was instrumental in their being evacuated more quickly from the front lines . . . .” Captain Connell’s service in the battle came to an abrupt halt in the early afternoon of October 14, when his Jeep ran over a land mine near D’Annunziata, Italy. Suffering a concussion as well as a left frontal bone fracture, Captain Connell was evacuated back to the United States where he became one of 13 pediatricians of World War II to be awarded the Purple Heart. He served out the remainder of the war stateside, being promoted to the rank of major. Dr Connell went on to have a long and distinguished career in pediatrics. He helped to found what would become the Rocky Mountain Poison and Drug Center because of his “concern about accidental aspirin deaths.” He was also involved in the work in designing the original Denver Developmental Screening Test. Dr Connell worked his way up to become medical director at Denver Children’s, then later served as the director of pediatrics at the then Denver General Hospital. Remembered by friends and family alike as a quiet and humble leader who let others flourish, he died in 2003 at the age of 93. Most of
his colleagues knew little about his war service, and even fewer knew about his heroic actions in the dark days of fall 1943.38

There is no accurate count of how many pediatricians served with the Army, Army Air Forces (the predecessor of today’s Air Force), and Navy in World War II. On July 1, 1940, there were 1562 physicians in the United States with board certifications from the American Board of Pediatrics. The AAP reported ~100 of its members in the Army Medical Corps by fall 1941. By fall 1942, the number of AAP pediatricians in the military service had risen to 162 of a total membership of 1500, and by January 1945 this percentage increased to 355 fellows of the 1740 in total membership. The pages of the Journal of Pediatrics listed the names of 453 pediatric members of the AAP who served in the military during the course of World War II: 304 were listed as having served in the Army, 127 in the Navy and Marine Corps, and 5 as having served in the Army Air Forces. For 17 serving members, no service of record was listed. This is at best a partial count, as those who interrupted their pediatric training, as well as those who had completed their training, but were not yet diplomates of the American Board of Pediatrics, were not included in the list. Data collected on the ~52 000 physicians on active duty with the Army in January 1944 showed 21 741 with specialty qualifications of some sort. Of this number, 963 (4.4%) had some training in pediatrics with 320 listed as having “Outstanding Ability” or “Superior Training” in pediatrics with the ability to perform pediatric duties without supervision. Another 386 had recently completed pediatric training, with the final 247 including those who had finished a pediatric internship and 1 year of residency or those who were general practitioners with a “demonstrated ability” in pediatrics.39

The World War II era was a pivotal time for American pediatrics. Pediatricians had proved their worth on the battlefield, and their absence at home showed their importance in American medicine. Commented Deputy Surgeon General of the Army George Lull: “In the Army there was no need for such specialists as obstetricians, gynecologists or pediatricians. Let it be said of this group, however, that they volunteered to do anything they could for the war effort.”39 The mass migration of the American populace during the war coupled with the departure of the majority of pediatricians under the age of 45 for the service left a gap of care for the children of those who had newly joined the military and for the families of those who worked in the defense industry. A portion of the care was provided to more than 230 000 infants under the age of 1 by the Emergency Maternal and Infant Care program, known as EMIC.40 This care allowed the enlisted in the lowest ranks of the military to receive subsidized care for their children, often provided by the few overworked civilian pediatricians who remained. Commented one physician: “Before EMIC, many parents did not know that a pediatrician was not a foot doctor.”41 The old adage, “if the Army wanted you to have a family, it would issue you one,” was passing by the wayside.

In 1943, the Army opened up its first pediatric ward at Brooke Army Hospital.42 In the December 1948 issue of Pediatrics, the new “Status of Pediatrics in the United States Army” was outlined: “Pediatricians who served in the armed forces during the war will be interested to learn that pediatrics as a specialty has been given recognition by the Army Medical Corps. With the inauguration of residency training in Army General Hospitals it became apparent that pediatric experience was essential to adequate training in almost all specialties. One aspect of this program, important to all pediatricians, is that in the event of another mobilization the consultants who have been appointed to the Surgeon General in pediatrics will have a strong voice in the adequate utilization and assignment of pediatricians.”43 Likewise, Navy military pediatric residencies were created as the American military needed to remain of sufficient size to meet the new challenges of the Cold War. Families and children had become a part of the US military landscape worldwide, and military pediatrics was here to stay.

KOREA

Less than 5 years of tentative peace were shattered in the early morning hours of Sunday, June 25, 1950, with the invasion of South Korea by the forces of communist North Korea. Again, American pediatricians were at war in a distant land. In the drawdown of the military and its medical services following World War II, this was a conflict for which America was ill prepared. Summer 1950 saw the Army Medical Corps woefully understaffed. The Eighth Army, which staffed medical units in both Japan and Korea, had only 156 physicians assigned, although they had an authorized strength of 346 doctors. Of the total number of physicians present, 13 had completed an internship or a portion of their residency in pediatrics. The majority of the remnants of the physicians had only a year-long rotating internship of training before they were thrust into the conflict. Hospital staffs were depleted in Japan as physicians were quickly transferred to staff the 8054th Evacuation Hospital as well as the 8055th Mobile Army Surgical Hospital (MASH), 8063rd MASH, and 8076th MASH. At one point in late summer 1950, all of the medical officers, with the exception of the commanding officers of the hospitals, were
physicians whose residency training had been interrupted.

By October 1950, the number of partially trained pediatricians serving in Korea in Army units was up to 18. What could a pediatric intern or resident new to Korea expect to be doing? For some, the assignment meant working in a dispensary away from the front lines, for others working in a hospital, caring for the wounded and for those with disease and non-battle-related injuries. For most, the assignment meant working at a Battalion Aid Station forward of the surgical hospitals. Their primary duties there would be "to provide first aid, resuscitation measures such as the establishment of adequate respiratory exchange, shock therapy, before and during evacuation, the alleviation of pain and apprehension, the institution of antibiotic therapy and the administration of the routine tetanus toxoid booster injections, the necessity for timely, early evacuation and distribution to appropriate surgical or evacuation hospitals." 

One of these young aid station doctors was Dr. William Nyhan, soon to become a well-known name in pediatrics. His residency in pediatrics at Yale was interrupted by a 15-month tour of duty in Korea. Remember D. Nyhan: "I joined the 5th Regimental Combat Team, and immediately after I arrived there we were in a furious fire fight. I was battalion surgeon for the first battalion. I don't think I slept at all my first night with the outfit. There was a lot more of that as we kept moving forward. Ultimately we got to a stable position and spent the winter with our troops on connecting high hills and the enemy on the next group of hills north. My life went from acute care of battle wounds to general practitioner trying to keep the troops healthy, with of course some acute care of wounded soldiers, but much less. I was impressed that the training the Army gave us during basic was virtually completely useless; except maybe the 'keep your head down' and 'wear a helmet.' When I resumed training in pediatrics at Yale, ultimately as chief resident, we taught pediatric residents to do cut downs, and tracheotomies."  

(W. Nyhan, MD, personal communication, 2009)

A letter from Dr. Nyhan to a pediatric colleague back at Yale tells what life was like as a physician on the front lines of the Korean War. "Geographically, I don't know where I am. I do know that I'm well into North Korea and about as far north as any United Nations troops have gotten at this particular time. Medically, I'm in as bad a spot as one can get. I'm what is known to the Army as a Battalion Surgeon—there is one to each Battalion of troops—and I'm in a Battalion Aid Station. This is the furthest forward of the Army's medical installations and we are the first to see casualties off the line. Our position now is about a mile from the front but we're very mobile. Two days ago we were on the line itself. A crazy job for a pediatrician—but this is a crazy Army. One of my aid men, a corporal, has a Master's Degree in Engineering and another a Bachelor's in Music Composition. The Army is so full of such incongruities that I find it hard to complain."

"We see so many badly wounded—very badly wounded men every day that it's difficult to complain at all. I hated the Army throughout (my time in) Texas and on my rapid journey over here, but even that passes in this sort of work. One can only hate war here. No one wants to be here—not even the Chinese I've seen. It's just heartbreaking work. Living is primitive, but not bad yet. We all dread the arrival of winter. The Army is on the move forward—has been since I arrived. So we don't stay in one place for more than a day or so. We sleep on the ground—there is a tent for patients, only rarely for us. It depends on the load." Continuing he writes: "It is now 72 hrs since I wrote the last paragraph; 72 hours of which I spent only 8 hours in my sleeping bag. We just participated in another bloody but 'successful' attack. Things were worse than I have ever seen . . . ."

Dr. Nyhan closed his letter with an apology for having lost a copy of a paper that he and his colleague were working on: "In the process of our last attack it disappeared along with a camera, razor and all of my clothes . . . judging from where we were when I last saw my bag, the Chinese may be reading my paper."

Young doctors were changed forever by their experiences in the war. Robert Endres served in Korea from 1951 to 1952 after completing a rotating internship. He was the chief medical officer of a dispensary attached to the 110th Replacement Battalion. For 3 months in summer 1951, he served in the combat zone near Inchon, and then his work slowed as the fighting moved to the north. His unit's chaplain had started an orphanage in Inchon in an attempt to care for some of the hundreds of children who needed food, clothing, and shelter (Fig 4). He asked Dr. Endres to "see the sick kids when I had finished up with my troops," and the young doctor obliged. Although he had a residency in surgery lined up upon his return to the United States, Dr. Endres enjoyed caring for the children so much that he changed his residency to pediatrics, eventually enjoying a career as a pediatrician in Tulsa, Oklahoma (R. Endres, MD, personal communication, 2009, Fig 5). Creative ideas were put into place to fill the depleted ranks of Army physicians who had been deployed to Korea. In September 1950, Operation NavMed was launched to furnish 570 Navy physicians to serve in Army hospitals and clinics worldwide, including Korea. After a day of in-processing, these doctors were given "three days of intensive Army
orientation, which covered Army Medical Service in the field, and in fixed hospitals; radiologic defense, military correspondence, law and courtesies; medical supply procedures; military preventive medicine and neuropsychiatry; and legal and personal affairs. Nearly 10% of these physicians were pediatricians or pediatric residents whose training was interrupted. According to the July 1951 issue of the Military Surgeon, which detailed the operation, “This project was a complete success, the entire group of Navy officers was pleased and satisfied as they departed for their new duties.”

Dr Howard Mermelstein was one of those Operation NavMed physicians. In fall 1950, after starting his residency in pediatrics at the Children’s Hospital of Pittsburgh where he would eventually become the medical staff president, he was given 3 weeks’ notice to report to duty and was soon off to Korea. While stationed in the city of Pusan, he served as a “Port Surgeon” in a dispensary. Recalled Dr Mermelstein: “One night a Korean Medical Advisor came to my dispensary, telling me that they needed a doctor as one of the children was dying at the orphanage on the hill. We got to the orphanage and the child had a diphtherial web in the back of his throat.” Dr Mermelstein performed a tracheotomy on the child, though he had never done one before as a resident. In looking around the orphanage, he saw what he described as “an irritable museum of chronic pediatric disorders.” Fortuitously, Captain Giulio Barbero, who had recently completed his pediatric residency at Children’s Hospital of Philadelphia, was also in Pusan. Dr Barbero, who during the war served as the chief of laboratories of an Evacuation Hospital, as well as the chief medical officer of the 8228th MASH, would go on to become one of this country’s early pediatric gastroenterologists and do pioneering work in children with cystic fibrosis. The newfound colleagues spent days off at the orphanage setting up a “state-side hospital.” Working with the local Masonic Lodge, the Children’s Hospital at Pusan, later to become the Pusan Children’s Charity Hospital, the first children’s hospital in Korea, was born (Fig 6).

Sadly, almost nothing about the service of pediatricians, pediatric interns, or residents were included in the pages of the Journal of Pediatrics or the AAP’s new journal, Pediatrics. No listing of those who served was ever published, nor was any mention of their service made during the yearly address of the AAP president. Dr Grover Powers, a contributing editor to Pediatrics, did briefly mention how pediatric interns were doing in his 1953 essay “Some Observations on Pediatric Education”: “One can acquire in a year of organized, focused experience under inspiring guidance in several aspects of one discipline, high standards, sharp critiques and the ability to accurately and intelligently appraise, relate and apply data in the humane practice of medicine—probably the most tender and sensitive area of human relations, these verities are never out-of-date! Physicians so trained and conditioned are prepared to meet the exigencies of future responsibilities in much wider fields of medicine; I have noted this too many times to have doubts of its essential validity eg effective battalion surgeons in World War II and in Korea after ‘straight’ pediatric training.”

VIETNAM

For the first time in any American conflict, pediatricians were deployed to be used as pediatricians during the Vietnam War. They arrived early during the American involvement, initially to care for the children of those American advisors stationed in Saigon. It is unclear how many military pediatricians filled these positions.
As American involvement grew, so did the number of pediatricians and pediatricians-in-training who served. From 1954 until 1974, the so-called “Berry Plan,” named after its creator, Dr Frank Berry, who served as assistant secretary of defense for health affairs, gave graduating medical students 3 different options of service. The first choice was to join their service of choice immediately after their internship year. After their 2 years of obligatory military service, they could then continue on with their residency training. A second option would be to elect to fulfill their military obligation after 1 year of residency, then return to complete their residency after their service. A third option was to complete their residency training and then serve. The Berry Plan meant that pediatricians and pediatricians-in-training would be found serving in the military throughout the Vietnam era.49

The American military was involved in widespread humanitarian aid programs during the conflict. Medical Civic Action Program (MEDCAP) I was a program in place from January 1963 until June 1967. In this program, American medical personnel advised the South Vietnamese Army in how to provide medical care to the medically underserved of their country. It is unknown how many pediatricians participated in this program. The more familiar MEDCAP II involved medical elements of all services providing outpatient care via mobile medical clinics, usually simple medical treatments with little opportunity for follow-up care. Beginning in 1965, with increasing American medical infrastructure in Vietnam, this sort of care was often attractive to those who wanted to help the local population, but it proved frustrating with organizational and logistical problems. An involved physician discussed one manner of care that did work: “I believe that the care provided in the Orphanages was significantly better than in other venues. Even if there was no firm schedule for revisits, if they occurred on a regular basis it was possible to provide a reasonable degree of ongoing care to the children. Vaccinations could be given and the nuns (most orphanages were Catholic Church affiliated) could keep some records of which children received them. Infectious skin diseases responded especially well to antibiotics plus proper cleansing with soap and water.”50

The Army’s deployment of pediatricians to Vietnam to serve as pediatricians was started with the establishment of the Civilian War Casualty Program. As the conflict grew in size, the numbers of civilian casualties began to mount. Directive Number 40-14 (MACV-66, sec. 3a) stated: “Vietnamese civilians injured by an instrumentality of the Armed Forces of the United States are authorized complete emergency care, including hospitalization when necessary. Care is authorized to be continued until the patient’s condition is stabilized sufficiently to permit discharge or transfer to a civilian hospital or to a civilian facility for convalescence.” Brigadier General Andre Ognibene commented on the roles Army pediatricians played in Vietnam: “By 1968, all US Army Vietnam (USARV) hospitals accepted Vietnamese civilians on a space-available basis. Pediatricians initially were assigned to these facilities, but pediatric care never developed beyond a small effort for a limited number of patients. Before the assignment of pediatricians to hospitals, care had been provided by an internist-surgeon team and, when available, a general medical officer with some pediatric training. At the peak of assignment in 1969, six pediatricians were assigned to USARV hospitals, as large a complement as the dermatology commitment. Their caseload was small, and their time was best spent assisting the internist in adult care. Most pediatric care was provided in the outpatient setting by MEDCAP; indeed most Vietnamese families were reluctant to release their children for care.

FIGURE 6
Dr Giulio Barbero (left) and Dr Howard Mermelstein (right) examine a young Korean boy affected with arthritis of the hip.
in USARV hospitals.” Consequently, after 1969, medical consultants urged that pediatricians not be assigned to USARV hospitals. By the end of 1971, the abortive pediatric program in USARV hospitals had ended.51

One additional program that used pediatricians as pediatricians was the Military Provincial Hospital Assistance Program (MILPHAP). In a letter to the editor published in the November 1966 issue of Pediatrics, Lieutenant Commander Wesley Boodish described what it was like to be on a MILPHAP team. “I head a 16 man Navy medical team situated in Quang Tri . . . there are now 21 of these military medical teams in South Vietnam—Army, Navy and Air Force—each consisting of three doctors, an administrative officer, and twelve corpsmen. It is perhaps not well publicized that the military is involved in such a large role, not only in providing medical care to the civilian population, but also in upgrading the capabilities of the Vietnamese to care for their own. Certainly here is a perfect opportunity for the young pediatrician to combine his military service with the practice of medicine in South East Asia.” Dr Boodish went on to describe the challenges: “After working at the hospital for a short time, it was apparent that despite my newly acquired ‘F.A.A.P.’ I would have to cease to think of myself as primarily a specialist. Not only have I and the team had to grapple with and teach elementary concepts of hygiene, disease, and treatment, but I have had to break out long forgotten skills in obstetrics, surgery, orthopedics and anesthesia. Pediatrics, in fact, despite a heavy case load, has formed only a small part of my time.”52

Dr Jed Jacobson and Dr Gerry Kilpatrick were two other physicians who served in the MILPHAP program in the small town of Hoi An, south of Da Nang, in 1967–1968 and 1969–1970, respectively. Dr Jacobson’s team had a surgeon, internist, and himself as the pediatrician. After training in tropical medicine was provided by the Army at Camp Bullis, Texas, they were off to Vietnam. He took his written pediatric board examination in Saigon and then became familiar with the real-world problems of pediatrics in Asia—malaria, tuberculosis, plague, and the traditional methods of child care such as cupping, coining, and the application of cow dung to the umbilical cord stump. Marine guards pulled security while they worked in the provincial hospital.

A vivid memory of Dr Jacobson’s is of being invited to dinner by the local mayor shortly after his arrival in country. The main course was presented with a complete chicken head bobbing up and down in the broth—the mayor proclaimed that this was for the special guest. Finding no way to escape, Dr Jacobson prepared for the worst, only to be surrounded by gales of laughter by his hosts who were pulling a favorite practical joke on the newcomer (J. Jacobson, MD, personal communication, 2009). Dr Kilpatrick’s experience in Hoi An was similar but reflected the changing environment of the surrounding countryside. Despite the fact that he worked in civilian clothes, he remembers that they “took a lot of incoming rounds and often had to head for the bunkers.” With a year of pediatric internship, he had to grapple with complicated cases of osteomyelitis, tuberculosis, Salmonella, and diphtheria. Recalls Dr Kilpatrick: “We went there to teach the Vietnamese western medicine, but we learned a lot from them.” (G. Kilpatrick, MD, personal communication, 2009)

Although the total numbers of pediatricians and pediatricians-in-training who served in Vietnam is unknown, it can be safely said that the vast majority still served in general medical capacities—usually taking care of adult service members. One unique experience was that of Lieutenant Commander Frederick “Skip” Burkle. In 1968, after completing a senior residency in pediatrics, Dr Burkle was assigned as a general medical officer with the Third Marine Division. Seven miles south of the Demilitarized Zone in the village of Dong Ha, more than 85,000 refugees had gathered, displaced from areas in northern and western Quang Tri province and from the fighting around Khe Sanh. At the Dong Ha Combat Base, the 110-bed Third Marine Division Memorial Children’s Hospital, an integral part of Delta Med’s Casualty Receiving Facility, was opened to the refugee population “to help check the rising numbers of childhood deaths and serious disease.” It was the only health facility for a province population of more than 300,000 residents.

In a classic case of “mission creep,” Lieutenant Commander Burkle’s job in Vietnam became that of a full-time pediatrician, working alongside a handful of other Navy general physicians and surgeons, often while under fire. One of Dr Burkle’s most memorable cases also serves as a cautionary tale for those working overseas: “A five day old infant was passed across the wire after the hospital was closed for the night. The infant was septic and apneic. I used what I had (back then we only had sulfa, penicillin and chloramphenicol)—I had to have colleagues send me the ‘new’ Ampicillin from Yale Medical Center plus ‘steroids’ that were then experimental. The infant was failing rapidly so I decided to do a double volume exchange transfusion—used at times before antibiotics were discovered. I had two Marines donate fresh blood and did this exchange . . . with pulses of antibiotics . . . About half way through the whole night’s slow exchange the infant began to cease the apneic spells and gained strength . . . The next morning the mother showed up with a small gray coffin . . . believing
for sure her child was dead. She fell to the floor and hugged my legs. Thinking this might be what I needed to get more kids in (we were in a Viet Cong controlled area), the whole event came back to haunt me. It was passed quickly around Quang Tri Province that I had taken out all the ‘evil spirits’ and put in ‘good spirits’ . . . for the next 3–4 days I was overwhelmed with adults (in particular an insistent village chief with chronic complaints that I ‘remove all his blood and give him new blood’) . . . they walked out in disgust when I told them it would not work . . . even my Vietnamese translator was threatened. Lots of lessons learned—especially not to go beyond what is culturally reproducible” (F. Burkle, MD, personal communication, 2009, Fig 7).

Dr Burkle was working at the hospital when it was severely damaged during a siege in October 1968, re-injuring many children already in the hospital from previous wounds. The hospital, in Burkle’s words, “a fitting Memorial to the men of the 3rd Marine Division who died serving the people of South Vietnam,” was destroyed by advancing North Vietnamese forces in 1972.53

A final bittersweet pediatric experience took place with the end of US military involvement in Vietnam in 1975. Operation Babylift took place between the 4th and 19th of April and involved the airlifting of more than 3000 infants and children out of the country. American military personnel had fathered some of the children, and with the reluctant agreement of South Vietnam’s tottering government, then-President Ford announced: “I have directed that C-5A aircraft and other aircraft especially equipped to care for these orphans during the flight, be sent to Saigon. It’s the least we can do.” Tragically, the first US Air Force transport plane, carrying 243 Vietnamese infants and children, crashed, killing 130 including at least 78 children. The next day, more than 1000 infants and children, including 40 of the crash survivors, made their way out of Vietnam for Clark Air Force Base in the Philippines. At Clark, hundreds turned out to help care for the children on their stopover. Temporary “surrogate mothers” assisted Air Force nurses and pediatricians in the care of these often ill and malnourished children. Some required care in the ward and intensive care unit before they could safely make their way to the American mainland and eventual adoption at locations around the world (K. Manney, personal communication, 2009).54,55

THE PERSIAN GULF WAR

The summer of 1990 brought a new challenge to the pediatricians of the American military—desert warfare. Saddam Hussein’s invasion and annexation of Kuwait first brought about the American defense of Saudi Arabia known as Operation Desert Shield, followed by the expulsion of Iraqi forces from Kuwait known as Operation Desert Storm.

Lieutenant Commander Gordon Naylor was likely the first pediatrician to deploy to the region. Ten days after the invasion, Dr Naylor shipped out of Camp Pendleton, California, with an infantry battalion of the First Marine Division. The first 3 months of his tour were spent in the desert of Saudi Arabia with his battalion, which was then the closest to the border with Kuwait. His work there mostly consisted of sick call and caring for heat injuries. In February 1991, the unit moved to within sight of the sand berms that separated Kuwait and Saudi Arabia. Final preparations were made for the attack that was to come.56

By this time, other pediatricians had joined Dr Naylor in the desert. A total of 31 Navy pediatricians served during the Desert Storm/Desert Shield operations. Dr Charles “Chuck” Morton, a developmental pediatrician fresh out of training, deployed to Saudi Arabia in support of forward Air Force operations. Unfortunately, no record exists of the total number of other Air Force pediatricians who deployed during this conflict, though it is known that some served with evacuation and large area support hospitals. Thirty-six pediatricians and a resident who had volunteered to take a leave of absence during his third year of training were deployed from the ranks of Army active-duty pediatricians. Another 25 pediatricians deployed from the Army Reserves, part of the largest activation of medical reservists since the Korean War. Of the 57 active-duty Army pediatricians, 34 were men and 3 were women. Twenty-nine were general pediatricians, and 8 were subspecialists.57,58

Pediatricians served a wide variety of roles during the conflict. Lieutenant Commander Naylor was the first American medical officer into Kuwait City with the Marines. Heading in he recalled that “outside the skies were black from smoke generated by oil fires burning on the horizon. Even though the sun was covered, I told one of the guys I was with that I feel like this is hell.” Although his battalion did not suffer a single death during the conflict, he did witness some horrific injuries: “It was not a happy experience for me. But in a lot of ways, that time was the best time for me. I was doing what I knew how to do best.”56
the Army pediatricians also served in Battalion Aid Stations, the nearest medical facilities to the front line, and 7 were awarded the Combat Medical Badge for performing medical duties while engaged with the enemy. Twelve Army pediatricians were placed in medical clearing companies. Colonel Russell Steele, a pediatric infectious disease specialist, served as a field surgeon with a medical clearing company, then was transferred to an Evacuation Hospital where he provided infectious disease consultation for much of western Saudi Arabia and Iraq. Dr Andre Muelenaer Jr, a pediatric pulmonologist and activated reservist from Duke University, helped to provide medical care for 3000 soldiers and 22,000 Iraqi prisoners of war in a camp in northeastern Saudi Arabia. Colonel Donald Person served as the only pediatrician known to have deployed as a pediatrician with the 312th Evacuation Hospital near Hafar al Batin, Saudi Arabia (D. Person, MD, personal communication, 2009).

Twenty-two of 32 Army active-duty pediatricians who responded to a postwar survey reported that they had had the opportunity to treat children while deployed. Dr James Brien, another pediatric infectious disease specialist, was assigned as an internist to the 41st Combat Support Hospital. After the fighting stopped and the casualties slowed, he traveled multiple times to a Kuwaiti refugee camp, seeing hundreds of children on the tailgate of a pickup truck (Fig 8). Captain Carolyn Sullivan, serving with the Third Armored Division, saw her workload go up dramatically after war’s end. As her division’s only pediatrician and female physician, she was sought out for care by the large numbers of internally displaced and refugee women and children. Her work was made more difficult by the fact that she had supplies primarily to treat war trauma rather than noncombatants.

After-action reviews from a conference conducted in Phoenix, Arizona, in July 1991 were filled with references to pediatricians and the lack of pediatric supplies in Desert Shield and Desert Storm. “Pediatricians should be located at each Military Treatment Facility where children may appear for care. It is obvious that hospitals will provide civilian care in future conflicts; therefore, every hospital unit should have at least one pediatrician. Pediatricians should be identified in doctrine as having a role in Refugee/Host Nation population care of infants and children who are injured, displaced, diseased, or malnourished by war.” Also mentioned in the after-action reviews was the need to have a course for providers in “Third World Medicine and Principles of Refugee Care.” This recognized need was acted upon by Dr Julia Lynch, who had deployed in support of the Kurds in northern Iraq in Operation Provide Comfort, and Dr Clifton Yu to create the Military Medical Humanitarian Assistance course. First offered in 1998, this course has provided hundreds of military physicians with a background in humanitarian care and can trace its roots to those pediatricians who toiled in the heat of Iraq and Kuwait in the aftermath of the Gulf War.

**THE GLOBAL WAR ON TERROR AND BEYOND**

The tragic events of September 11, 2001, meant that American military pediatricians were again heading overseas. The pace of deployments started slowly as few medical elements entered Afghanistan during the first months of hostilities. The first Army pediatrician was in neighboring Uzbekistan in spring 2002 with the first pediatricians arriving in Afghanistan by summer of that year. Dozens of pediatricians of all 3 services have served in a variety of roles and settings in Operation Enduring Freedom. A great deal of their work involved humanitarian care, as Afghanistan after the fall of the Taliban regime had one of the highest infant and child mortality rates in the world.

The contributions of military pediatricians in Operation Iraqi Freedom have been much more extensive. As of summer 2011, well over 250 Army pediatricians have deployed to Iraq and

![Figure 8](image-url)
Kuwait in support of the war effort, from young pediatricians recently graduated from residency to subspecialists, program directors, and department chairs at the Army’s largest medical centers. Many have had multiple deployments, including both Afghanistan and Iraq, with some deployments lasting nearly 500 days in duration. Almost one-third of all Army pediatricians deployed in support of both operations have been women. Twenty-eight Navy pediatrics, 14 Navy pediatric interns, and more than 2 dozen Air Force pediatricians have also been deployed to the region. Military pediatricians have also done humanitarian work in the southern Philippines as well as in the Horn of Africa nation of Djibouti as a part of operations in the Global War on Terror (Fig 9).

Military pediatricians have been involved in all levels of care in Afghanistan and Iraq. Many have again functioned as battalion surgeons: Serving in that role, the first 2 uniformed physicians to enter Iraq after the initial invasion were Army pediatricians. Others have served as brigade and flight surgeons, on hospital ships, and as hospital commanders. During the “surge” operations in Iraq, a chief physician of the Air Force’s 332nd Theater Hospital in Balad, then Iraq’s busiest military medical facility, was a pediatrician (Fig 10). And for the first time a general officer, Brigadier General James Reynolds, who served as the commander of the Second Medical Brigade from 2004 to 2005, was a pediatrician serving in wartime.

The need for pediatric care has been recognized during these conflicts. Brigadier General George Weightman, who was the senior medical officer in theater during the initial phase of the war in Iraq, commenting on lessons learned said that there “was the need to have more pediatric-trained physicians and pediatric supplies to treat children who were injured during the fighting. We’re going to see kids.” A study looking at pediatric patients who were hospitalized in Army treatment facilities in Afghanistan and Iraq from December 2001 until December 2004 found that 1012 (4%) of the patients hospitalized were children. Because of the almost complete lack of medical infrastructure in Afghanistan, the pediatric patients there occupied 25% of the hospital bed space as there was no place to transfer them to once they had been stabilized. One of the authors (C.W.C.) remarked that “there were pediatric patients in every hospital visited in Iraq and Afghanistan during my tour with Coalition Forces Land Component Command (CFLCC) and the 3rd Army.” As of this writing, the numbers of children who have been hospitalized in US military treatment facilities in Iraq and Afghanistan is now well past the 5000 mark.

The pediatric requirement at the hospital in Bagram, Afghanistan, was so...
being “over there” themselves recognized the stresses that repeated and extended deployments have put on the military family. Several of them created the Military Child and Adolescent Center of Excellence at Madigan Army Medical Center in Tacoma, Washington. Despite pediatricians having served in the US military for more than a century and pediatrics being one of the Army’s most deployed specialties in the current conflicts, it is not unusual to continue to encounter confusion and misunderstanding regarding the role of pediatricians. In 2009, when one of the authors (M.W.B.) was in the process of deploying, he was asked by a neurosurgeon he had just met, “What the hell is a pediatrician going to do in Afghanistan?” Despite this, pediatricians remain cornerstones of American military medicine in peacetime and in war. And as long as the nation defends its peace on the world’s frontiers, pediatricians will serve alongside her service members in harm’s way.

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