While the role of rail transportation during the American Civil War, World War I, and World War II has largely been acknowledged by historians, the importance of railroads in the Korean War 1950-1953, like the conflict itself, has mostly been forgotten. Both sides, the United Nations Command and the Communist forces, relied heavily on railroad transportation during the hostilities.

Though described as a limited war, the Korean Conflict was not a small war. Large quantities of men and materiel moved up and down the Korean peninsula. Due to the inherent efficiency of railways in large-scale movements and the inadequacy of roads and air transport, railways held a paramount role in UNC-theater military transportation. Approximately 95 percent of all supplies that were cleared at ports moved by rail to forward supply points. The same was true in the movement of personnel, including rotating troops and evacuating casualties.1

This article examines the use of rail transportation in evacuating casualties for the U.S. Army and its allies within the UNC. It is a compelling story of courage, improvisation, and innovation on the part of army medical personnel and railroaders. In the conclusion, I will examine the implications for the U.S. Army of the extensive use of railroads in medical evacuation during the Korean War.

The Army’s use of railroads in medical evacuation began during the American Civil War, 1861-1865, where special-purpose hospital cars were used to evacuate the wounded.2 The Prussians sent military observers who were attached to the Union Army, and the railway aspects of the conflict were carefully studied in Prussia and other German states.3 In the Franco-Prussian War (1870-1871), the Prussians improved on American evacuation concepts, devising an elaborate medical evacuation system based on railway transport. The relatively small number of deaths from wounds of German forces attested to the success of this system. Casualties were evacuated from the front lines to the interior of Germany by special trains that were staffed by surgeons, nurses, pharmacists, and cooks. The most heavily wounded were removed from the train into hospitals situated in towns nearest the frontier, and their places were filled with men whose wounds were healing; the process continued into the interior of Germany. Observers of the German medical evacuation system noted the favorable effect on the morale of soldiers. Every soldier knew that if he was wounded, he would be quickly conveyed home to be tended by his own people and not remain in a field hospital behind enemy lines.4

This evacuation system proved effective and was further developed by the Germans as well as adopted by other nations such as Great Britain, which used four hospital trains, constructed and organized on the German model, in South Africa during the Anglo-Boer War (1899-1902). Railroads were used for medical evacuation by all powers in the First and Second World Wars, integrated with other modes of transportation. At the time of the Korean War, the U.S. Army continued to use railways within a comprehensive medical evacuation system based on American experiences in the Civil War, influenced by German developments, and further developed during the world wars to move casualties to rear-area hospitals or for further evacuation out of the theater of war.

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A wounded American soldier aboard a U.S. Army hospital train during the Korean War. US National Archives
Prior to the Korean War, the Korean railroads had seen extensive use for the evacuation of casualties and other aspects of military logistics in the Russo-Japanese War of 1904-1905, and a series of conflicts the Japanese Empire was involved in from 1914 to 1945. The Japanese built the Korean railroad system between 1904 and 1945 as a strategic network connecting Korean ports to Manchuria. The Korean railroad system was almost entirely a very well constructed military railroad for the benefit of Japanese forces.7 The Japanese developed the Korean highway system to serve purely local needs and to serve as a feeder system to the railroads.8 Thus by 1945, the approximately 4,200 miles of Korean railroads held a dominant strategic and economic role. The equipment and operations were based on American practices, which were deemed best to meet the heavy transportation requirements on the Korean peninsula. Rolling stock had American characteristics, with four- or six-wheel bogie trucks and automatic knuckle couplers. Following the Japanese surrender at the end of World War II, U.S. forces occupied Korea south of the 38th parallel, and the Soviets occupied Korea north of the 38th parallel, as agreed at the Yalta Conference. For the American occupational government or the U.S. Military Government in Korea, the railroad system was highly important, because it provided nearly all transport services in the country for American forces.

A functioning national railway system also was vital for the future of the country. From September 14, 1945, to September 7, 1948, the USMGIK operated the Korean railroads with the intention of quickly training the Koreans to run the railroads themselves. This was not an easy task, because before 1945, Korean railroads were under tight control of the Japanese state. The Japanese held administrative and technical jobs, while Koreans for the most part worked in manual labor; positions largely attainable by Koreans were as track and car repairmen, roundhouse hostlers, and passenger-car cleaners.8 Despite largely perfunctory training of Koreans by Transportation Military Railway Service (3rd TMRS), many of KNR from the ROK government to the U.S. Army.14 Korean personnel were vital, and a military police battalion. It also supervised 32,000 KNR civilian employees.15 Korean personnel were vital, and a military police battalion. It also supervised 32,000 KNR civilian employees.15

Establishing a Korean state

As the façade of wartime amity between the United States and Soviet Union was quickly disappearing, the Soviets rejected a plan for an immediate Korean-wide election of a unified government, and refused to admit the United Nations temporary commission to the Soviet-controlled zone in the north. With this refusal, the United States allowed elections to take place south of the 38th parallel, and the Republic of Korea was thus established on August 15, 1948. Under Soviet tutelage, a Communist government, the Democratic People’s Republic of Korea was formed in North Korea soon after.

While the United States was forthcoming with assistance to rehabilitate the railroads, as well as other utilities and industries in South Korea, it was not so forthcoming in equipping the ROK armed forces. American military advisors trained Korean military personnel, but American political leaders studiously withheld such weapons as tanks and medium and heavy artillery that might have given the South Koreans an offensive capability. Unfortunately for the South, the Soviets exercised no such restraint in providing arms for their North Korean allies.10

Pusan Perimeter: First phase of the Korean War

The Korean War began at 4 a.m. on Sunday, June 25, 1950, when 90,000 North Korean People’s Army (NKPA) troops, supported by 120 T-34 tanks, numerous pieces of heavy artillery, and 180 Yak fighter planes and medium bombers streamed southward across the 38th parallel. The United States and the U.N. reacted quickly to the invasion. With the approval of the U.N. Security Council, Gen. Douglas MacArthur was appointed as commander-in-chief of the U.N. Command, and the United States and 19 other nations rushed military forces or medical units to the Korean Peninsula to stem the Communist aggression.11 The first American personnel to react were occupational forces stationed in Japan. The Eighth United States Army in Japan consisted of 50,000 soldiers, which was merely an occupation force, not a rapid-reaction combat force. All types of equipment were very much in short supply.12 Given a shortage of motor vehicles and the condition of transportation in Korea, the EUSA and the beleaguered Republic of Korea Army depended heavily on KNR trains for overland transportation.

But the immense traffic demands quickly overwhelmed both the KNR management abilities and the movement control capabilities of the ROKA, which were both relatively new and inexperienced organizations. A tremendous burden of heavy military traffic and masses of refugees made it impossible for the young railroad organization to cope without outside assistance.13 Consequently, in July 1950, EUSA negotiated – through the U.S. Ambassador to Korea, John J. Muccio – the transfer of operational control of KNR from the ROK government to the U.S. Army.14 On August 26, 1950, the U.S. Army activated the Third Transportation Military Railway Service (3rd TMRS), which would eventually grow to an organization of two railroad operating battalions, one railway shop battalion, and a military police battalion. It also supervised 32,000 KNR civilian employees.15 Korean personnel were vital, since the 3rd TMRS’s very much understrength units could hold out no hope of running the railroad without them.
Operation of hospital trains was a function of the U.S. Army Medical Corps, in close cooperation with the 3rd TMRS. The medical corps personnel provided care for patients, while 3rd TMRS personnel maintained equipment, moved trains, and coordinated schedules.16 The first U.S. Army force to enter Korea was the 24th Infantry Division, which was sent up to the front lines by rail in early July 1950 as its units arrived. The 24th Medical Battalion and the 805th Mobile Army Surgical Hospital arrived in Taegon on July 3, 1950, from Pusan to support front-line troops operating about 20 miles north. The medical units were under-strength, short of drivers, and equipped with World War II-vintage ambulances, which needed constant repair. Furthermore, they found the very rough roads to be hard on patients they were evacuating. Medical officers quickly found that rail movement was faster, as well as easier on casualties. Given the extensive rail network and the availability of Korean roads, it became standard practice of the medical corps to maximize the use of rail to move casualties and minimize the use of roads as much as possible. According to Gen. James A. Van Fleet, commander of the USAF (April 1951–February 1953), “Motor transportation for these long journeys was unthinkable and not used.” On a few occasions, railway section cars, usually used to transport track-repair crews, were pressed into service evacuation casualties to clearing stations. However, in the beginning of July 1950, most patients were moved from the aid station at Kong-ju to the railhead at Nonsan by the aid station at Kong-ju to the railhead at Nonsan by train. Three ambulances were kept at Taegon Station to receive patients arriving by doodlebug, and take them to the clearing station and MASH hospital. The most serious casualties were loaded on to the trains as they were being made up. Lightly wounded men were treated in Taegon and given hot food, a chance to take a shower and get a night’s rest, and usually returned to duty. Men with wounds that required evacuation were sent from Taegon to the 805th Evacuation Hospital in Pusan by rail.14 To transport patients to Pusan, three Korean coaches were quickly refitted with crudely built litter racks. The coaches were coupled to freight trains moving toward Taegon and Pusan. Attendants rode to Taegon in the improvised hospital cars as they were coupled to the next freight train heading north. At first, a doctor, a nurse, and a medical-aid man accompanied patients, but as the shortage of personnel grew more critical, a single nurse rode trains with only an aid man or two for assistance. Nurses for this duty were drawn from the evacuation hospital. These women were assigned to a rotating unit on a rotational basis, but because this proved to be unsatisfactory, three nurses were assigned to permanent hospital-train duty.15 To bring medical supplies up, one of the medical supply non-commissioned officers from the 24th Medical Battalion rode with the casualties to Pusan. He requisitioned supplies at the medical supply depot located near Pusan station. They were loaded in the empty hospital cars of the next train heading north. On the night of July 16–17, 1950, the 24th Medical Battalion and 805th MASH were withdrawn by rail about 20 miles south to Yongdong as the NKPA advanced on Taegon.17

As UNC forces withdrew southward into the so-called Pusan Perimeter, additional railway equipment was quickly dedicated to medical use. Box cars and coaches were converted, and a few ancient hospital cars previously used by the Japanese Imperial Army were put into service. Medical corps malaria-control detachments were assigned to keep this rolling stock free of lice and fleas, using dustings of DDT. At Taegon, one box car was kept stocked with C-rations, fruit juice, blankets, and bandages to supply the men during their trip to Japan.18

One controversy that arose during the time was the question of why the Allies didn’t make greater use of air evacuation rather than relying on surface transportation (hospital trains and hospital ships) in the early months of the war. On July 4, 1950, Maj. Gen. George E. Stratemeyer, commanding general of the Far East Air Force, informed Gen. George C. Marshall that the FEAF was prepared to airlift casualties to Japan. EUSA made use of air evacuation where possible and necessary, especially for most serious cases. However, FEAF complained that EUSA was not using the full medical airlift capacity available. From July 1 to September 15, 1950, 13,015 patients were evacuated from Korea, of which only 3,855 (29.6 percent) were evacuated by air. During the Pusan perimeter phase of the war, the nearest airfield to the front along the Naktong River was the K-2 Airfield near Taegon. Because of about six miles of rough roads between K-2 and Taegon and a lack of a railhead at the airfield, EUSA preferred to move its casualties by hospital train to Pusan. From Pusan, most patients were then taken by air to Korea's Airfield in East Pusan. K-9 Airfield had no medical holding facilities, and patients faced lengthy delays in waiting for air transportation. EUSA could not afford to count on such a “catch as catch can” system of air evacuation, and accordingly used more reliable railway and ocean transportation. Medical airlift out of Korea was dependent on good weather, and EUSA needed mass evacuation in all kinds of weather. FEAF’s own examination of air evacuation in the first two months of the war judged itself to have “a rather spotty history” in this effort.20

At first, it seemed this phase of the war would last only a short time. On July 24, 1950, FEAF chief surgeon Col. Clyde L. Brothers discovered that EUSA wanted air evacuation, but only on an orderly and regular basis.21 Furthermore, many Army officers felt that the Air Force did not value air evacuation as much as the Army. Thus, FEAF’s chief of transportation, Maj. Gen. William M. Hartzell, informed Gen. MacArthur that the FEAF was prepared to airlift casualties to Japan. EUSA preferred to move its casualties by surface transportation rather than relying on air evacuation in the theater in medical evacuation, but EUSA flatly rejected this.22 Furthermore, a great shortage of transport aircraft existed. The largest transport FEAF had was the C-54 Skymaster (similar to the commercial DC-4 airliner). When used in medical evacuation, a C-54 could carry 30 patients on litters, plus related medical staff. FEAF had only six of these aircraft available in Japan on July 1, 1950. The C-54s were too heavy to land, and as a result, could not be used on Korean airfields, which had been built by the Japanese for fighter planes and light bombers and transports. Therefore airlift operations to and from Korean airfields was restricted to far smaller C-47 Dakotas (military version of the DC-3) until engineers could improve the runways.23 The Army chose to remain with its own evacuation system, relying more on hospital trains than aircraft in the theater, rather than an untried system advocated by the Air Force. According to Brig. Gen. L. Holmes Ginn of the U.S. Army Medical Corps, who was on EUSA staff:24
We always tried to utilize the most economical means available that were consistent with the welfare and comfort of the patients, and our hospital trains provided the maximum comfort.38

The rough-and-ready period of medical railroading would not last through 1950. On August 1, 1950, the Army’s surgeon general received a request from Gen. MacArthur for two hospital trains for use in the Far East. This rolling stock would have to come from the United States. Eventually, all serviceable hospital cars in storage since the end of World War II were sent to Korea. U.S. Army hospital cars existed in Japan, however, the equipment was 3-foot, 6-inch gauge rather than the American and Korean standard gauge of 4 feet 8½ inches.

In November 1950, hospital cars began to arrive from the United States. By the year’s end, two complete 10-car trains were in Korea. In October 1950, they were between the front and Pusan.39 As the modern hospital cars began arriving in the theater operations, hospital trains could provide immediate care at forward railheads and comfortable transportation for patients to rear area hospitals and embarkation points. As these modern hospital trains came into service, the UNC experienced rapidly changing tides of war, offensive actions, withdrawal, and renewed offenses.

**U.S. Command offensive fights back**

The tide of the Korean War changed quickly as UNC forces made an amphibious landing at Inchon on September 15, 1950.40 It was accompanied by a breakout from the Pusan perimeter, which started four days later. The UNC breakout first went slowly, due to fierce resistance by NKPA. However, as the vise closed, the UNC offensive quickly turned into a rout of NKPA troops. On October 1, 1950, the ROK 1st Corps advancing on the east coast pushed across the 38th parallel into DPRK territory. Two days later, EUSA began its assault north on the western half of the peninsula. North of the 38th parallel, the transportation situation was the same as in South Korea. Trains were running as soon as lines were hastily restored, and this had to be done as quickly as possible to support the advancing forces. On October 19, 1950, the UNC entered Pyongyang and after this, the advance continued north in pursuit of remnants of the NKPA forces and DPRK government functionaries. On the east coast, the ROK 1st Corps advanced quickly, capturing the port of Wonsan on October 20, 1950. The U.S. Marine 1st Division began advancing north from the ports of Wonsan and Hungnam inland to the mountainous region surrounding the Chosin Reservoir, moving toward the Yalu River. To support this advance, the Marine 1st Service Battalion put the Chosin branch of the narrow-gauge Chosen Railway back in service. This line ran from Hamhung, adjacent to port of Hungnam, to facilities on Chosin Reservoir. By November 11, 1950, the narrow-gauge line was clear all the way to the bottom of Funchilin Pass at Chinhungi, 35 miles from Hamhung.39

To speed casualty evacuation, several heated railway cars were equipped as hospital cars on the narrow-gauge line. At Hamhung, the 1st Marine Division Hospital treated casualties, or evacuated more serious cases to the hospital ship S.S. Consolation in Hungnam harbor.40 Elsewhere as the railway lines were being restored and reconnected, the 66 pieces of standard-gauge rolling stock modified as hospital cars were kept in constant use.41

In October 1950, an armistice was eventually signed, ending the fighting.

**Chinese intervention – UNC withdrawal and counter-offensive**

Starting approximately November 2, 1950, the UNC came into contact with Chinese troops, possibly volunteers, which had reinforced the remnants of NKPA. By November 6, 1950, five Chinese divisions (10,000 men each) began advancing from the Yalu River and enveloped the UNC.42 On November 5, 1950, Gen. MacArthur instructed UNC commanders to make whatever withdrawals were necessary to escape being enveloped by the CCP, which was pushing hard and deep through UNC units near the Yalu River, and he ordered the U.S. Marine 1st Division to pull into a beachhead around the east coast port of Hungnam.43

Railroad transportation for the retreat was vital, according to the EUSA transportation officer, Col. Edmond C.R. Lasher. He said: “There’s no question that the railroad saved our army’s necks.”44 As the order to withdraw was given, the EUSA began “one of the strangest, wildest rail operations of any war.”45 EUSA systemically evacuated troops, administrative personnel, and refugees, as well as supplies and equipment, largely using rail transportation. Trains carrying casualties received first priority in moving southward.46

Once UNC forces reached roughly the 38th parallel, the cycle of withdrawal started again when, on December 31, 1950, CCP launched an offensive with the main objective of capturing Seoul. UNC forces were ordered to evacuate Seoul and fall back to a line about 40 miles south, where an offensive would begin at the first opportunity after forces were reorganized.47 The evacuation of Seoul took place on January 3-4, 1951. In addition to the removal of military personnel, equipment, and matériel, thousands of civilians, Korean civilian hospital patients, orphans, and prison inmates were moved southward by rail as well.

As rolling stock was removed, the mass exodus southward, rail traffic northward was minimized to compensate for ammunition, aviation, and motor vehicle fuel, rations, and the 10-car hospital train between ASCOM City and Pusan.48 On the night of January 4, 1951, the hospital at ASCOM City was closed and just as the last hospital train departed, retreating troops set fire to ammunition and various supplies that could not be evacuated from the vast support complex, to avoid their being commandeered by the enemy. The result was a series of huge explosions.49 As trains carrying supplies and equipment were ordered to leave southward, hundreds of refugees climbed aboard, riding on top or hanging on the sides, sometimes with tragic effect. People on top of the cars were crushed in the tunnels, while others died of exposure in sub-zero temperatures. As a result, most of the equipment was lost from the side of freight cars and fell off.50 Despite the chaotic and frightful nature of the withdrawal, the 3rd TMRS continued to maintain support to front-line combat units. Railheads were set up at points where combat units could draw fuel, rations, and ammunition, and evacuate casualties. Hospital trains ran overcrowded with patients, as medical personnel fit them in all available spaces, sometimes two to a bed, on the floor, and in corners. As trains reached their southern terminus, many patients were immediately flown to Japan to relieve already burdened hospital facilities.

When one railroad closed as the front advanced south, a new one was opened further south. This started after the Allied withdrawal from Taeong outside of Pyongyang and continued until a final defensive line was reached on January 25, 1951, and UNC forces went on the offensive.51 As UNC began moving north toward the 38th parallel, the greatest challenge for 3rd TMRS, KNR, and the U.S. Army of Corps of Engineers was repairing track, tunnels, bridges, and other facilities leading north – the same infrastructure that withdrawing UNC forces had demolished, and which then were bombed by the FEAF. Despite these efforts, railroad operations to forward areas as quickly as possible. The work was done on the heels of advancing UNC combat units. Some repair work and reopened track were under the range of CCF artillery fire.

Despite the chaotic period of withdrawal after CCF forces intervened in the Korean War, UNC medical railroading capabilities improved greatly from November 1950 to February 1951. With modern hospital ward cars and kitchen cars arriving in November, the medical corps deployed two specialized units of personnel to man hospital trains in December 1950. The 20th Hospital Train Unit and the 22nd Hospital Train Unit were formed in 1928 as part of the regular army, seeing service in the European theater of World War II. They were inactivated at the end of the war. In October 1950, each unit was reactivated, and each unit consisted of personnel: officers, nurses, one warrant officer and 39 enlisted men. The 20th Hospital Train Unit and the 22nd Hospital Train Unit saw their personnel strengths combined into one unit – the 8138th Hospital Train Unit – in July 1952. With advisory support and assistance of the U.S. Army, the ROKA medical corps established the 1st ROKA Hospital Train Unit on December 10, 1950.52 These units would continue their work unabated as fighting lasted though 1951 to the end of July 1953, when an armistice was eventually signed, ending the fighting.
In late June 1951, Communist officials publicly suggested that an armistice was possible on the Korean Peninsula, after which the UNC broadcast an offer to open armistice talks, which received an affirmative reply from the Communists. The talks began on July 10, 1951, taking place mainly at Panmunjom on the 38th parallel. The start of negotiations raised hopes that the war would soon be over, but intense fighting continued along the 38th parallel as talks went on in an often-tedious fashion.46 As the fighting continued, the evacuation of sick and wounded by hospital trains remained a critically important task for the 3rd TMRS, in close cooperation with the medical corps’ 20th and 22nd Hospital Train Units.47

In summer 1951, the 3rd TMRS in cooperation with KNR and the Army Corps of Engineers’ 32nd Engineer Construction Group, restored railroad lines northward very close to the front. Hospital trains could evacuate casualties directly from front-line areas. In one location, the forward railhead was a mere 8,000 yards from enemy lines.30

Hospital trains began operating from forward railheads in the combat zone to hospitals in Taejon, Taegu, and Pusan. At these railheads, hospital trains received wounded, often from ambulance conveyos of box ambulances and litter-carrying jeeps. With the stabilization of the front, the railroad line north was restored from Seoul to Uijongbu, and then to Chorwon, running through the rear of front-line infantry divisions. Along this line, EUSA placed all forward medical installations, including the all-important MASH units. Critically wounded men were flown by helicopter from battalion aid stations at the front to the nearest MASH hospital. Often head, chest, and abdominal cases were on an operating table within a matter of minutes after a soldier was wounded. After initial treatment, seriously wounded patients were quickly loaded aboard a fully staffed, fully equipped hospital train for further evacuation to the rear.11

Pusan remained the most important terminus for hospital trains, as it had a major in-country hospital complex, including the 8054th Evacuation Hospital, the Swedish Red Cross Hospital, the 1st Prisoner of War Field Hospital, and the hospital ship S.S. Hope in Pusan harbor, which was a sizable hospital in itself. Further evacuation from Pusan was carried out by sea or air to the 118th Station Hospital on the southernmost Japanese island of Kyushu. Within the Pusan area, hospital trains made a short run between K-9 Airfield in East Pusan and the complex of hospitals in the city. The trains picked up seriously wounded patients that had arrived from forward airstrips by air.

Despite the short distances involved, the terrible condition of Korean roads, even in the vicinity of Pusan, precluded the use of road-bound motor ambulances, to spare patients unnecessary discomfort. Specially equipped ambulance-buses, which could travel on railway lines, shuttled between K-9 and Pusan hospitals as the hospital train stood by waiting for more aircraft to arrive, serving as a mobile medical holding facility.31 Another short hospital train run was also made between the 8055th MASH hospital in Uijongbu and the 121st Evacuation Hospital at ASCOM City, which was near Kimpo Airport (K-14 airfield). From Kimpo Airport, casualties from the British Commonwealth Division were evacuated by Royal Australian Air Force C-47 Dakotas directly to the British Commonwealth General Hospital in Kure, Japan.32

When hospital trains made the run from forward railheads and Pusan, the standard hospital train consisted of 13 cars – eight hospital ward cars for carrying patients, a kitchen-dining and pharmacy car, an officer personnel car, two orderly cars and a utility car. Despite the fact that the devastation wrought by war was a major responsibility of the U.S. Army Quartermasters Corps’ Graves Registration Division, and not the medical corps, hospital trains also were used to move specially converted rolling stock for use as mortuary cars. When their movement was necessary, the mortuary cars were placed at the end of regular hospital trains. The deceased were moved from forward railheads to Pusan, where they were sent onward to their country of origin.

Hospital-train consists could vary to as few as seven cars per train. Often Korean coaches converted to hospital ward cars were combined with purpose-built cars. In total, 90 hospital ward cars and seven kitchen cars were shipped from the United States, all constructed in 1944 and 1945 for stateside service. These cars arrived in Korea between November 1950 and March 1951.48 As the end of 1951, 90 hospital cars were operating on KNR; these cars were divided into eight full hospital trains. In addition, the U.S. Army contracted with Mitsubishi of Japan to construct standard-gauge ward cars for Korean service. Between April and July of 1952, a total of 118 Mitsubishi-built cars were sent to Korea between April 1952 and July 1952. With this additional equipment available, the 1st ROKA Hospital Train Unit was able to put three hospital trains in operation by August 1952 with the assistance of the 8138th Hospital Train Unit and the 3rd TMRS. These trains were tasked principally with evacuating ROKA and ROK Marine Corps casualties from the combat zone to hospitals in the cities of Taejon, Taegu and Pusan. Although the 1st ROKA Hospital Train Unit operated converted civilian passenger cars rather than purpose-built hospital cars, the unit quickly gained a reputation for efficient and conscientious work.15

As the war drew to an end in 1953, hospital trains enjoyed a high profile and a sensitive role in two operations associated with the armistice negotiations. These two operations, Operation Little Switch and Operation Big Switch, involved the exchange of prisoners of war. Operation Little Switch was enacted after the Communists accepted UNC’s call for

**Stalemate and armistice**

**Patients aboard a modern U.S. Army hospital ward car.** U.S. Army Signal Corps Collection, U.S. National Archives
In commission custody for 120 days, as stipulated in the
move to the Neutral Nations Repatriation Commission
Korean POWs chose not to be repatriated. They were first
railhead near Panmunjom. Some 22,000 Chinese and North
POWs held by UNC was at the prison camp complex on
the demilitarized zone at Panmunjon, and the Communists sent
August 5 to September 6, the UNC transferred more than
Big Switch began as soon as practically possible. From
the trains over their 304-mile-long route by sending a pilot
locomotive in case of obstructions on the track or to serve
as a substitute locomotive. A wreck train equipped with a
strong screens to protect passengers from rocks and other
objects thrown by Korean civilians along the right-of-way.
The 3rd TMRS also took special precautions in moving
hospital cars were specially equipped with telephones for
intra-train communications. Windows were covered with
shades and screens to protect against sunlight and heat.

The familiarity of an American passenger train gave
boycott the end of hostilities, the 3rd TMRS initiated
retrograde operations. American Car & Foundry-built
ward hospital cars and kitchen cars, as well as other special
equipment, such as diesel-electric locomotives and
hospitals on the Korean peninsula was a civilian relief
effort in response to a large-scale catastrophe. On the night
of November 27, 1953, a blaze that started in crowded
refugee housing quickly spread by strong winds, resulting
in a firestorm that destroyed 3,000 buildings in downtown
Taejon railroad station. A hospital train was sent to Pier Number 1 (the international steamerhip pier)
adjacent to Pusan Station to provide medical assistance to
Korean civilians affected by the fire.

The familiarization of an American passenger train gave
a morale boost to wounded American GIs, who felt as
if they were getting closer to home as soon as they were
loaded aboard the hospital ward cars. The hospital ward
cars brought from the United Nations for use during World War II, they were 84 feet 6 inches long and rode on six-wheel trucks. However, these
cars were limited to use on certain KNR main lines, as
they were too long and the trucks were a problem on
sharp curves. As a result, the U.S. Army issued Mitsubishi
a contract to construct new ward cars. The Mitsubishi cars
were 78 feet, 11 inches long and rode on four-wheel trucks,
which allowed them to handle tight curves. Even so, these
cars were too heavy to operate over some lightly engineered
branch lines.

Both the Mitsubishi and ACF cars were fully compatible
with Korean rolling stock, which was built to American
specifications.92 The kitchen cars ran at the head end or rear
of hospital trains and could supply food more efficiently than
the individual ward car kitchens, and provided meals for
the older converted ward cars without kitchens. While
not always providing meals, the ward car kitchens were used
to provide hot coffee at all times, as well as other beverages.
The kitchen cars were also constructed in 1944 by ACF. They
were of utilitarian design, resembling large boxcars,
and outfitted with diaphragms and end-doors to provide a
passageway to other cars. They had no vestibules with
der ends, but a center side door to load supplies.
These were 50 feet 6 inches long and had a short wheelbase,
with express car type trucks, which offered a safe ride at speed.
A typical meal on a hospital train consisted of steak,
pineapple, and coffee with real cream.93 The American
Red Cross also provided notions and comfort items for
patients, such as books, writing paper, cards and other
incidents aboard each hospital ward car. The ward cars
were organized in a standard way so medical personnel
could work interchangeably on all cars and trains without
wasting time looking for supplies or equipment.

The hospital range of prisoners that came under the
armistice was signed.90 According to an agreement between the
Communists and UNC, Operation Little Switch was scheduled to take place from April 20 to May 4, 1953. The POWs had to
arrive at the exchange area at Panmunjom exactly on
date from April 20 to May 4, 1953. The POWs had to
arrive at the exchange area at Panmunjom exactly on
schedule. The slightest delay could become the target of
attacker on the track. If they were getting closer to home as soon as they were
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were organized in a standard way so medical personnel
could work interchangeably on all cars and trains without
wasting time looking for supplies or equipment.

The hospital range of prisoners that came under the
armistice was signed.90 According to an agreement between the
Communists and UNC, Operation Little Switch was scheduled to take place from April 20 to May 4, 1953. The POWs had to
arrive at the exchange area at Panmunjom exactly on
date from April 20 to May 4, 1953. The POWs had to
arrive at the exchange area at Panmunjom exactly on
schedule. The slightest delay could become the target of
attacker on the track. If they were getting closer to home as soon as they were
loaded aboard the hospital ward cars. The hospital ward

cars brought from the United Nations for use during World War II, they were 84 feet
6 inches long and rode on six-wheel trucks. However, these
cars were limited to use on certain KNR main lines, as
they were too long and the trucks were a problem on
sharp curves. As a result, the U.S. Army issued Mitsubishi
a contract to construct new ward cars. The Mitsubishi cars
were 78 feet, 11 inches long and rode on four-wheel trucks,
which allowed them to handle tight curves. Even so, these
cars were too heavy to operate over some lightly engineered
branch lines.

Both the Mitsubishi and ACF cars were fully compatible
with Korean rolling stock, which was built to American
specifications.92 The kitchen cars ran at the head end or rear
of hospital trains and could supply food more efficiently than
the individual ward car kitchens, and provided meals for
the older converted ward cars without kitchens. While
not always providing meals, the ward car kitchens were used
to provide hot coffee at all times, as well as other beverages.
The kitchen cars were also constructed in 1944 by ACF. They
were of utilitarian design, resembling large boxcars,
and outfitted with diaphragms and end-doors to provide a
passageway to other cars. They had no vestibules with
der ends, but a center side door to load supplies.
These were 50 feet 6 inches long and had a short wheelbase,
with express car type trucks, which offered a safe ride at speed.
A typical meal on a hospital train consisted of steak,
pineapple, and coffee with real cream.93 The American
Red Cross also provided notions and comfort items for
patients, such as books, writing paper, cards and other
incidents aboard each hospital ward car. The ward cars
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a contract to construct new ward cars. The Mitsubishi cars
were 78 feet, 11 inches long and rode on four-wheel trucks,
used in the European theater during World War II, some trains were inactivated and medical rolling stock became surplus. In August 1953, the Army began receiving new hospital cars that operated as a five-car self-contained hospital service, gaining its own power and heat, which could be blacked out for concealment against attack while maintaining full interior lighting. The hospital cars were fitted with shower and toilet facilities for all levels. It rode on adjustable trucks, which could be raised and lowered automatically, and which were adjustable to run on standard or broad-gauge track. Modern self-propelled railcars equipped for medical evacuation were also maintained as part of the Army's foreign-service rolling stock fleet, which stood by for deployment in overseas contingencies.

In April 1953, the Army began adding to the foreign service fleet 96 MRS-1 locomotives, which were steam-generator-equipped and could readily be used with the circa-1944 ward cars and converted passenger cars in hospital-train service. The MRS-1s, like the new hospital cars, could run on both standard and broad-gauge track and could be fitted either with American style automatic couplers or buffer plates.

During this period, the U.S. Army also purchased 61 European-built passenger cars that could serve both as troop sleepers and hospital ward cars for use by North Atlantic Treaty Organization (NATO) nations. Mediterranean theater forces also received railcars in the 1960s and 1970s, medical evacuation by rail did not play a role, as casualties came more incrementally, Vietnam's rail system was not very extensive, and there were no clear front lines. Throughout the 1950s and 1960s, the Army's fleet of medical rolling stock remained at the ready for a major war in Europe or renewed hostilities on the Korean peninsula, as casualties increased and the rail system expanded. During this period, a number of Army reserve units consisting of medical service personnel had the task of providing hospital-train personnel if mobilized. As air evacuation equipment and methods improved during the Vietnam War, the planned role of medical corps railway equipment became more limited, principally to speed casualties from forward railheads to the nearest railroad spur to the nearest railroad spur or branch line. They then pulled onto the track at locations such as grade crossings and turned lengthwise on the rails. The flanged wheels of the hospital cars were cracked down on the rails by hand. When in railroad mode, the rubber tires still provided propulsion and braking; the flanged Auto-Rail wheels provided guidance. Once on the railroad, an ambulance bus proceeded to a MASH unit or to a junction to meet a conventional hospital train. The ambulance buses were also used between airfields. As the ambulance buses were built on truck frames that made for rough riding on Korean roads, they traveled by rail as much as possible to speed movement and minimize discomfort.

Conclusions

The auto-rail buses were a good example of how the 3rd TMRS and army medical corps met medical evacuation problems with improvisation and innovation. The Korean War demonstrated the potential of the auto-rail buses used in the United States, and the Korean peninsula posed difficult transportation problems, but the Korean railroads played a larger role and did a more effective job than initially expected. As rail transportation proved its worth and it seemed that theater rail operations would be significant in the next major conflict, the U.S. Army and Pacific U.S. Medical Corps heeded many of the lessons learned in Korea. In August 1953, the Army began receiving new hospital cars that operated as a five-car self-contained hospital service, generating its own power and heat which could be blacked out for concealment against attack while maintaining full interior lighting. The hospital cars were fitted with shower and toilet facilities for all levels. It rode on adjustable trucks, which could be raised and lowered automatically, and which were adjustable to run on standard or broad-gauge track. Modern self-propelled railcars equipped for medical evacuation were also maintained as part of the Army's foreign-service rolling stock fleet, which stood by for deployment in overseas contingencies.
Thereafter, the U.S. Army left operation of hospital trains to host nations in which U.S. forces were stationed. Some hospitals were unable to run their railroad cars that served in Korea after seeing second careers to transport people and performing medical duties within the circus rings of the Ringling Brothers and Barnum and Bailey Combined Shows. Others were converted to standard passenger cars for service on the Alabama Railroad or used by Amtrak as baggage cars, or in maintenance-of-way service on the Northeast Corridor.

The Federal Republic of Germany and the Republic of Korea also maintain railroads as medical evacuation capabilities. For the ROK armed forces, given the relatively short distances involved and excellent railroad service, hospital trains are still an efficient means for mass casualty evacuation. The 1st ROKA Hospital Train Unit, which later became the ROK National Defense Hospital Train Unit, is still an active group, supporting the ROK armed forces in 1969, the ROG National Defense Hospital Train Unit had new built-up equipment. In 1999, its rolling stock was entirely replaced with a new rolling stock that is equipped with self-contained air-conditioning and ventilation systems, up-to-date medical treatment equipment, and special cushioned trucks for a smooth ride. The new ward cars are fitted with self-contained Berths, allowing the easy movement of patients in serious condition as well as providing conventional seats for ambulatory patients. The rolling stock is designed to be used for the evacuation and stabilization of serious combat casualties, as well as for routine movement of patients between military hospitals and clinics in peacetime. As a legacy of successful medical railroading during the Korean War, the National Defense Hospital Train Unit still stands ready to support the defense of ROK and to save lives.

Notes
3 Carl Russell Fish, “The Northern Railroads, April 1861,” The American Historical Review (July 1917): 799.
4 Alan Hik, “An Eighty-Year Hospital in Its Locos in the 20th Century as a crucial turning point in the Cold War. Conflict. In retrospect, the Korean War was a key event of strategic stabilization that allowed for meteoric regional power growth. The powerful military partner of the United States in the global struggle of the Cold War, the United States United States Army in the Korean War: Years of Stalemate (Washington, 2000): 3.
5 Kim Yoon-sun, “Korea’s first outreach to transport show people and Korea saw second careers to transport show people and performing medical duties within the circus rings of the Ringling Brothers and Barnum and Bailey Combined Shows. Others were converted to standard passenger cars for service on the Alabama Railroad or used by Amtrak as baggage cars, or in maintenance-of-way service on the Northeast Corridor.
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