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Medical Mobilization Since 1860: From Apathy to Action

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ABSTRACT - Medical Mobilization Since 1860: From Apathy to Action

Medical Mobilization provides a overview of the medical mobilization process including a historical review, a summary of actions taken during Desert Shield/Storm and a list of lessons learned. The historical analysis of the mobilization process indicates that we don't learn from our mistakes. Each war was preceded with a general lack of preparedness and followed by massive reduction of forces and reduced military spending. Operation Desert Shield/Storm was a successful mobilization effort; however, the military forces utilized war materiel from stockage and the industrial base was not seriously challenged.

The medical mobilization process has followed the same trends of being ill-prepared for war. With limited budgets during post-war years, the medical departments must compete for expensive weapons systems for funding priority. There is constant pressure to reduce the cost of peacetime health care; however, we must not forget that our primary mission is to provide care for the soldier on the battlefield.

We are facing a new domestic and international order. The threat to our national security has been reduced and domestic social issues require attention. Our leaders, and those organizations charged with monitoring our mobilization preparedness, must insure that we can respond to demands of being a leader in the New World Order.

Colonel Henry O. Tuell III

ICAF, 21 April, 1992

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MEDICAL MOBILIZATION

I. INTRODUCTION

Mobilization can be visualized as a system with many subsystems providing output in support of the total process during a crisis. The output of the system will marshal human, material, economic and natural resources to respond to and manage an emergency. The medical subsystem will provide input to other subsystems including personnel, transportation, logistical support and coordinate with civilian agencies such as the Department of Veteran Affairs (VA) and the Federal Emergency Management Agency (FEMA) for expansion of services.

The medical subsystem has always been a concern to mobilization planners. Unlike some facets of preparation for an emergency, medical mobilization has restrictions that are time sensitive. The twin concepts of mobilization preparedness - maintenance of peacetime preparedness and pre-conflict actions to increase readiness - are affected by the length of time required to train many of the health care providers and the abundance or scarcity of providers in the marketplace.¹

This paper will provide a summary of the medical

¹United states. Federal Emergency Management Agency. Resource Management: A Historical Perspective. Washington: GPO 1989. p. 2-7.

mobilization process including a historical review, a summary of actions taken during Desert Shield/Storm and a list of lessons learned. Recommendations provided are based on the current threat as we know it today and must be reviewed in light of changes in the new world order and in the size and content of our armed forces in the future.

Much of the data provided in this chapter is taken from experience and reports of the Department of the Army, Office of the Surgeon General. The problems encountered and national trends, though, may be relevant to all branches of the service.

II. HISTORICAL OVERVIEW

Our experience in mobilization over the past century has had a lasting impact on our current mobilization philosophy. Each of the past conflicts presented a different set of environmental and domestic conditions that affected the mobilization process. A historical review of our mobilization track record will provide us with problems and solutions, both good and bad, from past conflicts and guidance for mobilization planning for the future.

CIVIL WAR

Military Mobilization

The major difference between this war and those to

follow was, as the name implies, that it was a war within one nation to decide if that nation would survive or be divided. The major problem facing both the United States and the Confederate States was mobilizing for a modern war.² The mobilization of people, equipment, supplies, and transportation requirements had not been required of this relatively young nation. Guidelines and solutions that were established in this conflict would evolve and be applicable to challenges in World War I and World War II.

In 1861, the U.S. Army consisted of 17,000 men with the majority stationed at small installations on the western frontier. The Navy fleet consisted of forty-two ships and 1,400 officers. This relatively small force was further reduced as many of the United States officers and men resigned to join forces with the Confederacy once the conflict started.³ The United States was measurably superior to the Confederacy in manufacturing, railroad mileage, manpower, arms production, stable economy and commerce. President Abraham Lincoln, however, faced a formidable task in mobilizing these assets to win the war.

At the start of the war, the only statutory authority available to President Lincoln for increasing the military

²United States. Department of the Army. DA Pamphlet No 20-212, History of Military Mobilization in the United States Army 1775-1945. Washington: GPO 1955. p. 83.

³Robertson, James I. History of the Civil War. Harrisburg PA: Historical Times INC, 1983. p. 4.

was the Militia Act of 1792. This gave the President the power to call out the Militia to suppress insurrection. President Lincoln's first action was a call for 75,000 militia. This was the first of sixty-two strength increases to be called over the next four years. The total U.S. force would grow in size from a pre-war level of 17,000 to over 1,000,000 in 1865. Total personnel mobilization in proportion to population was the greatest of any period in United States history with the exception of World War II.⁴ During the initial stages of mobilization, the state governments were responsible for recruiting and equipping the forces. The centralization of this function increased throughout the war and by 1865 it was accepted as national policy that the Federal Government could, under the Constitution, raise armies by direct call on the citizens.

Industrial Mobilization

Industrial mobilization during the Civil War was not the result of any direction or strategic plan by the government. The country was still feeling the effects of a four year economic depression. Initial industrial mobilization was slow in coming and stimulated by anticipation of an open market for government contracts. With no governmental controls, the war industries market

⁴Huston, James A. The Sinews of War: Army Logistics 1775-1953. Washington: GPO 1966. p. 175.

place soon became filled with fierce competition, expanding industries, profiteering and often fraud. The government, as is often the case during times of emergencies, was more interested in delivery dates and quantity than quality and cost. By 1863, northern industry was booming and there were few shortages to hamper the war effort. In the south, manufacturing was in disrepair. There was a marked shortage of food and supplies and each battle worsened the problem.

Medical Mobilization

At the start of the war, the United States Army had no plans, personnel, nor equipment to collect wounded from the battlefield, treat them in hospitals, or evacuate them to the rear.⁵ A war that would result in 300,000 deaths, 400,000 cases of wounds and injuries and 6,000,000 cases of illness would surely tax the mobilization efforts of the United States. The Chief of the Army Medical Department, Colonel Thomas Lawson, was a veteran of the War of 1812 and was over eighty years old.⁶ In 1861 the Army Medical Department consisted of less than one percent of the total force compared to the twenty percent today. The medical forces would grow from 98 officers to a total of 11,000 at

⁵Duncan, Louis C. The Medical Department of the United States in the Civil War. Gaithersburg, Md: Olde Soldiers Books, 1987. p. 17.

⁶Adams, George Worthington. Doctors in Blue. Dayton, Ohio: Morningside Press, 1985. p. 4.

the end of the war. Of the original 30 surgeons and 83 assistant surgeons, 3 surgeons and 21 assistant surgeons resigned to join the confederacy.⁷

An important procedure that was instituted during the mobilization process was the certification or examination of physicians prior to commissioning. This practice was only a partial quality control because state militia often appointed physicians with minimal credentials. It did establish a practice that is still in effect today. Mobilization of Medical Department personnel continued to be unorganized, with no plan and a definite lack of leadership. There were regular army physicians, state appointed militia physicians and numerous civilian volunteers providing medical and nursing care throughout the war. Confusion continued in the mobilization process until the appointment of a new Surgeon General in April of 1862. The appointment of William A. Hominid finally brought a reorganization to the medical system that resulted in improved staffing and an increase in medical expenditures.

Planning for medical equipment was also lacking at the start of the war. The Army had no ambulances and lacked both the structure and money to provide medical equipment and supplies for the newly recruited physicians. An important concept that assisted in the industrial mobilization of the Army Medical Department was the

⁷Adams, Doctors in Blue p. 4.

formation of the Sanitary Commission. In June of 1863, President Lincoln approved an order forming a Sanitary Commission to investigate and provide advice to the Army Medical Department. This Commission was instrumental in improving the sanitary and living conditions for all soldiers and was the primary source for funneling medical supplies from industry to medical forces in the field.

Two important concepts of medical support which were developed during the Civil War have proven to be important features for future mobilization efforts. The basic principles for organization and support of the battlefield used in the Civil War were designed by Doctor Jonathan Letterman, the Medical Director for the Army of the Potomac. Doctor Letterman's ambulance system, field hospital system and medical supply system soon became the standard throughout the Medical Department. His basic concept is used by the Army today. The Letterman system improved the care provided to the soldiers and established a standard for base requirements for personnel, equipment and supplies. The second concept to come out of the Civil War was the use of dedicated vehicles for medical evacuation. By the end of the war, control of selected boats, trains and wagons was given to the Medical Department for evacuation of patients. This dedication of resources for evacuation would require medical planners to program and fund increased transportation requirements for future conflicts.

WORLD WAR I

Military Mobilization

In the years between the Civil War and World War I, there was a maturing of the Armed Forces of the United States. They had now become the forces of a world power. They had, at times, been mobilized and sent to Cuba, Puerto Rico, the Philippine Islands, China and Mexico. Despite all of the progress in organization and planning, there was a major deficiency in materiel readiness.

Declaration of war against Germany on April 6, 1917, found the United States militarily ill-prepared for this massive undertaking. War had been raging in Europe since 1914, and even with the increased world tension, there was little mobilization planning for possible armed conflict. General John J. Pershing's summary of mobilization efforts was, "Little more than a gesture was made to get ready for eventualities: in fact, practically nothing was done in the way of increasing our military strength or of providing equipment."⁸ The National Defense Act of 1916 was partially responsible for the reduced effectiveness of the Army planners. This act restricted the number of General Staff officers to 41 and of this number, only 19 could be stationed in Washington. This inability to respond to

⁸Pershing, John J. My Experiences in the World War. New York, 1931. p.7.

mobilization continued for 11 months. In May 1918, General Peyton Marsh became Army Chief of Staff and began a reorganization process that would result in a staff of over 1,000 officers in Washington, planning and monitoring the mobilization process.

The process of mobilizing industry to supply clothing and munitions would be based upon the total size of the forces. Rather than beginning production so that equipment would be available when troops arrived at the mobilization sites, there was considerable lost time waiting on total requirements to come from the War Department. In October of 1917, the War Department adopted a plan to organize thirty divisions consisting of a total of 1,370,000 men for deployment to France. In July 1918 this number was increased to 2,350,000 and by the end of 1918 a total of 3,360,000 were scheduled to arrive in France by July of 1919. This represented a large increase, since the strength of the Army prior to the declaration of war was only 133,111 men.⁹ The total requirement for mobilization was accomplished by volunteers and by draft authorized by the Selective Service Act of 1917. The Selective Service Act provided the President the power to call up civilians for the duration of the emergency. There was a quota system for each state based upon population minus the number of

⁹Huston, James A. The Sinews of War: Army Logistics 1774-1953. Washington: GPO 1965. p. 312.

volunteers. Both systems of personnel mobilization worked well; however, equipping, training and transporting the forces posed additional challenges for the War Department.

After war was declared, the Quartermaster General indicated that the Army only had enough equipment to outfit the regular army and that it would be at least twelve months before clothing and equipment could be procured for the minimum number of mobilized forces. This estimate proved to be optimistic and it was recommended that assembling of the national army be delayed by several months.

Industrial Mobilization

The industrial mobilization process started slowly due to a lack of planning prior to the war. The mobilization of the industrial base began prior to our entry into the war and was probably more critical than the rapid deployment of troops. The time required to mobilize the industrial base far exceeded the time needed to marshal and train soldiers. The total industrial potential of the United States and its share of world manufacturing output was two and a half times that of Germany's strained economy.¹⁰ The United States eventually trained and deployed 1.5 million men to the war zone; however, the United States had to rely on Allies to provide them with tanks, airplanes and artillery pieces.

¹⁰Kennedy, Paul. The Rise and Fall of the Great Powers. New York: Vintage Books, 1989. p. 271.

Arms and ammunition provided another mobilization challenge. Manufacturers had been producing at an increased rate to fill orders from our allies. The major problem was the difference in the size of Allied and United States weapons. To convert production lines to our specifications would take up to eighteen months and reduce our ability to support our allies.. If they manufactured allied weapons for use by American soldiers, we would have a logistics problem of two types of ammunition on the battlefield. A compromise was reached. They manufactured allied weapons modified to fire our ammunition. With manufacturers producing arms and ammunition at maximum rate, it was twelve months before the first 1,000,000 American soldiers were armed.

Aviation and the gasoline engine played an important role in reshaping warfare in World War I and would affect manufacturing mobilization in the future. The gasoline engine had little use in America prior to the war. In 1918 the Army had 294 different makes and models of vehicles. Army leaders selected the best characteristics from trucks in production and standardized the manufacturing of one truck. Over 40,000 of the standard B truck were ordered and 10,000 had been delivered by the end of the war. The gasoline engine would also stimulate the production of tanks and airplanes. The Army took little note of the airplane, an American invention. At the start of the war the United States Army had only fifty airplanes and they were all

outdated trainers. There was no viable aviation industry. It had to be developed from the ground up. By the end of the war, 11,700 planes had been produced with the DeHavilland plant alone producing over 1,000 planes a month.¹¹ The aviation and tank/transportation industries would both develop and be vital to America's mobilization efforts in future wars.

To enhance the ability of the industrial base to mobilize in any future conflict, Congress passed the National Defense Act of 1920. This act tasked the Assistant Secretary of War with mobilization planning of material and industrial manufacturing base to meet future wartime needs. This act also required the War Department to provide military manpower mobilization planning. Despite lessons learned from previous wars, the United States drastically downsized and under-funded its military structure; industrial mobilization planning was not attuned to the changing times.

Medical Mobilization

Little had been done in the area of medical planning and preparation prior to the start of the war. The Surgeon General had requested authorization and funding for a stockpile of medical supplies as early as February 1917.

¹¹Huston, James A. The Sinews of War: Army Logistics 1775-1953. Washington: GPO 1966. p. 327.

This request was not implemented because of a lack of funding from Congress. Production of medical supplies was increased to support the Allies, but it would take eight to twelve months to procure adequate sanitary and medical items to equip the mobilizing American force.

The biggest challenge facing the Medical Department was providing physical exams for the inductees. In the first eighteen months, the armed forces increased in size by over three million men. The medical examinations for inductees were conducted at mobilization camps and cantonment areas. Most of the medical personnel conducting the exams were recent inductees or volunteers who arrived at camp shortly before the main body of troops. The Surgeon General provided specific mission statements with detailed memoranda on each phase of the mobilization process. The duties of each division or camp surgeon, as outlined by the Surgeon General, were: prevention of the introduction and spread of communicable disease; administration of inoculations; sanitation of cantonment area; physical examination of drafted men; organization and equipment of sanitary units; and instruction and training of Medical Department personnel.¹² The mobilization camps were often the only source of training and equipping that the medical personnel received prior to overseas deployment.

¹²Bowen, Albert S. The Medical Department of the United States Army in the World War. Washington: GPO 1928. p. 5.

WORLD WAR II

Military Mobilization

The escalation of war in Europe started in March 1939 with Germany's annexation of Czechoslovakia, Italy's move into Albania in April and finally Germany's attack on Poland in September 1939. There was a lack of political will in the United States to become actively involved in the war in Europe. Prior to the attack on Pearl Harbor, there was a large anti-war sentiment among the majority of the public. The period of time between the summer of 1939 and the attack on Pearl Harbor on December 7, 1941 provided the military and industry time to revise existing mobilization plans.

Even with this additional time to prepare, the mobilization effort was slow to start. President Franklin D. Roosevelt was faced with neutrality legislation passed by Congress and the need to expand the armed forces and industrial base, if the United States were forced to enter the war. The majority of the military mobilization efforts were directed at building a force to protect the Western Hemisphere from attack. In August and September of 1940, Congress passed legislation allowing the President to call Reserve and National Guard units to active duty for a period of one year and instituting the Selective Training and

Service Act.¹³ Both pieces of legislation restricted the employment of soldiers beyond the limits of the Western Hemisphere or territories of the United States.

At the end of the day on December 7, 1941, it became clear that the United States was facing a formidable opponent and would require a total mobilization effort. Following a practice established in prior wars, the United States mobilized soldiers before they could be equipped or housed. Soldiers in training and on maneuvers in 1940 and 1941 often used trucks to simulate tanks and had to carry sticks to represent guns and mortars.¹⁴ The United States was the leading industrial nation in the world and had been involved in production for the allies' war effort, but could not provide basic weapons and ammunition for its soldiers. Conversion of manufacturing from civilian to military equipment, construction of new facilities, and a total team effort by industry and the military would be required to equip the 12 million soldiers called to service during the war.

Industrial Mobilization

The Lend-Lease Program and the Munitions Program of

¹³United States. Department of the Army. DA Pamphlet No 20-212, History of Military Mobilization in the United States Army 1775-1945. Washington: GPO 1955. p. 580.

¹⁴Huston, James A. The Sinews of War: Army Logistics 1775-1953. Washington: GPO 1966. p. 456.

1940 were part of President Roosevelt's call to provide an "arsenal of democracy" to support our allies. The President also stimulated industrial mobilization with the Victory Program of 1941. Each of these programs allowed the industrial base to begin a mobilization effort that would eventually provide the logistic support for conducting a war on three fronts simultaneously.

During the industrial mobilization process there were problems encountered, substitutions made, and plans changed. The final outcome was far more substantial than would have been imagined possible. During the course of the war the United States produced 88,000 tanks, 310,000 airplanes, 2,400,000 trucks, 27 aircraft carriers, over 7,000 ships of various types, 12,500,000 rifles and 40 percent of all Allied small arms ammunition.¹⁵

Medical Mobilization

The Army Medical Department found itself poorly prepared for the war. There had been no funds for medical readiness allocated between the end of World War I and 1940. The stockpiles of equipment in the war reserve were old and outdated. Requests for funding to upgrade equipment submitted in December of 1939 were disapproved by the War Department. Major General James C. Magee, the Army Surgeon

¹⁵Gropman, Alan L. Lecture given to Industrial College of the Armed Forces, Seminar 11. 5 November, 1991.

General, could not field one complete modern 1,000 bed hospital for deployment.¹⁶ The Surgeon General utilized executives from civilian industry to help reorganize and mobilize the Medical Department. Mr. Edward Reynolds, former president of Columbia Gas and Electric Corp., reorganized the supply and procurement division. He was commissioned as a Colonel in the Medical Administrative Corps and managed procurement for the duration of the war.¹⁷ The procurement system expanded from under 500 contractors in 1939 to 2,500 contractors with 25,000 contracts awarded in 1942 alone.

The medical industrial system encountered some specific problems during mobilization. Surgical dressings, blood plasma, penicillin and spectacles were in short supply and more importantly, the majority of surgical instruments were manufactured in Germany. The American Red Cross provided essential support with blood drives and established volunteer centers to assemble and package surgical dressings. Penicillin was the new wonder drug and the industry was still in the development stage. After initial processing problems with the Food and Drug Administration the drug manufacturing companies improved the quality and

¹⁶United States. Office of the Surgeon General, Department of the Army. Medical Supply in World War II. Washington: GPO 1968. p. 12.

¹⁷United States. Medical Supply in World War II. Washington: GPO 1968. p. 19.

by 1944 were able to fill all procurement requests. Lack of surgical instruments was a major problem which was never totally solved. Prior to the start of the war, Germany had dominated the market and there were few viable manufacture's in the United States. Silverware manufacturing firms answered the call and retooled for medical instruments. The lack of technology and shortage of raw material hampered the process and total requirements were never met.

In spite of the initial problems, the Medical Department responded well to the massive task of providing care to the sick and wounded. During the period from January 1942 through August 1945 more than 739,400 patients were evacuated to the United States with admissions to Army hospitals nearing 5,100,000 in the overseas theaters and about 8,900,000 in the United States.¹⁸

THE KOREAN WAR

Military Mobilization

The early morning attack of North Korean forces across the 38th parallel on June 25, 1950 once again forced the United States into a process of mobilization. Within five days after the attack by North Korea, President Harry S. Truman announced that American troops were to be committed

¹⁸Huston, James A. The Sinews of War: Army Logistics 1775-1953. Washington: GPO 1966. p. 514.

to the war.

One advantage that the United States had was the large war reserve left from World War II. Production lines were in full operation during World War II and the Armed Forces were blessed with a full complement of arms, ammunition and equipment. In addition to the stateside war reserves, there were large quantities of World War II supplies and equipment left in the Pacific Islands. These war reserves would be vital to sustaining the forces until industry could mobilize to meet the needs of the United States forces and our Allies.

An analysis of the mobilization process for the Korean War must be viewed in two phases: the initial phase against the North Korean forces; and secondly, the involvement of Chinese Communist forces. The initial attack by the North Koreans, and the United States' early successes created optimism that the war would be of short duration. General Douglas MacArthur, the Commander of the Far East Command, met with President Truman at the Wake Island conference in October 1950. He stated that even with Chinese Communist intervention he hoped to "get the boys home by Christmas."¹⁹ The second phase began with the build-up of Chinese Communist forces and their successful actions against the allied forces. This demonstrated to the

¹⁹Huston, James A. The Sinews of War: Army Logistics 1775-1953. Washington: GPO 1968. p. 620.

military planners and the industrial base that the war would be more prolonged than originally planned.

The early over-optimism created problems for logistic planners. The Department of Defense thought that the war would be over by the summer of 1951. They programmed the budget to curtail all expenditures for Korea past that time. However, the Chinese Communists moved 30 divisions into North Korea and began a major offensive in late November. The success of this offensive and the increase in material and equipment losses by the allied forces, required the expansion of our military mobilization effort. The military planners were operating on an orderly build up to reach the maximum forces in 1954. With the Chinese offensive gaining strength, this plan would not provide adequate troops or equipment.

Industrial Mobilization

The industrial mobilization policy for the Korean War was different from those for previous conflicts. The plan was to use the war reserves for the initial build-up and gradually mobilize the industrial base. This would be a partial mobilization expanding the industrial base with multiple smaller contracts to firms rather than a one firm large contract. This long term approach to the mobilization effort resulted in a broadening of the industrial base to allow for future surges, and a general expansion of the

procurement objectives for all classes of supplies.

The gradual expansion of the industrial base left the military planners with concerns over production of new weapons, tanks, trucks, helicopters, ammunition, and the increased demand for petroleum products to support the mechanized effort. New weapons and trucks were designed and tested with deliveries arriving in Korea by the summer of 1950. There were no tank production lines in operation and the new tank designs had not been tested. The Department of the Army made the decision to begin production without complete testing. The first of the new tanks came off the production line in the summer of 1952. Helicopter production was not easily expanded. The difficult terrain of Korea created a demand for helicopters that the procurement system could not meet.

The Army had become dependent on motor transportation for sustainment on the battlefield. This placed a great demand on the industry for petroleum products. Sixty-five percent of all the supply tonnage shipped to the Far East Command was petroleum products. The transportation of fuel to the ports and distribution to the units created a challenge for all services.

Medical Mobilization

In June of 1950 the Army Medical Department faced a critical shortage of medical personnel. They did not have

enough physicians on active duty to meet peacetime requirements and recruitment efforts were having little success. At the start of hostilities, American units stationed in Korea were at fifty percent of their authorized physician strength. Many of the assigned physicians were medical residents on temporary duty. American medical units in Japan were the receiving facilities for patients from Korea and also provided personnel to understaffed units in Korea. Medical units in Japan was also understaffed with only 156 of its authorized 318 physicians.²⁰ In July, 1950, the Army Surgeon General sent every available physician to Korea and Japan. The majority of the assigned physicians were interns or recently graduated residents. They had only basic clinical skills and no military training or experience. The arrival of new physicians made only marginal improvements in the overall staffing. The 1st Cavalry and 24th and 25th Infantry Divisions entered combat with only one-third of their authorized medical officers.²¹ Medical Sergeants with infantry and artillery units were often the only trained providers of care. They ran the aid stations, treated the wounded, arranged evacuation and often acted as the battalion surgeon.

Nurses, Medical Service Corps officers and enlisted

²⁰Cowdrey, Albert E. The Medics' War. Washington: GPO 1987. p. 67.

²¹Cowdrey, Albert E. The Medics' War. p. 77.

medics were critically short within the theater. This situation would continue for the first year of the war until the general draft and expanded training programs provided adequate medical staffing.

Evacuation of patients from the aid station to a hospital was often the most critical medical problem in the theater. The terrain limited ground transportation and many ambulances were lost to enemy fire or on night trips over dangerous mountain trails with no lights. The Mobile Army Surgical Hospital and medical evacuation helicopters were two changes to medical operations used to overcome the evacuation problem. The Mobile Army Surgical Hospital (M.A.S.H.) was designed as a 60 bed surgical treatment facility located as close to the combat unit as tactically possible. Surgical treatment far forward for badly injured soldiers reduced the mortality rate. This concept, designed in World War II and tested in Korea is a vital part of medical operations today. The use of helicopters for patient evacuation was the most important technical innovation for the Army Medical Department. Bad roads, broken terrain and the prevalence of North Korean infiltrators stimulated the growth of Army medical air evacuation.

The overall mobilization process for the Korean War must be viewed as twofold. The mobilization process was in direct support of the Korean War and was the initial stage

of massive build-up in response to the Cold War. The Cold War mobilization would continue to some extent for the next four decades.

VIETNAM AND THE COLD WAR

The fall of China to the Communists and the Korean War were initial events of the Cold War. The United States established and maintained an increased pattern of military procurement and readiness until they could proclaim victory in the Cold War. Communist aggressors became the enemy of free world nations.

The United States became actively involved in the struggle in Vietnam on May 1, 1950. President Truman made the decision to provide aid to the French Government in Indochina. In September 1950, a small United States military assistance team was established to provide logistic support to the French forces. Later, President Dwight D. Eisenhower advocated the "domino theory" - Asian countries would fall one by one like a set of dominos if the Communist aggressors were not stopped. The Vietnam War would last through five Presidents and create unrest and hostility among the citizens of the United States.

Military and Industrial Mobilization

The Vietnam war was unlike any of our previous

conflicts. There was no declared national emergency or mobilization point (M-Day) to energize troops and industry. There would be a gradual build up over the next twelve years to a maximum of 543,400 American soldiers in Vietnam.²² There was a gradual increase in procurement of equipment and ammunition. The tactics used in previous wars were of little use in Vietnam. Superiority in numbers and advanced technology in weapons and airpower proved ineffective against an army which owned the land and who were skilled in insurgent warfare. General William Westmoreland, Commander of U.S. combat forces in Vietnam, turned to air strikes to stop the flow of troops and equipment from the north. The air strikes consisted mostly of harassing and interdiction fire on suspected supply routes to disrupt the logistical support for forces in the south. From 1965 to 1968 there were more tons of explosives dropped by American pilots in such missions than were dropped against all the Axis powers in World War II.²³ Political and civil unrest in the United States became unbearable. In 1973 President Nixon began withdrawing the troops and the American military was faced with losing its first war.

²²Schandler, Herbert Y. The Unmaking of a President, Lyndon Johnson and Vietnam. New Jersey: Princeton University Press 1977. p. 352.

²³Palmer, R.R., Colton, Joel. A History of the Modern World. New York: McGraw-Hill 1950. p. 918.

Medical Mobilization

Medical mobilization for the Vietnam war was a long and gradual process. Tactical operations and jungle terrain dictated a different medical structure and evacuation plan for wounded soldiers. There were no battle lines or major movements of forces. Medical treatment facilities were located on fixed bases and the majority of evacuation was accomplished by helicopters. Once the medical structure was established, it became a process of personnel and supply sustainment. A large medical personnel base was established in the United States to treat returning wounded and to serve as a rotational base for one year assignments in Vietnam.

The use of dedicated medical helicopters as the primary means of evacuation resulted in an increase of pilots and equipment to the medical structure. Requirements for helicopters and medical equipment were easily met, but there was a continual shortage of medical evacuation pilots.

The Vietnam war was costly to the United States. The battle deaths exceeded those suffered in the Korean War and expenditures were estimated at \$150 billion.²⁴ More costly in the long term was the growing lack of trust for the military and the leaders of our nation. The basic underpinning for mobilization is the will of the American people. Many Americans opposed the war effort and the

²⁴Palmer, R.R., Colton, Joel. A History of the Modern World. New York: McGraw-Hill 1950. p. 921.

military lost the trust and respect it had acquired on previous battlefields.

The Cold War would continue with the military enduring periods of austere spending and periods of modernization. The threat of war with the Warsaw Pact Nations stimulated a healthy defense industry. The emphasis on technology and modernization of equipment under President Reagan provided a period of growth in the industry and provided a excellent base for mobilization.

HISTORICAL SUMMARY

The United States established a pattern of preparedness for war characterized by periods of frantic production followed by massive demobilization. Periods between wars found the military underfinanced and understaffed. The active duty military was maintained at the minimum essential level with reserve forces and the Selective Service Act available to mobilize the required manpower. Military equipment was stockpiled for contingency purposes, but seldom updated or modernized. To compound this deficiency, there was limited industrial mobilization planning. Our free market system would see defense companies entering and leaving the marketplace with no government intervention. This fluctuation in military preparedness was often driven by the nation's economic, political, and social conditions.

Following each war, the federal government established organizations and passed legislation to preclude repeating past mistakes in future mobilization efforts. These recommendations often did little in establishing long term productive mobilization planning. Two actions, the formation of the Federal Emergency Management Agency (FEMA) in 1978 and Executive Order 12565 in 1988, have been positive steps taken by the federal government toward emergency preparedness. The productivity of FEMA and the use of Executive Order 12565 can only be evaluated in the mobilization process of future conflicts.

III. OPERATION DESERT STORM

BACKGROUND

The events leading up to the United States involvement in Operation Desert Shield/Storm began years before with the continuing boundary disputes between Iraq and Kuwait. Iraqi President Hussein was trying to overcome the financial hardships resulting from eight years of war with Iran. He applied pressure on the Organization of Petroleum Exporting Countries (OPEC) to raise oil prices and lower production. He also claimed that Kuwait had been drilling wells on Iraqi land and demanded compensation. After months of no acceptable response, President Hussein positioned his forces along the Kuwait border. On August 2,

1990, Iraqi forces invaded Kuwait and by the end of the first day controlled the country.

A phased deployment from the United States began within the next few days that captured the attention of the nation and the world. President Bush and the National Security Council were briefed on the situation the night before the Iraqi attack. On the third of August, General H. Norman Schwarzkopf, Commander of U.S. Central Command provided President Bush with the deployment and military options available. On the fifth of August, Saudi Arabia made a formal request for United States support. The basic operation plan would contain two phases. Phase one would provide a force to deter aggression and defend the Kingdom of Saudi Arabia, and phase two would develop and sustain offensive capability. President Bush issued the Executive Order on the seventh of August followed by departure of Army, Navy, Air Force and Marine units on the eighth. There would be a continuous deployment and mobilization effort for the next six months.

MEDICAL MOBILIZATION

The Army Medical Department also mobilized to support a two-phased operation. The first phase, deployed in early August, was composed of active duty medical elements in support of the XVIII Corps. The second phase, to support the VII Corps and echelons above corps, began in November

and was composed of active duty units from Europe and Reserve and National Guard units from the United States. The total Army medical package contained 198 medical units ranging from surgical teams, logistic support units, air and ground evacuation units to a variety of different sized hospitals with the largest a 1,000 bed field hospital. The total force mix for the deployed Army medical forces was 45 percent from the active component and the remaining 55 percent from the Army Reserve and National Guard.

The mobilization process found the Army Medical Department in a transition period. They were in the middle of a five year force modernization process replacing old equipment and hospitals with new Deployable Medical Systems (DEPMEDS). The hospitals that deployed without DEPMEDS did not function well in the desert environment and were modernized in theater. Those that were preparing to deploy were trained in the United States and picked up their new DEPMEDS equipment in the theater. The modernization of equipment created some problems with lack of training and familiarity with equipment.

The Medical Department was also in the process of automating their supply management to the Theater Army Medical Management Information System (TAMMIS) Medical Supply Module (MEDSUP). TAMMIS was used for the first time in 1989 during the operation in Panama. It was still short some communications assets and was not in a full fielding

mode when Operation Desert Shield/Storm started. To compound the logistic support problem, U.S. CENTCOM designated the Army component as the single integrated manager for logistics. Navy and Air Force medical units were not equipped with TAMMIS and were not familiar with the procedures.

The Army Medical Department was also in the initial stages of converting their field forces to a new structure. Medical Force 2000 was a force restructuring process to better align and equip the units in support of the Army's Air Land Battle doctrine. Throughout the operation there were provisionally configured units mixed with units that had not undergone restructuring.

The greatest challenge facing the Army Medical Department was a change in policy directed by the Army Chief of Staff. In previous mobilization efforts, health care providers were pulled from fixed treatment facilities in the United States and sent with the deploying hospitals. This left the hospitals providing care to the beneficiaries in the United States short of staff. In the initial phase of the mobilization, the Chief of Staff directed that there would be no reduction in the level of care provided at Army health care facilities. This required the call-up of additional reserve forces to supplement hospitals in the United States and Europe.

The Medical Departments met the challenge of Operation

Desert Shield/Storm with a force that was the largest since World War II. They placed 63 major hospitals and 41,000 medical personnel in theater within six months. At the start of the ground war, the Army Medical Department had three times the number of beds and two times the number of medical evacuation helicopters than at the peak of the Vietnam War. During the operation there were 18,441 admissions, 10,667 returned to duty, 7,749 evacuations and 194,214 clinic visits. Fortunately, combat casualties were exceptionally light and the total system was not challenged.

The Army Medical Department utilized some improved patient diagnostic and treatment capabilities for the first time in a combat environment. Computer tomography, filmless medical imaging system and teleradiology, liquid oxygen generating system and satellite medical communications enhanced the treatment provided soldiers in a combat zone.

MEDICAL MOBILIZATION CONCERNS

The Army Medical Department accomplished the mission of medical support for the combat forces of Operation Desert Shield/Storm; however, there were mobilization concerns that must be addressed. The major areas of concern are: the personnel system for the Army active component, Army Reserve and the National Guard; mission-related training for all health care providers; communications and evacuation

equipment; and joint medical operations.

Personnel System

During the six month build-up for Operation Desert Shield/Storm the Army Medical Department deployed 23,493 medical personnel to the theater. Of those deployed, 46 percent were from the active component and 54 percent were reserve component. An additional 3,469 medical personnel were deployed to Europe to augment their hospital system. The policy implemented to maintain pre-deployment levels of care at stateside hospitals required the mobilization of additional reserve personnel to fill vacancies created by deploying active component providers. The personnel filler system utilized to fill all of these requirements was plagued with problems.²⁵

Each unit within the Army is required to submit a unit status report. This report is forwarded to their major command for validation and then to the Department of Army and the Joint Chiefs. For stateside tactical medical units, the unit status report is forwarded from the unit to U.S. Forces Command (FORSCOM) for validation. Regulations governing the reporting process allowed substitution of a provider within a critical shortage skill with one of a

²⁵Davis, Richard. United States General Accounting Office. Testimony before the Subcommittee on Military Personnel and Compensation, Committee on Armed Services, House of Representatives. February 5, 1992. p. 3.

similar specialty. Unit commanders are required to submit the unit status report indicating any personnel or equipment shortage and any training deficiency that would affect mission capability. FORSCOM utilized the readiness status from the unit status reports to decide which units to activate. Many medical units activated had been filled with personnel possessing different specialties than those required and a less than accurate training status.

Specific provisions of the limited call-up legislation outlined in 10 U.S.C. 673b. created problems for medical personnel mobilization. Under this legislation only units of the selected reserve or individual members of the selected reserve could be called to active duty. This prevented the Army from calling up individual members of reserve units or members of the individual ready reserve (IRR). Selected medical specialties were needed to fill unit vacancies. The Army was faced with activating an 800 person unit to get 15 surgeons they needed. To overcome this problem the Army Surgeon General had to build derivative units for call-up and assign only critical personnel to those units.

Changes to the unit status reporting regulation were submitted prior to the start of Desert Storm and should be published in the near future. These changes should improve readiness reporting, provided however, that unit commanders must report an honest and accurate status report. A

proposal to review legislative changes to the limited call-up has been forwarded to Congress and the Department of Defense.²⁶

Mission-Related Training

The Army Medical Department had two critical training issues surface during the mobilization process: lack of basic training for physicians, and minimal training in wartime missions. Over the past decade the Army Medical Department has been below its authorized strength of physicians in the active component and the reserves. Unlike other officers in the Army, all physicians were not required to attend a legislatively required 12-week course for officers on basic soldiering skills. Many active component physicians were sent directly to a medical training program or to a medical treatment facility. Physicians in the reserve component could not afford to take 12 weeks away from their civilian practice. Many of these physicians, critical for medical support in Operation Desert Storm, were by law, non-deployable. The Army Medical Department was faced with providing a condensed 2-week course to 1,600 medical officers to meet the deployment requirement.

Health care providers in the active and reserve

²⁶United States. United States General Accounting Office. Operation Desert Storm. Army Had Difficulty providing Adequate Active and Reserve Support Forces. Washington: GPO, March 1992. p. 5.

component were deficient in training of their wartime mission. Constructive field training was lacking prior to deployment. Physicians and nurses were unfamiliar with field hospital supplies and equipment and had a poor understanding of the unit mission. Physicians in forward areas were, by doctrine, to stabilize patients and move them to the rear for more definitive care. A lack of understanding of this mission stimulated the ordering of supplies and equipment that were not required for that level of care. Many of the supplies found in the field environment were equivalent to, but not the same as, those which physicians used in stateside fixed civilian and military hospitals. The lack of any supply discipline resulted in an increase of the normal deployment day medical supply stock list of 2,500 items to orders for over 16,000 medical supply items.²⁷

Communications and Evacuation Equipment

The Army Medical Department is not capable of providing patient regulating and evacuation with the current equipment. The helicopter fleet is a mixture of UH-60 Blackhawks and UH-1V Hueys. The UH-1 fleet was produced in the 1960s for use in Vietnam. The airframe is old, underpowered and lacks the communication and navigation

²⁷Gober, Lowman, Talk given to Industrial College of the Armed Forces Medical DIS. 7 April, 1992.

equipment required for operation on today's battlefield. The radios used by aircraft and hospitals had a limited range of 15-20 miles. Evacuation missions in Operation Desert Storm were often in excess of 100 miles. Communications limited the ability of the flight crews to obtain critical airspace control information and precluded inflight patient regulating.

Joint Medical Operations

The Army Medical Department is designed to provide command and control of medical units in support of Army forces from corps level down to the front lines. The medical forces are under the command of the service component commander. There is little in the design or doctrine of Army medical units to promote joint medical operations within the theater of operations. Because of transportation constraints, Army hospitals are usually late in the deployment schedule. Air Force and Navy medical units have the advantage of organic transportation and are usually operational early in the schedule. Coordination to insure inter-service utilization of hospitals and evacuation assets should be included in the planning process. Medical doctrine and operations for each service are distinct; however, the treatment of casualties, types of medical supplies and regulation of patients have joint applicability.

There was limited planning for joint medical support prior to Desert Shield/Storm. The Assistant Secretary of Defense for Health Affairs with the Surgeons General of each service provided a joint effort during the mobilization process. Once units arrived in country they were in support of their service with limited direction from the Central Command Surgeon.

With all services going through a process of downsizing, it is critical that the medical departments work in concert to provide a joint medical support plan for future mobilization efforts.

IV. SUMMARY

An analysis of the history of mobilization would clearly demonstrate that we don't learn from our mistakes. Following each war, we pass legislation and form organizations to preclude mobilization mistakes of the past. National will or support for mobilization is based on a perceived threat. If our interests are threatened or American troops are engaged in combat, there is general support for the mobilization process. Once the threat is gone, funding and support for the military is reduced to a peacetime level. We soon forget the seriousness of mobilization and turn our attention to other societal concerns. With little forethought, we proceed into the next war ill-prepared. We have been fortunate that all of our

wars have been fought on foreign soil with adequate time to stimulate industry and raise an armed force.

Operation Desert Shield/Storm was a successful limited mobilization process. The Department of Defense had an adequate war stockpile as a result of Cold War funding and Allied forces were given seven months to prepare for the ground offensive. Ground offensive operations were completed in four days with minimal battle casualties. Mobilization planners should be cautioned against using Operation Desert Shield/Storm as a template for future planning. Total mobilization was never called and the defense industry was not fully challenged.

The fall of communist governments within the past two years has signaled an end of the Cold War. With our adversary of many years gone, the military is struggling to define the threat facing our nation. Following a pattern established after previous wars, Congressional leaders are calling for massive demobilization of the forces. The "Peace Dividend" is portrayed as the solution to bolster the economy of the nation. The deployment of United States forces to Saudi Arabia in Operation Desert Shield/Desert Storm delayed the downsizing of the military. The televised reports of high technology weapons systems brought attention to the critical defense industrial base.

The reduction of the communist threat should allow the military and defense industry to downsize. The critical

mission that we face as a nation is to maintain a viable force and protect our defense industry base if we are to maintain our place of leadership in the Free World and preserve our national security.

Medical department leaders are under continuous pressure from Congress to decrease the cost of military peacetime health care. There is a critical need to provide quality health care for all deserving beneficiaries; however, we must not forget that our primary mission is to provide care for the soldier on the battlefield. We must make the investment in training and dollars to insure that the problems encountered in Operation Desert Shield/Storm are not repeated.

We are facing a new domestic and international environment. The threat to our national security has been reduced and domestic social issues require attention. Downsizing the armed forces to balance our economic resources among the pillars of our national infrastructure places an additional burden on the mobilization process. Our leaders, and those organizations charged with monitoring our mobilization preparedness, must insure that we can respond to the demands of being a leader in the New World Order.