Medical Support to Special Operations Forces: Desert Shield/Storm

Maj Thomas F. Lewis III, MS, USAR*

When US troops were deployed to Southwest Asia, Special Operations Forces were among the first to go. By the end of September 1990, there were approximately 4,000 Special Operations Forces troops in Saudi Arabia. The author describes the challenges, successes and lessons learned through providing medical support to Special Operations Forces.

NOTE: Some operational details, locations, and capabilities have been omitted or changed due to their sensitivity or security classification.

INTRODUCTION

When the decision to deploy United States armed forces to Saudi Arabia (SA) was made, some of the first units to deploy as part of Operation Desert Shield were Special Operations Forces (SOF). Advanced party elements from Special Operations Command Central (SOCCENT) travelled to Bahrain by commercial air as early as Aug 7, 1990, and SOCCENT elements accompanied the US Central Command (CENTCOM) advanced party aboard one of the first of many C-141s to land in Riyadh, SA. Within two weeks, two MH-53 (PAVE LOW) helicopters and support personnel from the Air Force Special Operations Command (AFSOC) and two 16-man SEAL platoons from the Naval Special Warfare Command deployed to the Dhahran area.

By the end of September, SOCCENT had approximately 4,000 SOF troops operating in SA. By the end of February 1991, the height of Desert Storm, SOCCENT had over 8,000 troops from half-a-dozen countries assigned. SOF operated—by land, sea and air—in friendly and enemy territory up to 500 miles from any conventional support bases in theater. Providing medical support to SOF in the CENTCOM area of responsibility (AOR) was a tremendous challenge requiring flexibility, ingenuity and continual coordination between the SOCCENT components and the major theater commands. The medical planner should be an integral part of the planning cell to ensure adequate support. This is especially important in a hostile and underdeveloped theater where there is no established US military infrastructure. Even in Operation Just Cause in Panama, the support assets had to be transported to the AOR to provide adequate support.

*Intelligence Operations Specialist, US Special Operations Command, MacDill AFB, FL 33608.

Organizations and Missions

SOCCENT is a subunified (joint) command, responsible for the command and control of US SOF assigned to the CENTCOM AOR. Commander, SOCCENT reports directly to the Commander-in-Chief, CENTCOM (CINCCENT). The Desert Shield mission of SOCCENT and apportioned SOF was to deploy to the AOR and, in concert with other US forces, host nation forces, friendly regional forces and other Allies, conduct special operations (SO) to defend against an Iraqi attack into SA and prepare to conduct other operations as directed. Those SO missions are depicted in Table I.

Abbreviations Used

AELT	Aeromedical Evacuation Liaison Team
AFSOC	Air Force Special Operations Command
AOR	Area of responsibility
APC	Armored Personnel Carrier
ARCENT	US Army, Central
ARSOTF	Army Special Operations Task Force
ATLS	Advanced trauma life support
BMP	Soviet armored fighting vehicle
CAV	Cavalry
CCT	Combat Control Team
CENTCOM	US Central Command
CINCCENT	Commander-in-Chief, Central Command
CSAR	Combat Search and Rescue
DA	Direct Action
ESO	Environmental science officer
FAV	Fast attack vehicle
FOB/FOL	Forward operating base/location
IR	Infrared
JCSE	Joint Communications Support Element
KCIA	Kuwait City International Airport
KKMC	King Khalid Military City
MASF	Mobile Aeromedical Staging Facility
MEDEVAC	Medical evacuation
MSB	Main Support Base
MT	Medical technician
NSWTG	Naval Special Warfare Task Group
NVG	Night vision goggles
OPCON	Operational control
PA	Physician Assistant
PJ	Pararescue medic
SA	Saudi Arabia
SBU	Special boat unit
SDV	SEAL Delivery Vehicle
SF	Special Forces
SO	Special Operations
SOCCENT	Special Operations Central Command
SOF	Special Operations Forces
SOSB	Special Operations Support Battalion
SOW	Special Operations Wing
SR	Special Reconnaissance
TAC	Tactical Air Command
TACON	Tactical control

Table I. Special Operations Missions.

- **Foreign Internal Defense (FID):** Training Saudi, Kuwaiti and other friendly forces in tactics, weapons, close air support, (CAS), NBC defense, etc.
- **CAS and Fire Support Training.**
- **Coalition Warfare.**
- **Combat Search and Rescue (CSAR).**
- **Special Reconnaissance (SR):** Mobile patrols and stationary outposts, usually behind enemy lines, but in this case includes border surveillance.
- **Reconstitution of the Kuwaiti Army and SOF.**
- **Non-Combatant Evacuation Operations (NEO).**
- **Direct Action (DA):** Raids, ambushes, strategic deception, demolition emplacement.
- **Visit, Board, Search and Seizure (VBSS):** Ship boarding operations supporting the embargo of Iraq.
- **Psychological Operations (PSYOPS).**

Of these missions, the two most critical were coalition warfare and Combat Search and Rescue (CSAR). Coalition warfare entailed the integration of US SOF and other forces into the infrastructure of the Pan Arab and other non-NATO ground forces to provide CINCCENT the ability to locate, direct, coordinate and communicate with these forces. General Schwarzkopf called this operation "... the glue that held the multinational coalition together." Additionally, SOCCENT had the only forces in the AOR capable of conducting CSAR, the recovery of downed aircrews

from enemy territory. This was a major concern in the early days of Desert Shield as initial US firepower immediately available to defend SA was USAF and USN aircraft and US losses were predicted to be high: No historical basis existed on which to base medical planning. Depending on when the air campaign was scheduled to commence, predictions for Allied aircraft losses ranged from 100 to 300 aircraft and 100 to 600 casualties in the first ten days.

SOF under the operational control (OPCON) and tactical control (TACON) of SOCCENT were based throughout the AOR in several countries, with HQS, SOCCENT located at a main support base (MSB) in eastern SA. A line diagram of the command and control structure, with approximate numbers of assigned personnel is shown in Figure 1. In addition, SOCCENT had OPCON and/or TACON of a Kuwaiti special forces (SF) battalion, Kuwaiti naval assets, various SF units, other countries, and elements from each of the following units: Joint Communications Support Element (JCSE); 112th Signal BN; 3/17th Air Cavalry Squadron (Atk Helo) and a US Navy helicopter detachment (Fig 1).

An Army Special Operations Task Force (ARSOTF) was formed with the 5th Special Forces Group (Airborne) (5 SFGA) as the main element for command and control. The Commander of 5 SFGA had OPCON of 3rd BN/160th Special Operations Aviation Regiment (3/160 SOAR)—specially equipped UH60 and MH47 helicopters with SOF crews—and the 528th Special Operations Support Battalion (528 SOSB)—a small battalion supporting in-theater SOF with conventional and unconventional services and supply, excluding Class 8 (medical). ARSOTF elements operated from their MSB, King Khalid Military City (KKMC), and numerous forward operating bases/locations (FOBs/FOLs) in SA. Organic medical resources ranged from SF medics at detachment (12 man "A" Team) and company level ("B" team) to physicians and physician assistants (PA) at the battalion ("C" team) and group level. Each battalion ran an "in-garrison" clinic for routine and emergency medicine for US and foreign troops. 5 SFGA established mobile battalion, brigade and division aid stations, aligned with the supported force structure of the Allied unit, to care for 5 SFGA personnel in coalition warfare. SOF medical personnel are detailed in Figure 2.

AFSOC was composed of elements of the 1st Special Operations Wing (1 SOW) including four fixed wing squadrons (C-130s, EC-130s, AC-130s, and HC-130s), three helicopter squadrons (MH-53s, MH-60s, HH-3s), a spe-

Maj Thomas F. Lewis III, MS, *is an Individual Mobilization Augmentee (IMA) assigned as a medical operations officer with US Army Special Operations Command (USASOC), Ft. Bragg, NC. A Special Forces-qualified officer with 12 years experience in Special Operations, he was recalled to active duty by USASOC in September 1990, and deployed to Saudi Arabia. He served as the SOCCENT Command Surgeon for Desert Shield/Storm, and was attached to 3rd SFGA and 1st SOW for operations in Kuwait City. Major Lewis was released from active duty in May 1991 and returned to his civilian position as an Intelligence Operations Specialist with US Special Operations Command, MacDill AFB, FL.*

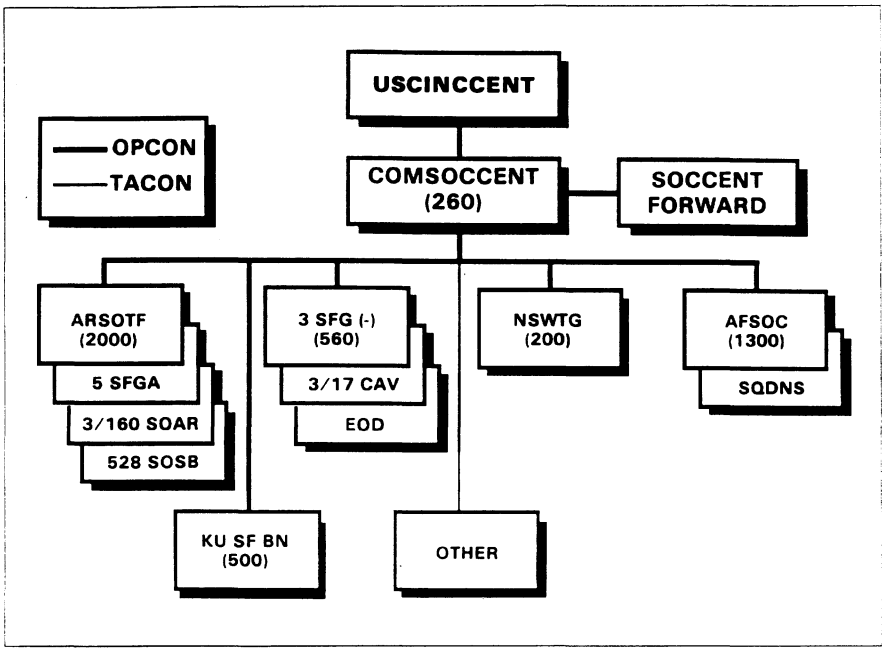

Figure 1. SOCCENT command and control.

	MD	PA	ESO	MEDIC	VET	DC	LOG
5 SFGA	5	3	1+3 ENL	4*	1	1	1+2 ENL
3/160 SOAR	1	0	0	6	0	0	0
528 SOSB	1	1	0	12	0	0	0
3 SFGA (1BN)	3	1	1	3*	1	1	1+1 ENL
3/17 CAV	0	0	0	0	0	0	0
AFSOC/1 SOW	3	1	0	4	0	0	0
NSWTG	1	0	0	5*	0	0	0

***Group/Battalion Level only**

Figure 2. Organic SOF medical assets during Desert Shield/Storm.

cial tactics squadron of Combat Control Team (CCT) personnel and pararescue medics (PJs) and support personnel. AFSOC was located initially at the MSB, but deployed elements to several FOLs in SA. Physicians and medical technicians (MTs) from one SOW ran a flight clinic at the MSB for the SOW and two Tactical Air Command (TAC) wings in addition to supporting SO missions.

A Naval Special Warfare Task Group (NSWTG), composed of elements of three SEAL teams, a special boat unit (SBU) and a SEAL Delivery Vehicle (SDV) platoon, operated from three FOBs and numerous vessels afloat along the east coast of SA. NSWTG was the smallest but busiest SOF element in the AOR. During Desert Storm they conducted over 50 DA and SR missions, and actively supported CSAR.

Add to this the arrival of the newly formed 3rd SFGA, 3/17 Cavalry and various miscellaneous units in January 1991, and the planning for medical support to SOF became very complicated. To support the personnel, intelligence, operations, training, and logistical requirements for this multifaceted organization, one medical plans officer (and de facto Command Surgeon) operated from the MSB as part of the SOCJ4 (Directorate of Logistics). This one-man surgeon's office was a major shortfall given the extent of SOF operational support needed in theater. Not until D-DAY (Desert Storm) was this position augmented with the arrival of a second major to assist in planning and coordination. A tremendous amount of time was spent coordinating medical support with the other US command surgeons, SOF components and the British and French medical commands. Table II outlines the major concerns for SOF medical operations.

Because SOF organic medical assets are very limited, coordination with and knowledge of US and Allied medical commands, facilities and medevac assets were crucial in order to tie into them. SOF have no surgical capability, no patient holding capability, no physician specialties, extremely limited medevac assets and very little technical diagnostic capability.

The biggest concern of the commanders, planners and operators was the medical evacuation of SOF sick and wounded. However, they had to be educated in two hard facts of operating in the AOR: unlike operations in Vietnam and Panama, wounded and injured troops could not be recovered, transported and treated at a hospital within the "golden hour;" and, evacuation of wounded personnel operating in enemy territory was (and is) a tactical, operational mission, not a medevac mission. On some cross-border missions, a minimum of three hours could be expected until the arrival of an evacuation vehicle, and that depended on whether the tactical situation would allow evacuation. In order to understand the scope and complexity of medical support to SOF, the two major Desert Shield/Storm missions will be examined: cross-border operations and coalition warfare.

Table II. Major concerns for Special Operations Forces medical operations.

- **Preventive medicine**
  - Immunizations (ISG, MSG, flu, etc)
- **Nuclear, Biological and Chemical**
  - Medical training
  - Equipment load and exchange
  - P-tabs
  - Anthrax
  - Botulism
- **Logistics**
  - Spot shortages
  - Cross service training
  - Bulk issue of special items
  - Non-TO&E items
- **Medevac**
  - Long distances
  - Limited assets
  - Evac policy/patient flow
  - No "neighbors"
  - Cross-border missions
  - CSAR
  - Coalition warfare (US vs. Arab)
- **Personnel Shortages**
  - SOCCENT headquarters
  - Special Operations Medical Sergeant (18D)
  - Preventive medicine
  - Logistics
  - Flight surgeons
- **Surgical Capabilities**
  - None in Special Operations Forces
  - Lacking for Arabs
  - Long distances

Cross-Border Operations

SOCCENT conducted six CSAR exercises/rehearsals and numerous rehearsals for other SO missions prior to Desert Storm. The scenarios and scope of these rehearsals expanded and increased as D-Day approached. These exercises tested every aspect of a mission: infiltration, exfiltration, fire support, communications, multinational and multiservice coordination, logistics and medical support. During a typical scenario, up to 12 aircrew members were placed in the desert or in the Gulf and began signalling as if they had parachuted from disabled aircraft. Each "distressed airman" was briefed on the extent of his injuries and how to play-act them. The SOCCENT Command Center was activated and continually coordinated with other CENTCOM component staffs. The process began with verifying who was signalling (extremely important, since during Desert Storm the Iraqis attempted to lure CSAR forces into ambushes), where they were and the feasibility of extraction. Aircraft and/or mounted SOF were launched to locate and pickup the crewmen.

Almost the entire SOCCENT rotary and fixed wing fleet (1 SOW and 3/160 SOAR aircraft) and a large percentage of SOF medical personnel (physicians, SF medics, AFSOC PJs and MTs, SEAL corpsmen) were committed to cross-border operations (CSAR, DA and SR). SOF aircraft recovering operational teams and downed aircrews from enemy territory carried medical personnel aboard to provide enroute treatment. Injured personnel were turned over to other SOF medical personnel at the FOLs to be held up to 24 hours. Figure 3 shows how medical assets were incorporated into CSAR operations. This arrangement also served to support other SO missions. Aircraft and vessels recovering to ships, Jubayl, FOL 4 and the MSB could transport patients directly to a US or British medical facility (levels II and III). However, most of these missions were

planned for or conducted north of KKMC and deep into Iraq. Evacuation direct to facilities at KKMC depended on the severity of injuries, fuel range of the recovery aircraft, and whether the patient could survive without immediate surgery.

Figure 4 shows the approximate location of medical facilities in the AOR as of D-Day, but in most cases, the level II and III facilities north and west of KKMC were not fully operational until D plus 30 (mid-February). To supplement SOF medical assets in the western region, a scaled-down USAF Mobile Aeromedical Staging Facility (MASF) was attached to SOCCENT. Along with SOF medical personnel, they not only provided a holding capability for routine and emergency patients, but staffed a flight clinic to support airfield operations.

The requirements for a MASF and/or a surgical team at FOL 1 was crit-

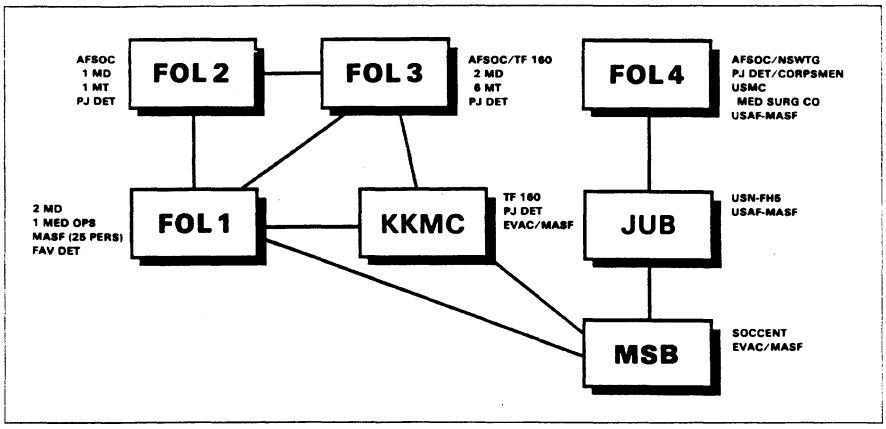

Figure 3. CSAR medical assets and operations.

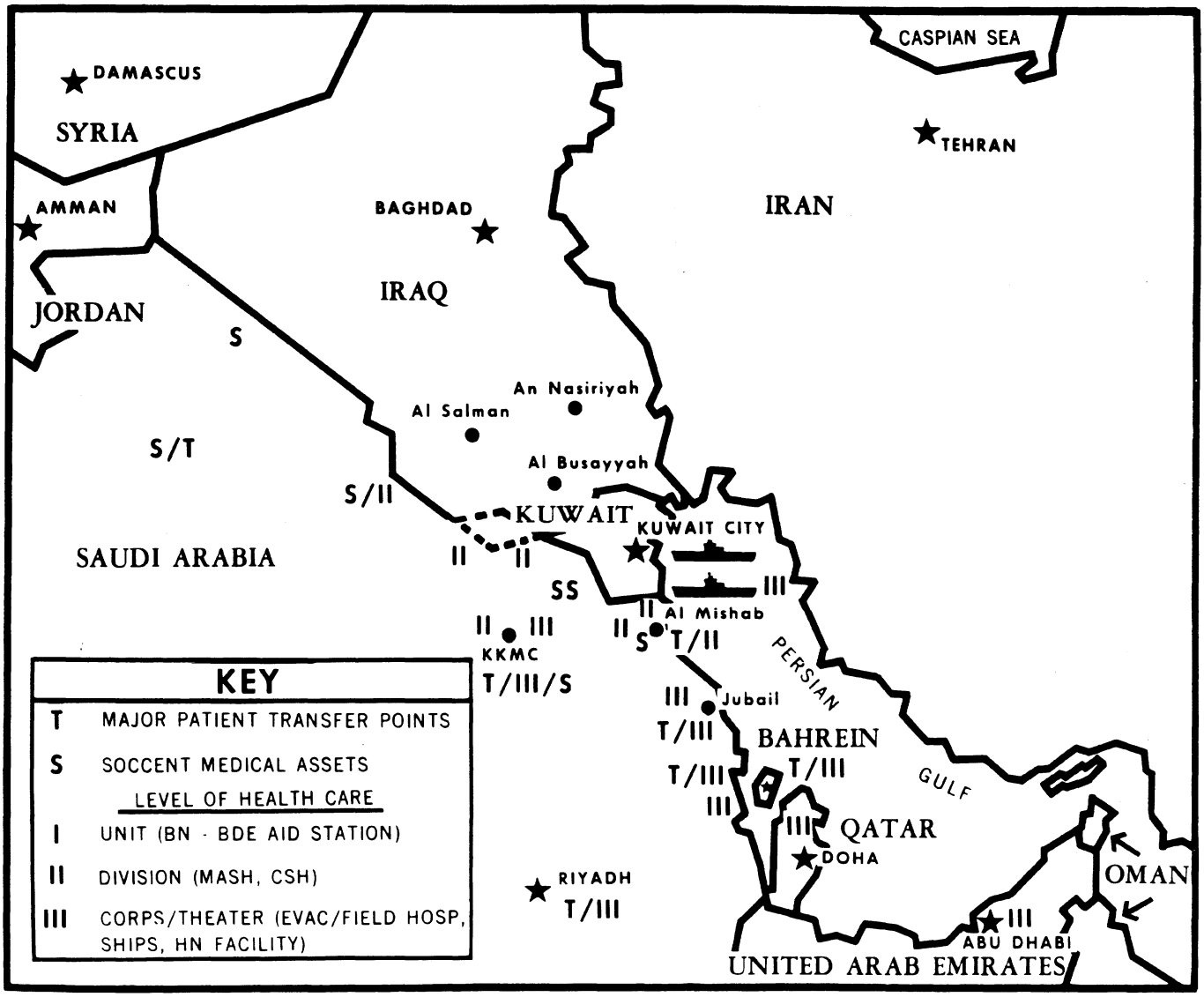

Figure 4. Theater health care available as of D-Day.

ical during the early days of Desert Shield when defensive air strikes and SR/DA missions would have been necessary to slow an Iraqi advance into SA. Personnel and equipment had to be able to re-locate immediately in case of attack. Up until mid-February, FOL 1 was the only available medical treatment, holding and evacuation facility available to US forces in the western areas. It maintained its importance throughout Desert Storm as this base grew and supported conventional tactical air missions as well as SOF missions. FOLs 2 and 3 had to be smaller and more mobile due to their proximity to the border. Initially, they were fully manned and operated only at night, with personnel and equipment returning to FOL 1 or KKMC each morning. Not counting transients, FOLs 2 and 3 supported about 50 troops each and FOL 1, at its peak, had a population of more than 2,000. Casualties were recovered and transported to FOL 1 and held until USAF medevac C-130s could arrive and move the patients. When necessary, the MASF provided flight crews to accompany patients and provide treatment enroute.

Initially, only AFSOC/1 SOW was tasked and planned to conduct CSAR. After review of the plan, the 1 SOW Surgeon realized his medical assets were totally inadequate to support the operation. When SOCCENT was fully operational and made responsible for CSAR, the plan was expanded to include NSWTG and ARSOTF. The SOCCENT Surgeon reviewed the plan, added the additional cross-border mission support requirements, and in conjunction with the components, coordinated and developed a concept involving joint SOF and other assets. The importance of medical operations to support CSAR was briefed and emphasized to the SOCJ3 (Operations) and J5 (Plans). Where previously it was assumed that "bandaids and aspirin" were a given, the medical planning input for CSAR, and subsequently all other missions, gained great prominence in the "War Room."

Realism was stressed during the exercises. In some cases, the aircrew provided by US and Allied naval and air force units remained in the water or desert for up to ten hours. SOF elements operated from simulated FOLs, in some cases from locations in the middle of the desert. SOF in the field conducted operations in total darkness, using night vision goggles (NVG) and infrared (IR) markers only. Upon arriving at the scene of the wounded aircrew, medical and security forces had to locate them (no easy feat given the desert expanse, no visible light and hiding sites of the crewman), identify them as friendly and initiate necessary medical care. Medical personnel conducted primary and secondary examinations, started IV therapy, attached cervical spine collars, splints, and bandages—all by feel and using NVG with IR lighting. To this were added the difficulties of performing procedures aboard a helicopter flying just 50 feet above the ground, aboard a small boat in high seas or on the side of a dune buggy-like fast attack vehicle (FAV).

The evacuees were transferred to physicians and others at the FOL for continued care under the same conditions (Fig 3). At the FOL, more equipment and supplies (eg, heart monitors, emergency surgical instruments, antibiotics, etc) were available to continue advanced trauma life support (ATLS) techniques. Helicopters equipped with emergency surgery equipment would then continue the evacuation to a point where they could be handed off to a MASF or field hospital for care and evacuation. At every opportunity, SOCCENT involved conventional medical assets to rehearse coordination with US and Allied aircraft and medical facilities. This provided realism and training for all participants, as well as rehearsing the movement of casualties through the entire system. Modifications were made to operating procedures based on after action reviews and as the position of theater forces changed in the conduct of combat operations.

Coalition Warfare

The major responsibility assigned to 5 SFGA was coalition warfare. This was a new mission for SOF. SF troops would be riding in Saudi tanks, Kuwaiti APCs, Egyptian jeeps and Syrian BMPs acting in a conventional role. The typical 12-man "A" teams were split three and four ways to cover coalition battalions. SF company personnel were assigned to brigade level and the SF battalion personnel were assigned to divisions. The 2nd and 3rd Battalions launched from northeast of KKMC into Kuwait. The 1st Battalion accompanied Saudi and Kuwaiti forces up the east coast into Kuwait City. Providing medical and other support was extremely complicated.

Again, US SOF were not located within US military boundaries, posing difficulties for treatment, transportation and holding of patients. (Figure 5 shows approximate pre-war locations.) The medical support of the Pan Arab forces ranged from fair to poor, with little thought given to patient evacuation. (In some cases, Saudi and Kuwaiti brigade surgeons were dental and medical students. An Egyptian neurosurgeon arrived carrying his entire basic load of supplies and equipment in a cardboard box.) Because of the inadequacy of Arab medical capabilities, it was decided to provide 5 SFGA medical support with a combination of organic SOF assets and attached conventional assets. This would have to be a system closed to US troops only—a very delicate situation given the proximity of the Americans to their coalition counterparts. SOCCENT made it clear that, with exceptions, the limited US SOF medical assets necessitated a policy to treat US casualties only.

US Army Central (ARCENT) and 18th Airborne Corps provided two German ground ambulances and three UH-60 medevac helicopters, two with external fuel tanks. These assets supported 2nd and 3rd Battalions in the offensive. (Initially, one UH-60 rotated duty at KKMC to support training and other operations in that area.

Five SFGA and NSWTG conducted border surveillance well forward of the conventional divisions throughout Desert Shield, with minimal support.) As the coalition units moved into attack assembly areas, battalion aid stations were prepared along the lines of conventional division health service support, the major difference being that a SF battalion aid station was manned by no more than four to five people with only limited ATLS capability. All available medical personnel in the group were utilized—the environmental science officer (ESO), veterinarian, dentist, the group judge advocate (a former PA) and an emergency medical technician-trained chaplain.

To support the 1st Battalion on the east coast, AFSOC assisted by providing five PJs and two HH-3 rescue helicopters. The HH-3s and other assets were supporting CSAR from FOL 4 and were in a position to assist. The PJs rotated between ground aid stations with the battalion and duty as flight medics aboard the helicopters. Additionally, a humvee was converted into a front line ambulance. This last minute assist by AFSOC saved the day for the battalion surgeon who was without the "amenities" of his colleagues in the other battalions.

SF wounded were recovered and treated by the nearest "A" team medic and sent to the company team medic for treatment, holding and preparation for evacuation via 528 SOSB logistics vehicles, any available ambulance or if tactically feasible, helicopter. The wounded were moved to the SF battalion aid station. (The Group Surgeon and senior medic were held in reserve to support other operations.) When stable, the patient was then moved to the nearest French, British or US field hospital as necessary. Because the French and British army hospitals and a USMC collecting and clearing company were the closest surgical assets available, coordination with them was continuous.

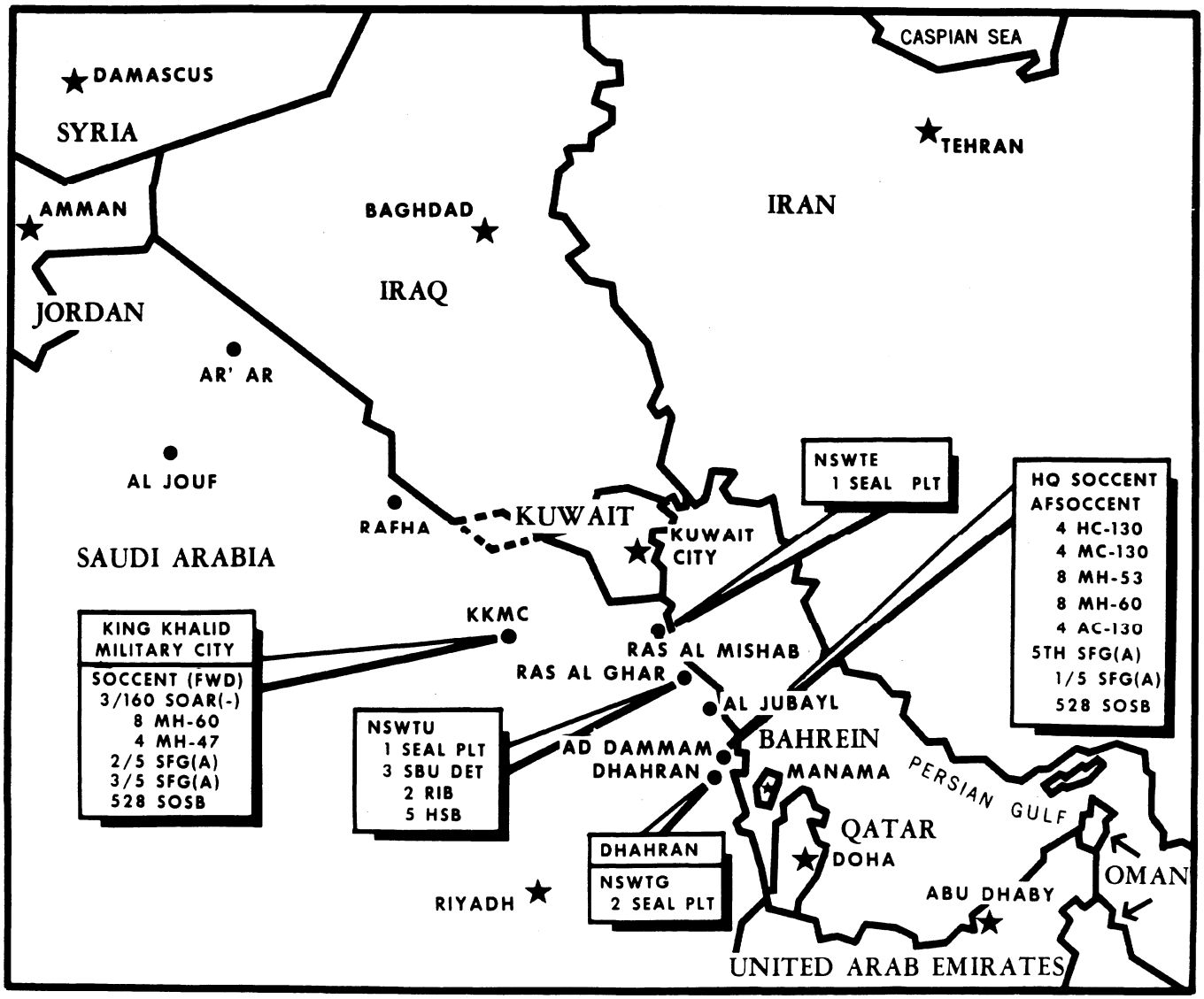

Figure 5. SOF disposition during the pre-hostilities stage.

Table III. Joint Medical Task Force.

- **Mission**
  Provide medical support to US, Kuwaiti, United Kingdom and French Special Operations Forces engaged in offensive operations in Kuwait City.
- **Surgical Team**
  4 Surgeons/1 Anesthesiologist*
- **Holding/Decontamination**
  Clearing Platoon (20 beds)*
  2 Officers/28 Enlisted*
- **ATLS/Triage**
  US Army: 4 DR, 1 PA, 2 medics, 3 other
  US Air Force: 2 DR, 2 MT, 5 PJs
  US Navy: 1 DR, 2 MT
- **Ground Evacuation**
  US Army: 3 medics
  US Air Force: 5 PJs
- **Air Evacuation**
  3 UH-60 helicopters with crews*
  1 MH-47 aircraft with crew
- **Standby**
  12 medics and PJs
- **On Call**
  1 SELT (3 persons)*
  1 MASF (25 persons)*
  Additional hospital personnel*

*Non-SOCCENT assets

Table IV. Lessons Learned.

- **Utilization of medical personnel:**
  - Veterinarians, dental, ESO, PJs, medics, chaplains, JAG
- **Logistics**
  - 30 day supply
  - Re-order early
  - Assist other services
- **Lack of transportation**
  - Coordination
  - Medevac
- **Medical operations coordination with Command's operations**
- **Special Forces Group medical assets**
  - Surgical
  - Holding
  - Evacuation
- **Medevac**
  - Coordination with theater assets (USAF, USN, USA, USMC)
  - Direct support requirements
- **Lack of SOCCENT medical staff**
  - Nine major locations
  - Dozens of minor locations
  - Attached units
- **Organic asset limitations**

Support to 3 SFGA and Urban Operations

While cross-border missions and coalition warfare already had support to SOCCENT forces stretched to the limit, 3 SFGA and 3/17 CAV arrived in theater in January and were assigned to SOCCENT. Teams from 3 SFGA participated in SR and DA missions and, along with 3/17 CAV, were given the mission to conduct special operations in Kuwait City to advise and assist coalition forces in clearing and securing the city and establishing Kuwaiti government control. Originally, the battle for Kuwait City was expected to last 2 to 3 weeks. AFSOC and 3/17 CAV gunships would provide pinpoint fire support to SOF and coalition forces in ground actions. SOCCENT and selected forces were to deploy to Kuwait City International Airport (KCIA) and conduct urban operations.

The scope of this mission was immense: SOCCENT would be directly controlling 8,000 or more troops operating all over the huge city. Refugees would be innumerable. Still unknown during the planning phase was whether to expect chemical and biological casualties. The closest US medical facilities, operated by the Marines, did not plan to relocate any surgical facilities into Kuwait until well after the start of urban operations. To support this mission, the concept of a Joint Medical Task Force was developed. Table III details the mission and composition of the task force. It incorporated assets from all of SOF, a clearing platoon from 18th Corps, a surgical team from CENTCOM, and a MASF and Aeromedical Evacuation Liaison Team (AELT) from the Air Force.

The task force was to flow into KCIA in seven helicopters and three C-130s over three days. As the situation allowed, CENTCOM would then send additional assets to operate a 250-bed hospital in support of operations in the area. The entire task force as listed in Table III was conceived, planned, organized, equipped and trained in eight days. SOCCENT, 3 SFGA, 3/17 CAV and elements of the medical task force began deployment to KCIA, and ultimately into the city on Feb 27, as the Marines overran KCIA. By March 1 it was evident that a major urban campaign would not be necessary, and the task force was scaled down and modified to support reduced security operations in the city.

Lessons Learned

Table IV outlines the SOCCENT medical operations lessons learned. The most important lesson is the need for the medical plans/operations officer to thoroughly coordinate with the commander and principal staff elements and understand the mission(s). The command must be educated to the fact that the planning and execution of medical support to special operations is as complicated, intensive and important as the planning and execution to conduct the actual operational mission. Medical planning must begin with and parallel the operational planning. In sum, the Special Operations Medical Planner must:

- know the command's mission;
- anticipate requirements;
- know the capabilities of the individual services;
- know the capabilities of the US Allies;
- be flexible and creative;
- and know where the experts are and use them. ●