



CURTIS E. LEMAY CENTER

FOR DOCTRINE DEVELOPMENT AND EDUCATION



ANNEX 4-02 MEDICAL OPERATIONS

AIR FORCE MEDICAL FORCES SUPPORT IN JOINT OPERATIONS

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Medical support in the joint environment is also a key component of expeditionary and operational planning. The following Air Force medical capabilities are provided to the joint force commander:

- ✦ En route casualty support and responsiveness corresponding to the activities during the opening, establishing, operating, drawing down, and closing of air bases during the deployment, operations, and redeployment phases of operations.²⁵ The capabilities of these medical forces allow precise insertion into forward areas with teams tailored to the specific medical mission, e.g., preventive or primary care medicine, trauma surgery, intensive care, humanitarian relief operations, en route critical care or [aeromedical evacuation](#) (AE). These capabilities are designed to support military forces when they are historically most vulnerable to illness and injury, and are most likely to lack access to medical care.
- ✦ Responsive medical capability to support military or civilian medical requirements including those during stability operations. The rapidly deployable and near-immediate operational capability of air expeditionary medicine often makes the Air Force the most capable of all military Services to support such operations. The use of expeditionary medical forces from the beginning to the end of operations ensures the [commander, Air Force forces](#) (COMAFFOR) makes these limited forces available based upon priority and reconstitutes these forces for their primary airpower mission once other Services' sustainment forces are able to deploy.

Air Mobility and Medical Forces

Air Force air mobility and medical forces provide Service assets, in conjunction with the other Services, to form the worldwide patient movement system. AE provides time-sensitive en route care of regulated casualties to and between medical treatment facilities using organic and/or contracted aircraft with medical aircrew trained explicitly for that mission. AE forces can operate as far forward as aircraft are able to conduct air operations, across the full range of military operations, and in all operating environments. Specialty medical teams may be assigned to work with the AE aircrew to support patients requiring more intensive en route care.

²⁵ Air Force Instruction 48-101, [Aerospace Medicine Enterprise](#).

The Air Force description supplements the joint definition presented in Joint Publication (JP) 3-17, [Air Mobility Operations](#), "AE is the movement of patients under medical supervision to and between medical treatment facilities by air transportation." This clarifies that to provide patient care in the aeromedical environment, Air Force AE crew members and specialty medical teams receive advanced training and education on the stresses of flight, altitude physiology, and medical equipment designed for AE. See Annex 3-17, [Air Mobility Operations](#), for a detailed discussion of AE.

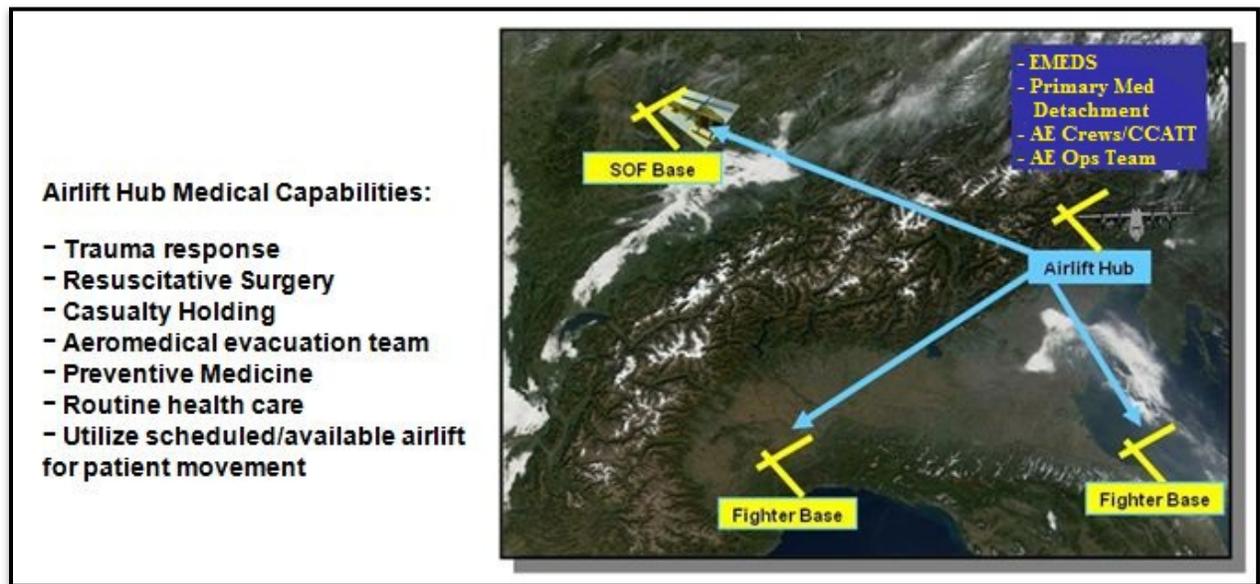
Within the [En Route Casualty Care System](#) (ERCCS), the Air Force AE system uses its capability to stabilize, prepare, and approve casualties or patients for regulated air transport to ensure they are transported to the right destinations. The ERCCS provides commanders the ability to evacuate severely wounded or critically ill personnel to [definitive health care](#) while providing increasing levels of critical health care along the way and in the least amount of time. Other Services support key elements of the ERCCS by providing the majority of forward surgical care and rotary wing medical evacuation. The Air Force AE System is the backbone of ERCCS, which is operated by air mobility and medical forces. In a permissive environment command and control over medical and mobility forces through the AE system resides in the COMAFFOR's A-staff and the [air operations center](#) (AOC) enables near-immediate evacuation, strategic reach, and operational capability upon arrival.

Hub and Spoke Operations

The Air Force theater medical support network is based upon a hub and spoke concept. Deployed Air Force medical facilities are located at "hubs" and provide expanded theater medical and surgical support to treat and return joint personnel to duty or to stabilize them for AE to more definitive care as needed. The 'spokes' are relatively small teams that provide life-saving medical care and continuous [force health protection](#) and prevention services to joint personnel. The figure titled, **Notional Hub and Spoke Operations Medical Capabilities** illustrates a notional hub and spoke operation. Air Force medical hub and spoke operations leverage the integration of inter- and intratheater airlift to optimize the use of low density, high demand medical forces and enable rapid response to emergent medical needs at forward operating bases (FOBs). The hub is the focal point for follow-on transshipment by intratheater assets to FOBs via spokes. Hub and spoke operations enable the COMAFFOR, at the recommendation of the Air Force forces Surgeon (AFFOR/SG), to "push" medical capability to spokes based on anticipated or actual medical threats to the operational mission such as biological agent indicators. Hub and spoke operations also allow commanders at spokes to "pull" medical capability when needed such as mobile forward surgical and casualty staging capability, patient movement item, blood, and biomedical equipment maintenance. For more detailed discussion on hub and spoke, see Annex 3-17 and JP 3-17.

The interdependence and synergy between medical forces and air mobility are demonstrated by hub and spoke operations where trauma, casualty staging, and AE forces from the hub are pulled to a Forward Operating Base (FOB) in response to a mass casualty scenario. Casualties are stabilized, staged, and evacuated back to the

hub for a higher level of care and possible strategic evacuation. Hub and spoke operations extend the ERCCS to at-risk FOBs that may not require full-time capability.



Notional Hub and Spoke Operations Medical Capabilities

Accommodating Changes in Employment Missions

Medical forces deployed in support of one unit may be tasked to support forces performing an unrelated mission. These missions are usually conducted by joint forces or component forces of another Service in the same operational area as the airfield. Accommodating changes to missions require planning and direction by the A-staff and the AOC in coordination with the unit commander, usually in support of short-notice, short-duration missions. Typically, these missions leverage the existing resuscitative surgical, critical care, and staging capability that offer immediate access to available AE organic and/or contracted aircraft. The tasked medical unit has a support relationship with the requesting commander while ensuring the unit commander retains tactical control of their organic medical capability. The unit commander makes an assessment of shortfalls in medical capability that should be augmented or presented to the supported commander as risks to be accepted. The supported commander may augment the medical unit with organic medical assets to enhance the overall capability and mitigate risk. In most cases, changes in employment mission tasking cannot be planned exclusively at the tactical level but require the AFFOR/SG and the A-staff to make AE plans in support of the mission. In-place medical forces tasked to support adjacent combat operations provide the supported commander the ability to rapidly plan and execute intense, short-duration combat missions supported by the immediate ability to stabilize, stage, and evacuate significant numbers of combat casualties and patients.