Bureau of Medicine & Surgery (BUMED)
The first page of this section provides a structure diagram of BUMED with some (but not all) of the division codes. The Surgeon General of the Navy acts as Chief, Bureau of Medicine and Surgery, Code 00. He also has a CNO advisory operational hat, OP-09. This is Medical Resources, Plans and Policy (931). 09 is also a catch all for such things as legislative affairs, regulations and directives, facilities, and HQ administration. The Naval Medical Information Management Command (NMIMC) is included in this list, and mentioned here because it represents a significant force in database management for medical information, and is the link between the Fleet and DOD for reporting, management and tracking of required medical reports.

BUMED was reorganized in 1989, placing all Medical and Dental Treatment Facilities (MTFs) (DTFs) under line commands known as Responsible Line Commanders or RLCs. BUMED is still responsible however, for primary and technical support of the MTFs. There are 6 Health Support Offices (HSOs) whose task is to provide primary and technical support to the MTFs worldwide, and maintain liaison with the appropriate RLC.

All operational medical and dental staff report to the Asst. Chief for Operational Medicine and Fleet Support (BUMED 0-2) administratively, but OPCON of operational medical and dental support remains a command (line) function. The Seabee medical and dental departments, both active and reserve, report through their respective unit commanders to Regiment, Brigade, and finally to CINCLANT or CINCPAC. BUMED 02 remains our advocate for medical and readiness issues from the field, which need to be brought to the attention of the Bureau of Medicine and Surgery.

Seabee Medical/Dental Department
The Seabee mission requires greater flexibility and mobility than most Navy units, and is most closely aligned with the Marine Corps, whose missions it most frequently supports. So too, the Seabee medical department is most closely aligned with Marine Corps medical support, and must be flexible enough to follow maneuver elements as combat forces move forward.

Manpower
One medical officer is at each of the brigades, but is assigned there as Additional Duty (ADDU) at the present time. Dental support at the brigade level is also an ADDU billet, from NAVFACENGCOM. There is one active duty corpsman billet and may be a reserve billet filled on brigade staff. Regiments are authorized a single corpsman billet.

Seabee battalions are authorized one medical and dental officer, two dental technicians and ten corpsmen at full wartime strength. Peacetime manning however, reduces the number of corpsmen to eight. There are billets for three Independent Duty Corpsmen (IDCs) in this total except for reserve battalions, since there is no civilian equivalent for IDCs, and they would be unable to maintain skill levels. The UCTs have billets for two IDCs and two Diving Medical Techs (DMTs). Recent manpower revisions have been implemented, replacing lab and x-ray technicians with Field Medical School trained (FMF) corpsmen. This change is in keeping with the Seabee
mission and matching of the medical supplies and equipment changes outlined in the following section.

**Seabee medical supplies and equipment**

As of this writing, the NCF medical Table of Allowance (TOA) is in transition. All ships, and deployable units of the Navy and Marine Corps have an Authorized Medical Allowance (AMAL) as part of their overall TOA. The Seabee medical TOA had grown far beyond mission requirements and included lab, x-ray and surgical capabilities. It was beyond our manpower and training ability to support as well. In 1997, an agreement was reached between the two brigades to streamline the medical TOA in order to reflect the lighter, faster, more mobile operations of the future; and to match the medical department's manpower and capabilities. Those changes have not been completely finalized nor implemented uniformly between the two brigades. The new AMAL part of our TOA will essentially match the AMAL of the Marine Corps, but will have different identification numbers, for purely administrative reasons.

<table>
<thead>
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<th>OLD Assembly</th>
<th>NEW Assembly</th>
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<tbody>
<tr>
<td>QTY</td>
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The changes, when fully implemented, represent a considerable cost savings as well as a marked reduction in weight and cubic footage, in keeping with the concept of lighter, faster and more mobile forces.

The 0302 and 0303 are to be considered *WAR RESERVE*, and not for use in routine sick call or other operations without approval of higher authority. The 0303 will have shelf life items, which need to be managed and rotated out as necessary to minimize losses, but cannot be removed without replacement. Each unit will be responsible to manage its own TOA unless other arrangements have been made. A portion of the TOA is positioned at the four forward sites, Rota, Spain and Roosevelt Roads, Puerto Rico, under the control of SECONDNCB. The sites at Guam and Okinawa under control of THIRDNCB. Re-supply of consumables during exercises...
and peacetime deployments is through the unit supply department. During wartime, that re-supply function transfers to the command which is being supported. For example, Seabee units would most likely be positioned with the MEF forward, and obtain their medical supplies and support from the Force Service Support Group (FSSG) of the Marine Corps.

**Vendor Managed Inventory (VMI)**
The above listed TOA is the AUTHORIZED battalion medical allowance, but not necessarily what you may have on hand. One of the problems confronting the military has always been that of dealing with the enormous logistical tail required for any operation. Vendor Managed Inventory is one way which has been developed to reduce the logistical burden. VMI is essentially a contract between manufacturers or suppliers and the military, in which the "vendor" maintains the required inventory in their warehouses for shipment on demand. In this way, shelf-life items may be refreshed as part of stock rotation in order to minimize waste. Part of our total TOA is held under VMI contract just as is a portion at homeport warehouses.

**In garrison medical support**
Medical support while in garrison is a peacetime operation. Manning levels are governed by naval manpower authorization, and the medical personnel authorized are permanently present. Branch medical clinics at Port Hueneme and Gulfport have the responsibility of providing for the care of all beneficiaries in their assigned area.

Seabee medical personnel practice out of these facilities under arrangements made between battalion commanders and that MTF. In this way, the battalion commander controls the amount of time and effort allocated between battalion requirements and support of the "Navy family". In the event that any unit establishes a BAS while in garrison, the MTF has no obligation to provide funding for any equipment or consumables used at the BAS. However, The MTF still has a fiscal responsibility for "readiness" items such as immunizations. Clinical Skills which can rapidly degrade in the purely preventive and occupational medicine practice may be sharpened in this setting. While in garrison, the Manual of the Medical Department specifies that all medical records be held and maintained at the nearest MTF. Assuring those records are up to date and ready are additional responsibilities of the unit medical department.

**Combat medical support**
During wartime, more medical personnel are needed for the expected increase in casualties. This is especially true of combat units, less so for the Seabees whose combat role is defensive. Manning is according to the table of organization (TO), and medical personnel structurally authorized are actually present only if there is a specific need or tasking.

**Combat "echelons of care"**
Although this concept is being phased out in favor of a "continuum of care", echelons of care are
"where we are", until we transition into the next century. Echelons of care grew out of the traditional war fight, conducted through an initial assault and advance, consolidation of gains, and control of the field.

Medical care at each echelon is limited by four interacting factors: (1) urgency of the patient's needs, (2) mobility requirements of the medical facilities and personnel, (3) the workload at each echelon of care relative to its capacity, and (4) the capabilities of the supplies/equipment and personnel at each echelon. The further forward, the less medical capability exists.

Echelon I
A buddy is the most likely first point of contact for the sick, injured or wounded Seabee or Marine. Hence the importance of training all hands in self aid and buddy aid. The corpsman is usually next on the scene, and represents the first critical medical department contact to provide emergency care. The care rendered on the spot is limited to an examination and assessment followed by emergency or lifesaving measures such as control of bleeding, maintenance of airway and control of shock and further injury. Once done, he must initiate the request for evacuation from the field, usually to a nearby battalion aid station. The BAS level of treatment is characterized by the availability of a physician's clinical skills and judgment. In this somewhat more secure environment, there is more time to do a more complete examination, assessment, development and initiation of a treatment plan. Treatment may include restoration of an airway through surgical intervention, use of resuscitative fluids, antibiotics and application of splints bandages or other appliances as required to stabilize the patient. Certainly, no definitive care can be provided, unless the problem is relatively minor. Dental personnel become key players in the medical department for facial injuries, airway problems and triage of casualties, under direction of the medical officer.

Echelon II
At this level, initial resuscitative surgery may be performed as required. This capability is characteristic of the surgical companies of the Marine Corps Force Service Support Group (FSSG), or aboard the Casualty Receiving and Treatment Ships (CRTS) during the initial assault phase. The task here, is to perform those surgical procedures without which, loss of life, limb or sight would result. Anything less urgent, but requiring more care or greater level of care, are evacuated to the next level of care.

Echelon III
Fleet hospitals and hospital ships provide this level of care, which for the first time has a scope of capabilities broad enough to qualify as a hospital, and in an area with lower threat of enemy action. Resuscitative care remains the goal rather than definitive treatment, although first steps toward ultimate restorative care may be initiated. Surgical capabilities found here are obviously greater than those found at lower echelons.

Echelon IV
The definitive phase of treatment occurs at this level, provided by a fully staffed and equipped
hospital. Definitive treatment will return the majority of injured to duty or a useful life. This level of care is provided by a communications zone fleet hospital or an overseas hospital.

**Echelon V**
Convalescent, restorative, and rehabilitative care is provided at this final level, usually by military or veterans affairs hospitals in CONUS. While care at this level may be relatively minimal, the rehabilitation process may be intense. These individuals are unlikely to be returned to full duty.

While the echelons of care described are usually thought of for combat injury, the same system applies for those who suffer from Disease or Non-Battle Injury (DNBI).

**Seabees and echelons of care**
The Seabee medical department operates at the echelon I level only. It has neither the manpower nor mission to provide higher levels of care, and the TOA revisions will more accurately reflect that fact in the future with elimination of lab, x-ray and surgical equipment.

**Joint Health Service Support 2010**
Any discussion of care in the combat environment would be incomplete without including the concept of health service support into the next century. The future war fight envisions a more extensive use of joint assets of the Army, Navy, Marine Corps and Air Force. JHSS was developed to support that vision, and the new strategy. It is anticipated that future conflicts will be brief, intensive and decisive. Emphasis for treatment of wounded will be to evacuate them from the area of operations immediately if they cannot be quickly returned to duty. The Air Force has changed its aeromedical evacuation system to provide emergency care in the air, unthinkable a few short years ago. Overflights of overseas hospital facilities direct to CONUS would be most likely. An increasing level of care from the point of wounding to definitive care rather than the start/stop criticism of the echelon concept. What this means for the future is yet to be completely resolved. A more complete discussion of the evacuation of casualties is provided in a later section of this book.

**A Point of Clarification**
Casualty Receiving and Treatment Ships (CRTS) is an unfortunate choice of terms. It must always be borne in mind that these are COMBAT VESSELS of the amphibious Navy primarily, which can do double duty in providing shelter and a higher level medical capability than on the battlefield. Medical people tend to think of the CRTS as a sort of "hospital" which clearly, it is not. They do however, have some considerable medical capabilities depending on the class of ship. In the Amphibious Task Force (ATF), there are 3 types of ships suitable for receiving casualties and are designated as such in the battle plan. IN GENERAL, each class of ship has the medical capabilities as presented in table form below.

**Amphibious Assault Ship, Iwo Jima Class. (LPH) (Helicopter).** The LPH can transport about 2000 troops and land them vertically via helicopter. They do NOT have the capability to launch amphibious assault craft or other vehicles. These vessels are being phased out of the
Amphibious Assault Ship, Tarawa Class (LHA). The LHA can transport about 1900 troops, and also has the capability to land them not only vertically with helicopters, but also with boats and amphibious vehicles.

Amphibious Assault Ship, Wasp Class (LHD) (Multipurpose). This is the newest, largest and most versatile of the amphibious vessels, very much resembling an aircraft carrier. The LHD carries about 1800 troops, but can land them via helicopter, boat or amphibious vehicle, but can also carry some rather heavy equipment and troops ashore using the Landing Craft, Air Cushioned or LCAC.

<table>
<thead>
<tr>
<th>CLASS</th>
<th>ORrs</th>
<th>ICU BEDS</th>
<th>WARD BEDS</th>
<th>OVERFLOW BEDS</th>
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<tr>
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</tr>
<tr>
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<td>17</td>
<td>48</td>
<td>360</td>
<td>Lab/x-ray/blood</td>
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<tr>
<td>LHD</td>
<td>6</td>
<td>17</td>
<td>47</td>
<td>540</td>
<td>Lab/x-ray/blood/pharmacy</td>
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The Amphibious Transport Dock, Austin Class ships (LPD) do not have a medical capability other than that for ship’s operation. The LPD-17, although in a different class of ship, will be the only LPD with CRTS capability in the real sense. LPD-17 is still in development and construction.

Hospital Ships (T-AH-19, Mercy & T-AH-20, Comfort) provide considerable medical/surgical capability, with 12 ORs, 80 ICU beds, 20 recovery beds and 900 other level of care beds. They also have capable lab, x-ray, blood bank and pharmacy.

Fleet Hospitals. The Fleet Hospital Program is managed by Program Medical Logistics (PML-500) at Ft. Detrick, MD. FHs provide the capability of full resuscitation and emergency surgery for the acutely injured in the rear of a combat zone. Assembly of these hospitals requires about ten days once the site is prepared, and are brought to the combat zone from pre-positioned overseas sites and afloat. While the CRTSs provide the initial Echelon II casualty care, that function is reverted to FHs ashore as soon as possible, permitting the amphibs to get on with the war. There are 10 prepositioned or afloat, modular hospitals around the world. Upon mobilization, they will be provided with 60 days worth of supplies, except for fuels and potable water. These are large complexes, requiring 28 acres of space, and requiring over 17,000 cubic feet of transportation space. The Fleet hospitals are able to provide an Echelon III level of care, much more surgically capable than the first 2 echelons. The smaller Naval Expeditionary Medical Support System (NEMSS) was designed to be "task organized", to provide the flexibility of smaller responses with smaller support modules ranging from 20-116 beds. Training sets of the NEMSS are at 29 Palms, California and Camp Lejeune, North Carolina. FHs have undergone rapid re-engineering and changes in the last few years, and may well undergo more changes as JHSS 2010 evolves further. From the Seabee perspective, it is the CBUs which are tied to FHs.
and provide construction of these facilities as required throughout the world.

\textit{LPD-17}