WHAT'S NEW

Optimal Fluid Resuscitation for Severely Injured Casualties

Mountain Medicine Topical Site

USMC 4th Medical Battalion After-Action

Iraq Health-Sector Reconstruction After-Action Conference

FEATURED ARTICLE

Corpsman Assault Pack
The Corpsman Assault Pack (CAP) is a major equipment improvement for Navy Corpsmen supporting USMC operations and replaces the older MOLLE bag. The CAP features compartments for medical instruments and equipment, improved ergonomics, an integrated hydration system, and with the additional hip or chest pack it gives the Corpsman the flexibility to carry medical supplies in a way that is more efficient during patrols. However, the current equipment list and contents for the CAP do not meet the requirements for equipment and consumable supplies required to treat combat casualties under the TCCC guidelines. The TCCC committee has recommended specific hemostatic agents, analgesics, antibiotics, hypothermia management kits and other equipment based on a combination of research papers, published medical reports and battlefield experience. Reiterating the Commandant’s and Navy Surgeon General’s stated intent for all corpsmen to be trained to TCCC standards, it is imperative that the proper equipment and supplies are procured and available to field corpsmen during combat operations and the contents of the CAP should fully meet this requirement.

**Recommendations**

- Review contents of CAP and ensure contents meet TCCC guidelines.
- Allocate funding for CAP training equipment and supplies.
- Review Battalion Aid Station AMALs and ensure CAP replenishment supplies are available.
- Issue a supplemental supply/equipment pack to meet TCCC Guidelines.

Log on now to see the features of all these web tools at: https://mll.nomi.med.navy.mil

**Naval Operational Medical Lessons Learned Center**

“We support America’s war fighters through state-of-the-art resources, medical knowledge and research.”

Phone: 850-452-7716
DSN: 922-7716
mllstaff@nomi.med.navy.mil

The Naval Operational Medical Lessons Learned Center (NOMLLC) in Pensacola, FL, a component of the Naval Operational Medicine Institute, was established in 2004 at the direction of the Navy Surgeon General to provide a central repository of past experiences and solutions related to every aspect of patient care delivery in the operational setting. The center built upon the excellent groundwork done in this area by the Marine Corps Center for Lessons Learned.

This partnership between NOMLLC and MCCLL is providing Navy Medicine a comprehensive tool to continue to improve medical support provided to fleet and FMF operations.

**Learning from those who have gone before**

**Corpsman Assault Pack**

**NOMLLC Quick-Look Report**

[Image of Corpsman Assault Pack]

[Click here to read more.....]
In his letter of 3 January 2007, LTG Kevin Kiley, the Surgeon General of the Army, forwarded important new information on the resuscitation of severely injured casualties. The U.S. Army Institute of Surgical Research (USAISR) has found that increasing the ratio of Fresh-Frozen Plasma (FFP) to Packed Red Blood Cells (PRBCs) administered can dramatically increase the survival rate of casualties who require massive transfusions.

“Massive transfusion” is defined as 10 units or more of PRBCs in a 24-hour period. USAISR’s analysis of data from OIF/OEF found that casualties meeting this criteria who received FFP in a ratio of 1:1 with PRBCs had a mortality of 20%; in contrast, casualties in this group who received FFP at a ratio of 1 unit of FFP to 4 units of PRBCs or less had a mortality of 65%.

Mountain Medicine Topical Site

The U.S. Marine Corps Center for Lessons Learned issued a Quick-Look report on 21 December 2006 noting that current operations in Afghanistan entail extensive deployment of forces to mountainous regions of that country. This report highlighted the need for additional information and training on mountain operations. The Navy Operational Medical Lessons Learned Center has responded with a new Topical Site called Mountain Medicine. Among the items included in this topical site are:

**High Altitude Warfare: The Kargil Conflict and the Future of Mountain Warfare**
(U.S. Naval Postgraduate School thesis paper by Marcus P. Acosta)
Summary - The emergence of precision warfare has altered the nature of warfare on most of the world’s surface, yet has not significantly changed the conduct of ground combat at high altitude. This thesis examines the impact of the high altitude environment on soldiers, their weapons, and military operations.

**Medical Aspects of Harsh Environments Volume Two**
This chapter is excerpted from the U.S. Army Textbook of Military Medicine. Summary – This volume of the Military Medicine textbook series published by the Office of the Army Surgeon General contains a comprehensive review of the medical and physiological issues entailed in military operations in mountain terrain.

**USSOCOM Tactical Medical Emergency Protocols with Approval Letter**
Summary - First responders operating in austere environment may be required to treat patients with non-traumatic medical conditions for extended periods of time. These protocols, developed by the US Special Operations Command and approved by the Commander in May 2005, provide a diagnostic and management approach suitable for use by combat medical personnel in the austere environment for 41 medical disorders.

**Staging Protocols for Inducing Altitude Acclimatization**
Summary - An important aspect of operations in mountainous terrain is the prevention, recognition, and treatment of altitude-related diseases. One critical aspect of physiological acclimatization to altitude is covered in an information paper produced by the U.S. Army Research Institute of Environmental Medicine dated 18 September 2001. For personnel ascending from low altitude (<5,000 ft), the first stage of all staged ascent protocols should be ascent to an elevation of 5,000 - 6500 ft. (1,525 - 2,000 m). Every day spent at this altitude prepares a soldier for a subsequent rapid ascent equal to the number of days at that altitude times 1,000 ft (305 m) up to a maximum altitude of 14,000 ft (4,300 m). For example, a unit is deployed from sea level to 6,000 ft (1,830 m). Following 5 days at 6,000 ft, this unit could make a rapid ascent to 11,000 ft (5 days X 1,000 ft/day = 5,000 ft ascent above 6,000 ft altitude). This has particular relevance to operations in Afghanistan since the main base at Bagram is at approximately 6000 ft altitude.
After-Action Report Summary from the 4th Medical Battalion

This document is a summary of 19 AARs from 4th Medical BN operations in the period 2003-2006 and includes the experiences of the unit's detachments deployed to Iraq, Afghanistan, Peru, Africa, Eastern Europe, and Alaska. It was compiled and forwarded by CAPT Rom Stevens, Division Surgeon, 4th Marine Division, Marine Force Reserve.

Among the issues discussed in this AAR are:

1. The most common conditions seen and medications required for medical/civic action missions in South America;
2. Medical logistics problems encountered by the 4th Med BN;
3. Significant equipment deficiencies in the Authorized Medical Allowance List and Authorized Dental Allowance List sets provided, both in the equipment lists and in the condition of the sets received;
4. Field gear equipping issues for unit members;
5. Inadequate generator connections to provide power to the Forward Resuscitative Surgical Suite and Shock Trauma Platoon;
6. Substandard tentage being issued to support their unit;
7. Poor watertight integrity and compartmentation of the Authorized Medical Allowance List containers;
8. 4th FSSG personnel being issued body armor vest with only one SAPI plate per person and failure to supplement this with a promised additional plate upon arrival in theater;
9. Lack of required internet connectivity for medical assets;
10. Better definition and addressing of translator capabilities during mission planning;
11. The value of thumb drives for data transfer and storage.

Iraq Health Sector Reconstruction AAR

The Office of the Assistant Secretary of Defense (Health Affairs) sponsored an Iraqi Health Sector Reconstruction After-Action Review on 9-11 January 2007. This event was hosted by the Uniformed Services University of the Health Sciences and the National Naval Medical Center in Bethesda Maryland. CDR Dave Tarantino from Health Affairs, Dr. Shakir Jawad al-Ainachi from USUHS, and LCDR Tony Catanese from the Naval Operational Medical Lessons Learned Center facilitated the proceedings.

Key points covered at the AAR included:

1. The need for U.S. personnel involved in health care reconstructive efforts to be well-versed in the pre-war structure of health care delivery in the involved country and better trained in the cultural aspects of health care in that nation;
2. The need to establish health sector reconstruction as a stated mission of both the Department of Defense and other U.S. government agencies, with appropriate resourcing and personnel development planning;
3. The need to avoid politicization of health care delivery;
4. The need for increased education and training for US health care providers who will be involved in health care sector reconstructive efforts;
5. Better organization of health care reconstructive operations with improved preliminary planning, establishment of agreed-upon goals, a clear chain of command, and full asset visibility throughout.

NOMLLC has created a Topical Site on Health Care Reconstruction that highlights the briefings and proceedings of this meeting.
The BUMED Remedial Action Program

The BUMED Remedial Action Program was established to address significant operational medical problems that are not being effectively addressed by existing programs/processes. Deficiencies identified by the Naval Operational Medical Lessons Learned Center are forwarded to Subject Matter Experts for comment and then to BUMED M5 for analysis and action as appropriate. Current items that are being addressed and tracked by this program are:

- Standardization of treatments for Humanitarian/Civic Action missions
- USNS Mercy AMAL Issues: Humanitarian/Pediatrics/Sick Call
- Cardiac equipment for Humanitarian/Civic Action missions
- Extra imaging capability for USNS Mercy
- Non-FDA antimalarials for HCA missions
- USNS Mercy pre-deployment training
- Surgical tech skills identification
- Combat Eye Injuries

Navy Surgeon General’s Message on Tactical Combat Casualty Care

BUMED message 111621Z Dec 06 announced the Surgeon General’s policy on Tactical Combat Casualty Care (TCCC). Highlights of this message include:

1. TCCC is established as the Navy Medicine standard for trauma care in the tactical environment.
2. TCCC training is required for all Navy enlisted medical department personnel (Hospital Corpsmen) with sustainment training in two-year cycles and prior to assignment to operational billets.
3. The Commander, Navy Medicine Support Command and the Navy Medicine Manpower, Personnel, Training and Education Command will oversee the TCCC training program.
4. The Naval Operational Medicine Institute will commence TCCC instructor training no later than 15 March 07 and coordinate with Navy and Marine Corps force providers and supporting elements to coordinate, standardize, and enhance TCCC training for Navy Medicine personnel.
5. The Naval Operational Medical Lessons Learned Center and the U.S. Marine Corps Training and Education Command will obtain feedback from returning combat medical personnel regarding the strengths and weaknesses of TCCC techniques and equipment and use this information to propose future modifications to the TCCC guidelines as appropriate.
6. A computer-based TCCC training course will be developed and evaluated by 01 June 2007.
The NOMLLC Web Site - Helpful Hints

- When registering initially – enter your information and then there will be a delay while the system waits for authorization. (This is a one-time issue.)
- When doing searches on the Lessons Learned search engine – don’t forget to click on “Reset” before each new search.
- For some requested documents, you will be asked to RE-ENTER your same user name and password – this is a by-product of the data retrieval system used and is normal for the web site.
- The best way to search for a list of all the current Remedial Action Program items is to type “RAP Lesson” in the search box.
- CAC cards are coming…..this is a DoD-wide requirement and may be required for web site access in the near future. For the moment, you can close the CAC card box when it appears by clicking on the “X” in the upper-right hand corner of the box.

Deployments: Language and Culture Topical Site

Deployments to foreign countries require an understanding of the country-specific considerations in providing care to military and civilian patients and the ability to communicate effectively with non-English speaking individuals. This new Topical Site provides a number of resources that contain information on the language and cultures of countries to which U.S. military units may deploy. One link of special interest is the Defense Language Institute Foreign Language Center. The Country Support Modules on this site contain country familiarization information and a language translator capability that includes commonly required medical phrases to assess and treat a patient.

2006 BUMED Contingency Fact Book

This BUMED document is a ready reference on the capabilities of various medical platforms in the Navy and Marine Corps. Frequent updates are published by BUMED M3B1 and requests for copies or notification of changes required should be directed to that office.