

6220
Ser PM/00986
MAY 09 2000

From: Executive Secretary, Navy Epidemiology Board
To: Commanding Officer, Navy Environmental Health Center
Via: President, Navy Epidemiology Board

Subj: MINUTES OF THE NAVY EPIDEMIOLOGY BOARD (NEB) MEETING OF
DECEMBER 8-10, 1999

Ref: (a) NAVENVIRHLTHCENINST 6220.1E

Encl: (1) List of Attendees
(2) Navy Epidemiology Board Agenda
(3) EPI-RAP 00-001 Revision of BUMEDINST 6220.12A – Dr Morrow
(4) EPI-RAP 00-002 Meningococcal Vaccine for Midshipmen – CAPT Zajdowicz
(5) EPI-RAP 00-003 Procure Lethal Ovitrap for Dengue Control – CDR McCarthy
(6) EPI-RAP 00-004 Procure Camouflage Paint with Repellant - CDR McCarthy
(7) EPI-RAP 00-005 Procurement of HEV Vaccine – CDR McCarthy
(8) EPI-RAP 00-006 Navy Collaboration with Center for Disease Control and
Prevention in Gonococcal Isolate Surveillance Program – CAPT Davis
(9) EPI-RAP 00-007 Recommendations for Procurement of a Malaria Rapid
Diagnostic Device (MRDD) CDR McCarthy

1. The subject meeting was held at the Navy Environmental Health Center, December 8-10, 1999, in accordance with reference (a). Attendees are listed in enclosure (1). The NEB Directory, and the meeting agenda, are provided as enclosures (2) and (3), respectively.

2. **Old Business** (Previous EPI-RAPs still pending).

a. EPI-RAP 97-015: Recommendations for the Protection of Visitors to Infectious Agent Patients in Isolation Rooms

NEB Recommendation: Recommend that the following statement be inserted into BUMEDINST 6224.8A, which is presently at BUMED for review: “It is adequate for visits to wear surgical masks while visiting patient. Patients while ambulatory shall wear a surgical mask. This is considered an acceptable infection control standard.”

Action Required: CDR McBride will insure that this language is inserted in the draft of BUMEDINST 6224.8A.

Status: Closed.

Subj: MINUTES OF THE NAVY EPIDEMIOLOGY BOARD (NEB) MEETING OF
DECEMBER 8-10, 1999

b. EPI-RAP 98-002: New Criteria for the Command Review

NEB Recommendation: The Malcolm Baldrige criteria is to be used by the NEHC Command Review Team. The Checklist will be used as a review and analysis tool for the Preventive Medicine Programs.

Action Required: No further action required.

Status: Closed.

c. EPI-RAP 98-005: Hepatitis A immunization for Europe

NEB Recommendation: Recommend BUMEDNOTE be changed to read as follows: Paragraph 6.c.(1) (b) "HAV vaccine should also be administered to family members, age 2 and older, and DoD civilian personnel who are under orders to, assigned to, or travel to OCUNUS stations (not inclusive of Hawaii) with high or intermediate endemicity of Hepatitis A."

Action Required: The NEHC Preventive Medicine Directorate will incorporate this into the next BUMED NOTICE on Immunization Requirements and Recommendations, and recommend it be included in the next Quad-Service instruction on Immunizations and Chemoprophylaxis.

Status: Closed.

d. EPI-RAP 98-006: Hepatitis B Vaccination for the Far East

NEB Recommendation: The updated BUMEDNOTE 6230 draft presently at BUMED-24 for review states in paragraph 6.d.(1)(e) the following: " All active duty personnel deploying to WESTPAC."

Action Required: No further action required.

Status: Closed.

e. EPI-RAP 98-010: Tuberculosis Control Program

NEB Recommendation: Based on the Villarino, et al study reported in JAMA, the Board recommends that either product is suitable for use.

Action Required: No further action required.

Status: Closed.

f. EPI-RAP 99-001: Medical Event Reports (MERS)

NEB Recommendation: Recommendation identified through this EPI-RAP have been approved by the Board and will be incorporated into the BUMEDINST 6220.12A update.

Subj: MINUTES OF THE NAVY EPIDEMIOLOGY BOARD (NEB) MEETING OF
DECEMBER 8-10, 1999

Action Required: No further action required.

Status: Closed.

g. EPI-RAP 99-002: Navy Epidemiology Board's Role related to DOD Global Emerging Infections Surveillance and Response (DOD-GEIS) Program.

NEB Recommendation: EPI-RAPS categorized as a GEIS issue will be considered as a standing agenda item and will be reviewed and prioritized by the Board for merit of receiving funding. These recommendations will be forwarded to Navy Health Research Center, the designated Navy GEIS hub.

Action Required: No further action required.

Status: Closed.

h. EPI-RAP 99-003: Malaria Chemoprophylaxis for Port Visits.

NEB Recommendation: Have cognizant NEPMU contact the fleet plans, operations & medical intelligence officer (POMI) to get list of port visits. Once the NEPMU receives listing a category of risk (using the Malaria Matrix) will be assigned to each port. The NEPMUs will then forward their lists to NEHC who will consolidate and forward onto AFMIC for inclusion into the Medical Environmental Disease Intelligence & Countermeasures (MEDIC). Also, NEHC will post the listing on their website.

Action Required: NEHC PM Directorate to track the NEB recommended action to ensure it is implemented.

Status: Open.

i. EPI-RAP 99-004: Use of Biological Markers and Biomonitoring During Operational Deployments.

NEB Recommendation: Access to the HIV repository is feasible; however in order to receive samples a research statement of need with an Institutional Review Board (IRB) approval is required along with funding to procure the needed number of samples. The NEB will accept for review any proposed EPI-RAPS requiring the use of the serum samples as part of the research protocol.

Action Required: No further action required.

Status: Closed.

j. EPI-RAP 99-005: Uniform Immunization Package for NEHC System Rapid Deployers

NEB Recommendation: Additions and modification to the list are as follows: IPV Booster as recommended by BUMEDNOTE 6230 and JEV immunization for NEPMU personnel who are at high risk for deployment to areas of know endemicity.

Subj: MINUTES OF THE NAVY EPIDEMIOLOGY BOARD (NEB) MEETING OF
DECEMBER 8-10, 1999

Action Required: No further action required.

Status: Closed.

k. EPI-RAP 99-006: Addition of Two USMC Preventive Medicine Officers (PMOs) to the Navy Epidemiology Board (NEB).

NEB Recommendation: Appointment letters have gone forward to both I and II MEF by CO, NEHC. The appropriate changes reflecting I and II MEF membership is now noted in the NEHC Instruction governing the Navy Epidemiology Board.

Action Required: No further action is required.

Status: Closed.

4. New Business

a. EPI-RAP 00-001: Revision of BUMEDINST 6220.12A, Medical Event Reports, enclosure (3).

NEB Recommendation: Board concurred and accepted the recommended changes to the instruction. Board to review final draft prior to submittal to BUMED for approval. NEB endorses the goal of aggregate DNBI surveillance both in garrison and during operations.

Action required: No further action required.

Status: Closed.

b. EPI-RAP 00-002 Meningococcal Vaccine for Midshipmen, enclosure (4).

NEB Recommendation: Incorporate the vaccine as a requirement for U.S. Naval Academy, Officers Candidate School, The Basic School and Officers Indoctrination School into the BUMEDNOTE 6230.

Action required: NEHC PM Directorate to make recommended changes in the BUMEDNOTE 6230 and forward to BUMED for approval.

Status: Open.

c. EPI-RAP 00-003: Procure Lethal Ovitrap for Dengue Vector Control, enclosure (5).

NEB Recommendation: Forward EPI-RAP to Navy Entomology Steering Committee for comment.

Board also reiterates the conscientious use of personal protection measures (PPM) in conjunction with any vector control program.

Subj: MINUTES OF THE NAVY EPIDEMIOLOGY BOARD (NEB) MEETING OF
8-10 December 1999

Action Required: Review comments by the Navy Entomology Steering Committee prior to any final decision on recommendation of procurement of the lethal ovitraps.

Status: Open.

d. EPI-RAP 00-004: Procure Camouflage Paint with Repellant, enclosure (6).

NEB Recommendation: Board recommends the procurement of the Camouflage Face Paint Repellant by U.S. Navy and Marine Corps ground forces.

Action Required: No further action required.

Status: Closed.

e. EPI-RAP 00-005: Procurement of HEV Vaccine, enclosure (7).

NEB Recommendation: NEB does not see evidential requirement for wide-use among USN/USMC personnel. However, there is potential use in small portions of our active duty population i.e., Special forces, Seabees (Construction Battalions), etc.

Action Required: No further action required.

Status: Closed.

f. EPI-RAP 00-006: Navy Collaboration with Center For Disease Control and Prevention (CDC) in Gonococcal Isolate Surveillance Program (GISP), enclosure (8).

NEB Recommendation: NEB endorses Navy facility participation in the GISP. The Board recommends initiation of the GISP protocol by NEPMU-5 through a field-trial with SURFPAC.

Action Required: LCDR Sherman, NEPMU-5 in consultation with LCDR Scott Thornton, NEPMU-5 Lab Officer will contact CAPT Davis, DoD GEIS to coordinate the GISP Project.

Status: Open.

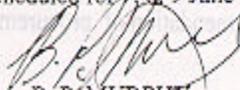
q. EPI-RAP 00-007: Recommendation for Procurement of a Malaria Rapid Diagnostic Device (MRDD), enclosure (9).

NEB Recommendation: NEB recommends that BUMED 02 support this product's further development of an MRDD and its future procurement.

Action Required: No further action required.

Status: Closed.

5. Next Meeting. The next meeting is scheduled for 7, 8 & 9 June 2000.


B. P. MURPHY
CDR, MSC, USN

Minutes reviewed and approved by President, Navy Epidemiology Board.

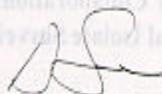

H. G. POTTER
CDR, MC, USN

Date

Minutes reviewed by Commanding Officer, NAVENVIRHLTHCEN.

Comments:

Approved/Disapproved


D. M. SACK

Date

**NAVY EPIDEMIOLOGY BOARD
NAVY ENVIRONMENTAL HEALTH CENTER
NORFOLK, VA**

LIST OF ATTENDEES FOR NAVY EPIDEMIOLOGY BOARD
MEETING OF DECEMBER 8-10, 1999

MEMBERS PRESENT

CDR G. Potter, MC, USN (**President**/Naval Hospital Bremerton)
CAPPED K Schor, MC, USN (HQUSMC)
CDR M. McCarthy, MC, USN (NMRI)
CDR McBride, MC, USN (BUMED Med-24)
CDR B. Murphy, MSC, USN (**Executive Secretary**/NEHC)
CDR R. Rendin, MSC, USN (NEHC)
LCDR R Hyer, MC, USN (NEPMU-7)
LCDR S. Sherman MC, USN (NEPMU-5)
CDR J. Lamar, MC, USN (NEPMU-2)
LCDR A. Fallon, MC, USN (**Vice President**/I MEF)
CDR B. Hendricks, MC, USN (II MEF)

GUESTS

CAPT J. L. Malone, MC, USN (NMC Portsmouth)
CAPT Thomas, MC, USN (USUHS)
Maj Trent, BSC, USAF (AL-AOES)
Dr. Morrow (NEHC)
HMC Shuck (NEHC)

MEMBERS ABSENT

CAPT L. Betts, MC, USN (NEHC)
CDR B. Hendrick, MC, USN (NEPMU-7)
CDR M. McCarthy, MC, USN (NMRC)
LCDR M. Ryan MC, USN (NHRC)

AGENDA
NAVY EPIDEMIOLOGY BOARD MEETING
December 8-10, 1999

Wednesday, December 8, 1999

0900 - 0910 Welcome & Opening Remarks - CDR Potter

0910 - 0930 Commanding Officer Remarks - CAPT Buck

Program Updates

0930 - 1010 BUMED MED-24/JPMPG/AFEB – CDR McBride

1010 - 1030 NEHC PM / Plans & Ops - CDR Rendin/CAPT(S)Novak

1030 - 1045 **Break**

1045 - 1145 NEPMU Briefs

1145 - 1300 **Lunch**

1300 - 1330 HQ USMC – CAPT Schor

1330 - 1400 USA – COL Craig

1400 - 1430 USAF – Maj Goodman

1430 – 1445 **Break**

1445 - 1515 Update on Managing The Health Of Our Populations – CAPT Sack

1515 - 1545 Specialty Leader - CAPT Thomas

1545 – 1615 GEIS – CAPT Davis

1615 - 1630 Closing Remarks/Adjourn – CDR Potter

Thursday, December 9, 1999

0800 – 0810 Opening Remarks – CDR Potter

0810 – 0830 Deployment Medical Surveillance – CDR Murphy

Old Business (Review Status of Open EPI-RAPS)

0830 – 1000 EPI-RAP 97-015 – CDR McBride

EPI-RAP 98-002 – CDR Rendin

EPI-RAP 98-005 – CDR Murphy

EPI-RAP 98-006 – CDR Fallon

EPI-RAP 98-010 – CDR Murphy

1000-1020 **Break**

1020-1200 EPI-RAP 99-001 - Dr. Morrow/LCDR Beadle

EPI-RAP 99-002 - CDR Rendin

EPI-RAP 99-003 - CDR Hendrick

EPI-RAP 99-004 - CDR Murphy

EPI-RAP 99-005 - CDR Murphy

EPI-RAP 99-006 - CDR Murphy

Enclosure (2)

1200 – 1330 **Lunch**
New Business (EPI-RAPS)
1330 - 1400 Revision of BUMEDINST 6220.12 (EPI-RAP 00-001) – Dr. Morrow
1400 - 1430 Meningococcal Vaccine for Midshipmen (EPI-RAP 00-002) – CAPT Zajdowicz
1430 - 1500 Procure Lethal Ovitrap for Dengue Vector Control (EPI-RAP 00-003) – CDR McCarthy
1500 - 1520 **Break**
1520 - 1550 Procure Camouflage Paint with Repellant (EPI-RAP 00-004) – CDR McCarthy
1550 – 1620 Procurement of HEV Vaccine (EPI-RAP 00-005) – CDR McCarthy
1620 – 1650 Navy Collaboration with Centers For Disease Control (CDC) in Gonococcal Isolate Surveillance Program (GISP) (EPI-RAP 00-006) – CAPT Davis
1650 – 1700 Closing Remarks/Adjourn – CDR Potter

Friday, December 10, 1999

—
0800 – 0810 Opening Remarks – CDR Potter
0810 - 0900 PMO Credentialling Update – CDR Potter
0900 – 0930 NDRS Update – Dr. Morrow
0930 - 1000 AVIP and VEARS Update – LCDR Gombah-Alie/HMC Shuck
1000 - 1015 **Break**
Administrative Business
1015 – 1030 Recommendations for New Membership - CDR Potter
1030 - 1100 Unfinished Business
1100 - 1115 Selection of Date for Next Meeting and Closing Remarks
1115 **Adjourn**

Title: Medical Event Reports (MERs): Revision to BUMEDINSTR 6220.12A

Issue:

Medical Event Reports have primary purposes according to the BUMEDINST 6220.12A. This Instruction was released prior to recent developments in Disease Non Battle Injury reporting. According to the Joint Chief's memo, all medical events are reportable during deployments.

Since the release of BUMEDINSTR 6220.12A a new version of NDRS and an on-line tutorial have been prepared. This tutorial can be used to orient and train epidemiologists and enlisted personnel on the capabilities of NDRS and changes in reporting requirements.

Background:

Department of Defense Directive 6490.2 of 30 August 1997 states that medical surveillance shall encompass periods before, during, and after deployment. Department of Defense Instruction 6490.3 of 7 August 1997: "Implementation and Application of Joint Medical Surveillance for Deployments" requires the determination of unit-specific rates of illnesses and injuries during deployments which shall be reported to CINC and/or JTF Surgeons. These data are to be forwarded to US Army Center for Health promotion and Preventive Medicine (CHPPM). Furthermore, the memorandum of the Chairman, Joint Chiefs of 04 December 1998, "Deployment Health and Readiness" specifies that weekly reports on all medical encounters are to be provided. The Joint Chiefs Instruction, current in draft circulation, mandates the reporting of Medical Events, as well as submitting weekly summary reports on all encounters.

To assist Naval Commands to meet these requirements while in the deployed setting, a new version of Naval Disease Reporting System has been prepared which includes a DNBI module which will automatically calculate and electronically submit the required weekly reports. It will also automatically refer the user to the Medical Events Report module if the diagnosis entered meets the criteria of reportability outlined in BUMEDINSTR 6220.12A. This instruction needs to be updated to reflect developments in deployment medical surveillance.

The NEHC Working Group on Deployment Medical Surveillance in its upcoming Technical Manual on "Implementing Guidance for Deployment Health Surveillance" has determined that Naval vessels are subject to the requirement of weekly DNBI reports and reporting diagnoses on the Reportable Medical Events list while on their usual 6 month deployments.

Action Needed:

It is suggested that NEB endorse the attached updated MER instruction BUMEDINST 6220.12A which includes the new DNBI reporting requirements and utilizes the on-line tutorial for required training.

Revisions include: the extension of reportable events into the Deployed setting, the use of NDRS for DNBI as well as all other reportable events in garrison, and new training requirements using the NDRS on-line tutorial.

There are no suggested revisions to the list of Reportable Medical Events.

Issue Originator:

POC: Robert C. Morrow, MD, MPH, NEHC (757) 462-5609.

Enclosure (3)

NAVY EPIDEMIOLOGY BOARD
REQUEST FOR ACTION PAPER (EPIRAP)

TITLE: MENINGOCOCCAL VACCINE FOR MIDSHIPMEN AT USNA

ISSUE: Meningococcal vaccine is not currently administered routinely to officer candidates of the US Navy or US Marine Corps. This is no longer an appropriate stance.

PRIORITY: Urgent

BACKGROUND: Meningococcal disease remains a risk for certain populations, including college students in a dormitory setting. Quadrivalent meningococcal vaccine has proven efficacy in immunizing at-risk populations, with perhaps the greatest success in the US being reduction in rates of meningococcal disease in military enlisted recruits.

The military has targeted use of meningococcal vaccine for enlisted acquisitions, as they enter boot camp or basic training. Recent outbreaks at colleges suggest the epidemiology of meningococcal disease may be changing, and college populations are at increased risk, especially when living in a dormitory setting. The American College Health Association recommended earlier this year that “students consider vaccination to reduce their risk”, and that “college health care providers take a proactive role in providing information and access to the meningococcal disease vaccine.” Numerous civilian colleges and universities have adopted this recommendation, still however making it voluntary. The US Military Academy at West Point has immunized their incoming classes (telephone communication, CDR S. Mawn). To date, the Navy has no established policy regarding use of meningococcal vaccine in Naval Academy midshipmen.

ACTION NEEDED: The Navy Epidemiology Board should recommend immunization of Naval Academy midshipmen, beginning with this current year. Timing is critical, as they will be doing a mass influenza immunization campaign shortly; the two campaigns should be aligned.

ISSUE ORIGINATOR: CAPT Thaddeus Zajdowicz, MC, USN
Navy Environmental Health Center
Norfolk, VA 23513
757-462-5568

PERTINENT REFERENCES:

1. Harrison LH et al. Risk of Meningococcal Infection in College Students. *JAMA*. 1999; 281:1906-1910.
2. American College Health Association. Recommendation on Meningococcal Meningitis Vaccination. <http://www.acha.org/special-prj/men/overview.htm>

PERTINENT PERSONNEL:

1. Bureau of Medicine and Surgery
2. US Naval Academy

Enclosure (4)

**NAVY EPIDEMIOLOGY BOARD
REQUEST FOR ACTION PAPER (EPIRAP)**

**EPI-RAP 00-003
Nov 04 1999**

TITLE: Recommendation To Procure Lethal Ovitrap For Dengue Vector Control

ISSUE/PROBLEM STATEMENT

Currently, vector control is the only means of preventing the spread of dengue to U.S. military forces. For forces on the move, the DoD Personal Protection System (AFPMB TIM 36) is the only line of defense. However, for forces in encampments, personnel can be protected by vector control. Since the principal vector of dengue is not controlled by space sprays usually applied for mosquito control, a device has been developed which significantly reduces older members of the vector population which are most likely to transmit dengue. This device is portable, uses minimal amounts of insecticide, completely safe, and could be applied by any personnel.

PRIORITY : Urgent, The CG, USAMRMC needs a decision from the Navy in DEC 1999.

BACKGROUND

The principal vector of dengue fever is associated with containers which accumulate water. Such containers are rare on a military installation or encampment. If containers are present, current doctrine dictates that preventive medicine personnel eliminate or treat them. The vector threat for dengue on military encampments is from adult mosquitoes which fly onto the site from surrounding areas. These mosquitoes would be seeking a places to lay their eggs and would be attracted to appropriate containers.

A device has been developed which consists of a dark cup, an attractant mixture, and an insecticide impregnated strip of paper. The cup filled with water and attractant is highly attractive to dengue vector mosquitoes seeking a place to lay eggs. When the mosquito lands on the paper strip to deposit eggs, it is killed. This strategy targets the older population of mosquitoes (because only the older mosquitoes will have developed eggs) and therefore eliminates those mosquitoes most likely to transmit dengue. In preliminary trials in Brazil, use of the device alone with no other control measures eliminated 70% of the vector population. It is anticipated that the success would be even better in a military situation where containers producing mosquitoes were not present. The device is appropriate for use by any personnel since it is safe and simple to use. It has been patented in the U.S. and internationally by the Walter Reed Army Institute of Research. A manufacturer willing to purchase a license for production has been located.

ACTION NEEDED

The development process would be strengthened by a recommendation from the NEB that the lethal ovitrap for dengue vector control would be a useful addition to control devices available to Navy preventive medicine units.

Enclosure (5)

ISSUE ORIGINATOR

Michael C. McCarthy, M.D., M.P.H.
CDR, MC, USN
Research Area Manager, Infectious Diseases, US Navy
301-319-7409
mccarthy@nmripo.nmri.nmcc.navy.mil

**NAVY EPIDEMIOLOGY BOARD
REQUEST FOR ACTION PAPER (EPIRAP)**

**EPI-RAP 00-004
Nov 04 1999**

TITLE: RECOMMENDATION TO PROCURE CAMOUFLAGE FACE PAINT WITH REPELLANT

ISSUE/PROBLEM STATEMENT:

The Military Infectious Diseases program has developed and tested a new camouflage face paint that contains insect repellent. This product is ready to transition to advanced development in DEC 1999. The Navy needs to make a recommendation to the Commanding General USMRMC on the requirement for this product, including amount, in the Navy and Marine Corps, so that the Navy's logisticians can plan for the procurement and budget for this materiel.

PRIORITY : Urgent, The CG, USAMRMC needs a decision from the Navy in DEC 1999.

BACKGROUND:

Currently, ground forces using standard camouflage face paint (CFP) as either a stick or paste (in compact case) are required by doctrine (AFPMB TIM 36) to apply the standard military repellent (active ingredient: 33% DEET) prior to application of the CFP. This procedure has the disadvantages of requiring soldiers to carry two items (the repellent and the CFP) and of requiring extra time for application. In addition, the current face paint has sub-optimal application characteristics.

In response to an Acquisition Decision Memorandum signed 11 Aug 97 by the Commander, Medical Research and Materiel Command (BG Zaitchuk), the Walter Reed Army Institute of Research developed a combined CFP with 30% DEET. This was done in conjunction with an industrial partner who brought the latest cosmetic formulation techniques to the problem. The result was a product with improved application characteristics (determined by user acceptability trial conducted in May 1999) and repellency duration equal to the standard military repellent (field trial in Peru, November 1998). An Operational Requirements Document for improvement of the CFP, including insect repellency, was signed by the Asst. Deputy CofS for Combat Developments, U.S. Army Training and Doctrine Command, on 28 May 1999. A joint working group with representation from the U.S. Army Infantry School, the U.S. Army Medical Dept. Center and School, Product Manager - Enhanced Soldier Systems, U.S. Army Medical Research Acquisition Activity, U.S. Army Soldier and Biological Chemical Command, and Medical Research and Materiel Command meets approximately quarterly to make decisions on the development of the product and to hear results of research.

The product will be reviewed for entry into Acquisition Development Milestone I in early December, 1999, with final testing to be conducted during the subsequent year.

Enclosure (6)

ACTION NEEDED:

The development process would be strengthened by a recommendation from the NEB that the Camouflage Face Paint Repellent would be a useful addition to Navy and Marine ground

forces.

ISSUE ORIGINATOR

Michael C. McCarthy, M.D., M.P.H.
CDR, MC, USN
Research Area Manager, Infectious Diseases, US Navy
301-319-7409

mccarthym@nmripo.nmri.nnmc.navy.mil

TITLE: RECOMMENDATION TO PROCURE HEPATITIS E VACCINE

ISSUE/PROBLEM STATEMENT:

The Military Infectious Diseases Research Program has a candidate Hepatitis E vaccine that is ready to be transitioned into advanced development. The Navy must make a recommendation to the Commanding General, USAMRMC on whether they are interested in this product and estimate the number of doses required. This recommendation is needed so that logisticians can plan and budget for the future purchase of materiel. Product availability is anticipated by FY06.

PRIORITY: Urgent, an opinion from MED 02 was requested in August 1999. The CG, USMRMC is awaiting the Navy's official recommendation.

BACKGROUND

In collaboration with Smith Klein Beecham Biologicals, The Military Infectious Diseases Research Program has developed a recombinant protein HEV vaccine that is immunogenic. The goal is to produce a vaccine that is immunogenic in at least 80% of vaccinees,; that would be protective 2 weeks following vaccination; that has a duration of protection of at least 2 years; that has a shelf life of 2 years; and will require 2 doses to protect. The original approval for this product by the Joint Technology Coordinating Group was for a combined vaccine with hepatitis A vaccine.

Hepatitis E is a common cause of both sporadic and epidemic jaundice in Asia, the Middle East and Africa. The prevalence of this virus in South America is unclear, although it clearly causes disease in Mexico and Central America. Large outbreaks can involve tens of thousands of persons. Common source exposure is thought to be associated with contaminated water. Person to person transmission is unusual. The incubation period is a median of 35 days. Clinical illness lasts for several weeks. Symptomatic infections are more common in adults compared to children. The case fatality rate is 2% and up to 20% in pregnant women.

The risk to deployed US Forces is difficult to estimate. Koshy et al published in the Journal of medical Virology in 1994, that our experience in the recent Gulf War failed to demonstrate that hepatitis E infection was a cause of any morbidity, despite the presence of 700,000 troops in that region. Likewise, Burans et al published in Clinical Infectious Diseases in 1994 the absence of hepatitis E infections among troops in Somalia, despite the lack of infrastructure in that country that led to a breakdown in sanitation. The risk to non-deployed US is very low.

Enclosure (7)

In contrast to US Forces, there are reports of HEV infection among military troops from other countries:

1. From October 1983 to April 1984, 40 French soldiers deployed to Chad presented with acute icteric jaundice (Molinie, Zuckerman AJ (ed): "Viral Hepatitis and Liver Diseases," pp 154-57). Thirty-eight of the 40 were determined to have "non-A, non-B" hepatitis and the source was determined to be untreated water. HEV serology was not available at the time, but the serum from these patients was evaluated with a first generation HEV fluorescent antibody blocking assay in 1993. This assay, though specific, is likely much less sensitive than those in use today, but 22 of 34 (65%) tested were positive for antibodies to HEV (Coursaget, J Med Virol 1993; 39:163-166). The full extent of the outbreak is unknown as only jaundiced soldiers presenting to the hospital were evaluated.

The number of personnel at risk is not discussed in the article.

2. Operation Restore Hope: A report in Lancet (Buisson, Lancet 1994; 34:1165-6 reported seven cases of acute HEV hepatitis were diagnosed in a French Legion unit of 420 troops in Waajid despite strict hygienic policies (consumption of food and bottled water from France only). Two additional soldiers had asymptomatic infections diagnosed serologically (elevated IgM antibodies to HEV). The HEV attack rate was 9 of 420, or 2% overall. Also, one additional French soldier assigned to a different unit in Somalia developed acute icteric HEV in July. The authors comment that lack of disease in Belgian and US personnel might have been due to differences in degree of HEV exposure. French troops were more likely to have been exposed to HEV as one month prior to onset of the French cases, an outbreak occurred in the Somali population in Waajid. The authors also state that 85% (44 of 52) of all confirmed HEV cases that they have diagnosed were in French soldiers deployed to endemic areas. Clearly, many of the cases of HeV in French soldiers have not been published in the literature.

3. HEV may also have been a significant cause of hepatitis in World War II. Large outbreaks of hepatitis affected U.S., British, New Zealand, and other Allied forces, as well as Axis troops in northern Africa, Sicily, and Italy. One report of an outbreak affecting the 2nd New Zealand Division at Alamein noted that two front-line brigades were severely affected while support troops behind the front were unaffected (Kirk, Lancet 1, 1945:80-81). Importantly, the authors noted that sanitary conditions on the Alamein front were much worse than in the rear and concluded that the disease 'does not spread where sanitation is good.' Most of the outbreaks in World War II were determined to be due to an orally transmissible agent and HAV has been presumed to be the etiology. However, large epidemics also occurred in Indian and French Arab troops who were almost certainly universally protected from HAV due to childhood infections. Furthermore, HEV is now known to occur in northern Africa and Italy. Together, this strongly suggests that HEV was also an important cause of hepatitis during the War in this region. It should be noted that acute hepatitis was a significant problem for Allied troops in Asia during World War II and during the Korea and Vietnam conflicts. HAV has again been the presumptive diagnosis, but HEV is endemic in large areas of Asia and may have been an important cause of disease in combatants in these areas.

ACTION NEEDED

In summary, the reports from other militaries suggests HEV is a potential threat to U.S. military. Ground troops, such as Marines and Special Forces, may be at greatest risk. Outbreaks may occur in an endemic area when there is a breakdown of sanitation. While significant breaks in

sanitation did not happen to U.S. forces in recent deployments, it occurred repeatedly in World War I, World War II, and the Korea and Vietnam conflicts. We must expect it will happen again in any future major conflict. Military history has taught us that under severe battlefield conditions, it is simply not possible to establish or maintain effective sanitary measures. I conclude from the historical record as well as available data that continued development of the HEV vaccine is a prudent and appropriate means of preparing for this threat.

ISSUE ORIGINATOR

Michael C. McCarthy, M.D., M.P.H.
CDR, MC, USN
Research Area Manager, Infectious Diseases, US Navy
301-319-7409
mccarthym@nmripo.nmri.nmnc.navy.mil

TITLE: NAVY COLLABORATION WITH CENTERS FOR DISEASE CONTROL (CDC) IN GONOCOCCAL ISOLATE SURVEILLANCE PROGRAM (GISP)

ISSUE: CDC is inviting DoD to renew and expand collaboration with them on the GISP, largely in response to increasing fluoroquinolone resistance in Hawaii.

PRIORITY: High

BACKGROUND: Gonorrhea (GC) is the second most frequently reported communicable disease in the United States. Although gonorrhea rates have decreased almost every year since 1975, rates remain high in the southeastern states, among minorities, and among adolescents of all racial and ethnic groups.

GISP is a collaborative project, established in 1987, to monitor antimicrobial resistance in Neisseria gonorrhoeae. Participants include 27 STD clinics, five regional laboratories, and the CDC. DoD sites include Fort Lewis, since 1989, and Fort Bragg, on an intermittent basis, 1987-90 and 1997-98. CDC uses data from GISP to monitor ongoing appropriateness of treatment recommendations. Participating STD clinics collect isolates from the first 20 men with urethral gonorrhea seen each month. Participating regional laboratories perform susceptibility testing of the isolates to antimicrobial agents, including broad-spectrum cephalosporins and fluoroquinolones currently recommended for the treatment of uncomplicated gonorrhea.

Fluoroquinolone-resistant strains of GC have been frequently isolated in the western pacific in such locations as Hong Kong and the Republic of the Philippines. As a principal gateway to the western pacific, Hawaii is a critical site for participation in GISP. Data from the Hawaii GISP site show a concerning increase in ciprofloxacin-resistance over the past 11 years:

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total Tested	121	126	115	112	79	82	74	61	77	42	51
I (%)	---	---	5.2	2.7	3.8	2.4	4.1	1.6	3.9	7.1	3.9
R (%)	---	---	---	0.9	---	1.2	1.4	3.3	---	2.4	3.9

Although CDC indicates that fluoroquinolone-resistance is becoming endemic in Hawaii, the majority of resistant cases still appear to be imported from the western pacific region. In Hawaii, in 1998, 33% (166/507) of all reported cases of GC came from military facilities. At present, Tripler, as with many clinical laboratories, uses nucleic acid testing (GenProbe), not culture, to confirm cases for all military facilities in the area. Consequently, DoD does not have antibiotic resistance data on GC for our Hawaii beneficiaries seen in military facilities. Typically in the United States, even when culturing is used to confirm GC, a rapid beta-lactamase test is the standard for determining resistance; very few clinical laboratories routinely perform susceptibility testing on GC. In Hawaii, however, civilian clinical laboratories do identify approximately 250 cases per year of GC by culture and go on to run susceptibility tests on the isolates, largely due to the increasing resistance issue.

Our Navy and Marine Corps populations serving in Hawaii, as well as throughout the Pacific area of operation, are at increasing risk of exposure to fluoroquinolone-resistant GC and of importing fluoroquinolone-resistant GC to mainland United States. Participation in GISP of key military sites in Hawaii, western pacific nations with sizable military presence (i.e. Japan and Korea), and points of entry to mainland United States (e.g. San Diego) would provide DoD with crucial information on resistance patterns in military beneficiaries throughout the Pacific region and contribute valuable information to DoD and CDC in predicting spread of resistance to the mainland and in making recommendations on drugs of choice for treatment.

ACTION NEEDED: Navy Epidemiology Board endorsement of Navy facility participation in GISP as sentinel sites at selected fleet and marine corps concentration sites in the United States and key western pacific nations.

ISSUE ORIGINATOR: CAPT Susan Davis, MC, USN
DoD GEIS Central Hub
Walter Reed Army Institute of Research
Washington, DC 20307-5100

PERTINENT REFERENCES:

1. Susan Wang, Principal Investigator, GISP, Division of STD Prevention, CDC.
2. GISP Annual Report 1997; <http://www.cdc.gov/ncidod/dastlr/gcdir/Resist/annrep97.html>.
3. GISP Site Summary Data through 1998; <http://www.cdc.gov/ncidod/dastlr/gcdir/Resist/gisp.html>.

PERTINENT PERSONNEL:

GEIS Central Hub: CAPT Davis
BUMED (MED-24): CDR McBride
Navy SG Specialty Leader for Laboratory Officers: CAPT Brophy
NEMPU6: LCDR May (coordinating POC for Pacific AOR)
NEMPU5: CDR Sherman (coordinating POC for western mainland United States)

Selected MTFs (to be determined)

**NAVY EPIDEMIOLOGY BOARD
REQUEST FOR ACTION PAPER (EPIRAP)**

**EPI-RAP 00-007
08 December 1999**

TITLE: RECOMMENDATION FOR PROCUREMENT OF A MALARIA RAPID DIAGNOSTIC DEVICE (MRDD)

ISSUE: Currently, light microscopy is the method used to diagnose malaria in US Forces during deployment and peacetime. The procedure is considered the “gold” standard; however, it is time consuming and requires trained and experienced personnel. An alternate method of diagnosis for malaria is desirable. A MRDD is a small portable device that is intended to help healthcare professionals rapidly detect malarial parasites in the blood samples of patients displaying symptoms, such as fever, chills, and malaise.

PRIORITY: URGENT

THE CG, USAMRMC needs a decision on procurement from the Navy in DEC 99

BACKGROUND: Malaria is the most common infectious disease worldwide and has had a tremendous impact on US military deployments. The DoD recognizes that early medical intervention saves lives and improves overall health, which in turn saves money. Providing healthcare providers, during war and peacetime, with a rapid means to diagnose malaria in a portable format, without labor-intensive microscopic examination, can directly meet the goals of saving lives and preserving the effectiveness of military operations. The ability to rapidly diagnose malaria in far-forward military health care echelons will help health care professionals treat malarious patients sooner and avoid unnecessary evacuation.

ACTION NEEDED: A Recommendation to BUMED 02 in support of further product development of an MRDD and a recommendation for future procurement.

ISSUE ORIGINATOR:

Michael C. McCarthy, M.D., M.P.H.
CDR, MC, USN
Research Area Manager, Infectious Diseases, US Navy
301-319-7409
mccarthym@nmripo.nmri.nnmc.navy.mil

PERTINENT REFERENCES: None

PERTINENT PERSONNEL: None

Enclosure (9)