



The Society of U.S. Naval Flight Surgeons Newsletter

Volume XXIV, Number 4

<http://www.aerospacemed.org>

October 2000

President's Column

The one thing all of us can depend on in the Navy is that change will occur. Finally, NAMI is a reality as of 26 July 2000, which just happened to be my last day at the command. CAPT Mike Valdez assumed the role as the Officer in Charge and will continue to be the RAM Director. I ask that all of you support CAPT Valdez as you have supported me. There are many great evolutions going on at NAMI and we all need to be part of them.



RAMs to take every opportunity to recruit our hard charging first or second tour flight Surgeons into the RAM program.

In closing, take full advantage of all the opportunities that serving our great nation has to offer. If asked to make a change, take it, all of my adventures have been more fulfilling than I anticipated.

Take care, and.....
GET 'EM UP, KEEP 'EM UP.

My transfer to US Naval Hospital, Naples, Italy as the Commanding Officer has gone well. Deb and I are settling into Naples and hope to see as many of you as possible over the next 2 to 3 years. As I meet with the medical staff, it becomes very obvious that our Flight Surgeon community has done very well obtaining and completing a variety of residencies. Seeing the Wings of Gold on our chests immediately brought us closer and quickly lead to conversations of great adventures as Flight Surgeons. Without exception, everyone of my specialist that had a flight surgeon utilization tour cherished that time as their best experience in the Navy.

This enthusiasm must be shared with our interns and residency trained physicians who have not experienced an operational tour as a Flight Surgeon. We need each and everyone of us to share our experiences and recruit our colleagues. The next few years are going to be difficult in meeting the operational demands of Naval Air. I also challenge my fellow

CAPT Fanancy L. Anzalone, MC, USN
flanzalone@naples.med.navy.mil

IN THIS ISSUE

President's Column	1
From the Secretary	2
From the Treasurer	3
Specialty Leader (MED-23)	4
A Model of Servant-Leadership	6
AVT of the Year Message	10
Internal Medicine (Code 24)	11
Influenza Message	13
Substance Abuse/Dependence Gouge	15
Psychiatry (Code 21)	17
Ophthalmology	20
ORM	23
Med-233	24
Dietary Supplements	25
RAM Corner	27
Intrusive Leadership	30
Carbon Monoxide Poisoning	31
Selected SUSNFS Merchandise Catalog	33
SUSNFS Renewal/Order Form	35
Med-231	36



THE SOCIETY OF U.S. NAVAL FLIGHT SURGEONS
P.O. BOX 33008
NAS PENSACOLA, FL 32508-3008
<http://www.aerospacemed.org>

2000-2001 SOCIETY OFFICERS

PRESIDENT

CAPT Fanancy L. Anzalone

VICE PRESIDENT

CAPT Charles O. Barker

SECRETARY

LCDR David K. Weber

TREASURER

LCDR David C. Kleinberg

BOARD OF GOVERNORS

CAPT Charles H. Bercier (ret.)(emeritus member)

CAPT Terrence L. Riley (00-02)

CDR Terry L. Puckett (99-01)

CDR Gerald S. Scholl (00-02)

LCDR Thomas B. Faulkner (00-02)

LT Matthew Clark (99-01)

NEWSLETTER EDITOR

CAPT Michael R. Valdez

ASSOCIATE EDITORS

LCDR William S. Padgett

LT G. Merrill Rice, III

The Society of U.S. Naval Flight Surgeons is a non-profit organization. Its purpose is to advance the science, art, and practice of aerospace medicine and the mission of the U. S. Navy and the U. S. Marine Corps; to foster professional development of its members; and to enhance the practice of aerospace medicine within the Navy and the Marine Corps.

Membership is open to all flight surgeon graduates of the Naval Operational Medicine Institute. Subscription memberships are available. Dues are \$20.00 per year, or \$300.00 for a lifetime. Contact the Secretary or Treasurer for more information or a membership application form.

From the Secretary

Get Famous.... get published in SUSNFS! Got your attention? SUSNFS is your forum to get out exciting news to others in the Naval aeromedical community. The SUSNFS newsletter is THE source for up-to-date information on Aeromedical issues and concerns. We want articles from experts in Aerospace Medicine. That means you!



Tell us what is happening at your command level. Share interesting cases with the membership. How about submitting an update on your community or platform (i.e. F-14 transitions to the Super Hornets). The article doesn't have to be medical. This is your forum. I WILL consider any input from the Fleet. It might even look good on your CV when applying for future residencies.

OK, that aside we can move on to business. For your friends who didn't get a newsletter this time...their membership probably expired. Tell them to contact me to renew or they can visit the web page at www.aerospacemed.org for membership information. The Navy is a mobile community, so don't forget SUSNFS when you relocate. We pay for returned and forwarded newsletters.

On a lighter note, SUSNFS annually selects some of our best people for awards at the ASMA convention. Please be proactive and start looking at your people for potential candidates. I will put more details in the next newsletter.

Please email me for any issues or concerns about the membership or the newsletter. Articles for the next newsletter should be in to me no later than December first. Sooner is always helpful.

Yours in Naval Air..... "Odie"

LCDR David K Weber, MC, FS, USNR

weber@nomi.med.navy.mil

DSN 922-2257 ext 1056/1075/1082

(850) 452-2257 ext 1056/1075/1082

From the Treasurer

Now that Autumn has finally arrived, the temperatures are beginning to approach tolerable levels once again. Despite the predominance of Loblolly Pines here in Pensacola, there are still a few color changes to be appreciated in the deep South (considering the fact that we truly are south of Interstate 10).

It was so good to see so many of you at the AsMA conference in May. The year is rapidly moving along. Business seems to be at a slower pace than usual, however with the introduction of the credit card capability, I believe we have improved our service to the membership. Those of you who have not already had the opportunity to avail yourself of our credit card service, please feel free to pay your dues and/or order merchandise in that manner. If you prefer



not to send your credit card number through the Internet, you may reach us by email or telephone. In either case, please include the expiration date as well as your credit card number when ordering.

Unfortunately, due to the unimpressive sales of some of our clothing merchandise (sweat clothes in particular), we have decided not to renew all of our clothing items once the inventory has expired. On the other hand, jewelry, ties, polo shirts and T-shirts continue to be favorites. We still do not have any recommendations for a new design to our T-shirt, so if any of you have any graphic arts talents, please send us your suggestions. The good news is that we are actively pursuing renewal of our ULTIMATE FLIGHT SURGEON CD and the mishap reference guide. These should be ready for the next Aerospace Medical Association conference.

LCDR David C. Kleinberg, MC, USNR

NOMI, Physical Qualifications

Code 42 (MED-236)

code265@nomi.med.navy.mil

DSN 922-2257 ext. 1062

(850) 452-2257 ext. 1062



(USS George Washington Catapults

Official Navy Photo)

Specialty Leader (MED-23)

Aerospace Medicine Strategic Planning (AMSP) Session at AsMA, Houston, TX. Another Great Success! My last SUSNFS article focused exclusively on the “hot” topic of Military Health System Optimization (MHSO). I’d like to back track a little in this article to update folks on the results of our AMSP session in Houston on Saturday, May 13, prior to the AsMA scientific meeting. It was clear that our community is committed to a common vision, mission, and set of objectives. Over 30 AM leaders attended the session and contributed significantly to AMSP, agreeing on needed changes and modifications by the end of the day. Excellent updates/reports were presented in the morning by CDR Puckett on our Recruitment/Retention Program, by CAPT Hiland on the new Dual Designator Program, by CDR Andy Bellenkes on Operational Risk Management Training for Docs, and by CAPT Dave Johanson and CDR Glenn Merchant on Aerospace Medicine academics and the MPH program at USUHS. Updates were followed by RADM Arthur’s presentation on the essential elements of the Navy’s MHSO plan. This was the first time many AM leaders had heard the details of this program. After RADM Arthur’s comments, the remainder of the day was spent with “Focus on Metrics.” Each AM attendee was assigned to one of four AMSP Goal Groups—Force Health Protection, People, Health Benefit, or Best Practices. CDR Bob Netzer, a prior Naval Aviator turned MSC officer working at BUMED 08, assisted us by describing a simple, yet effective methodology for reviewing our current objectives to ensure they are measurable. He mentored each goal group during their reviews. The methodology is called SMART, an acronym describing essential process components. An objective should be **Specific**, i.e. what action is to be taken; should be **Measurable**, i.e. defines a quantifiable target; should be **Accountable**, i.e. assigns responsibility (e.g. Action Officer); should be **Realistic**, i.e. achievable; and should be **Time-phased**, i.e. sets final and interim deadlines. CAPT Ferrara led Goal Group I-Force Health Protection, CAPT Matthews and CAPT DeVoll led Goal Group II-People, CAPT Anzalone led Goal Group III-Health Benefit, and CAPT(sel) Beane led Goal Group IV-

Best Practices. Under their leadership, we updated our AMSP and now have a working, “living” document. Thanks guys. Great job!! Go to <http://navymedicine.med.navy.mil/MED23> for the updated version of our AMSP Objectives List.

Current Milestones/Issues:

First, congratulations are in order for HM1 Thomas S. Schaefer, USN, MED 233. HM1 Schaefer was recently selected Hospital Corps Chief. Way to go HM1!

Military Health System Optimization (MHSO) Operational Executive Steering Committee (RADM Johnson, RADM Arthur, RADM Potter, CAPT Hart, and CAPT Bumgarner) has chartered an Operational Champions Integrated Product Team and four tiger teams to address the five priorities identified by Fleet and Marine Corps champions who participated in the June 2000 MHSO Planning Conference, Hagerstown, MD. Tiger teams include Fleet Liaison, Enrollment and Access, Primary Care Manager By Name (PCM-by-Name), and Information Management/Information Technology (IM/IT). CAPT Dean Bailey, COMNAVAIRPAC Surgeon, co-chairs Enrollment and Access, and CAPT Bill Ferrara, OIC BMC Miramar, chairs IM/IT. All four tiger teams recently reported significant progress at the Surgeon General’s Commanding Officers’ Conference, Operational Breakout Session, here in DC. MHSO goals and objectives, including PCM by Name, have been integrated in our Aerospace Medicine Strategic Plan (AMSP) and Objectives with metrics as modified at AsMA in Houston. Go to <http://navymedicine.med.navy.mil/MED23> for current AMSP and objectives as of 31 July 00. Aerospace Medicine is fully committed to the MHSO process.

CNO established NOMI, NAMI Detachment as of 26 Jul 00!! CAPT Anzalone was NAMI’s first official OIC.

Use of Aeromedical Summary (AMS) in lieu of the Local Board of Flight Surgeons is now operational. NOMI message 251300Z AUG 00 describes current AMS requirements. Go to <http://edicine.med.navy.mil/MED23> to peruse a copy of the

message. If additional guidance is needed, call MED 236 (NOMI Code 42, Pensacola) 850 452-2357 or email CDR Jeff Brinker, MC, USN at jrbrinker@nomi.med.navy.mil.

Navy Aerospace Medicine's Dual Designation Program has been implemented. Implementation is due in large part to the hard work and efforts of CAPT Dave Hiland, Action Officer, and others on the Dual Designator Working Group. The working group has officially been re-designated Dual Designator Advisory Group (DDAG). DDAG will play a significant role in advising MED 23, OPNAV, and BUPERS on selection and training of potential candidates, in mentoring new dual designators, and in updating the DD Business Plan annually. Go to http://navymedicine.med.navy.mil/MED23/Dual_Designator.htm for MED 02 message call for DD applications. Applications are due by 30 Sep.

Flight Surgeon and RAM recruitment efforts are in full swing. As of the writing of this newsletter, intern briefs have been given at NMC Portsmouth and NNMC Bethesda. A great deal of FS training interest was expressed at both programs. CDR Jay Dudley, NAMI Medical Corps Training Programs Director, will hit the road and give intern briefs at NH Pensacola, NH Bremerton, NH Camp Pendleton, and NMC San Diego. Per our AMSP, future FS and RAM recruitment planning and implementation will be centralized at NAMI under MC Training Program and RAM Program Directors, currently CDR Jay Dudley and CAPT Mike Valdez respectively. MED 23 will facilitate efforts.

Photorefractive Keratectomy (PRK) for NAs/NFOs/Other aviation personnel is available through the Aviation PRK Retention Study headed by LCDR Dave Tanzer and CDR Mitch Brown, NMC San Diego. If interested call CDR Mitch Brown, (619) 524-5515. The Aviation PRK Accessions Study for civilian, NROTC, and Naval Academy recruits should begin in October—check <http://navymedicine.med.navy.mil/MED23> website periodically for the appropriate message. If interested, call CDR Mitch Brown at above number.

On Leadership IV. The New Leadership, 21st Century Style.

We have been on a journey this past year discovering how an organization can become a high performance organization (HPO). In my Jan 2000 SUSNFS article we discussed HPO leadership philosophy as a basic premise and concluded that participatory leadership is the optimal philosophy. In April we discussed the work of leadership and what that means in an HPO. At a recent Interagency Institute for Federal Health Care Executives leadership course at George Washington University, Dr. Hamilton Beazley described the “New Leadership” of the 21st century. The New Leadership is not only an “enhanced” participatory philosophy, but also takes that philosophy to a heightened level of awareness. It is fundamentally “relational and holistic,” grounded in “humility,” based on “service,” driven by a “vision,” sustained by close attention and commitment to “eternal” values, and preserved by “honesty.” This concept naturally leads to Dr. Beazley’s model of the “Servant-Leader.” Servant-leadership is a concept first introduced by Robert K. Greenleaf in a 1970 article entitled, “The Servant as Leader.” Rather than trying to paraphrase Dr. Beazley’s model, I asked him for and he granted permission to reprint in this newsletter his brief paper entitled, “A Model of Servant-Leadership.” (Please see the copyrighted reprint elsewhere in this issue.) If you are interested in leadership, you will find the paper most enlightening and of practical use no matter in what leadership setting you find yourself. After reading and reflection, both Dr. Beazley and I would appreciate any thoughts or feedback you might have. Thanks!

Until next time, keep the faith...Godspeed!

CAPT C.O. Barker, MC, USN

Director, Aerospace Medicine
cobarker@us.med.navy.mil
<http://bumed.med.navy.mil/med23/default.htm>
DSN 762-3451
(202) 762-3451
FAX 202-762-3464

A MODEL OF SERVANT-LEADERSHIP

*Without having the unreasonable ambition
to save men, we still want to serve them.*

—Albert Camus

Robert K. Greenleaf introduced his concept of servant-leadership in a 1970 article entitled, "The Servant as Leader." The definition he provided was straight forward although Greenleaf did not phrase it as a definition per se. Servant-leadership, according to Greenleaf, ". . . begins with the natural feeling that one wants to serve, to *serve first*. Then conscious choice brings one to aspire to lead." (1) According to Greenleaf,

The difference [between the servant-first and the leader-first] manifests itself in the care taken by the servant-first to make sure that other people's highest priority needs are being served. The best test, and difficult to administer, is: do those served grow as persons; do they, *while being served*, become healthier, wiser, freer, more autonomous, more likely themselves to become servants? And, what is the effect on the least privileged in society; will they benefit, or at least, not be hurther deprived?(2)

Servant-leadership is a comprehensive idea that begins with an individual but culminates, ideally, in the transformation of society through changes in its institutions. Servant-leadership is a broad and complex concept of leadership that demands contemplation as well as action, internal examination as well as external vision, and rational thought as well as intuitive leading. Its foundation is holistic rather than reductionistic, and it relies on systems thinking rather than on piece-meal approaches. Such a concept is not easy to grasp because it starts small and grows, in individual increments, to encompass many people and many organizations. A model of servant-leadership must necessarily deal with the characteristics of servant-leadership itself as well as with its effects on other individuals, on the institutions of which they are a part, and on society as a whole.

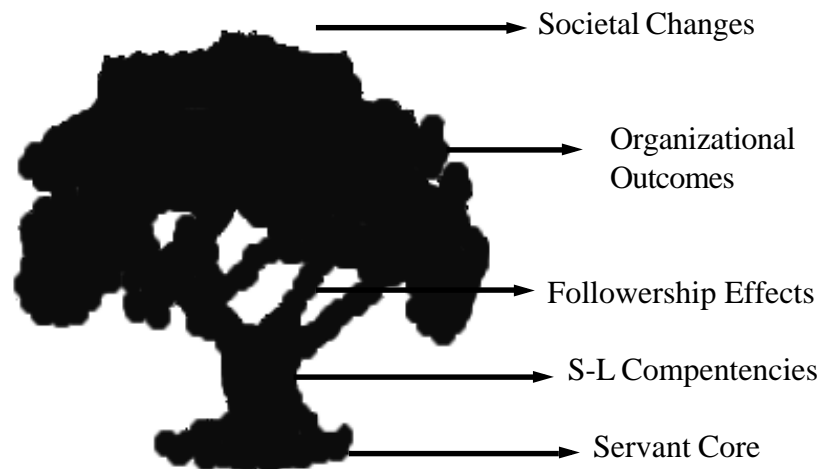
Servant-leadership is a process rather than an event, a state of equilibrium, or a skill. Metaphorically, it is more a journey than a destination. It is organic rather than static; it evolves over time and in response to circumstances. Processes are more difficult to grasp than events because they invariably involve states of being as well as acts of doing. Servant-leadership is ultimately about oneself and one's relation to the world rather than about the world itself. That is to say, the focus of servant-leadership is on one's own attitudes and behavior. This aspect of the concept makes servant-leadership potentially threatening and certainly difficult for many. As human beings, we seem ever hopeful that we can focus on the external world in order to remedy it rather than on ourselves in order to change it. Greenleaf addresses the quandary in this way, ". . . the servant views any problem in the world as *in here*, inside oneself not *out there*. And if a flaw in the world is to be remedied, to the servant the process of change starts *in here*, in the servant, not *out there*." (3) Servant-leadership is internally driven, but outwardly focused.

The function of a model is to help clarify a complex phenomenon by integrating its various components into an organizing framework. Servant-leadership describes a way in which individuals relate to each other as they interact in social institutions. The model proposed here describes this system of interaction including its individual, institutional, and societal aspects. It addresses both causes and effects. The characteristics and behaviors described by the model are explicitly stated in Greenleaf's writings or can be logically inferred on the basis of those writings. The proposed model can be described diagrammatically or metaphorically.

In Figure 1 below, the model is shown through the metaphor of a tree, which represents servant-leadership. Various parts of the tree stand for various components of servant-leadership described by the model. There are five such components: the *servant core*, *servant-leadership competencies*, *followership effects*, *organizational outcomes*, and *societal changes*. These components can be divided into two categories: those that relate to servant-leaders themselves (individualized components) and those that relate to the effects that servant-leaders have on other individuals, organizations, and society (social components).

The *servant core* (the roots of the tree) consists of internal characteristics of the servant-leader. *Servant-leadership competencies* (the trunk) are leadership competencies based on the characteristics of the servant-core that servant-leaders exhibit in dealing with followers and colleagues. *Followership effects* (the branches) are the qualities that servant-leaders foster in their followers and colleagues. *Organizational outcomes* (the leaves) are the effects created by servant-leaders in their organizations and its members. *Societal changes* (oxygen and shade) describe the effects of servant-leadership on society as a whole. Momentum in the model is upward and outward because growth is occurring in all components and each component depends on the previous one: the roots give rise to the trunk that nurtures the branches that support the leaves that provide the oxygen and shade.

FIGURE 1
A METAPHORICAL MODEL OF SERVANT-LEADERSHIP



The following paragraphs describe the components of the model in more detail:

1. SERVANT CORE (Roots): The **servant core** is central to the servant-leadership model and reflects the primary tenet of servant-leadership: that it “begins with the natural feeling that one wants to serve, to *serve first*.” In the model, *servant core* is defined as *the set of fundamental commitments, attitudes, and behaviors of the servant-leader that flow from the idea of servanthood*. These elements of the servant core are characteristic of true servants and might be termed dedications.

Each of the six dedications is itself a complex constellation of attributes and behaviors. Metaphorically, these dedications can be thought of as the DNA of servant-leadership. Management studies as well as psychological

(continued on page 8)

(continued from page 7)

research and spiritual programs all attest to the possibility of developing these components of the servant core through study, commitment, and practice. They are as follows:

1. *Honesty with self and others*, including acceptance of reality and responsibility as well as a commitment to truth.
2. *Self-examination and awareness of others*, including one's own strengths and weaknesses.
3. *Humility* (modesty in behavior, attitude, and spirit marked by a willingness to learn, to be wrong, to follow when appropriate, and to put other agendas ahead of one's own—all of which permit the realistic assessment of one's power and role in the world, neither overstating it in grandiosity or understating it in false humility).
4. *Understanding conversations as prayers* uttered together, i.e. as deep and meaningful events deserving of profound respect and attention (involving active listening, empathy, acceptance, withholding of judgment, and appreciation for diverse points of view, perspectives, and backgrounds).
5. *Desire to serve others*, including a discernment of how to do so in the best way possible.
6. *Commitment to spiritual growth and psychological development*. Spiritual growth can be defined in many ways, but one workable definition is *strengthening one's faith relationship with the Transcendent*. Psychological development generally involves intellectual development (i.e. cognitive improvements), social development (i.e. the formation and maintenance of quality relationships with other people), and some degree of productivity (broadly defined).

2. SERVANT-LEADERSHIP COMPETENCIES (Trunk): Servant-leadership competencies are *qualities of leadership derived from the attributes of the servant core that constitute the basic competencies of servant-leaders in their dealings with followers and colleagues*. Servant-leadership competencies include the following:

1. *Envisioning* (creating a vision, designing a plan and structure, initiating)
2. *Leading by facilitating, modeling, and teaching*.
3. *Building community*.
4. *Emotional intelligence* (recognizing one's emotions as they occur, managing one's emotions effectively, self-motivation, recognizing emotions in others, and managing emotions in others).
5. *Encouraging the spiritual growth and psychological development of others*.
6. *Intuitive, holistic thinking* (including a sense for the unknowable and unforeseeable enabling the leader to act while there is still time).

3. FOLLOWERSHIP EFFECTS (Branches): Whereas the servant core and servant-leadership competencies pertain to servant-leaders, followership effects *are the qualities that the servant-leader fosters in his or her followers and colleagues that flow naturally from the servant-leadership competencies*. As might be expected, these commitments and capacities mirror those of the servant-leader since one of the goals of the servant-leader is to serve his or her fellows in such a way that they are “more likely themselves to become servants.” Followership effects include the following:

1. A manifestation within those served of some attributes of the servant core: honesty, humility, self-examination and awareness of others, understanding conversations as prayers, willingness to serve others, personal spiritual growth and psychological development.
2. A manifestation within those served of some of the servant-leadership competencies: envisioning; leading by facilitating, modeling, and teaching; building community; utilizing emotional intelligence; encouraging the spiritual growth and psychological development of others; and intuitive, holistic thinking.

4. ORGANIZATIONAL OUTCOMES (Leaves): Organizational outcomes are *the effects on the organization that are wrought by a manifestation of servant-leadership in the leaders and followers of an organization*. Servant-leadership creates a unique organizational culture that results from the servant core, servant-leadership competencies, and followership effects. In manifesting these commitments, characteristics, attitudes, and behaviors, an organization becomes something extraordinary—an environment that is transformational for its members. Organizational outcomes flow logically from the preceding components of the model and are consonant with the servant-led institutions described by Greenleaf. They include:

1. Mission-based, value-driven organizations.
2. Creativity and innovation.
3. Responsiveness and flexibility.
4. Commitment to service, internally and externally.
5. Respect for employees, employee loyalty, and celebration of diversity.
6. All people touched by the institution are served, not used or exploited.

5. SOCIETAL CHANGES (Oxveen and Shade): Societal changes are *the changes wrought in society as a whole or in portions of society as a result of servant-leadership induced organizational transformations*. These changes flow naturally from organizational outcomes like ripples from a stone tossed in a pond when the requisite number of servant-leaders materialize to transform their organizations. Societal changes include the following:

1. A manifestation within society of some attributes of the servant core: honesty, humility, self-examination and awareness of others, understanding conversations as prayers, willingness to serve others, personal spiritual growth and psychological development.

(continued on page 10)

(continued from page 9)

2. A manifestation within society of some of the servant-leadership competencies: leading by facilitating, modeling, and teaching; building community; utilizing emotional intelligence; encouraging the spiritual growth and psychological development of others; and intuitive, holistic thinking.
3. A manifestation within society of some of the organizational outcomes so that the society becomes value-driven, creative and innovative, responsive and flexible, committed to service, respectful of its members, celebratory of diversity, and careful to ensure that its members are served rather than used or exploited.

(1) Greenleaf, Robert K. 1977. *Servant Leadership: A Journey into the Nature of Legitimate Power and Leadership*. New York: Paulist Press, 13.

(2) Ibid., 13.

(3) Ibid., 44.

Copyright 2000 Hamilton Beazley, Ph.D. All rights reserved. Reproduction in whole or in part without written permission is strictly prohibited.

AVT of the Year Nomination Message

R 290742Z SEP 00 ZYB

SUBJ: NOMINATION FOR 2000 AEROSPACE MEDICINE TECHNICIAN OF THE YEAR

POC: HMC KIMBALL, NAMI, TEL:850 452-502 DSN 922-502

1. THE FOLLOWING IS THE CRITERIA AND SUBMISSION FORMAT FOR NOMINATION OF THE 2000 AEROSPACE MEDICINE TECHNICIAN (AVT) OF THE YEAR. ALL NAVY AEROSPACE MEDICINE TECHNICIANS IN PAYGRADES E-1 TO E-6 ARE ELIGIBLE.

2. ALL COMMANDS AND UNITS ARE ENCOURAGED TO SUBMIT A NOMINEE.

3. AVT OF THE YEAR NOMINATIONS SHOULD BE RECEIVED NLT 30 DEC 00 BY CAPT M. R. VALDEZ, NAVAEROMEDINST CODE 33, 220 HOVEY RD, PENSACOLA, FL 32508-1047. FOR FURTHER INFORMATION, VISIT NEHC'S WEBSITE AT WWW-NEHC.MED.NAVY.MIL OR CONTACT HMC KIMBALL AT EMAIL nami_avtinst2@nomi.med.navy.mil.

4. NOMINATIONS MUST BE SUBMITTED AND/OR ENDORSED BY A FLIGHT SURGEON AND THE APPROPRIATE COMMANDING OFFICER.

5. PERIOD OF CONSIDERATION: 01 JAN 00 TO 30 DEC 00

6. FLIGHT SURGEONS SUBMITTING NOMINATIONS SHOULD GIVE GREATER CONSIDERATION TO INDIVIDUALS WHO HAVE EXCELLED IN MORE DEMANDING ASSIGNMENTS, EXHIBITED SUPERIOR LEADERSHIP, AND DISPLAYED EXCEPTIONAL PROFESSIONAL GROWTH.

7. THE AVT OF THE YEAR WILL RECEIVE RECOGNITION BY THE SOCIETY OF U.S. NAVAL FLIGHT SURGEONS (SUSNFS). THIS YEAR'S AWARD WILL BE PRESENTED TO THE RECIPIENT AT THE 41ST NAVY OCCUPATIONAL HEALTH AND PREVENTIVE MEDICINE WORKSHOP AND THIRD ANNUAL COMBINED OPERATIONAL AND AEROMEDICAL PROBLEMS COURSE (11-18 MAY 2001) IN SAN DIEGO, CA. THE AWARD INCLUDES A \$100 SAVINGS BOND, PLAQUE AND A LETTER FROM SUSNFS.

(continued on page 28)

Internal Medicine (Code 24)

The Flea Bag

Welcome to the Flea Bag. I thought it would be helpful to share with you a few of the interesting medical conditions that have been evaluated at NAMI over the last quarter. We have held two Special Boards of Flight Surgeons. One was for a patient with Chronic Idiopathic Urticaria and the other for Food Dependent Exercise Induced Anaphylaxis. Both of these conditions are relatively uncommon, but they do make for interesting discussions at dinner parties. These may be a little esoteric, but what did you expect, I am an Internist (or as most of the medical community affectionately calls us, a Flea). Just to show that Internists can provide practical information, the next edition of the Flea Bag will discuss a case of Asthma that was evaluated here in Pensacola. Enjoy!

Chronic Idiopathic Urticaria:

Urticaria is edema of the superficial dermis, typically limited to the skin, invariably pruritic and will spontaneously resolve within 24-48 hours depending on the type and cause. Urticaria occurs in approximately 25% of all people at some time in their lives. Urticaria that occurs repetitively over greater than six weeks is referred to as Chronic Urticaria. Chronic urticaria is found to be Idiopathic in 80-95% of the cases. A search for a cause is still warranted as the mainstay of treatment is avoidance of the offending agent or condition if discovered.

Angioedema is a short-lived edema of the deep dermis and subcutaneous or submucosal tissue. Angioedema also typically resolves within 24 hours but occasionally lasts longer if there is a large area of edema. Fifty percent of the cases of Chronic Idiopathic Urticaria (CIU) will have associated angioedema. While angioedema may be life threatening, the angioedema associated with CIU is mild and not life threatening.

CIU is present in approximately 0.1% of the population. The average duration of symptoms in adults is 3-5 years. CIU resolves by 5 years in 50-80% of patients with only 20% of patients having any symptoms after 20 years. There are many causes of urticaria including medications, foods, additives,

infections, insect bites, physical agents (heat, cold, light, pressure, vibration, water), and several systemic diseases (SLE, JRA, thyroid disease, neoplasms). Most of these are easily excluded by careful history and physical examination. Except for physical challenges, lab tests are reserved for refractory cases or when indicated by history. The differential for CIU is less extensive and is essentially limited to the physical urticarias and urticarial vasculitis.

Recent investigations have led to the recognition of an immunologic basis of CIU with approximately 25% of patients being positive for IgG antibodies to the high affinity IgE receptor or to IgE itself. Despite this finding in the minority of CIU patients, the etiology is still idiopathic and treatment remains unchanged. H1 antihistamines remain the mainstays of first line therapy for all patients with CIU. Second generation, non-sedating antihistamines are the preferred treatment with multiple studies showing both efficacy and safety. When therapy with H1 antihistamines alone fails to resolve a patient's symptoms, the addition of H2 receptor antagonists (H2RA) have been recommended. Although H2RA therapy alone has limited benefit, it has significant benefit when used as combination therapy in patients not responding fully to H1 therapy alone. It is important to recognize that CIU has a varied clinical presentation from patient to patient. Treatment should likewise be individualized with different medications from multiple classes utilized alone or in combination until an effective, acceptable individualized treatment regimen has been established.

Food Dependent Exercise Induced Anaphylaxis:

Food Dependent Exercise Induced Anaphylaxis (FDEIA) is a relatively recently recognized phenomenon. Exercise Induced Anaphylaxis (EIA) was first diagnosed in the early 1970's, but it was not until 1980 that a series of patients with EIA was described. In 1983, a subset of EIA triggered by foods was described. The clinical presentation varies among patients. It can range from mild punctate (<5mm) urticarial lesions on the extremities and/or trunk to giant urticaria with laryngeal edema, vascular collapse and death. The differential diagnosis for

(continued on page 12)

(continued from page 11)

FDEIA includes cholinergic urticaria, exercise induced asthma, vocal cord dysfunction and idiopathic anaphylaxis. The diagnosis is made by history with challenge testing used to confirm the diagnosis. Patients with FDEIA may have a reaction if they exercise after eating any food or it may occur only after specific foods. When a specific food is identified the patient almost invariably will have a positive skin test to that agent.

FDEIA can be distinguished from the other clinical entities by history alone in most cases. Though both FDEIA and cholinergic urticaria may be induced by exercise, FDEIA can not be induced by passive increase in core body temperature. Exercise induced asthma has wheezing as a primary feature, a finding which is absent in FDEIA. Vocal cord dysfunction may have similar stridor though there is no associated skin or vascular involvement. Finally, idiopathic anaphylaxis is a diagnosis of exclusion when exhaustive history fails to reveal any clear food or exercise association.

The pathophysiology of FDEIA is the same as any other form of anaphylaxis. Histamine and other mediators (prostaglandin D₂, leukotriene C₄, tryptase) released from mast cells, and possibly neutrophils, cause first a local reaction followed in some instances by a systemic response. The systemic reaction can be mild (lightheadedness or labored breathing) or severe with vascular collapse, respiratory compromise and death. Each individual will react differently to varying scenarios and the same patient may even have a different response to the same stimulus. The only consistent factor about FDEIA is that after eating the offending agent and exercising a reaction is likely to occur. The severity may vary with the intensity of the exercise though the antigen load has not been shown to be a significant factor. The time after exposure to the antigen does roughly correlate with the likelihood of having a reaction. The mechanism of FDEIA is not clear but it is believed that the antigen sensitizes the mast cell to IgE mediated mediator release. Neither exercise nor the antigen alone will cause a reaction but the combination of the two will prompt an anaphylactic response.

There is no effective prophylactic treatment to prevent FDEIA. Results of trials of antihistamine

therapy have been inconsistent in preventing the phenomenon. Other agents, including beta adrenergics, anticholinergics, cromolyn, leukotriene modifiers and phosphodiesterase inhibitors have no proven benefit.^{10,11,12} The only proven prophylaxis for FDEIA is avoidance of the offending agent.

Acute treatment of a reaction consists of epinephrine injected subcutaneously, intravenous fluid support, oxygen, antihistamines, and airway maintenance. Steroids are generally not needed except in cases requiring prolonged respiratory support. Incidence of FDEIA is unknown and deaths attributed to FDEIA are believed to be underestimated since it is believed that some episodes of sudden death following exercise are actually the first manifestation of FDEIA.

Several recommendations are consistently found throughout the literature regarding the care of patients with FDEIA. All patients should avoid the offending agent and postpone exercise for a significant length of time (6-12 hours depending on the source) if the offending agent has been eaten. Patients should be prescribed an epinephrine auto injector and instructed to carry it at all times, especially when they exercise. They should never exercise alone and their exercise partner should know how to administer the epinephrine and obtain emergency assistance. Some sources recommend that patients with FDEIA not exercise for 4-8 hours after the ingestion of any food, even if the specific food is identified and avoided.

In one long-term follow-up study of FDEIA, the frequency of reactions was stable to decreased over a ten-year period. The severity of the reactions did not lessen over this time frame. The decreased frequency was attributed to patient education on reaction avoidance and avoiding exercise in temperature extremes or high humidity.

A final note, please feel free to send me any comments or questions about these cases or any Internal Medicine matters. Join me next time for more IM excitement in the Flea Bag.

LCDR Paul Kane

code243@nomi.med.navy.mil

DSN 922-2257 ext. 1022

(850) 452-2257 ext. 1022

Influenza Information

ROUTINE

R 262000Z SEP 00 ZYB PSN 306516J21

FM BUMED WASHINGTON DC//02//

SUBJ/IMPLEMENTING GUIDANCE FOR THE 2000-20001 INFLUENZA IMMUNIZATION /PROGRAM//

REF/A/GENADMIN/BUMED WASHINGTON DC/241302ZJUL2000//

REF/B/DOC/MMWR RR-3 VOL 49/14JUL2000/-/NOTAL//

REF/C/DOC/ASD (HA)/21SEP2000//

REF A IS MESSAGE PROVIDING CLINICAL GUIDELINES ON 2000-2001 INFLUENZA PROGRAM ADMINISTRATION.

REF B IS CDC NOTICE REGARDING THE DELAY OF INFLUENZA VACCINE AND ADJUNCT ACIP INFLUENZA VACCINE RECOMMENDATIONS FOR THE 2000-01 INFLUENZA SEASON.

REF C IS ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS) POLICY MEMORANDUM REGARDING PREPARATION FOR INFLUENZA VACCINE SHORTAGE, WITH ACCOMPANYING PLANS FOR 2000-2001 INFLUENZA SEASON.

1. THIS MESSAGE HAS BEEN COORDINATED WITH THE COMMANDANT OF THE MARINE CORPS (CMC). THE COMMANDANT HAS AUTHORIZED TRANSMISSION TO MARINE CORPS ACTIVITIES.

2. THIS MESSAGE SHOULD BE PASSED TO ALL HANDS, WITH SPECIAL ATTENTION TO IMMUNIZATION CLINICS, PHARMACIES, PATIENT AFFAIRS REPRESENTATIVES, PREVENTIVE MEDICINE PERSONNEL, AND CLINICAL DEPARTMENTS PROVIDING SERVICES TO HIGH-RISK MEDICAL BENEFICIARIES.

3. PER REFS A THROUGH C, THERE IS A SUBSTANTIAL DELAY IN AVAILABILITY AND THEREFORE A FUNCTIONAL SHORTAGE OF INFLUENZA VACCINE FOR THE 2000-2001 INFLUENZA SEASON, AFFECTING BOTH THE DOD AND THE UNITED STATES. THIS MESSAGE PROVIDES AN UPDATE ON THE FOLLOWING: STATUS OF THE INFLUENZA VACCINE DELAY; DETAILS ON PRIORITIZATION OF AVAILABLE DOSES TO BOTH SELECTED OPERATIONAL UNITS AND TO HIGH-RISK MEDICAL BENEFICIARIES, AND THE RESPONSE PLAN COORDINATED BETWEEN THE SERVICES (REF C); GUIDANCE ON INFLUENZA SURVEILLANCE BY OPERATIONAL UNITS; AND INFORMATION ON FURTHER MEASURES TO TAKE DURING THE FORTHCOMING FLU SEASON.

4. STATUS OF VACCINE AVAILABILITY.

A. HISTORICALLY DOD HAS USED APPROXIMATELY 2.8 MILLION DOSES OF INFLUENZA VACCINE TO COVER ACTIVE DUTY AND ELIGIBLE BENEFICIARIES. LATEST INFORMATION FROM THE DEFENSE SUPPLY CENTER PHILADELPHIA (DSCP) INDICATES APPROXIMATELY 230K DOSES OF FLU VACCINE ARE ON HAND. IT IS ANTICIPATED THESE DOSES WILL BE DISTRIBUTED TO THE SERVICES AND COAST GUARD ON OR ABOUT 2 OCT 2000.

B. THE BULK OF THE DOD ORDER (APPROXIMATELY 2.5 MILLION DOSES) IS NOT EXPECTED FROM THE MANUFACTURER UNTIL NOV OR DEC. ONCE THESE DOSES ARE AVAILABLE, THEY WILL BE DISTRIBUTED AND ADMINISTERED AS IN PREVIOUS YEARS. C. THE ANTICIPATED DELAY IN INFLUENZA VACCINE AVAILABILITY IS DUE TO LOWER THAN EXPECTED PRODUCTION YIELDS FOR THE INFLUENZA A(H3N2) VACCINE COMPONENT AND OTHER PRODUCTION ISSUES.

5. RESPONSE PLAN. A RESPONSE PLAN FOR THE 2000-2001 INFLUENZA SEASON, HAS BEEN APPROVED BY THE ASSISTANT SECRETARY OF DEFENSE (HEALTH AFFAIRS). THIS PLAN, AVAILABLE FOR VIEWING AND DOWNLOADING FROM THE BUMED HOMEPAGE, [HTTP://NAVYMEDICINE.MED.NAVY.MIL](http://NAVYMEDICINE.MED.NAVY.MIL), PROVIDES SPECIFIC GUIDANCE ON: PRIORITIZATION OF AVAILABLE VACCINE DOSES; INCREASED INFLUENZA SURVEILLANCE; RECOGNITION AND CONTROL OF POSSIBLE OUTBREAKS; RECOMMENDATIONS FOR THE USE OF ANTIVIRALS AND RAPID DIAGNOSTIC TESTS FOR INFLUENZA; AND OTHER MEASURES. BUMED IMPLEMENTING GUIDANCE FOR REF C IS AS FOLLOWS: A. PRIORITIZATION. VACCINATION OF MISSION CRITICAL MILITARY PERSONNEL AND HIGH-RISK MEDI-

(continued on page 14)

(continued from page 13)

CAL INDIVIDUALS WILL PROCEED IN PARALLEL. INASMUCH AS CURRENTLY AVAILABLE DOSES WILL NOT MEET THE ENTIRE REQUIREMENT OF THESE TWO GROUPS, THE INTENT IS TO PROVIDE DOSES TO INDIVIDUALS AT HIGHEST RISK WITHIN THESE TWO GROUPS.

- 1) OF THE APPROXIMATE 230K DOSES IMMEDIATELY AVAILABLE, 2,500 DOSES WILL BE HELD IN RESERVE FOR POSSIBLE CONTINGENCY SITUATIONS INCLUDING OUTBREAKS OR UNPLANNED OPERATIONAL DEPLOYMENTS.
- 2) 114K DOSES ARE BEING DISTRIBUTED TO SELECTED OPERATIONAL UNITS TO SUPPORT CINC-IDENTIFIED OPERATIONAL REQUIREMENTS. THESE DOSES WILL BE SHIPPED TO IN-THEATER MEDICAL LOGISTICS SITES WITH FURTHER DISTRIBUTION COORDINATED BY CINC SURGEONS OFFICE AND COMPONENT SURGEONS.
- 3) MTFS WILL RECEIVE APPROXIMATELY 50% OF THEIR FLU VACCINE REQUISITION FOR THE 2000-2001 FLU SEASON. THESE DOSES WILL BE GIVEN FIRST TO HIGH RISK MEDICAL BENEFICIARIES AS WELL AS SELECTED HEALTH CARE WORKERS. INITIAL VACCINATION OF HEALTH CARE WORKERS SHOULD BE LIMITED TO THOSE AT RISK OF TRANSMISSION OF INFLUENZA TO HIGH-RISK MEDICAL BENEFICIARIES. MTFS WILL DEVELOP STRATEGIES ENSURING THAT ELIGIBLE MEDICAL BENEFICIARIES AT HIGHEST RISK ARE IMMUNIZED FIRST. DISTRIBUTION OF VACCINE DOSES TO SUPPORTED BRANCH CLINICS BY MTFS SHOULD BE BASED ON MEDICAL RISK OF PATIENT POPULATIONS SERVED AND NOT A PROPORTIONAL DISTRIBUTION.
- 4) IT IS ANTICIPATED THAT ALL OF THE 230K DOSES WILL BE DISTRIBUTED BY THE FIRST WEEK IN OCTOBER. IF AFTER IMMUNIZING HIGH RISK MEDICAL BENEFICIARIES MTFS HAVE ADDITIONAL VACCINE REMAINING, THESE DOSES MAY BE ADMINISTERED TO OTHER PRIORITY GROUPS PER REF C.
- 5) PRIORITIZATIONS WITHIN OPERATIONAL PERSONNEL AND HIGH RISK MEDICAL BENEFICIARY CATEGORIES ARE DESCRIBED IN REF C, AND ARE SUMMARIZED AS FOLLOWS:
 - A) VACCINATION OF OPERATIONAL MILITARY PERSONNEL WILL OCCUR IN THE FOLLOWING PRIORITIZATION: FORCES DEPLOYED IN SUPPORT OF CINC OPERATIONAL REQUIREMENTS IN AREAS OF HIGH SECURITY RISK; PERSONNEL DEPLOYED ABOARD SHIP UNDERWAY FOR TWO OR MORE WEEKS (INCLUDING PRE-DEPLOYMENT WORK-UPS); SPECIAL DUTY PERSONNEL AT PARTICULAR OPERATIONAL OR EPIDEMIOLOGICAL RISK; AND THOSE ON 24 HOUR ALERT STATUS. VACCINATION REQUIREMENTS FOR THESE GROUPS HAVE BEEN DETERMINED BY THE CINCS, AS COORDINATED BY THE JOINT STAFF.
 - B) HEALTH CARE WORKERS (INCLUDING CIVILIAN EMPLOYEES AND VOLUNTEERS) WITH DIRECT PATIENT CONTACT (DUE TO THE INCREASED POTENTIAL TO TRANSMIT INFLUENZA VIRUS INFECTIONS TO HIGH-RISK PERSONS) SHOULD BE VACCINATED FROM DOSES RECEIVED BY MTFS FOR HIGH-RISK MEDICAL BENEFICIARIES. BECAUSE OF LIMITED VACCINE SUPPLY, INITIAL IMMUNIZATION OF ALL HEALTH CARE WORKERS WILL NOT BE POSSIBLE.
 - C) MEDICALLY HIGH RISK BENEFICIARIES, AS DEFINED BY THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC), ARE THOSE FOR WHOM CONTRACTING INFLUENZA WOULD RESULT IN POTENTIALLY SIGNIFICANT MORBIDITY AND POSSIBLE MORTALITY, AND INCLUDE: PERSONS OVER 65 YEARS OF AGE ENROLLED IN TRICARE SENIOR PRIME AT AN MTF; ADULTS AND CHILDREN WITH CHRONIC PULMONARY OR CARDIOVASCULAR DISORDERS; ADULTS AND CHILDREN WHO HAVE REQUIRED REGULAR MEDICAL FOLLOW-UP OR HOSPITALIZATION DURING THE YEAR FOR CHRONIC METABOLIC DISEASES (INCLUDING DIABETES MELLITUS), RENAL DYSFUNCTION, HEMOGLOBINOPATHIES, OR IMMUNOSUPPRESSION (INCLUDING IMMUNOSUPPRESSION CAUSED BY MEDICATIONS OR HIV); RESIDENTS OF LONG TERM CARE FACILITIES (WHERE APPLICABLE); WOMEN WHO WILL BE IN THE SECOND OR THIRD TRIMESTER OF PREGNANCY DURING THE INFLUENZA SEASON; AND CHILDREN AGE 6 MONTHS TO 18 YEARS RECEIVING CHRONIC ASPIRIN THERAPY.

SUBSTANCE DEPENDENCE

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by:

Three (or more) of the following, occurring any time in the same 12-month period:

- (tolerance
 - markedly increased amounts to achieve intoxication or desired effect
 - diminished effect with continued use of the same amount
- (withdrawal
 - characteristic withdrawal syndrome
 - substance is taken to relieve or avoid withdrawal
- (substance taken in larger amount or longer period than intended
- (desire or unsuccessful efforts to cut down
- (great deal of time is spent to obtain/use the substance, or recover from its effects
- (social, occupational, recreational **activities** given up/reduced because of substance use
- (substance use continued despite a persistent or recurrent **physical** or **psychological** problem caused or exacerbated by the substance

(pattern of compulsive use)

SUBSTANCE ABUSE

One (or more) of the following, occurring repeatedly in the same 12-month period, or been persistent:

- (recurrent substance use in situations in which it is physically hazardous
- (recurrent substance-related legal problems
- (home, occupational or school **obligations** neglected because of substance use
- (substance use continued despite persistent or recurrent **social** or **interpersonal** problems caused or exacerbated by the substance

(pattern of harmful consequences)

	Must Specify	May Specify
303.90 - Alcohol Dependence	<p>With Physiological Dependence (either tolerance or withdrawal present)</p> <p>Without Physiological Dependence (neither tolerance nor withdrawal present)</p>	<p>Early Partial Remission 1 month \geq 12 months - one or more criteria for dependence met (but not all criteria)</p> <p>Early Full Remission 1 month \geq 12 months - no criteria for dependence met</p> <p>Sustained Partial Remission \geq 12 months - one or more criteria for dependence met but not all criteria</p> <p>Sustained Full Remission \geq 12 months - no criteria for dependence met</p>
305.00 - Alcohol Abuse		<p>Early Full Remission 1 month \geq 12 months - no criteria for abuse met</p> <p>Sustained Full Remission \geq 12 months - no criteria for dependence met</p>

Psychiatry (Code 21)

First a farewell to CAPT Mittauer who has transferred to Naval Medical Command, Portsmouth and a hearty welcome to CAPT Myron Almond who is reporting from the same facility. CAPT Almond has a long and rich background in operational medicine having completed his first four years in the Navy as a submarine officer. He is board certified in Aerospace Medicine, was the senior physician at the Navy Safety Center and in a mature fit of fancy (sorry Myron) decided to do a psych residency that he is just completing.



YEA!!!MORE ALCOHOL!!!!



Just when you thought it was safe to read your SUSNFS psych stuff, back we come with more alcohol info.

CDR Ellis has provided you with a handy-dandy double sided alcohol assessment tool (suitable for framing!) that you can copy, laminate, and keep on your desk for quick reference.

Please note that there is one very important change from the current version of the DSM-IV which just came out with a text revision on 1 July. The criteria for the diagnosis of alcohol abuse is **no longer limited to a pattern within a period of 12 months**. If a person meets one of the criteria either within a 12 month period **OR** *if the substance-related problem has been persistent*, the diagnosis can be made.

This is much more realistic and appropriate. As you know we apply the DSM-IV (or current version) quite strictly when making a psychiatric diagnosis. The panel that offered the text revision noted that the intent was *not* to limit the diagnosis to the 12 month period but that was the effect. Now, when you have a member who had a DUI in 1998 and another DUI in 2000 (or any other pattern outside a 12 month period) you can make the appropriate diagnosis of alcohol abuse.

Here is an email from a flight surgeon who asked an excellent question:

QUESTION:

Dear Capt. W-F,

I just finished reading your article in the July 2000 issue of SUSNFS re: alcohol waivers; however, the article does not address what is required for applicants or candidates.

BUMEDINST 5300.8 (paragraph 5) states applicability to "all aeronautically designated personnel or students," which would include candidates enrolled in a training course.

My question is what is required for "wanna-bes" who are applying for a flight-related training program with prior dx of alcohol abuse or dependence, have been treated, and are in remission. Black shoes are only required to do one year of aftercare, vice aircrew who must do three years.

I have an enlisted member who is more than one year post tx and still in remission, applying for aircrew. Do we need to get him into aircrew aftercare now, or can we wait until a decision on his application, assuming he will be recommended for a waiver, which will need to be decided before his application can be considered?

V/R
Doc Capos
HC-3 flight surgeon

ANSWER:

Dear Doc Capos:

EXCELLENT question!!! The answer is there is no one absolute answer and we make recommendations with each candidate case-by-case. It is best you email or call us with these so you will know up front what is required for a waiver.

The general guidance we use in providing a recommendation is based on an answer to the following question:
(continued on page 18)

(continued from page 17)

tions: What was the diagnosis? What level of treatment did they have? How long ago was it? What is their current diagnosis?

For nonaviation persons who have completed Level I or II (outpatient or intensive outpatient) treatment over three years ago, have been compliant with the aftercare that was given to them at the time, and no longer meet the criteria for active abuse or dependence, do the following: give them a copy of BUMED 5300.8 (and document this on the SF 600 which they sign); ensure they know the requirements for abstinence and acceptance of their condition; and submit a waiver request as you would with anyone.

The three major problems that pop up outside this guidance are:

1. **They only went to IMPACT** which is common for a groundpounder with only mild abuse. Regardless of how long ago it was, they need to go through at least outpatient treatment.

2. **They completed treatment sometime less than 3 years ago.** We don't want to apply different standards to someone not initially in three years of aftercare (not more or less stringent than aviation personnel) so the usual recommendation is to do the remaining aftercare as if they were already in aviation; therefore if they had treatment one year ago they would be required to have the remaining two years of aftercare IAW 5300.8.

3. **The member currently is still drinking.** They need a full assessment (at minimum by you and the SACO – and the ATF if there is any evidence of an active diagnosis). If they do not meet the criteria for current alcohol abuse (and had an abuse diagnosis before), then go to the general guidance and #1 and #2 above. If they do meet the criteria currently (or had the diagnosis of dependence and are not abstinent) they need to be evaluated for retreatment or increase in the level of treatment and are again back at square one with all the requirements of a newly diagnosed aviation person (i.e. no waiver for 90 days, all initial waiver requirements and three full years of aftercare).

I hope this answers the mail and thanks for reading the SUSNFS stuff.

BLOOPERS AND BZ's

To avoid terminal embarrassment of anyone, the names of those responsible for the bloopers will remain confidential. . . . Please pay attention to detail and ask us questions to avoid being the subject of a blooper. Unfortunately, the errors in the packages we receive both reflect upon your professionalism AND have a negative effect on the mission.

We had two packages for initial alcohol waivers that on the surface looked fair (meaning they included most of the pieces of paper required IAW BUMED 5300.8) but the content was pretty nasty.

It was pretty clear that the flight surgeons involved (total of four as there was one local board of flight surgeons) did not bother to read the enclosures.

As you well know (or should by now!) the required attendance at AA meetings for the first year is three meetings per week with four per month for years two and three of aftercare. In one package, the psychiatrist evaluation and the member's statement clearly said the member was attending only one AA meeting a week. The LBFS stated "member demonstrated required AA attendance."

The second package was even more egregious in that the SACO stated "the member attended 2-3 AA meetings per month for the required six months of aftercare." He also included the signature pages of this attendance that showed 1-3 AA meetings per month. The flight surgeon stated "member attending AA regularly." In both of these cases, they are NOT in compliance with the instruction and therefore are NOT eligible for a waiver. Compliance with BUMED 5300.8 is a shared responsibility of the member and the flight surgeon. Once the flight surgeon clearly educates the member and documents this education on a SF600, the primary responsibility is the member's. The lack of attention to policy requirements and detail in both of these cases now prevent the members from doing their job and contributing to their mission. The CO's of these flight surgeons will not be happy with their role in the delay.

To avoid many of these problems do the following:

1. ALWAYS give the member a copy of BUMED 5300.8, document that you have reviewed this with the member and have them sign the SF 600.
2. ALWAYS include BUMED 5300.8 as a reference for the LBFS in alcohol cases.
3. ALWAYS ensure that your DAPA/SACO and local ATF has the guidelines for treatment and aftercare of aviation personnel diagnosed with alcohol abuse or dependence.

BZ's

Thanks to all of you who do a great job and the 99% who are dedicated to professionalism and doing the best you can every day. Part of professionalism is asking questions if you don't know and can't find the answer. We are ALWAYS happy to get calls and emails.

Four flight surgeons and one RAM get a big **BZ** for a job well done over the past year. These folks stand out as a "cut above" for either an outstanding job on one case or consistent excellence.

LT Pusateri from Keflavik for his involvement in two tough cases where he identified problems/potential problems not identified by several other flight surgeons previously and performed the proper assessments and referrals. His attention to detail when reviewing a record and taking the time to ask the members questions helped him stand out from the crowd.

LT Petrucci from China Lake who submitted a fantastic alcohol waiver package that allowed us to immediately give a thumbs up and not need other info. Also for calling us with questions about other cases.

LT Karen Lehew and LT Renee Brown for an outstanding job of also identifying an alcohol abuse and dysthymia diagnosis from 15 years ago that had *never* been addressed nor waived. They approached the issue logically, methodically, and submitted the proper waiver request allowing us to quickly take action.

Each of these LTs took the time to do the right thing in the right way for aeromedical safety and mission accomplishment. Please learn from their actions and take an extra minute to review the full medical record and make some calls.

A newly graduated RAM, **LCDR Brad Smith** did an outstanding job arranging for an eval for one of his aviators; he provided us with the Boxer letter, full prior evals, SF 600's, consult, and phone numbers and emails for necessary points of contact – ***TWO WEEKS BEFORE THE MEMBER'S APPT!!!!*** Frequently the eval process and final recommendations are delayed because the flight surgeon has not been proactive about getting us the info we need to make a recommendation.

THANKS!

And one final thanks to a flight surgeon (who will kindly remain unnamed) who gets both a blooper and a BZ for the same case. He sent me an email recently entitled, "**I slept too much in class.**" He requested info on some basic alcohol waiver info that he realized he should've known, got confused by looking at the waiver guide, and admitted he wished he had paid more attention in class and asked me to spoon-feed him the info.

Although of course we prefer you pay attention and learn the basics in class, we **ALWAYS** prefer that you take the honest approach if you perhaps were in a trance during a class (been there, done that!) and are now clueless. Just be honest and call/email. Much better to swallow your pride and do that than not do the right thing which *perhaps* will have no repercussion, but in the worst case scenario could cause significant morbidity or mortality.

CAPT D.J. Wear-Finkle, MC, USN
code211@nomi.med.navy.mil
DSN 922-2257 ext. 1081
(850) 452-2257 ext. 1081

Ophthalmology

FY 00 REFRACTIVE SURGERY UPDATE AND FY 01 CONSIDERATIONS:

The information in this section is taken from a brief I prepared for the SG's staff and the Tri-Service PRK Working Group that met in late August. Moreover, I have fielded a variety of questions in the past couple of weeks from RADM Mayo (Surgeon to the Joint Chiefs of Staff), which indicates continued Line interest at the highest levels. I have shared much of the following information with him.

Navy Refractive Surgery Web Page ('Corrective Eye Surgery' linked to the BUMED home page http://Navymedicine.med.navy.mil/PRK/refractive_surgery_information was completely revised and updated in April 2000. This has worked out very well thus far, and continues to serve as the principal source of information for potential new accessions, current active duty and reservists considering surgery (either as part of the PRK Warfighter Program or in the civilian sector), and medical department personnel that are involved with the program.

Navy Optometry Web Page: <http://chppm-www.apgea.army.mil/dcpm/vcp/navopnet/navopnet.htm>: This web site has a refractive surgery page with several additional useful links, including a Power Point Presentation that CAPT Frank Butler and CAPT Clint Fletcher put together for use in briefing line audiences on refractive surgery. You can download and modify it to suit your needs if called upon to give a presentation.

POLICY UPDATES:

Changes in policies for potential NEW ACCESSIONS: All forms of refractive surgery remain disqualifying for new accessions (per DoD policy), but waivers can be granted. Current Navy policy, as outlined in the APR 00 revision of 'Complete Policy for Corneal Refractive Surgery Physical Standards and Waiver Policy' (a copy of this BUMEDINST is linked to the Corrective Eye Surgery web page), states:

- a. RK no longer waiverable.
- b. PRK waiverable for all personnel (Note: accession into aviation community requires acceptance and participation in a current clinical study).
- c. LASIK waiverable for all personnel except those entering aviation, diving and SPECWAR communities (Note: a study of LASIK in SPECWARFARE accessions is planned in FY01).
- d. Other refractive procedures (i.e. INTACS, etc.) generally not waiverable at this time.

Changes in guidelines for waiver approval in NEW ACCESSIONS (based on civilian and Navy outcomes and stability post-op):

- a. Waiting time post-op reduced from 12 to 3 months.
- b. Vision post-op correctable to meet visual existing standards (vs. prior requirement that BCA be correctable to 20/20).
- c. Post-op refraction stable (no more than 0.50 D change in sphere or cylinder) measured at least one month apart (vs. six months apart).
- d. No change in other requirements (i.e. pre-op refractive error can not exceed entry criteria; there can be no complications that interfere with visual function; copies of medical records must be provided).

Changes in policies for current ACTIVE DUTY + RESERVISTS: None of the refractive surgery procedures are disqualifying except:

- a. Aviation personnel can only have PRK, and must have it performed at one of our MTFs as part of a current clinical study.
- b. LASIK is disqualifying in aviation, diving and SPECWARFARE communities and will not be waiverable at this time (Note: a study of LASIK in SPECWARFARE accessions is planned in FY01).

Pre-op and Post-op guidelines established for current ACTIVE DUTY + RESERVISTS that undergo refractive surgery, regardless of whether it is performed in a DoD Laser Center or at member's own

expense in the civilian sector. These include:

- a. Prioritized consult system based on member's CO endorsement
- b. Pre-op counseling for members pursuing surgery in the civilian sector
- c. Post-op return to duty guidelines (regardless of whether the surgery was performed in a DoD laser center or in the civilian sector)

SUMMARY OF CLINICAL STUDIES

Report for ONR (Office of Naval Research) was completed last fall by the NMC San Diego refractive surgery staff. It detailed results from a larger study population (>400) with longer follow-up (2 years), and confirmed successful results as previously reported from prior Navy PRK reports regarding visual outcomes, stability, satisfaction, etc.

NVG evaluation after PRK (30 subjects at Fallon, small decrease in starlight NVG performance at 2 weeks post-op with recovery by 4 weeks, no long term decrement).

Initial evaluation of PRK in non-pilot aircrew (40 aircrew, all aircrew "up" by 4 weeks post-op, UCVA and BCVA results better than previously reported, satisfaction with procedure very high)

Comparison of cycloplegic agents in the preoperative evaluation of refractive surgery patients (15 subjects, Mydracyl provides an adequate cycloplegia compared to cyclogyl and results in a faster return to work)

Initial evaluation of LASIK (100 subjects, follow-up continuing, UCVA, BCVA, and refractive accuracy similar to PRK, safety profile similar to PRK)

Visual performance after PRK (100 subjects, follow-up continuing, a transient decrease in contrast sensitivity noted, high myopia has a more prolonged visual recovery, night driving performance evaluation ongoing)

Establishing normative values of the small letter

contrast test in aviators (500 aviation subjects, normative data established)

Prolonged exposure to hypobaria and hypoxia after LASIK (a slight myopic shift in refraction during the first 24 hours of exposure to 14,000 ft altitude, similar to PRK, which recovers by 48 hours of exposure, a slight loss of contrast sensitivity noted).

Survey (conducted by HSO staff in Jacksonville) of aviation personnel (Pilots/NFOs and aircrew) concluded that interest in PRK surgery is likely to be significantly higher than the 30% estimate used to formulate the Navy BCA in FY 98.

Ongoing studies:

Hyperopic PRK (n=100 patients): ~60 patients treated, excellent outcomes to date.

Stability of healed LASIK flap: Study just beginning – animal model had to be changed from chicken to rabbit for technical reasons.

Eval of INTACS (n=90 patients): 30 patients treated, excellent outcomes to date.

Eval of wavefront device: Data being collected, but not being used to perform surgery.

Retention of Designated aviators after PRK (n = 500 patients): 125 treated to date (including ~20 pilots), all with excellent outcomes and 95% returning to full duty within 4 weeks.

Accessing new student naval aviators after PRK (n=200 treated and 200 control): Protocol in review at NOMI.

National Eye Institute satisfaction survey being evaluated for use in the Navy population.

Upcoming Studies:

Evaluation of LASIK in BUD/S students

Comparative study of 4 Excimer lasers (VISX, Au-

(continued on page 22)

(continued from page 21)

tonomous, B+L and Nidek) in LASIK procedures: (n=125 patients with bilateral treatment for each of the 4 lasers) Anticipate start date in early FY 01

ARMY AND AIR FORCE PROGRAMS

Air Force

Policies: Have largely mirrored changes in Navy policy, but differ in that they are not as comfortable with LASIK at this time. The post-op waiting time for new accessions is 12 months. Collaborative Air Force and Navy PRK studies in aviation personnel continue. Launch and announcement of the start-up of their program is anticipated sometime in the second quarter of FY 01.

Sites: San Antonio will be joined by Wright Patterson and USAF Academy this FY. Additional sites for FY 01 will depend on funding.

Army

Policies: Have largely mirrored changes in Navy policy, but they are more comfortable with moving into LASIK. The post-op waiting time for new accessions is 6 months. Details on how services will be provided/prioritized are still under development.

Sites: Ft Bragg just stood up. Studies there are being conducted on PRK and LASIK. Plans call for standing up 4 additional sites in FY 01 with AMP funding (Ft. Cambell, Ft. Hood, Tripler and Landstuhl) as well as Walter Reed with research funding.

PRK vs. LASIK issues:

One of RADMM Mayo's questions, which has been asked by many other people inside and outside military medicine, is why we haven't fully transitioned to LASIK if it is the civilian community standard. Simplifying my answer to him, we're getting there and hope to be in a position in another year to have enough first hand experience of our own to render our own opinion. While the down time post-op is less with LASIK (i.e. faster return to duty) and visual outcomes are similar for both procedures, the potential morbidity and longer term effects of LASIK are things we'd like to be more comfortable with before making it our procedure of choice. Our follow-up of the first 100 LASIK patients treated in San Diego, the comparative study of 600 people over the next year, the study of BUDS students, and the animal model may better enable us to make such a decision. Meanwhile, we've changed accession and retention policies to reflect 'acceptance' of LASIK, and don't prohibit service members from having this procedure except in the Aviation, Diving and SPECWARFARE communities.

CAPT Peter Custis MC, USN
Specialty Leader



(USNS Mercy Navy Prosthetic Technician in the Phillipines

DVIC Photo)

Operational Risk Management

By now I hope that many of you have had the opportunity to take one of the Navy courses on ORM. If not, please check with your aviation safety officer to find out when the next one will be. ORM provides you with several useful tools to apply to your day-to-day aeromedical decision-making and to use the same language your line counterparts use – thus giving you significant credibility. In this format we will cover a VERY abbreviated “how to” followed by an example from a recent case.

You may wish to copy and keep the front and back of the ORM card below. Similar cards (and lots of info on ORM) are also available on the website for the Navy Safety Center: www.safetycenter.navy.mil. Also look at CDR Bellenkes article in the Spring SUSNFS.

The first step you take in any case you are trying to assess, is to define the **HAZARD**, which is anything that may have a negative effect on mission effectiveness (i.e. in your realm is anything of an aeromedical nature that might contribute to a mishap or failed mission). Next, you assess the **HAZARD SEVERITY (HS)** which is defined as the “worst credible consequence that can occur as a result of the hazard.” HS is defined in terms of the numerals I through IV, with 1 being the worst (death) and IV being a minimal threat.

OPERATIONAL RISK MANAGEMENT

Please rate the **HAZARD SEVERITY** (the worst credible Consequence which can occur as a result of the hazard):

- I** – hazard can cause death, facility loss, or grave damage to national interests
- II** – hazard can cause severe injury, illness, property damage, damage to service interests, or degradation to efficient use of assets
- III** – hazard may cause minor injury, illness, property damage, damage to service interests, or mission degradation
- IV** – hazard presents a minimal threat to personnel safety or health, property, national, service, or command interests, or efficient use of resources.

Next you assess the **MISHAP PROBABILITY (MP)** of the hazard from “A = likely to occur immediately or frequently” to “D = unlikely to occur.” This part is quite straightforward as you can see from the card below.

Please rate the **MISHAP PROBABILITY** (the probability that a hazard will result in a mishap or loss)

A – likely to occur immediately or within a short period of time; expected to occur frequently

B – probably will occur in time

C – may occur in time

D – unlikely to occur

Risk Assessment Code:

1 – critical

2 – serious

3 – moderate

4 – minor

5 – negligible

	A	B	C	D
I	1	1	2	3
II	1	2	3	4
III	2	3	4	5
IV	3	4	5	5

Once you have the HS and MP just plug them into the **RISK ASSESSMENT CODE (RAC)** grid and you have your RAC. This is a great way to compare two or more possible courses of action on an issue or prioritize the issues identified in the planning or assessment of an evolution. It is particularly useful in general medicine if making a decision between two medications and two courses of action.

An example of applying the tools of ORM to a specific situation is demonstrated in the following case. A flight surgeon submitted a package on an aviator and suggested that they did not think the diagnosis of alcohol abuse was substantiated and wanted our opinion. What the aviator told the flight surgeon was quite different from what the aviator told the substance abuse counselor as documented in the eval. This is not unusual and it is likely that someone trained in the substance abuse field may be more skilled than many physicians in making the proper assessment. I concurred with the substance abuse counselor who made the diagnosis of alcohol abuse (and suspect dependence).

Here are several paragraphs of my return letter to the flight surgeon. Please try to follow along with the logic used in the ORM assessment of diagnosing and treating alcohol abuse vs. not doing so.

“I hope the medical personnel involved in this case can make the transition from trying to prove something doesn’t exist to considering the possibility/probability that it does. To those of us with many years experience in the substance use field,

(continued on page 24)

(continued from page 23)

after reviewing the package, it is easy to say it is more likely than not that XXXXXX has a problem with alcohol which merits the diagnosis of alcohol abuse and he needs the appropriate medical treatment. You do not need to prove this beyond a shadow of a doubt – just meet the criteria.

*Another recommendation. Whenever in doubt, **apply the tools of operational risk management.** In this case there are two possible scenarios; one, if the decision was made to over-rule the diagnosis made by the experienced evaluator and diagnose him with just one alcohol related incident and not abuse. The second, if he is diagnosed with alcohol abuse. In the first case the **hazard** would be that he would not receive treatment and would continue to drink, which would both put him at risk for the myriad of alcohol-related health risks and might have alcohol contribute to a flight safety issue (given the lingering effects of alcohol even after the BAL is 0). The **hazard severity** of untreated alcohol abuse/dependence is obviously a “I.” The **mishap probability** would be a “C” – may occur in time. This gives a **risk assessment code** of 2, or serious. If the member undergoes treatment for alcohol abuse and remains sober for his remaining time in aviation, the hazard severity (he might not like it) would be a IV (inefficient use of resources) with the probability either an “A” or a “B” (that the member won’t like it!) which equals a risk assessment code of 3 or 4. Also, understanding that the greater the resistance to the diagnosis of an alcohol misuse disorder, the more evidence of denial.*

*One last comment is to follow the principles of medical ethics in decision-making: do no harm. There is great potential harm that may come from not affording proper medical treatment to an alcohol misuse disorder whereas very little harm that can arise from an alcohol treatment program. I have only seen positive outcomes from those who gain insight through a 12-step program. The effect on his career has already occurred through **his** personal actions and choices; not through any action taken by medical personnel.”*

Can you see how these tools can be applied to the myriad of aeromedical issues that confront us daily? Of course in 90% of the cases you make a reasoned decision based on training and experience. In 10% of cases, having ORM to offer additional decision-making tools (or validate your intuitive process) can be invaluable – both to you and your CO.

CAPT D.J. Wear-Finkle, MC, USN

code211@nomi.med.navy.mil

DSN 922-2257 ext. 1081

(850) 452-2257 ext. 1081

MED 233

Search and Rescue Medical Technicians (HM NEC 8401): Action Memorandum to stand-up SAR Med Tech “C” school at Naval Aerospace Medical Institute has been approved by MED 02 and OPNAV. We are awaiting MED 05 endorsement. The school will consist of 4 weeks of training concentrating primarily on in-flight medical care.

Aerospace Physiology Technician (HM NEC 8409): Current manning levels for Aerospace Physiology Technicians are at 80.9%. Recent recruiting efforts from the Aviation Survival Training Centers (ASTC) have been successful. With July 00 “C” schools seats filled and the increase in “C” school seats from 4 to 8 in FY01, overall manning levels should drastically increase by Jan 01. “Bravo Zulu” to the ASTC’s!

Aviation Medicine Technician (HM NEC 8406): Manning levels are at 87.8%. There are 33 students in the Jul 00 AVT class. With retention levels high for this community, overall manning levels should reach 98% by Jan 01.

HMC(FMF) Tom Schaefer, USN

TSSchaefer@us.med.navy.mil

Phone: DSN 762-3450

202-762-3450

Fax: 202-762-3464

Dietary Supplements

DIETARY SUPPLEMENTS ARE NOT CURRENTLY ALLOWED IN AVIATION PERSONNEL

LCDR Paul Antony provides the following reference for Flight Surgeons. Though not allowed in aviation personnel, the Flight Surgeon is encountering patients taking dietary supplements, especially with the increased utilization of the Flight Surgeon as a primary care provider taking care of **NON-AVIATION PERSONNEL**. This go-by is a tool that Flight Surgeons can use to make sure patients are approaching these products in a safe manner, as well as being able to explain the dangers associated with supplements.

Supplementing your diet with “energy pills”, herbal medicines, or high dose vitamins can be dangerous. Always discuss any use of dietary supplements with your flight surgeon or physician. Just because it is “natural” does not mean it is safe.

- Ask the right questions?** Bring the bottle and any other information you have to your doctor. Be prepared to discuss these questions:
- Why are you taking this supplement?
 - What are ALL the ingredients?
 - What are the possible side effects of taking this supplement?
 - Will it interact with any other medicines?
- Supplements are risky.** What you should know:
- Supplements do not have to meet the strict FDA safety & efficacy guidelines required of prescription medicines.
 - Serious injuries like seizures, strokes, even death have occurred from improper use of supplements.
 - **Use of dietary supplements is not authorized in Naval flight personnel.**
- General guidelines.** General guidelines for those considering using supplements:
- **Choose well-known brands.** Quality & ingredients vary widely by manufacturer.
 - **Drink lots of water.** Staying hydrated is critical to prevent many of the complications associated with supplement use.
 - **Watch out for side effects.** Even mild side effects like nausea & diarrhea can interfere with your performance. Be especially careful when starting new supplements.
 - **More is not better.** Do not take a larger dose than recommended on the product label.
 - **Eat a well balanced diet.** Supplements do not make up for a poor diet.
 - **Inform your healthcare provider.** Make sure your doctor knows what supplements you are taking. Especially if you are being prescribed other medications.
- Get more information.** Do your homework before using any dietary supplement. Links to information on dietary supplements can be found at: www.med1.com
- <http://www.med1.com>**

For additional information and to download this card go to: <http://www.med1.com>
The information on this card is not a substitute for professional medical advice.

Some Common Dietary Supplements

Name(s)	Description	Cautions
Creatine	Natural amino acid found in all sources of meat. Popular with body builders.	Few serious adverse effects noted in healthy individuals. Stay well hydrated. Dehydration with creatine use associated with cramping, seizures, and death.
Androstenedione	Testosterone precursor. Popular with body builders.	Potentially severe and permanent adverse effects, even with short-term use. Side effects same as anabolic steroids incl: acne, impotence, liver and other tumors.
Gingko Biloba	May improve circulation. Used to enhance brain blood flow & function.	Prolongs bleeding times. Many active ingredients, mechanism of action unknown.
Echinacea	Immune booster. Used to prevent respiratory infections.	Should not be used continuously for more than 2 months.
St. John's Wort	Widely used anti-depressant. Increases serotonin levels.	Psychoactive compound.
Kava	Anxiolytic. Widely used in Europe as sleep aid.	Psychoactive compound. Alcohol adds to depressant effects.
Glucosamine/ Chondroitin Sulfate	Used to relieve/prevent joint pain. Claims to repair cartilage.	Few serious adverse effects noted in healthy individuals.
Ephedrine/Ma Huang	Stimulant, mood enhancer, appetite suppressor. Popular for weight loss. Blended into body building products.	Seizures, heart rate and BP abnormalities all associated with use. Long term use may lead to dependency.
Saw Palmetto	Treatment for BPH. Benign prostatic hypertrophy. May increase urinary flow.	Few serious adverse effects noted in healthy individuals.
Vitamin C	Antioxidant. 500-1000 mg/day may be useful. RDA 60mg/d.	High dose side effects include diarrhea, gas and potential risk of kidney stones. Some diets recommend up to 10000mg/d.
Vitamin E	Antioxidant. 400-800 mg/day may be useful. Dose range from RDA 30mg/d.	Prolongs bleeding times. Dosages up to 3200 mg/day appear to be well tolerated.
Selenium	Antioxidant. 70-200 mcg/d may be useful. Best taken with Vit-E. Involved in thyroid hormone production and may reduce cataract formation. RDA 70mcg/d.	Toxic effects at dose as low as 900 mcg/d. Includes: birth defects, hair loss, vomiting, anxiety, and depression.
Chromium	Increases effectiveness of insulin. Improves cellular uptake of glucose. May improve fat utilization and increase lean muscle mass. 50-200 mcg/d is considered safe & effective.	Few toxic effects noted below 1000 mcg/d.

RAM Corner

New Drug for Treatment and Chemoprophylaxis of Malaria

A combination drug, atovaquone-proguanil hydrochloride (Malarone), was approved by the Food and Drug Administration on 14 JUL 00. Atovaquone-proguanil will provide an alternative drug for the treatment and prevention of chloroquine-resistant *Plasmodium falciparum* and give physicians greater flexibility in the treatment of malaria. This article will discuss the activity, adverse effects, and indications of atovaquone-proguanil, review the guidelines for chemoprophylaxis of malaria, and propose consideration of the use of atovaquone-proguanil in personnel on flight status.

Atovaquone-proguanil

Atovaquone (Mepron) is a broad-spectrum antiparasitic drug that has been used extensively as an alternative drug for the prevention and treatment of *Pneumocystis carinii* pneumonitis in persons with AIDS who are allergic to trimethoprim-sulfamethoxazole. It is usually well tolerated in this population. Adverse effects include rash (20%), nausea (20%), and diarrhea (20%). These symptoms are severe enough to require discontinuation in 9% of patients. Less common side effects include vomiting, pruritis, headache, fever, and insomnia.

Atovaquone as a single agent for the treatment of malaria demonstrates good control of parasitemia but has an unacceptably high recrudescence rate [1]. Proguanil (Paludrine) has been available in the United Kingdom and Canada, but not the United States, for the prevention of malaria in sub-Saharan Africa. The combination of atovaquone and proguanil is synergistic and results in enhanced efficacy [1]. Malarone (Glaxo Wellcome Inc) is a fixed drug combination of 250 mg of atovaquone and 100 mg of proguanil hydrochloride and achieves cure rates of greater than 98% [1]. The adverse effects of abdominal pain, anorexia, nausea, vomiting, diarrhea, and coughing occur at similar rates to other malaria treatments.

Chemoprophylaxis of Malaria

Current guidelines for the treatment and prevention of parasitic infections, including malaria, can be obtained from the Medical Letter web site www.medicalletter.com at the "Public Reading Room" area [3].

The drug of choice for the chemoprophylaxis of malaria in areas with chloroquine-resistant *Plasmodium falciparum* is **mefloquine** 250 mg weekly. Mefloquine is not recommended for personnel on flight status because of the risk of neuropsychiatric side effects: insomnia, nightmares, anxiety, irritability, and depression in 1:200 to 1:500; and psychosis or seizures when used for prophylaxis in 1:10,000 to 1:13,000 [2].

Doxycycline 100 mg daily is an alternative regimen and is highly protective. Compliance is a problem because of the daily dosing. Adverse effects include gastrointestinal disturbances, vaginal moniliasis, and photosensitivity reactions. Doxycycline is not considered disqualifying for flight if there is close flight surgeon follow-up, grounding for 72 hours at the initiation of therapy, and a recommendation by the NEPMU.

Another alternative is **chloroquine** 500 mg (base) weekly or **chloroquine plus primaquine** 45 mg (base) weekly. These drugs are NCD if no side effects are present. Personnel receiving primaquine should be screened for G-6-PD before prophylaxis to avoid those individuals at risk for hemolytic anemia. Primaquine should not be used in pregnancy. Chloroquine will not prevent infections with chloroquine-resistant *Plasmodium falciparum* so a three-pill regimen of pyrimethamine-sulfadoxine (Fansidar) should also be available for presumptive treatment of malaria if medical facilities will not be readily available.

Aeromedical Considerations of Malaria Chemoprophylaxis

The drug of choice for chloroquine-resistant *Plasmodium falciparum*, **mefloquine**, is
(continued on page 28)

(continued on page 27)

contraindicated in aviation personnel because of neuropsychiatric side effects. One alternative, doxycycline, is effective but shows poor compliance because of the requirement for daily dosing and runs the risk of photosensitivity reactions in tropical environments. The other alternative, chloroquine, is not active against resistant strains and requires the availability of presumptive treatment. The combination of atovaquone- proguanil may provide another effective alternative with a tolerable side-effect profile. Further review by NAMI will be required.

References

1. Looareesuwan S, Chulay JD, Canfield JD, Hutchinson DB. Malarone (atovaquone and proguanil hydrochloride): a review of its clinical development for treatment of malaria. Malaria Clinical Trials Study Group. Am J Trop Med Hyg 1999;60:533-41.
2. Weinke T, Trautmann M, Held T, Weber G, Eichenlaub D, Fleischer K, Kern W, Pohle HD. Neuropsychiatric side effects after the use of mefloquine. Am J Trop Med Hyg 1991;45:86-91.
3. Drugs for parasitic infections. Medical Letter 2000;42: www.medicalletter.com

CDR R WESLEY FARR, MC, USNR
Naval Aerospace Medical Institute
rwfarr@nomi.med.navy.mil

(continued from page 10)

AVT of the Year Nomination Message

8. SUBMISSION FORMAT FOR 2000 ACCOMPLISHMENTS ONLY: STANDARD NAVAL LETTER AS BELOW:

A. RANK, NAME, UNIT ASSIGNED

TIME IN SERVICE	(YEARS/MONTHS)
DATE ASSIGNED AS AVT	(MONTH/YEAR)
DATE REPORTED FOR CURRENT DUTY	(MONTH/YEAR)
PRD/EAOS	(MONTH/YEAR)
ASSIGNED EDVR BILLET RANK	(E-?)
ELIGIBLE FOR ADVANCEMENT	(YES/NO)
RECORD OF NJP LAST 18 MONTHS	(NO/YES-EXPLAIN)
2000 PRT SCORES	(BOTH)

B. COMMAND DUTIES AND RESPONSIBILITIES:

CURRENT DUTY ASSIGNMENT
PRIMARY DUTIES
COLLATERAL DUTIES
DEPLOYMENTS: UNIT/LOCATION/LENGTH (WEEKS OR MONTHS)

C. EDUCATION (MILITARY AND CIVILIAN)

SCHOOLS ATTENDED - GRADES
CORRESPONDENCE COURSES COMPLETED
TRAINING CERTIFICATES RECEIVED

D. PROFESSIONAL PERFORMANCE

E. MILITARY BEHAVIOR

F. APPEARANCE

G. ADAPTABILITY

H. COMMUNITY SUPPORT

I. SPECIAL CONTRIBUTIONS

J. AWARDS RECEIVED 1999-2000

K. CAREER INTENTIONS/GOALS

Mystery Case

You are enjoying your beautiful sunny day aboard the Navy's newest aircraft carrier off the coast of Virginia in August, when your AVT comes a knocking. They have the weekly sick-call numbers for you to sign off. Excellent AVT, in whom you have the upmost confidence. The sick-call report has quite a few flu diagnosis, which peaks your interest.

The AVT reports that there has been a "bug" going around with people complaining of malaise, fatigue, shortness of breath, nausea, vomiting, diarrhea, and headache. More than the run of the mill viral syndrome routinely seen on the ship, but quite commonly seen during flu season.

Your interest is peaked, however, since it is NOT flu season. Further review of the report shows all of our "flu" cases are coming from the paint shop. With your epidemiology brain cells on full alert, you head on down to the shop to do an investigation. There must be high levels of volatile compounds in the air causing the illness (the number of people involved and seniority of some makes the huffing idea a passing thought), you think as you head down to save the day.

In the paint shop, you are surprised to find it is an immaculately clean area with no odor. A quick check of the IH handbook led you to believe that you would be able to smell the culprit agent. Nevertheless, you press on and go searching for the LPO. You are informed that he is out smoking. You soon learn that most of the shop smokes (not in the shop of course) and in particular the ones who were sick.

Out in the smoking area you find the LPO and he tells you the same symptoms that the AVT reported. A little extra nugget on information, however, is that the people seem to feel a little better when they come in for their shifts.

Convinced the illness is work related, you head to the MSDS's and get the LPO to tell you what they have been doing. The LPO informs you that they have had an increase stripping (not clothes) tempo. With the MSDS's and investigation, you determine the culprit.....

(continued on page 31)

Influenza Reminder

With the expected shortage of flu vaccine, as well as the delay in availability, you can expect to have a much busier winter illness season. This would be a good time to brush up on the expected symptoms of influenza versus routine URI and what your response will be if you determine you are seeing an outbreak.

Expect to see the drug companies pushing their new influenza treatments. The effectiveness of the treatments are controversial. There is also a time element in appropriate use. With the media stepping up coverage of the possibility of an outbreak and the drug companies pushing their "effective" treatment options, you WILL have patients demanding the latest drugs. Read up on them and have a plan on what you are going to tell them.

Good luck.....



(Ordnancemen on CVN 71 USS Roosevelt
DVIC Photo)

Intrusive Leadership

ROUTINE

R071907ZZ SEP 00

FM COMSUBLANT NORFOLK VA//00//

TO ALSUBLANT

RMKS/1. IN THE PAST TWO WEEKS WE HAVE HAD THREE SERIOUS, LIFE CHANGING MOTOR VEHICLE MISHAPS INVOLVING SIX OF OUR SAILORS. THESE ACCIDENTS ARE ALL THE MORE TRAGIC IN THAT AT LEAST TWO WERE EASILY AVOIDABLE. INJURIES INCLUDE ONE BROKEN NECK, FOUR CRUSHED VERTEBRA, TWO COLLAPSED LUNGS AND AN AMPUTATED ARM. I KNOW THAT NONE OF US EXPECTED TRAGEDY TO STRIKE SO SWIFTLY. WHAT WENT WRONG?

2. MOST OF OUR SAILORS RECOGNIZE THE INHERENT RISKS OF DRIVING ON OUR HIGHWAYS. THEY EXERCISE SOUND JUDGEMENT AND COMMON SENSE IN IDENTIFYING UNSAFE ROAD AND WEATHER CONDITIONS, IN ENSURING THEY ARE PHYSICALLY ALERT, AND THEY KNOW THEIR OWN AND THEIR VEHICLE'S/MOTORCYCLE'S LIMITATIONS. BUT THERE WILL ALWAYS BE A SMALL HANDFUL WHO, AS A RESULT OF THEIR YOUTH, IMMATURITY OR FOR OTHER REASONS, BELIEVE THAT ACCIDENTS "CAN'T HAPPEN TO ME", AND BEHAVE ACCORDINGLY. THESE ARE THE SAILORS WE NEED TO IDENTIFY AND CALIBRATE.

3. INTRUSIVE LEADERSHIP, THE KIND A PARENT PROVIDES FOR HIS TEENAGE CHILDREN, WILL ALWAYS BE REQUIRED FOR THIS SMALL PORTION OF YOUR CREW, NOT JUST IN TRAFFIC SAFETY, BUT IN OTHER AREAS OF THEIR LIVES AS WELL. BY INTRUSIVE, I MEAN THE KIND OF "GET IN YOUR FACE" LEADERSHIP GUIDANCE AND DIRECTION THAT IS SELDOM DESIRED OR ENJOYED BY THE RECIPIENT. I EXPECT YOU AND YOUR CHAIN OF COMMAND TO BE PROACTIVE IN ALL AREAS OF LEADERSHIP, BUT THIS ONE IN PARTICULAR. THE YOUNG SAILORS WHO NEED THIS "UP CLOSE AND PERSONAL" APPROACH WILL PROBABLY NEVER THANK YOU, BUT THEIR LOVED-ONES, AND OUR NAVY, WILL BE MOST GRATEFUL.

4. VADM GROSSENBACHER SENDS.



(P-3 over USS COLUMBUS (SSN 762) and Korean SS-66

Defense Visual Information Center)

(continued from page 29)

You have determined that Methylene Chloride is causing carbon monoxide intoxication in these patients that already have elevated carboxyhemoglobin levels secondary to smoking.

CO intoxication occurs after inhalation of methylene chloride vapors, a volatile liquid found in degreasers, solvents, and paints removers. Liver metabolizes as much as one third of inhaled methylene chloride to CO. A significant percentage of methylene chloride is stored in the tissues, and continued release results in elevation of levels for more than twice as long as with direct CO inhalation. While once very commonly used, methylene chloride is being phased out where possible.

Carbon Monoxide Poisoning

CO poisoning is the most common cause of poisoning in the United States. It accounts for more cases of poisoning than all other agents combined. A 1994 emergency medicine department survey indicated there are more than 40,000 emergency department visits per year from CO poisoning. Yet this may only be the tip of the iceberg. Studies suggest only one third of CO poisonings are diagnosed as such. Given the frequency of CO poisoning in the general population, it's likely to occur in your practice.

What is CO and Where does it come from?

CO is a colorless, odorless, tasteless, non-irritant gas. The primary source of CO is incomplete combustion of carbon based materials such as gas, wood, tobacco, etc. Smokers have a persistently elevated COHb level. An often unrecognized source of CO is from exposure to methylene chloride (MC). MC is a component of paint thinner strippers. It is readily adsorbed via the lungs and metabolized in the liver to CO. The metabolism of MC to CO continues even after exposure has stopped. Consequently, symptoms may not develop immediately while using the paint stripper but arise later.

Why is CO toxic?

The most readily measurable action of CO is its binding to hemoglobin in place of oxygen. CO's

affinity for hemoglobin is 230-250 times greater than oxygen. Thus, hemoglobin preferentially binds CO even when CO is present at low levels. The outcome is decreased oxygen delivery at the tissue level.

Another important site of action is in the mitochondria where CO binds at the cytochrome a3 level and interrupts electron transport and ATP synthesis. This appears to affect glycogen utilization. It has been shown that the effects of CO on the mitochondria persist even after COHb has cleared.

CO acts on platelets inducing high levels of peroxynitrate, a highly oxidative chemical, resulting in vascular damage. Excitatory amino acids, activated neutrophils and high levels of catecholamines and reactive oxygen species have also been found after CO exposure resulting in cellular damage.

The Clinical Picture of CO Poisoning

CO exposure can be either chronic or acute. The subacute and chronic exposures tend to present with less severe symptoms such as nausea, vomiting and headache. These are rather non-specific and can be easily misdiagnosed.

Mild clinical manifestations include dizziness, headache, fatigue, nausea and vomiting. Moderate symptoms may be ataxia, blurred vision, disorientation, tachycardia and tachypnea. Severe manifestations can be coma, myocardial ischemia, myonecrosis, seizures and ventricular dysrhythmias. The symptoms run quite the gamut and are nonspecific to CO exposure.

CO poisoning can also present with persistent or delayed neurologic sequelae. Persistent neurologic sequelae are symptoms that arise at the time of CO poisoning and do not resolve with treatment. These include headache, numbness, visual and taste/smell impairments, sleep disturbance, memory problems and attention/concentration difficulties. The majority of deficits are found in memory and attention/concentration testing.

Delayed neurologic sequelae arise in patients who initially demonstrate a full recovery then 3 to 4 weeks later develop sequelae. They are usually chronic headaches, cognitive deficits and personality changes. Rarely, delayed neurologic sequelae are more severe. Thus it is important to follow-up patients recovering from CO poisoning.

(continued on page 32)

(continued from page 31)

Making the Diagnosis of CO Poisoning

The cherry red skin coloring is only seen in 2% of severe, acutely intoxicated individuals. Chronic, low level exposures are more insidious. The presenting symptoms are easily attributed to other common illnesses. Hence the large number of undiagnosed cases.

The best clue in making the diagnosis of CO poisoning is a good history. But if the patient isn't aware of their exposure how do you get them to tell you about it? Basically you have to include questions like: Anyone else in the home or workplace sick? Are friends you do recreational activities with ill? Is there a periodicity to their symptoms, i.e. only have them after stripping paint off furniture? Are symptoms worse in the winter when the gas furnace is running? Are household pets sick? (Animals generally have a faster metabolic rate and are more susceptible to CO exposure.) Do they have a CO detector in their home? If so what has it been reading? Of course you can get a COHb level, in fact if the patient is unconscious you should, but remember it doesn't have to be elevated for the patient to have suffered CO poisoning.

Treatment for CO Poisoning

The mainstay of treatment is to give oxygen, support ventilation if needed and monitor for cardiac dysrhythmias. The use of hyperbaric oxygen, HBO, is somewhat controversial. Various studies have looked at the issue but randomized, prospective clinical trials are lacking and the existing data are conflicting. Proponents for the use of HBO argue that:

- COHb is cleared faster as the half-life is reduced to approximately 23 minutes at 3 atmospheres
- intracranial pressure and cerebral edema are decreased as HBO induces cerebral vasoconstriction - HBO speeds the release of CO from respiratory cytochromes which may mitigate intracellular damage
- HBO has been shown to deter oxidative injury after CO poisoning

However, the use of HBO to treat CO poisoning is not without consequence. Patients with CO poisoning who receive HBO therapy have a 3% risk of seizure. The cost of treatment with HBO is 4 to 5 times higher than treatment with normobaric oxygen. That does not include cost of transportation to the chamber. There also seems to be a six-hour post exposure window when HBO treatment is effective thus limiting its useful availability.

The recommendations of the Undersea and Hyperbaric Medical Society for the treatment of CO poisoning are to use HBO in patients with signs of serious CO intoxication regardless of their COHb level. Thus if the patient has suffered loss of consciousness, neurologic deficit, cardiovascular dysfunction or severe acidosis they should receive HBO treatment. Additionally, pregnant women with CO poisoning should receive HBO as CO will concentrate in the fetus and can result in developmental deficit or even fetal death.

Prevention! Prevention! Prevention!

Most exposures are not occupationally related, thus interventions at home can have a large impact on patient exposure. So, educate your patients and your staff about the sources of CO and symptoms of intoxication. Most accidental CO poisonings result from a defective heating system that could be avoided by proper maintenance and annual inspection. Another common source is car exhaust. Don't "warm the car up" when it's parked in the garage or operate it with a damaged exhaust system. If the cookout gets rained-out don't move the gas or charcoal grill indoors to cook. Make sure the fireplace is properly functioning and has good ventilation. Encourage people to have CO monitors installed in their home. Get one yourself. Get the idea?!

LT T.J. Buratynski, MC, USNR
Doctjb@aol.com

Selected SUSNFS Merchandise Items Catalog



T-Shirt: SUSNFS "FS - Yesterday and Today"



T-Shirt: FS Wings



Tank Top Shirt: SUSNFS "Leonardo"



Running Shorts



Sweat Shirt: SUSNFS "Leonardo"



Sweat Shirt: FS Wings

Selected SUSNFS Merchandise Items Catalog



Sweat Pants: SUSNFS Logo, NAOMI Logo, FS Wings



Polo Shirt: FS Wings



FS Wings 'Skrunchie', Bow Tie, Tie; SUSNFS Patch



Pocket Reference, Travel Mug, CD: Ultimate FS



Sweetheart FS Wings Necklace, 14K Gold/Diamond Chip



Full Size 14K Gold Flight Surgeon Wings



The Society of U.S. Naval Flight Surgeons

PO Box 33008
NAS Pensacola, FL 32508-3008

Telephone: COM (850) 452-2257 ext. 1056/1075; FAX (850) 452-5194; DSN 922-

Address Change, Subscription/Membership Renewal, Price List, and Order Form (Jun 2000)

#	ITEM	PRICE		SUB-TOTAL
	<i>(Indicate Size and Color Where Appropriate)</i>	<i>Non-Member/Member</i>		
___	T-shirt: SUSNFS "FS - Yesterday and Today" (M, L, XL)	24.00	19.00	_____
___	T-shirt: SUSNFS "Leonardo" (M, L, XL, XXL)	24.00	19.00	_____
___	T-shirt: FS Wings (children's XS, S, M; adult S, M, L, XL)	24.00	19.00	_____
___	Tank Top Shirt: SUSNFS "Leonardo" (M, L, XL)	24.00	17.00	_____
___	Running Shorts: (Blue with Gold SUSNFS Logo) (M, L, XL)	20.00	17.00	_____
___	Sweat Shirt: SUSNFS "Leonardo" (S, M, L, XL)	40.00	35.00	_____
___	Sweat Shirt: FS Wings (M, L, XL)	40.00	35.00	_____
___	Sweat Pants: SUSNFS Logo (S, M, L, XL)	30.00	24.00	_____
___	Sweat Pants: NAOMI Logo (S, L, XL)	5.00	5.00	_____
___	Sweat Pants: FS Wings (S, M, L, XL)	30.00	24.00	_____
___	Polo Shirt: FS Wings (M, L, XL) (Navy Blue, White)	38.00	33.00	_____
___	SUSNFS Patch	6.00	5.00	_____
___	FS Wings Tie	22.00	20.00	_____
___	FS Wings Women's Bow Tie	5.00	5.00	_____
___	FS Wings 'Skrunchie'	1.50	1.50	_____
___	Travel Mug: SUSNFS Logo	6.00	5.00	_____
___	CD: The Ultimate Flight Surgeon Reference (TriService)	20.00	15.00	_____
___	Naval FS Pocket Reference to Mishap Investigation	15.00	10.00	_____
___	Sweetheart FS Wings Necklace, 14K Gold/Diamond Chip	200.00	160.00	_____
___	Petite Sweetheart FS Wings Necklace, 14K Gold/Diamond Chip	150.00	120.00	_____
___	Sweetheart Physiologist/Psychologist Wings Necklace, 14K Gold	75.00	65.00	_____
___	Full Size 14K Gold Flight Surgeon Wings	240.00	200.00	_____
___	Mess Dress 14K Gold Flight Surgeon Wings	160.00	128.00	_____
___	Refrigerator Magnet: FS Wings (price includes shipping)	2.00	1.50	_____
	SUBTOTAL			_____

Shipping and Handling:

For all items (do not include refrigerator magnet):

\$4.00 for 1st item, \$1.00 for
each additional item

For jewelry items - postal insurance (add for 1st jewelry item only):

\$2.00

Membership or Subscription Renewal:

___ years at \$20.00/year

Life Membership/Subscription:

\$300.00

Total Amount Enclosed _____

Name and Address: Is this an address change? Y / N **Are You a Current Member of AsMA?** Y / N

Name _____ Rank _____
(Last) (First) (MI)

Circle All That Apply: MC / MSC / MD / DO / PhD / USN / USNR / Active / Reserve / Retired / Other _____

Are You - a Flight Surgeon? Y / N - a Graduate of a Residency Program in Aerospace Medicine? Y / N

Street _____ City _____ State _____ Zip _____

Phone: Home (_____) _____ Work (_____) _____ E-mail _____

Command _____ Current Billet _____ Projected Billet _____

MILCON construction contracts for new Water Survival Training Facilities at NAS Pensacola, NAS Norfolk and MCAS Cherry point have been authorized and construction is expected to begin as soon as contracts have been finalized. The NAS Whidbey Island and NAS Patuxent River projects are under review due to construction and material costs.

Naval Aviation Schools Command (NASC) and the Marine Corps Development Command (MCDC) have requested existing billets be re-designated as Aerospace Physiologists (AP). Each command is submitting a manpower change request to bring APs onboard to better meet their mission requirements. Once again the combined value of aeromedical training and line experience has proven to be a recognized asset.

**Remember to get your
SUSNFS Gedunk!**

by using the order form
on the inside of the back cover



The Society of U.S. Naval Flight Surgeons
P.O. Box 33008
Naval Air Station Pensacola, FL 32508-3008

Forwarding And Return Postage Guaranteed
Address Correction Requested

Museum of Naval Aviation

The Museum of Naval Aviation **MAY** allow an exhibit commemorating Naval Flight Surgeons. A group at NAMI is working on ideas for the exhibit. We would appreciate your input. Please send any suggestions. Please do NOT send any memorabilia or artifacts. Information on progress will be passed in SUSNFS.

LT Christopher Lucas, FS, RAM
220 Hovey Rd.
Pensacola, FL 32508

celucas@nomi.med.navy.mil

SUSNFS EDITORIAL POLICY

The views expressed are those of the individual authors and are not necessarily those of the Society of U.S. Naval Flight Surgeons, the Department of the Navy, or the Department of Defense.

This Newsletter is published quarterly by the Society on the first of January, April, July and October of each year. Material for publication is solicited from the membership and should be submitted via computer file on floppy disk or e-mail attachment in Rich Text Format or MS Word ©.

Submissions should clearly indicate the author's return address and phone number. All submissions should reach the Editor one month prior to the scheduled date of publication. Correspondence should be sent to:

CAPT M.R. Valdez, MC, USN
Editor, SUSNFS Newsletter
P.O. Box 33008
NAS Pensacola, FL 32508-3008

FAX: COM (850) 452-5194 DSN 922-5194
E-mail: namiramdir@nomi.med.navy.mil

NON-PROFIT
ORGANIZATION
U.S. POSTAGE
PAID
PERMIT NO. 459
PENSACOLA, FL