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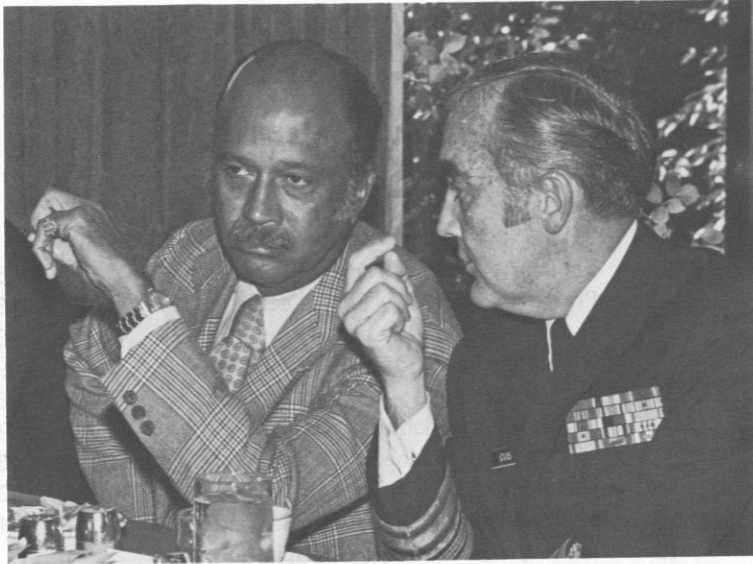
Credits: All pictures are Official Navy Photographs unless otherwise indicated.

Honored on our front cover is HM3 P.I. Valdez, USN (deceased), who was posthumously awarded the Navy Cross for saving the lives of 2 Marines during action in Vietnam.

The ocean escort ship USS *Valdez* (DE-1096) bears his name. (See page 46)

The continued support of the Media Division, Educational Programs Development Dept., Health Sciences Education & Training Command (HSETC), NNMC Bethesda, Md., is gratefully acknowledged.

Happy 199th Anniversary to the U.S. Marine Corps.



THE SURGEON GENERAL'S CONFERENCE.—Assistant Secretary of Defense (H&E), The Honorable J.R. Cowan, M.D. (left) confers with VADM D.L. Custis, MC, USN (right), the Navy Surgeon General. Dr. Cowan was guest speaker at the luncheon on 24 Sep 1974.

from the Chief

I have spoken often in the past about the military members of the Navy Medical Department; now I would speak to an equally vital part of our Department — our civilian employees. Their 10,000-plus billets represent a wide spectrum of occupations and professions. Their efforts and energies have helped shape our Medical Department into an effective and dedicated military-civilian team. Since civilian members are so widespread throughout our organization and are consequently an integral part of us, the events that affect them will also have an impact on the Medical Department as a whole. It is to some of these events that I wish to address my remarks this month.

Without question one of the most pressing problems confronting Navy Medicine today is the relative unavailability of Medical Corps replacements for physician positions, traditionally staffed by military personnel.

In the face of our medical officer shortage, attention has been focused upon the increased utilization of civilian medical officers. Working with our sister services and the Office of the Secretary of Defense, some limited progress has been made. As you know, an across-the-board exception has been made to the limitations of the Dual Compensation Statutes, as they pertain to our retired military medical officers. Now, as a Navy *civilian* physician, the retired medical officer can draw the full pay of his GS job without any reduction whatsoever in his military retired pay. I look to this important exception to further open up a very logical and invaluable Navy physician recruitment source; and, I look to every commanding officer to do all he can to effectively tap that source.

Another encouraging development has been the increased local latitude of activities in hiring medical officers. Thanks to the "Direct-Hiring Authority" recently granted by the Civil Service Commission to the Department of Defense, our activities may now make "on the spot" job offers to qualified candidates for civilian medical officer positions up to the GS-14 level. No advance filing of applications or certification from Civil Service

Commission registers will be involved. In a similar vein, we are now looking at any and all Navy or BUMED requirements or procedures which may inhibit, delay, or discourage the employment and/or retention of civilian medical officers. Should any of you have any observations or suggestions on this particular point, please share them with me.

Unfortunately, the biggest roadblock to civilian physician recruitment is the one over which we continue to have the least control — i.e., salary limitations. Special salary rates, tied to the GS schedule, have been in effect (but largely ineffective), for a number of years. Current entry levels range from \$20,125 for a GS-11 to \$31,806 for a GS-15. A recent proposal to the Civil Service Commission which we have strongly endorsed, would set entry levels at the top step of the medical officer's special salary table, i.e., from \$24,769 for a GS-11 to \$40,752* for a GS-15. The fate of this particular proposal remains uncertain.

I might also add that the Civil Service Commission is currently conducting a Government-wide study of staffing problems in the various health occupations. Time and time again, throughout the study, salary levels of physicians seemed to surface as the number one problem. For our part, the problem cannot readily be solved or even significantly alleviated if physician salaries continue to be tied to the GS schedule. The solution, perhaps, lies in the development and application of a separate grading and compensation system for medical officers throughout the Federal service.

In regard to the management side of the house, there is a move to strengthen the civilian personnel management evaluation system. In recent years the Civil Service Commission has become increasingly critical of the nature and extent of the Navy's systems and procedures for evaluating the effectiveness of its civilian personnel-management programs. In response to the most recent CSC report on the Navy's evaluation program, Secretary Middendorf committed Navy (specifically OCMM) to the development of a strengthened personnel management-evaluation system. A SECNAV notice is now being drafted, which describes a proposed program of on-site activity reviews to be conducted by personnel specialists from OCMM's field offices. I think this approach will be good for BUMED and its field activities. In most cases, we must look to Consolidated Civilian Personnel Offices not under our control for personnel servicing and civilian personnel leadership. These on-site reviews will give our commanding officers a regular, systematic way of evaluating that service and leadership without going up one command line and down another.

The above "events," I hope, will aid in further building a closer and more effective working relationship between all of our personnel. We in Navy medicine have benefited enormously from our resourceful civilian colleagues; the concept of a teamwork approach to solving problems is essential to efficient operations, and the provision of an ever increasing level of responsive health care.

*The current statutory salary maximum rate is \$36,000.



Aloha Medicine: Navy Health Care in Hawaii

*Hawaii, island of flowers,
Where dreams go that want to come true . . . **

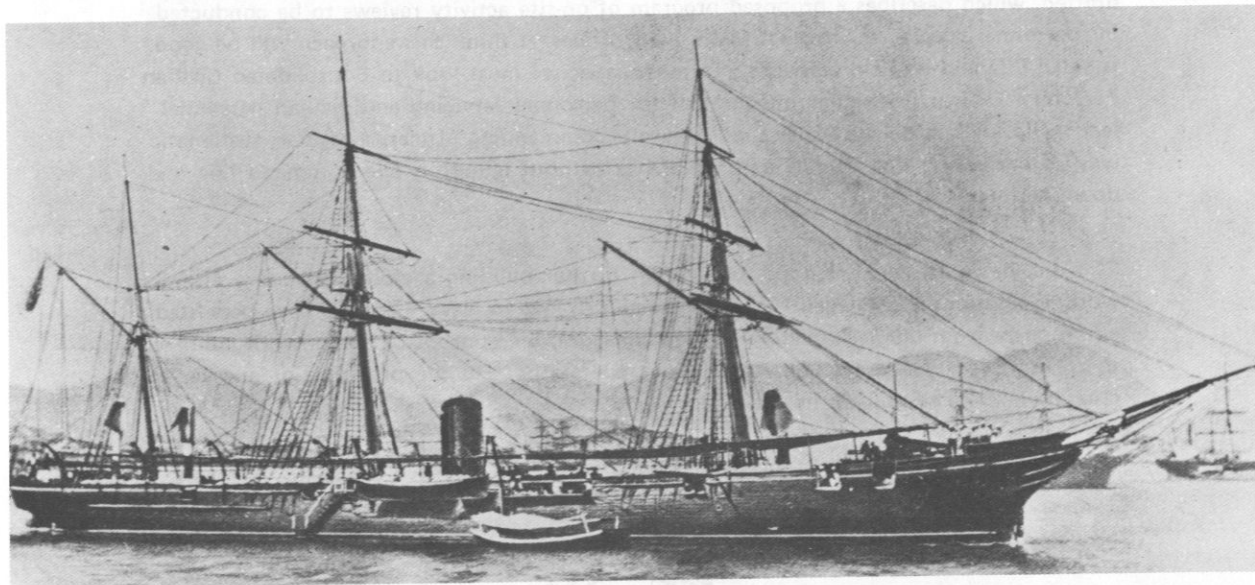
One of the newest Hawaiian dreams come true makes its home near Pearl Harbor's Makalapa Gate: it's the new Pearl Harbor Branch of the Naval Regional Medical Clinic, a modern, \$2.7 million medical facility that consolidates under one roof all medical functions of the Pearl Harbor area. The facility was dedicated on 8 Mar 1974.

Navy medicine has been part of Hawaiian history for 84 years, ever since the USS *Iroquois* sailed into Pearl Harbor, bringing the first military medical assistance for naval personnel stationed at the Islands. Back in 1890, when the *Iroquois* arrived, the islands were ruled

by King Kalakaua. One year later, he was succeeded by his sister, Queen Liliuokalani, who was deposed in 1893. A provisional government was then set up with the aim of annexing the Islands to the U.S. Since the attempt at annexation was initially unsuccessful, a republic was established in 1894. Annexation was finally accepted by joint resolution of Congress in 1898, and the Territory of Hawaii was established on 14 Jun 1900.

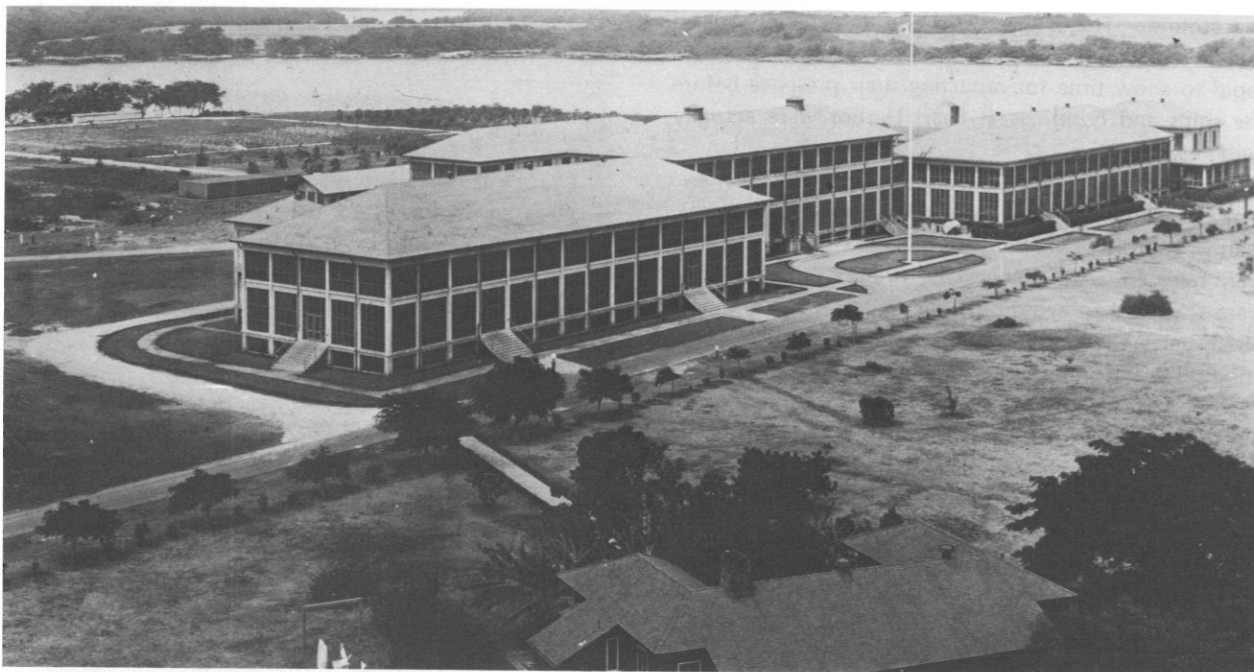
CONSTRUCTION BEGINS

The changing status of the Hawaiian Islands, and the accompanying increase in Navy personnel assigned there, brought about a need for more substantial medical care than could be provided by local physicians.



WHERE IT ALL BEGAN.—Navy medicine sailed into Hawaii in the USS *Iroquois* in 1890. After the ship returned to the U.S. in 1901, the first small Naval dispensary was built in Honolulu.

*From LEGEND OF THE RAIN, by Ken Darby and Eliot Daniel. Reprinted with permission of Longridge Music, Inc., Sherman Oaks, Calif.



PEARL HARBOR.—Nav Hosp Pearl Harbor looked like this in 1921. In the foreground are the nurses' quarters; the main hospital group is in the center, and the site for future wards is located in the rear.

So in 1901, when the *Iroquois* returned to the U.S., a small dispensary was built at the old naval station in Honolulu. Equipment in the dispensary was meager and the staff was small. All patients who had a serious disease or who required major surgery, special diets and nursing were sent to Queen's Hospital for treatment at a cost of \$1.50 per day.

Early in 1909, Navy Surgeon General RADM Presley M. Rixley, MC, USN recommended that a naval hospital be built at Pearl Harbor. Congress authorized the construction of this hospital in 1911. The selected site consisted of 42 acres of waterfront land in the western section of the Navy Yard at Pearl Harbor, facing the channel and Waipio peninsula.

Construction of the hospital was completed on 1 May 1915, but the first patient was not received until 23 Jul 1917. Although the hospital had a patient capacity of 74, during its early years the patient census was usually no more than 25. Nav Hosp Pearl Harbor featured one large ward on the second floor of the main building, and a small urology ward on the second floor of the main operating building. A dispensary, laboratory, bakery, storeroom, power plant, toilet facilities, and mortuary were situated in the basement.

In Aug 1919, Secretary of the Navy Josephus Daniels and ADM William B. Fletcher, USN, Commandant of the 14th Naval District, inspected the hospital and authorized the construction of additional units and

quarters. With the completion of these new buildings in Apr 1921, the first floor of the old ward building was reconstructed into a large ward, and the basement area was remodeled into an eye, ear, nose and throat clinic.

By May 1929 a new laboratory and mortuary building, animal house, nurses' quarters, junior officers' quarters, pharmacists' quarters, and 2 hutments had been added to the hospital complex. In 1933 the hospital building and grounds at Pearl Harbor, and the equipment and stores contained within the complex, were valued at over \$1.3 million.

Naval activities at Pearl Harbor continued to expand, and by 1938 it had become obvious that the hospital was inadequate to provide the required medical services. Construction of a new hospital on Aiea Heights was begun. In order to temporarily alleviate the overcrowded conditions at Nav Hosp Pearl Harbor, Mobile Base Hospital No. 2 was shipped to Hawaii in Nov 1941, for installation near the new construction.

ATTACK ON PEARL HARBOR

Then, on 7 Dec 1941, war engulfed Pearl Harbor. At 0745 a few staff members of Nav Hosp Pearl Harbor noticed about 20 Japanese planes flying immediately over, and to the channel side of the hospital building. They were traveling at high speed, 75 to 150 feet above

the ground. The planes were not immediately identified as belonging to Japan, and the action was too rapid to allow time for reporting their presence before the ships and buildings at Pearl Harbor were actually being attacked.

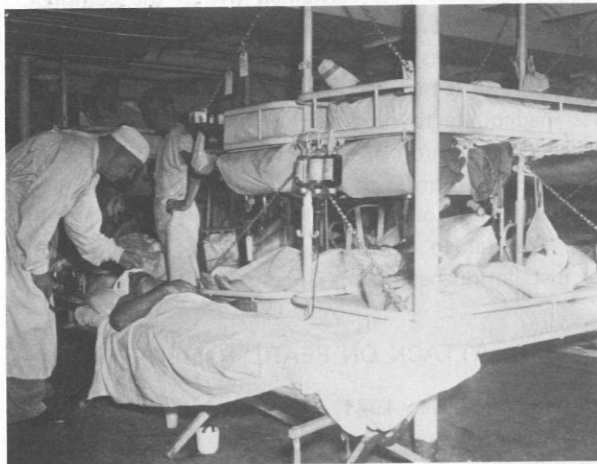
All members of the hospital staff immediately assembled at the hospital. Stations for air attack were manned by 0800. Patients in the locked ward and brig were released. Ambulances and fire-fighting apparatus were scattered to avoid possible mass destruction. By 0815, battle dressing stations were manned in the operating suite and in all ward dressing rooms.

About 10 minutes after the attack had begun, a blazing Japanese plane dived directly toward the front of the main hospital building. It swerved to the left, struck the corner of the laboratory building and crashed, setting fire to nearby quarters.

By 0900 the casualties were flowing into the hospital in a steady stream, and were distributed to the various dressing stations. Four operating teams were organized to work in the main operating suite. A receiving station was set up for minor injuries. The basement of the laboratory, and the nurses' quarters were converted into temporary morgues. Ambulatory patients were evacuated from the hospital and transferred to 2 adjacent frame buildings, and to 5 hospital tents set up behind the hospital.

A total of 452 battle casualties were admitted to the hospital as patients on 7 Dec 1941. (The patient census at midnight on 7 Dec was 960.) Three-hundred and thirteen dead were brought to the hospital that day.

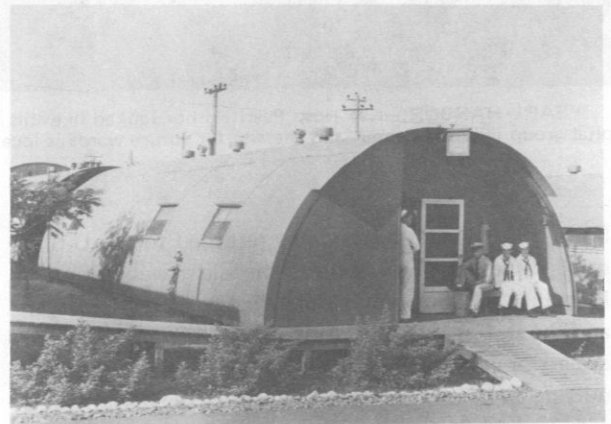
Various medical officers from lost ships reported to the hospital for duty throughout the morning. Red Cross nurses and the wives of military personnel volunteered to augment the nursing staff.



PACIFIC THEATER, ACT I.—Burned and injured patients received care aboard the hospital ship *USS Solace* following the attack on Pearl Harbor, 7 Dec 1941.



MOBILE HOSPITAL.—Mobile Base Hospital No. 2, sent to Hawaii in 1941 to relieve overcrowded conditions at Nav Hosp Pearl Harbor, shared the brunt of hospitalization for the entire central Pacific area during World War II. Not yet uncrated, this mobile hospital provided personnel, supplies, and equipment to treat 110 patients on the very day that Pearl Harbor was attacked.

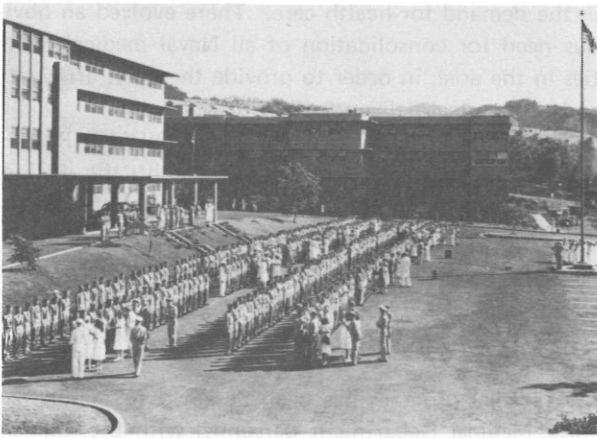


MCGREW POINT.—Located at McGrew Point in Aiea Heights, Oahu, Territory of Hawaii, Naval Base Hospital No. 8 replaced Mobile Hospital No. 2 in 1943. Naval Hospital No. 8 subsequently closed in late 1945.

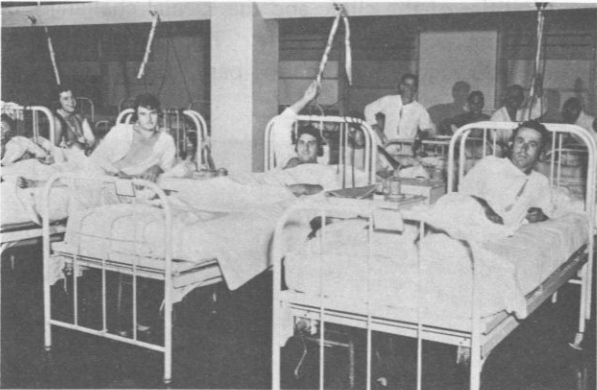
Anchored in Pearl Harbor, the hospital ship *USS Solace* was unharmed by the attack and had admitted 132 patients by the end of the day. An additional 80 ambulatory patients were treated and returned to their duty stations.

During the first year of the war, Nav Hosp Pearl Harbor and Mobile Hospital No. 2 provided hospital treatment for the entire central Pacific area. In Nov 1942 a permanent, modern hospital was opened at Aiea Heights. Although this hospital had been planned as a replacement for the old one at Pearl Harbor, the increased operational demands required that the Nav Hosp Pearl Harbor continue to function.

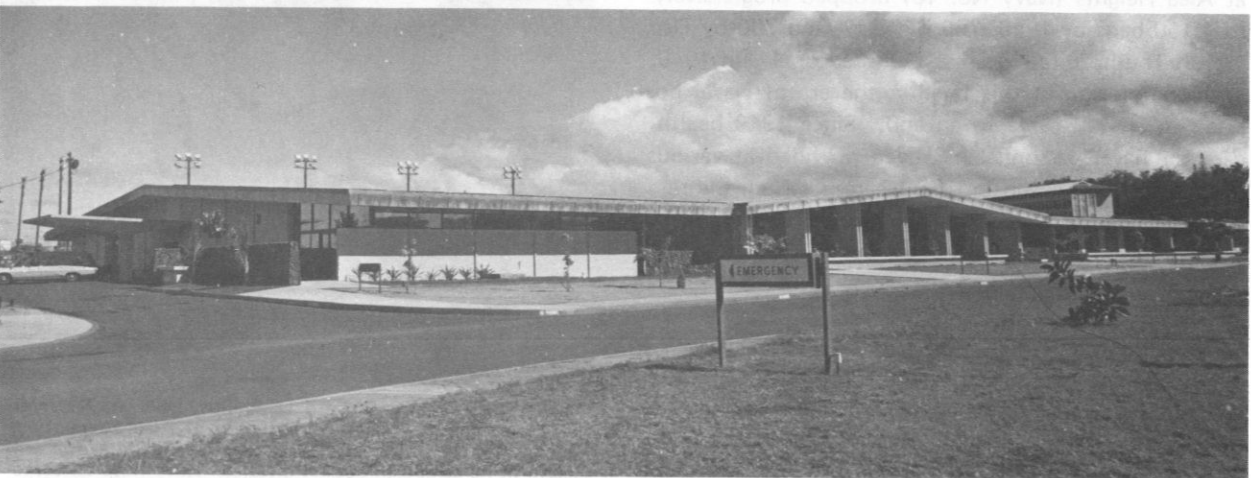
On 18 Aug 1943, the activities of Nav Hosp Aiea Heights were separated from those of the Nav Hosp Pearl Harbor command, and the former facility was officially designated U.S. Naval Hospital, Navy No. 10.



AIEA HEIGHTS.—Still under construction at the time of the attack on Pearl Harbor, Nav Hosp Aiea Heights was added in support of the war effort in Nov 1942. When this hospital was disestablished in Jun 1949, the era of Naval hospitals in Hawaii was brought to a close.



GETTING THE NEWS.—Patients at Nav Hosp Aiea Heights (U.S. Naval Hospital, Navy No. 10) hear the radio announcement that the Japanese have accepted the Potsdam surrender terms. Patients in the foreground, listening in by earphones, take the news quietly; but patients in the background react to the news with evident jubilation.



HAWAIIAN DELIGHT.—The Navy Medical Department's newest dream come true in the Hawaiian Islands is the Pearl Harbor Branch of the Naval Regional Medical Clinic (NRMC), Pearl Harbor. The new facility was dedicated on 8 Mar 1974.—PAO, NAV-REGMEDCLIN Pearl Harbor, Hawaii.

Casualties during the war years required thousands of hospital beds. Mobile Hospital No. 2, originally built as a temporary measure, was decommissioned on 31 Oct 1943; it was replaced by the new Naval Base Hospital No. 8, located at McGrew Point in Aiea. An additional 3,000 beds were gained when a new temporary hospital was established on Moanalua ridge.

The year 1943 saw tremendous growth in both the physical facilities and the staff of Naval medical facilities in Hawaii. The increase in the number of newly constructed wards occurred during a critical period in which battle casualties, numbering hundreds in each wave, were brought in from the Solomon, Gilbert, and Marshall Islands. Furthermore, a major evacuation of patients to the mainland had to be accomplished before the admission of each succeeding wave of casualties from the forward areas.

Throughout 1944, the history of Navy medicine in Hawaii was intimately entwined with sea and land-battle activity in the Pacific area. At the beginning of the year, there were 1,709 patients in U.S. Naval Hospital, Navy No. 10, many of whom were veterans of the invasion of the Gilbert Islands; 1,358 casualties were admitted from the Tarawa action alone.

Efficiency in admitting patients had improved by the time casualties began to arrive from Saipan, Guam, and Tinian in the Marianas Islands. Between 25 Jun and 14 Sep 1944, a total of 7,667 patients was admitted to Nav Hosp No. 10; 2,255 of these patients had been transported from the forward areas by air. The greatest number of patients admitted on any one day was 1,169 on 3 Jul 1944. During the year, 39,006 patients (from a total of 41,872 admissions) were either evacuated to the mainland or returned to duty. The hospital reached its peak patient load on 31 Mar 1945,



WELCOME ROOM.—This waiting room at the new Pearl Harbor Branch of the NRMC Pearl Harbor, might more accurately be called a "welcome room." It reflects the apparent care taken by the Navy to provide a convenient, pleasing atmosphere for patients.—PAO, NAVREGMEDCLIN Pearl Harbor, Hawaii.

with a census of 5,676. But by the end of the year, demobilization had begun. Staff officers and enlisted personnel were ordered back to the U.S. for separation, and there were many rapid shifts in hospital-capacity requirements.

Designed as a 3,000-bed facility, the temporary hospital at Moanalua was reduced to 1,000 beds by Sep, and was decommissioned on 1 Nov 1945. Nav Hosp No. 8 at McGrew Point was also phased down and closed in late 1945.

Throughout 1946 the emphasis was placed on demobilization. A total of 12,439 patients was evacuated to the U.S. Most patients were returned via the Naval Air Transport System, although some surface transportation was used during the early part of the year.

The authorized patient capacity of the naval hospital at Aiea Heights (Navy No. 10) dropped progressively to 1,150 beds by 1946, 750 by 1947, and 700 by Dec 1948. The hospital was disestablished on 1 Jun 1949. With the closing of this facility, the era of Naval hospitals in Hawaii came to an end. Since 1949 health care for naval personnel has been provided at various naval dispensaries, and inpatient care has been the responsibility of the Tripler Army Medical Center.

POST WORLD WAR II

After the hectic activity of the war years, Navy physicians and supporting health-care personnel welcomed the opportunity to practice medicine in a relaxed atmosphere more in keeping with the tranquil beauty of the Hawaiian Islands. But the passing years brought with them gradual increases in the numbers of Navy men and women stationed in Hawaii, and steady growth

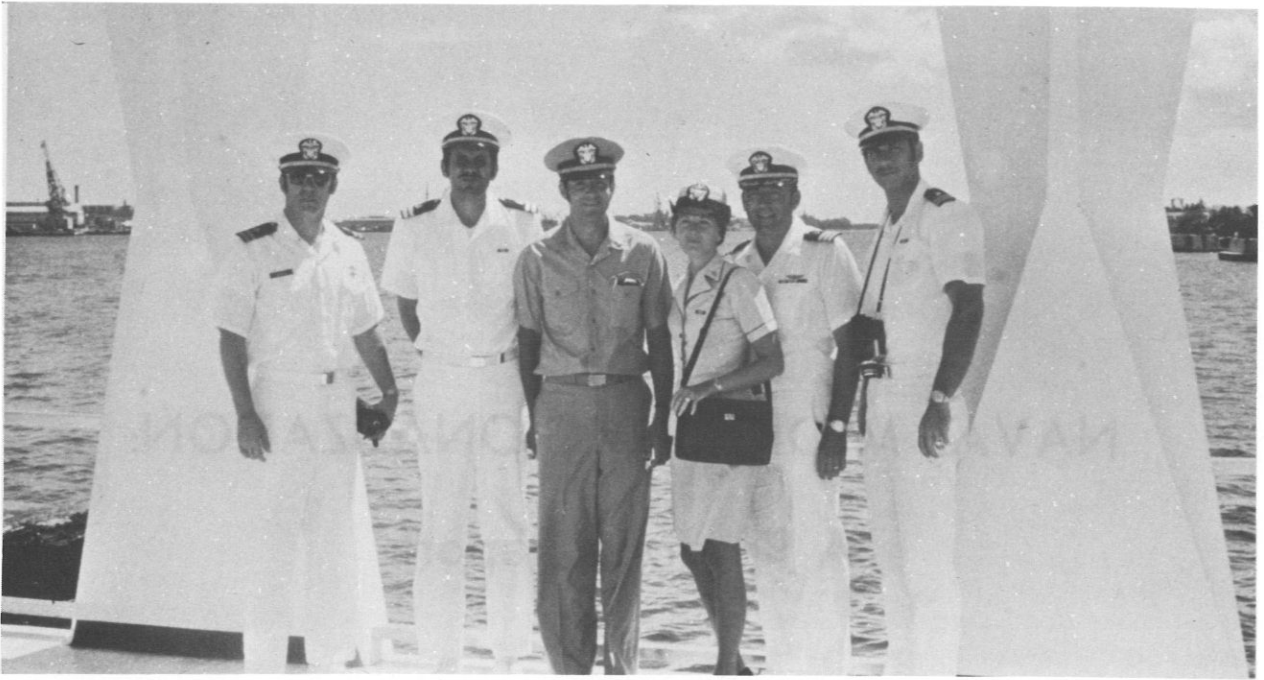
in the demand for health care. There evolved an obvious need for consolidation of all Naval medical facilities in the area, in order to provide the most efficient and economical delivery of health care.

The Naval Medical Regional Clinic (NRMC) Pearl Harbor was established in Jan 1973, with the distinction of being the only region in the Navy system without a naval hospital as its central unit. The Clinic is comprised of three major outpatient facilities — Pearl Harbor, Naval Air Station Barbers Point, and Marine Corps Air Station (MCAS) Kaneohe — plus several small dispensaries.

A special program has been designed to familiarize Navy Medical Department personnel with the multiple units, dispersed population, and available consultation services pertinent to health-care delivery in the region. The commanding officer of NRMC Pearl Harbor meets with each incoming group of officers to discuss the responsibilities of the clinic and the special challenges of Navy medicine, Hawaiian style. The newcomers are escorted through the submarine base, the diving tower,



BIG GUN.—HMC Richard D. Philips, USN, uses a hypodermic jet gun to immunize a student at Aiea Elementary School; the Navy thereby assists the Hawaii State Board of Health in its campaign against measles. Navy hospital corpsmen helped set up 4 clinics in the Aiea-Pearl City area, to administer free measles inoculations provided by the State.—PAO, Hq 14th Naval District, Pearl Harbor, Hawaii.



WELCOME TO HAWAII.—Newly arrived in Hawaii, Navy Medical Department officers participate in an orientation program conducted at the NRMCC Pearl Harbor. The course concludes with a visit to the USS *Arizona* Memorial.—Courtesy of LCDR Harris S. Vernick, MC, USN, NAVREGMEDCLIN Pearl Harbor, Hawaii.

and Tripler Army Medical Center; they also meet with the CINCPACFLT surgeon and assistant fleet surgeon to discuss medical responsibility for the largest fleet in the world. The orientation ends with a tour of the USS *Arizona* memorial.

Navy medical personnel quickly succumb to the aloha spirit. Cooperation between the Navy and civilian health-care professionals is outstanding. Four Navy medical teams recently helped the Hawaii State Department of Health combat an outbreak of measles in the Aiea area. State health officials selected sites for

immunization centers and handled the administrative procedures, while Navy hospital corpsmen used hypodermic jets to inoculate nearly 5,000 youngsters over a 4-day period. Two Navy physicians and State health officials helped to supervise the immunization clinics.

Navy medicine can be proud of the Hawaiian chapter of its history. And the story hasn't ended. A new branch dispensary has been approved for Barbers Point, and another is in the planning stages for MCAS Kaneohe. The Navy Medical Department hopes to be in Hawaii for at least another 84 years. 🇺🇸

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NAVAL MEDICAL REGIONALIZATION: A Progress Report

By CAPT John E. Wells, MSC, USN*

The many medical facilities which support the Navy mission — from the smallest sick-call treatment facilities and dispensaries to the largest, most comprehensive hospitals and medical centers — provide the Navy family with a graduated approach to health-care services. Ideally these facilities should not operate as separate, autonomous entities, but should instead function as independent contributors to an integrated health care delivery program. With recent progress in regionalization of its medical facilities, the Navy Medical Department has moved closer than ever toward the realization of such an elusive goal.

ORIGINATION

Until 1971, the Navy health care delivery system was fragmented and only minimally coordinated. It was difficult to manage the effectiveness and efficiency of the system, or to control resource requirements or operating costs. Most naval medical facilities were operated and managed separately as station departments. Before

1971, for example, some 243 facilities came under the management responsibility of 20 different major claimants; only 45 of these facilities reported to the Navy Surgeon General at the Bureau of Medicine and Surgery (BUMED). With this kind of diffused management responsibility, the Surgeon General had little opportunity to influence medical operations at the 198 facilities not included in his area of management responsibility. Moreover, no other authority actively pursued the coordinated management of these 198 facilities.

Such lack of coordination was most apparent in areas where there were large concentrations of naval medical facilities, such as Norfolk, Va., and San Diego, Calif. In the Norfolk area alone, 8 separate authorities were independently responsible for the management of 13 medical facilities, and some 2,700 military and civilian medical personnel; in the San Diego area, 7 separate authorities managed 14 medical facilities and some 2,900 Medical Department personnel. Neither area had any formal organization for coordinating health services, or monitoring the use of scarce health-care resources. The various major claimants determined the levels of medical care to be offered, and the resources needed to support the operating mission of each activity. No Medical Department officer was assigned to coordinate these determinations.

*Formerly director of the Health Care Administration Division (Code 44), BUMED, CAPT Wells retired from the naval service on 30 Aug 1974. His current address is: 8612 LSU Lane, Orlando, Florida 32807.

Although the Surgeon General did not at that time have the authority to coordinate the overall operations of the Navy health care delivery system, he did have ultimate professional responsibility for the medical care provided in all naval medical facilities. He was therefore placed in the awkward position of having to answer for medical care over which he had only minimal direct control. The resulting lack of coordinated management, coupled with a growing need for improved health services, prompted a proposal for a pilot study of regionalization of Navy health care.

In Oct 1970, the Surgeon General proposed to the Chief of Naval Operations (CNO) that such a pilot study be carried out in the Norfolk area. The plan integrated all nearby medical facilities into a coordinated Navy health-care organization under the management authority of one medical director, and redistributed patient-care responsibilities among the facilities.

THE FIRST NAVREGMEDCEN

With the CNO's approval, the Naval Regional Medical Center (NAVREGMEDCEN) Portsmouth, Va., was established on 1 Jul 1971. Twelve Navy branch dispensaries in the area were consolidated under the control of the commanding officer of Naval Hospital Portsmouth, Va.; responsibility for personnel, funds, and equipment from the other major claimants of the involved medical facilities was gradually transferred to the new medical center. For the first time, all naval medical facilities in a given area reported to a regional medical director who had direct access to the Surgeon General.

The objectives of this pioneering program were:

- To increase and improve health-care services
- To improve patient, staff, and command satisfaction
- To achieve better use of health-care resources

To reach these goals, patient-care responsibilities were realigned, management of all administrative functions was centralized, health-care services were expanded by the use of scheduled, specialty, outpatient clinics, and the operating hours of various clinics were extended. Other innovations included standardized medications for all medical facilities, staff rotation to meet changing demands, and establishment of public information programs.

Within 6 months it had become evident that medical regionalization had greatly improved access to, and delivery of health services, and had produced better utilization of medical resources. Spurred by this early success, BUMED developed further plans for extension of medical regionalization to as many areas as possible. On 4 Feb 1972 the CNO approved these expanded

plans and expressed his conviction that further regionalization would: increase the Navy's medical support capability; improve health-care services; and make full, efficient use of medical resources.

PROGRAM EXPANSION

The next development, which included naval medical facilities in areas with large concentrations of military personnel and dependents, was implemented in two phases in Jul 1972 and Jan 1973. Today there are 28 naval medical regions, with 145 assigned medical facilities — a total of 173 regional medical facilities under the command and support of BUMED. (See Figure 1)

The third phase of medical regionalization began 1 Jul 1974; it will affect 77 naval medical facilities currently under the command of 19 different major claimants. (See Figure 2) BUMED is recommending regionalization for 68 of these facilities; the remaining 9 are excluded because of closure, shore establishment realignment (SER) actions, or other mission considerations. Of the 68 facilities which are to be included in extended medical regionalization, 49 will be assigned to current medical regions and 12 will be assigned to the new medical regions; 7 new medical regions will be established.

The proposed BUMED plan for extension of medical regionalization is summarized in Figure 3. When this plan is put into effect, all naval medical treatment facilities will be regionalized under the command and support of BUMED.

CONCLUSION

Through medical regionalization the Navy Medical Department has an ideal opportunity to improve health-care delivery, and to implement advances in medical support operations which, because of unnecessary management and command constraints, were not previously feasible. Such advances and improvements include: centralized administrative and supply operations; more effective use of specialty services; periodic rotation of medical staff; improved medical practice in the dispensary; better use of enlisted personnel; improved emergency and after-hours services; increased training of, and reliance on paramedical personnel, nurse practitioners, and allied health professionals; centralized and computerized laboratories; improved medical record and medical support systems; and maximized use of all available naval medical facilities. The innovations and improvements in Navy health-care delivery that can be achieved with medical regionalization are limited only by our imagination, interest, cooperation, and determination.

FIGURE 1.—CURRENT STATUS OF MEDICAL REGIONALIZATION

<i>Controlling Facility</i>	<i>Naval Medical Regions</i>	<i>Assigned Medical Facilities</i>	<i>Facilities under command of BUMED</i>
Medical Centers	17		17
Naval Hospitals	10	7	17
Medical Clinics	1	1	2
Naval Dispensaries		2	2
Medical Administrative Unit		1	1
Branch Dispensaries		134	134
Total:	28	145	173

FIGURE 2.—NONREGIONAL MEDICAL FACILITIES

<i>Claimant</i>	<i>Regionalization Recommended</i>	<i>Regionalization not Recommended</i>	<i>Total Medical Facilities</i>
BUMED	4	2	6
CINCPACFLT	8		8
CNET*	5	1	6
CINCLANTFLT	7		7
CMC	8		8
COMNAVTELCOM	7	1	8
CNM/NAVSHIP		1	1
CNM/NAVORD	4		4
CNM	3	2	5
CNO	4	1	5
NAVSEGRU	3		3
CNM/NAVSUP	1		1
CNAVRES	5		5
BUPERS		1	1
CINCUSNAVEUR	5		5
CNM/NAVFAC	1		1
NAVCOMPT	1		1
OCEANOT†	1		1
CNM/NAVAIR	1		1
Total:	68	9	77

*Chief, Naval Education and Training
 †Oceanographic Office

FIGURE 3.—PLANNED EXTENSION OF NAVAL MEDICAL REGIONALIZATION
RECOMMENDED NRMC ASSIGNMENT

<i>NAVAL MEDICAL FACILITIES</i>	<i>MAJOR CLAIMANT</i>	<i>PROPOSED NRMC ASSIGNMENT</i>
1. NAF ANDREWS AFB, WASHINGTON, D.C.	CNO	NNMC BETHESDA, Md./NRMCLIN WASHINGTON, D.C.
2. NAVOCEANO SUITLAND, Md.	OCEANO	NNMC BETHESDA, Md./NRMCLIN WASHINGTON, D.C.
3. NAVHOSP BOSTON, Mass.	BUMED	NONE — SER ACTION PENDING
4. NSA BOSTON, Mass.	CNO	NONE — SER ACTION PENDING
5. BNSY BOSTON, Mass.	CNM/NAVSHIP	NONE — SER ACTION PENDING
6. NUSC NEWPORT, R.I.	CNM	NONE — DIVING SUPPORT ONLY
7. NUSC DET NEW LONDON, Conn.	CNM	NONE — COMBINED WITH NUSC NEWPORT, R.I.
8. NAVHOSP ST. ALBANS, N.Y.	BUMED	NONE — SER ACTION PENDING
9. NSA BROOKLYN, N.Y.	CNO	NRMC PHILADELPHIA, Pa. 7/74
10. NAD EARLE, N.J.	CNM/NAVORD	NRMC PHILADELPHIA, Pa. 7/74
11. SPCC MECHANICSBURG, Pa.	CNM/NAVSUP	NRMC PHILADELPHIA, Pa.
12. NAVDAMCONTRACEN PHILADELPHIA, Pa.	CNET	NRMC PHILADELPHIA, Pa.
13. NAVAL HOME PHILADELPHIA, Pa.	BUPERS	NRMC PHILADELPHIA, Pa.
14. NAVFINCEN CLEVELAND, Ohio	NAVCOMPT	NRMC GREAT LAKES, III.
15. NAVCOASTSYS LAB PANAMA CITY, Fla.	CNM	NARMC PENSACOLA, Fla.
16. MCSC ALBANY, Ga.	CMC	NRMC JACKSONVILLE, Fla. 7/74
17. NAVSCSOL ATHENS, Ga.	CNET	NRMC JACKSONVILLE, Fla.
18. NAS ATLANTA, Ga.	CNAVRES	NRMC JACKSONVILLE, Fla.
19. NAS GLYNCO, Ga.	CNET	NONE — STATION DISESTABLISHED
20. NAS MERIDIAN, Miss.	CNET	NARMC PENSACOLA, Fla.
21. CBC GULFPORT, Miss.	NAVFAC	NARMC PENSACOLA, Fla.
22. NSA NEW ORLEANS, La.	CNO	NEW — NRMCLIN NEW ORLEANS, La.
23. NAS NEW ORLEANS, La.	CNAVRES	NRMCLIN NEW ORLEANS, La.
24. NAS DALLAS, Tex.	CNAVRES	NAVHOSP CORPUS CHRISTI, Tex.
25. NAD MCALESTER, Okla.	CNM/NAVORD	NAVHOSP CORPUS CHRISTI, Tex.
26. NAD CRANE, Ind.	CNM/NAVORD	NRMC GREAT LAKES, III.
27. NAF DETROIT, Mich.	CNAVRES	NRMC GREAT LAKES, III.
28. USNAVFAC ELEUTHERA, Bahamas	CINCLANTFLT	NAVHOSP ORLANDO, Fla.
29. USNAVFAC ANTIGUA, W.I.	CINCLANTFLT	NAVHOSP ORLANDO, Fla.
30. USNAVFAC GRAND TURK, W.I.	CINCLANTFLT	NAVHOSP ORLANDO, Fla.
31. USNAVFAC BARBADOS, W.I.	CINCLANTFLT	USNAVHOSP ROOSEVELT ROADS, P.R.
32. NAVHOSP LEMOORE, Calif.	BUMED	NRMC OAKLAND, Calif.
33. NAVPGSCOL MONTEREY, Calif.	CNET	NRMC OAKLAND, Calif.

(Continued on next page)

FIGURE 3.—PLANNED EXTENSION OF NAVAL MEDICAL REGIONALIZATION
RECOMMENDED NRMIC ASSIGNMENT (Continued)

<i>NAVAL MEDICAL FACILITIES</i>	<i>MAJOR CLAIMANT</i>	<i>PROPOSED NRMIC ASSIGNMENT</i>
34. MARCORB TWENTYNINE PALMS, Calif.	CMC	NRMIC CAMP PENDLETON, Calif.
35. NAF EL CENTRO, Calif.	CINCPACFLT	NRMIC SAN DIEGO, Calif.
36. NAVFAC PT SUR BIG SUR, Calif.	CINCPACFLT	NRMIC OAKLAND, Calif.
37. NAVFAC CENTERVILLE BCH FERNDALE, Calif.	CINCPACFLT	NRMIC Oakland, Calif.
38. NAVWPNSCEN CHINA LAKE, Calif.	CNM	NRMIC LONG BEACH, Calif.
39. MCSC BARSTOW, Calif.	CMC	NRMIC CAMP PENDLETON, Calif.
40. NUC SAN DIEGO, Calif.	CNM	NRMIC SAN DIEGO, Calif.
41. MCAS YUMA, Ariz.	CMC	NRMIC SAN DIEGO, Calif.
42. NAS FALLON, Nev.	CINCPACFLT	NRMIC OAKLAND, Calif.
43. NAD HAWTHORNE, Nev.	CNM/NAVORD	NRMIC OAKLAND, Calif.
44. NAVFAC PACIFIC BEACH, Wash.	CINCPACFLT	NRMIC BREMERTON, Wash.
45. NAVFAC COOS BAY, Ore.	CINCPACFLT	NRMIC BREMERTON, Wash.
46. NAVNUPWRTRAU IDAHO FALLS, Ida.	CNET	NRMIC BREMERTON, Wash.
47. NAVSTA ADAK, Alaska	CINCPACFLT	NRMIC BREMERTON, Wash.
48. NAVCOMMSTA ADAK, Alaska	COMNAVTELCOM	NRMIC BREMERTON, Wash.
49. USNAVCOMMSTA BALBOA FORT AMADOR, C.Z.	COMNAVTELCOM	USNAVHOSP ROOSEVELT ROADS, P.R.
50. USNAVSECGRUACT GALETA ISLAND, C.Z.	NAVSECGRU	USNAVHOSP ROOSEVELT ROADS, P.R.
51. USNAS, Bermuda	CINCLANTFLT	NRMIC JACKSONVILLE, Fla.
52. USNAVSTA KEFLAVIK, Iceland	CINCLANTFLT	NEW — USNRMICLIN KEFLAVIK, Iceland
53. USNAVSTA ARGENTIA, Newfoundland	CINCLANTFLT	USNRMICLIN KEFLAVIK, Iceland
54. USNAVACT LONDON, England	CINCUSNAVEUR	NEW — USNRMICLIN LONDON, England
55. USNAVCOMMSTA LONDONDERRY, Ireland	COMNAVTELCOM	USNRMICLIN LONDON, England
56. USNAVSECGRUACT EDZELL, Scotland	NAVSECGRU	USNRMICLIN LONDON, England
57. USNAVSECGRUACT TODENDORF, Germany	NAVSECGRU	USNRMICLIN LONDON, England
58. USNAVHOSP ROTA, Spain	BUMED	USNAVHOSP ROTA, Spain
59. USNAVTRACOM KENITRA, Morocco	COMNAVTELCOM	USNAVHOSP ROTA, Spain
60. USNAVHOSP NAPLES, Italy	BUMED	USNAVHOSP NAPLES, Italy
61. USNAF SIGONELLA SICILY, Italy	CINCUSNAVEUR	USNAVHOSP NAPLES, Italy
62. USNAF NAPLES, Italy	CINCUSNAVEUR	USNAVHOSP NAPLES, Italy
63. USNAVCOMMSTA NEA MAKRI, Greece	COMNAVTELCOM	USNAVHOSP NAPLES, Italy
64. USNAVCOMMSTA ASMARA, Ethiopia	COMNAVTELCOM	NONE — STATION DISESTABLISHED

(Continued on next page)

FIGURE 3.—PLANNED EXTENSION OF NAVAL MEDICAL REGIONALIZATION
RECOMMENDED NRMIC ASSIGNMENT (Continued)

<i>NAVAL MEDICAL FACILITIES</i>	<i>MAJOR CLAIMANT</i>	<i>PROPOSED NRMIC ASSIGNMENT</i>
65. FLEACTS NAHA, Okinawa	CINCPACFLT	USNRMIC YOKOSUKA, Japan
66. MARCORB CAMP BUTLER, Okinawa	CMC	USNRMIC YOKOSUKA, Japan
67. USNAVHOSP TAIPEI, Republic of China	BUMED	USNAVHOSP TAIPEI, Republic of China
68. USNAVCOMMSTA HAROLD E. HOLT EXMOUTH, Australia	COMNAVTELCOM	NEW — USNRMICLIN EXMOUTH, Australia
69. MINEFORSUPPGRU CHARLESTON, S.C.	CINCLANTFLT	NRMIC CHARLESTON, S.C.
70. NAVAVIONICFAC INDIANAPOLIS, Ind.	CNM/NAVIAIR	NRMIC GREAT LAKES, III.
71. HQ 9TH MARCORDIST KANSAS CITY, Kans.	CMC	NRMIC GREAT LAKES, III.
72. NAS LOS ALAMITOS, Calif.	CNAVRES	NRMIC LONG BEACH, Calif.
73. USNAVCOMMSTA, Morocco	COMNAVTELCOM	USNAVHOSP ROTA, Spain
74. USNAVSUPPO LA MADDALENA, Sardinia	CINCUSNAVEUR	USNAVHOSP NAPLES, Italy
75. USFLESUPPO ATHENS, Greece	CINCUSNAVEUR	USNAVHOSP NAPLES, Italy
76. CHNAVSECMAAGDET CHINHAE, Korea	CNO	USNRMIC YOKOSUKA, Japan
77. USMCAS FUTEMA, Okinawa	CMC	USNRMIC YOKOSUKA, Japan

ECOLOGY: ANOTHER NAVY FIRST?

The Navy Medical Department pioneered anti-pollution programs as long ago as 1880. Consider this excerpt from page 28 of the *Sanitary and Statistical Report of the Surgeon General of the Navy* in 1880:

Two years ago a small laboratory was established in Washington for the investigation of the causative relation of the atmosphere and its impurities to the origination and extension of disease. This work has steadily progressed, with the aid of a small appropriation made at the last session of Congress, and it is now the intention of the bureau to increase the usefulness of this institution by widening its scope of investigation to all matters connected with the prevention of disease and the maintenance of health. This important work involves the collection from various sources of instruments, appliances, inventions, and designs relating to, and illustrating the progress of sanitary science in its widest application to the exigencies of civil and military life. It is intended to invite the cooperation of all classes interested in sanitary reform, so as to secure contributions to the collection, which, in a few years, will thus afford the most ample material for the exemplification of the courses of lectures to be delivered upon sanitary science.

This report also reveals that, from a total Medical Department operating budget of \$181,500, some \$1,500 was allotted "for continuing investigations of atmospheric impurities." — BUMED, Code 721.

The Reserve Restructured

Adopting the recommendations of a brilliant study group called RASP (Reserve Analytical Study Project), the Chief of Naval Operations (CNO) has completed the phased implementation of a comprehensive restructuring of the Naval Reserve. Such a reorganization is necessitated by the evolution of a smaller, all-volunteer active duty force, and the probable nature of the military contingencies which the Nation may face during the next decade. Contingency planning in the Medical Department calls for the immediate deployment, in the first response, of designated teams and individuals from active duty commands. The Reserve, as it is restructured, rather than being a people reservoir will consist of trained, team-oriented, mission-capable, recallable units, each of which is identified with an active duty command. It is the mission of the Reserve to be prepared to replace those teams and individuals so deployed, in order to restore the capability of the parent activity. The Reserve is restructured as a Contingency Response Force.

The Naval Reserve is now divided into 11 major mission platforms, each under the direction of a Program Sponsor. The first 10 programs are combat or combat-support programs; the 11th, the Special and General Support Program contains 29 subprograms, the first of which is the Medical Program. Implementation of the reorganization began in Nov 1973 with the activation of Programs 2-8, and concluded in Aug 1974 with the activation of Program 11. In the case of the Medical element, the Program Sponsor is the Chief, Bureau of Medicine and Surgery (BUMED) who has designated BUMED Code 36 as Sponsor Representative, Medical; and BUMED Code 6 as Sponsor Representative, Dental. Restructuring affects only the drilling units of the Ready Reserve.

The above article was furnished by CAPT N.V. Cooley, Jr., MC, USNR, our new Naval Reserve Editor and director of the Naval Reserve Division, BUMED Code 36.

Within the first 10 Mission Platform Groups are distributed 630 medical officers, 40 Medical Service Corps officers, 40 Nurse Corps officers, and 2454 hospital

TABLE I
NAVAL REGIONAL MEDICAL CENTER UNIT
(LARGE)

1. OFFICER ALLOWANCE									
DESIGNATOR		GRADE		ALLOWANCE					
2105	(Medical Corps officer of the Naval Reserve)	CDR		2					
2105		LCDR		3					
2105		LT		2					
2205	(Dental Corps officer of the Naval Reserve)	LCDR		1					
2305	(Medical Service Corps officer of the Naval Reserve)	LCDR		1					
2305		LT		2					
2905	(Nurse Corps officer of the Naval Reserve)	CDR		1					
2905		LCDR		1					
2905		LT		1					
TOTAL				14					
2. ENLISTED ALLOWANCE									
RATING	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL		
HM	3	11	8	2	1		25		
DT		1					1		
YN/PN		1					1		
TOTALS ..				3	13	8	2	1	27

TABLE II NAVAL REGIONAL MEDICAL CENTER UNIT (SMALL)							
1. OFFICER ALLOWANCE							
DESIGNATOR	GRADE	ALLOWANCE					
2105	CDR	1					
2105	LCDR	1					
2105	LT	1					
2305	LCDR	1					
2905	LCDR	1					
2905	LT	1					
TOTAL		6					
2. ENLISTED ALLOWANCE							
RATING	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
HM	1	5	4	1	1		12
YN/PN		1					1
TOTALS ..	1	6	4	1	1		13

sible for the professional training of these people, their billets and military activities are controlled by their own program sponsors. In the Medical Program, 3872 billets are authorized in 128 units tasked to support: 38 naval hospitals, 13 naval regional medical centers, 2 regional medical clinics, 8 preventive medicine units, 2 naval regional dental centers, 12 naval regional dental clinics, and 5 naval regional branch dental clinics. Three medical unit types and a single dental unit type are authorized.

Although the existing phased force units (i.e., Medical and Dental Companies) must be the main source of personnel for these units, it is clearly ordered that no unit shall be disestablished solely for the purpose of restructuring the Reserve. Early experience has shown, however, that Naval District commandants are withdrawing support from phased force units as new units are formed. It is expected that all Naval Districts and/or Readiness Commands will have implemented the reorganization by the end of Oct 1974. Pay is authorized for all members of new units — 24 drills annually for officers, and 48 for enlisted personnel. At this time, at least, the maximum size of each unit and the designator mix are established in the Manning Document, and may not be exceeded or modified. The rank structure, however, is recognized as unrealistic in the light

TABLE III PREVENTIVE MEDICINE UNIT							
1. OFFICER ALLOWANCE*							
DESIGNATOR	GRADE	ALLOWANCE					
2105	LCDR	1					
2305	CDR	1					
2305	LT	2					
TOTAL		4					
*NOBC (Naval Officer Billet Code [professional qualification]) Priority: 23XX: 0846, 0890, 0885, 0657.							
2. ENLISTED ALLOWANCE							
RATING	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
HM	4	8	5	2	1		20
TOTALS ..	4	8	5	2	1		20

corpsmen attached to ships companies, a hospital ship, construction battalions (CBs), Marine Corps units and aviation squadrons. Although BUMED remains respon-

TABLE IV NAVAL REGIONAL DENTAL CENTER UNIT							
1. OFFICER ALLOWANCE*							
DESIGNATOR	GRADE	ALLOWANCE					
2205	CDR	1					
2205	LCDR	2					
2205	LT	5					
TOTAL		8					
*NOBC Priority: One each: 0569/0550, Six 0335. Substitute: 0569, 0510, and additional 0335 officers when priority mix 1-1-6 not available.							
2. ENLISTED ALLOWANCE							
RATING	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
DT**	4	4	2	1	1		12
YN/PN		1					1
TOTALS	4	5	2	1	1		13
**Navy Enlisted Classification (NEC) First Priority: 8703, 8752. Balance: 8753, 8765, 8707, 8732, 0000.							

of the observed rank distribution amongst the present generation of reservists; it is virtually certain that waivers will be granted liberally and to the full extent necessary, to accommodate the Manning Document to reality. Similarly, the designation of commanding officers and executive officers on the basis of qualifications and interest, rather than on the basis of military seniority alone, is considered to be as possible now as in the past.

Emphasis is directed toward training and readiness training as units, as subunit teams, and as individuals. Clearly, medical and dental officers are not in need of professional training, but many who will enter the Reserve during the coming years will have had no military experience. Many hospital corpsmen and some Medical Service Corps officers, whose civilian occupations lie outside the field of health care, will require specific individual and group training in order to regain and maintain skills needed by the team in the event of mobilization. Wide latitude is accorded drilling units with regard to the location and content of the training process, in the realization of identified objectives within the framework of a 3-year training cycle. The entire unit, subunit teams, or individuals may drill according

to needs and circumstances. Active duty training (ACDUTRA) is required annually for all personnel. The unit will be required to drill together at least twice annually, at the command it is designated to support. The complete "Mission and Training Statement" has been approved, is presently being published, and will be delivered in the near future. To support the new training objectives, new curricula are being developed by the Health Sciences Education and Training Command (HSETC). This material will be on hand in late Fiscal Year-1975.

What has been said regarding authorized billets in the Medical Program appears to be firm for the remainder of FY-75, but it is probable that the Chief of Naval Reserve or the Readiness Commands will shift to other programs the majority of many billets that are not filled by 30 Jun 1975. It is important, therefore, that the process of implementing the Medical Program move forward with some speed, and that attention be directed toward a purposeful recruiting campaign for interested and qualified personnel, in order that as many new units as possible may be activated before the end of this fiscal year. ☞

PREVENTIVE DENTISTRY SLIDE LECTURE

A slide-lecture presentation describing the Naval Preventive Dentistry Program is now available. Suitable for both professional and lay audiences, the presentation consists of a narration with 23 complimenting 35-mm color transparencies. Dental officers may make arrangements for a short-term loan copy of the slide lecture by writing: Commanding Officer, Naval Graduate Dental School (411), National Naval Medical Center, Bethesda, Md. 20014. — BUMED, Code 61. ☞

HEARING LOSS SLIDE LECTURE

The Industrial Hygiene Department of the Navy Environmental and Preventive Medicine Unit No. 6 has prepared an unusual audio-video presentation on the causes, effects, and prevention of noise-induced hearing loss. Available on loan to all naval medical facilities, the presentation consists of a 30-minute taped narration and 100 color slides (35mm).

For further information, write: Industrial Hygiene Department, Navy Environmental and Preventive Medicine Unit No. 6, Box 112, FPO San Francisco 96610. — *Pacific Health Bulletin*, No. 68, Sep-Oct 1974. ☞

Therapy for Metastatic Breast Cancer: The State of the Art

By LCDR Harry J. Long, MC, USN*

and

CAPT Richard Burningham, MC, USN

INTRODUCTION

Carcinoma of the breast represents 28% of all malignancies of women and is responsible for 20% of all female deaths in the United States. With few exceptions, these deaths are due to metastatic disease and not to the primary tumor. Surgery remains the mainstay of therapy for primary cancer whether it be standard radical mastectomy or total mastectomy with local radiation therapy, or any number of other procedures that are being debated in the surgical literature. This paper will not address primary therapy, but will focus on the therapies currently employed to treat metastatic breast carcinoma.

HORMONAL THERAPY

Any discussion of treatment for metastatic breast carcinoma should begin with hormonal therapy, since it is the oldest and most widely employed treatment

modality. A distinct relationship between ovarian function and the progression of breast carcinoma was recognized as early as 1836. In describing metastatic nodules of breast cancer, Cooper¹ observed that "the disease is supposed to occur more particularly at the cessation of menstruation, and which is usually the fact, for it is frequently sympathetic with the uterus; but still the exceptions to this rule are frequent. The symptoms are augmented by the approach of menstruation, and decline as the period is passing." Although the hormonal basis for his observations was not known, Cooper was describing tumor progression during periods of premenstrual estrogenic activity. Similar observations by Schinzinger in 1889,² and Beatson in 1896,³ led to their recommendations that menstruating women with malignant breast tumors should be castrated. During the subsequent 60 years therapeutic castration was debated, with its proponents claiming as much as 20% response rates and duration of response lasting 6-48 months.⁴

In 1959, Treves⁴ reported on 191 patients treated at the Memorial Hospital in New York, from 1935 to 1955. His retrospective chart review showed objective response in 70/191 (or 37%), with the remaining 63% showing no response to oophorectomy. The duration of response averaged 21 months in premenopausal patients, and less than 6 months in postmenopausal patients. The median survival postcastration was 23+ months in those showing objective response, and 5

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The above paper presents the private opinions or assertions of the authors and may not be construed as official, or as necessarily reflecting the views of the Navy Department or the naval service at large.

months in those failing to respond to oophorectomy. In his study, the addition of androgens did not significantly alter the survival statistics.

Prophylactic castration at the time of primary treatment has been compared to castration at the time of first recurrence or metastasis, and although the interval between primary treatment and first recurrence was longer in the prophylactic group, the overall survival was longer in those who received castration at the time of first evidence of recurrence.⁵

During the past 10 years, there has been extensive research to identify specific hormonal receptors in breast tissue that seem to have a regulatory effect on tumor growth. The most extensively studied receptors are those exhibiting an increased capacity to bind and take up estrogens.⁶ In subsequent studies, it has been observed that those patients who respond to oophorectomy have a higher incidence of specific estrogen receptors in the breast tumor than those who fail to respond. To date, reports of specific estrogen receptors have almost exclusively involved malignant breast tissue, but low level estrogen-binding capacity has been reported in association with benign fibroadenomas.²⁰ Estrogen receptors are found in approximately 30% of breast carcinomas occurring in premenopausal females,⁷ and in 68% of breast tumors occurring in postmenopausal patients. Similar glucocorticoid receptors have been found in the rat but are not unique to malignant tissue.⁸ Specific androgen receptors have also been found in rats, but have not been shown to have any clinical significance.⁹ More recently, a common receptor to growth hormone and prolactin has been found in rats, and in one study¹⁰ this receptor was identified in 4 out of 26 human breast carcinomas studied. It was further shown that in cultures of tumor cells obtained from those patients who possessed the receptor, culture growth was stimulated by the addition of growth hormone, or prolactin, and inhibited by their absence. This finding of specific pituitary-hormone receptors in breast tumors, together with the estrogen receptors, may explain the previously reported remission rates of 59%-75% for postmenopausal patients following hypophysectomy¹¹ and the 45%-80% response to hypophysectomy by premenopausal patients who had previously responded to oophorectomy.¹²⁻¹³

A 40% remission rate has been observed when bilateral adrenalectomy was utilized to further lower the estrogen levels in patients who had previously responded to oophorectomy.¹⁴ A 17% remission rate has been observed in those patients who had previously failed to respond to oophorectomy.¹⁴ The choice of adrenalectomy or hypophysectomy depends a great deal upon: the menstrual function of the patient, response to

previous endocrine therapy, the technical skill of the surgeon, patient reliability, and medical support for long term follow-up and endocrine homeostasis.

The use of androgens has been of limited value in the treatment of premenopausal patients and may be contraindicated, particularly in patients who responded to castration due to the metabolic pathway from androgens to estrogens prior to excretion.²¹ Androgen therapy has been of minimal value in postmenopausal patients, and the use of such drugs has been further limited by their undesirable side effects.

The progestins were formerly shown to be of less value than the androgens, but are currently being reevaluated for their feedback inhibitory effect on estrogen production.¹⁵

Estrogens are contraindicated in most premenopausal patients because of their potential stimulatory effect on tumor growth, but these drugs have been shown to be of high efficacy in the postmenopausal patient. Clinical regression of inoperable-primary and metastatic lesions occurs in about 50% of postmenopausal patients with estrogen administration.²¹

CHEMOTHERAPY

During the past 15 years many chemotherapeutic regimens have been investigated in the treatment of metastatic breast carcinoma. (See Table I).

Employed in various dosage regimens and treatment schedules, the alkylating agents¹⁶ including nitrogen mustard, thio-TEPA, phenylalanine mustard, and cyclophosphamide have individually yielded 30-35% response rates in metastatic breast carcinoma.

The antimetabolites¹⁶ which have been efficacious are 5-fluorouracil (5-FU) and methotrexate, with response rates of 25% and 20-40%, respectively.

The mitotic inhibitors,¹⁶ vincristine and vinblastine, have each shown about a 20% response rate.

The most promising antibiotics have been adriamycin and mitomycin C, with response rates of about 35% demonstrated by each drug, but the toxicity of mitomycin C has limited its usefulness.¹⁶

Adriamycin is a recently released glycoside antibiotic which is a structural analogue of daunorubicin. It apparently functions as an intercalator between base pairs on the DNA molecule with inhibition of template RNA synthesis. It is predominantly metabolized and excreted by the liver. Adriamycin has achieved much publicity because of its activity against a variety of carcinomas and sarcomas. Used individually, adriamycin has shown objective 35-48% response rates in breast carcinoma, even in patients who had previously failed to respond to combination chemotherapy.¹⁶

TABLE I.—Reported Results of Chemotherapy in Metastatic Breast Carcinoma*

DRUGS	% RESPONSE
Alkylating Agents	
Cyclophosphamide	34%
Nitrogen mustard	35%
L-Phenylalanine mustard	23%
Thio-TEPA (triethylenethiophosphoramide)	30%
Antimetabolites	
5-Fluorouracil (5-FU)	26%
Methotrexate	34%
Mitotic Inhibitors	
Vincristine	20%
Vinblastine	20%
Antitumor Antibiotics	
Adriamycin	35%
Mitomycin C	38%
Streptonigrin	23%
Others	
BCNU (bischloronitrosourea)	21%

*Modified after Carter¹⁶

It became obvious that a 20-40% response rate is the best one could expect from a single drug, and it has been found that patients who fail to respond to one drug regimen are more resistant to other regimens with different drugs. In the hope of obtaining higher response rates, combinations of drugs with differing actions and non-overlapping toxicity were investigated. Greenspan¹⁷ achieved 81% response rates utilizing a combination of cyclophosphamide, methotrexate, 5-fluorouracil (5-FU), testosterone and prednisone. In 1969 Cooper¹⁸ reported 90% response rates in a non-controlled group of 60 patients of varying ages and prior therapies, using a regimen of 5-FU, methotrexate, cyclophosphamide, vincristine, and prednisone. The Cooper regimen has been evaluated by other groups, but it has not yielded the impressive figures presented in Cooper's original report. The Acute Leukemia Group B has compared the Cooper regimen with a less toxic,

3-drug regimen of 5-FU, vincristine and prednisone, with 63% and 42% response rates, respectively.¹⁶

Since hormonal and chemotherapeutic modalities do not appear to have overlapping toxicities, it seems logical that this would form the basis for the next avenue of investigation. Van Dyk¹⁹ compared the effects of oophorectomy alone and oophorectomy plus cyclophosphamide therapy in the treatment of metastatic breast carcinoma, and found no differences in 2-year survival; but a 5-year survival of 35% for patients treated with the combined approach was observed, as against 25% for oophorectomy alone. He also noted that patients did better if chemotherapy was instituted shortly after oophorectomy, rather than waiting for the first evidence of recurrence before commencing chemotherapy.

There are currently three large, ongoing, cooperative studies evaluating the results of hormonal manipulation with chemotherapy.¹⁶

The Acute Leukemia Group B (ALGB) is comparing oophorectomy alone, oophorectomy plus cyclophosphamide, and oophorectomy plus the 5-drug Cooper regimen. The Mayo Clinic is studying oophorectomy alone and oophorectomy plus a 3-drug regimen of 5-FU, cyclophosphamide, and prednisone. The National Cancer Institute (NCI) is investigating oophorectomy alone and oophorectomy plus a 3-drug regimen of 5-FU, cyclophosphamide, and methotrexate. It is still too early for any results to be accepted as statistically significant.

Finally, a brief consideration of the surgical adjuvant studies is in order. For patients who present localized disease at the time of radical mastectomy but who are found to have multiple positive axillary lymph nodes, who have been shown to have a very high incidence of recurrence and distant metastasis, it has been proposed that postoperative adjunctive chemotherapy may yield prolonged remissions and longer survival. It is still premature to make any definite statements on the role of adjunctive chemotherapy, but Dr. Bernard Fisher of the National Surgical Adjuvant Breast Project (a clinical investigation involving 34 institutions) has reported prolonged survival rates achieved in patients treated with oral L-phenylalanine mustard 0.15 mg/kg/d for 5 days every 6 weeks beginning 2-4 weeks postmastectomy. The ALGB is treating similar patients with a 5-drug regimen consisting of 5-FU, methotrexate, cyclophosphamide, prednisone, and vincristine. The NCI is studying 5-FU, methotrexate, and cyclophosphamide. The Mayo Clinic is studying 5-FU, cyclophosphamide, and prednisone in similar patients. It should be noted that combination chemotherapy represents a very aggressive approach, with significant drug toxicity seen in most patients.²²

Various forms of immunotherapy have been considered, but to date there is no large, ongoing study for evaluating this potentially useful adjunctive form of therapy.

SUMMARY

This paper has presented the significant historical contributions, and a brief review of the currently effective modalities in the treatment of metastatic breast carcinoma. The present trend appears to be for early aggressive therapy with a combined chemotherapeutic approach for primary disease, and for a similarly aggressive therapeutic approach once metastases are in evidence.

Perhaps the two most exciting areas of current investigation are the specific-hormone-receptor theory, and the combined multimodality approach to treatment. If the early work with hormone receptors proves true, a whole new method of predicting patient response to specific hormonal therapy may allow more rational selection of the treatment regimen which will yield the best result. The combination of aggressive chemotherapeutic regimens and hormonal manipulations should further reverse the discouraging survival statistics for breast cancer.

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Tuberculous Lymphadenitis in Military Personnel

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INTRODUCTION

Extrapulmonary tuberculosis is defined as the presence of tuberculous granulomata in an organ other than the lung, as the result of lymphohematogenous dissemination from a prior, or concurrent, pulmonary focus. This report deals with the spectrum of metastatic tuberculosis involving lymphatic tissue, encountered in active duty military personnel at the Naval Regional Medical Center San Diego, Calif. Emphasis is placed upon pathogenesis and clinical characterization.

MATERIAL AND METHODS

The study group is composed of 29 patients with the primary diagnosis of extrapulmonary tuberculosis involving the lymphatic system, who were admitted to

the Pulmonary Service over a 4-year period from July 1967 to July 1971. These patients represent 16.7% of all active duty tuberculosis admissions, excluding cases of tuberculous pleuritis and infections of lung caused by mycobacteria other than *Mycobacterium tuberculosis*.

The diagnosis of tuberculosis involving the lymphatic system was based upon the following criteria, singly or in combination: (1) demonstration of acid-fast bacilli on special stains of biopsy specimens, (2) growth of *Mycobacterium tuberculosis* on appropriate culture media upon culture of biopsy specimen, (3) compatible histopathology of biopsy specimens, (4) tuberculin hypersensitivity to PPD-S (Purified Protein Derivative-Standard), and (5) a definite response to specific anti-tuberculous chemotherapy. Coexistent active pulmonary tuberculosis did not preclude inclusion in the study.

Specimens of sputum, gastric washings, and first voided morning urine were obtained from all patients for culture of *Mycobacterium tuberculosis*. Only one patient had concurrent active pulmonary tuberculosis documented by chest roentgenography, and positive sputum cultures for *Mycobacterium tuberculosis*.

CLINICAL OBSERVATIONS

The mean age and racial distribution of the study group is shown in Table 1, and is compared with a group of patients who manifested pulmonary tuberculosis

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The opinions or assertions contained herein are those of the authors and are not to be construed as official, or necessarily reflecting the views of the Navy Department or the naval service at large.

TABLE 1.—AGE AND RACE DISTRIBUTION

Case Group	Avg. Age (yrs.)	Total Cases	Race Distribution*				
			C	M	N	MA	AI
A. Extrapulmonary Lymphatic	28.8	29	2	23	2	2	0
B. Pulmonary	27.3	104	57	32	11	2	2

*C = Caucasian
M = Malayan
N = Negro
MA = Mexican-American
AI = American-Indian

alone. No significant difference in average age is appreciated between the two groups, however, the predominance of hyperpigmented individuals (93%) with extrapulmonary lymphatic tuberculosis is striking. In a comparable group of patients with pulmonary tuberculosis, hyperpigmented individuals constituted 45% of the patient population.

The sites of lymphatic involvement are shown in Table 2. Fourteen patients had cervical node involvement alone; axillary node involvement was present in 5 patients and 1 patient presented involvement in both areas. Individual patients offered a wide spectrum of regional lymph-node involvement with combinations of cervical and other peripheral nodes, as well as isolated peripheral-node involvement. Tonsillar tuberculosis with regional lymph-node involvement was present in 1 patient. Mesenteric node and intestinal involvement were observed in 3 patients.

The majority of patients with cervical, axillary, or other peripheral node involvement came to medical attention because of an enlarged painless mass. (See

Table 3) Only 1 patient complained of painful nodal enlargement. One patient with an isolated extrathoracic paratracheal node involvement presented with hoarseness, secondary to recurrent laryngeal-nerve entrapment in the granulomatous process. Tonsillar tuberculosis in 1 patient was discovered following tonsillectomy for chronic tonsillitis. In the 3 patients with mesenteric lymphadenitis, weight loss was the dominant presenting symptom. One patient with concurrent active pulmonary tuberculosis presented signs and symptoms of small bowel obstruction, which required exploratory laparotomy. No evidence of active pulmonary tuberculosis was revealed in the other 2 patients with bowel involvement. Radiographic abnormality of the ileocecal area led to laparotomy in 1 patient, while the other underwent emergency surgery for localized peritonitis.

Caseating granulomata were found in biopsied lymph nodes taken from all 29 patients. Acid-fast organisms were demonstrated by Ziehl-Neelsen stain of biopsied tissue in only 8 patients. *Mycobacterium tuberculosis* was identified by culture of biopsied nodes in only 4

TABLE 2.—PRIMARY SITES OF INVOLVEMENT

Cervical	14
Axillary	5
Cervical & axillary	1
Cervical & epitrochlear	1
Cervical & submandibular	1
Cervical, axillary & parotid	1
Paratracheal	1
Epitrochlear	1
Tonsillar	1
Mesenteric	3
TOTAL:	29

TABLE 3.—PRESENTING SYMPTOMS

Cervical	14	enlarging mass
Axillary	5	enlarging mass
Cervical & axillary	1	enlarging mass
Cervical & epitrochlear	1	enlarging mass
Paratracheal	1	hoarseness
Epitrochlear	1	enlarging mass
Tonsillar	1	chronic tonsillitis
Mesenteric	3	fever, weight loss, bowel complaints

TABLE 4.—DIAGNOSTIC CRITERIA

Site	Caseating gr.	Acid-fast organisms	Positive <i>M. tuberculosis</i> culture
Cervical (14)	14	3	2
Axillary (5)	5	1	1
Cervical & axillary (1)	1	1	
Cervical & epitrochlear (1)	1		
Cervical & submandibular (1)	1		
Cervical-axillary-parotid (1)	1		
Paratracheal (1)	1	1	
Epitrochlear (1)	1		
Tonsillar (1)	1		
Mesenteric (3)	3	2	1

patients. Therefore, a diagnosis of tuberculous adenitis in 17 patients was based upon compatible histopathology of biopsied tissue, positive tuberculin skin test, multiple organ involvement with caseating granulomas, and a definite clinical response to antituberculosis chemotherapy. These results are summarized in Table 4.

Previous non-lymphatic organ involvement in these patients is outlined in Table 5. Thirteen patients had suggestive evidence of a previous pulmonary granulomatous infection as demonstrated by calcification on chest roentgenograms. Histoplasmin and coccidioidin skin tests were negative in all 29 patients.

As previously mentioned, 1 patient had concomitant far-advanced, active pulmonary tuberculosis. Two patients presented non-caseating granulomas of the liver demonstrated by study of percutaneous Menghini-needle-biopsy specimens. Special stains revealed no bacterial or fungal organisms. One patient manifested parotid gland involvement, which led to superficial parotidectomy when ipsilateral cervical adenitis failed to respond to chemotherapy. In addition, an intravenous pyelogram was performed because of persistent pyuria, and pronounced caliectasis was demonstrated. However, both routine and acid-fast cultures of urine specimens failed to generate any growth. Two patients

TABLE 5.—NON-LYMPH-NODE ORGAN INVOLVEMENT

	Pulmonary	Other
Cervical (14)	7	spleen (2)
Axillary (5)		
Cervical & axillary (1)	1	
Cervical & epitrochlear (1)	1	epididymis (1)
Cervical & submandibular (1)	1	
Cervical-axillary-parotid (1)		kidney (1)
Paratracheal (1)		
Epitrochlear (1)	1	
Tonsillar (1)	1	eye (1)
Mesenteric (3)	1	ileocecal or small bowel (3)
TOTAL: 29	13	8

presented a palpable spleen together with axillary and cervical adenitis, but no evidence of active pulmonary tuberculosis was found; regression in size of their lymph nodes and spleen was observed following the initiation of antituberculosis chemotherapy. The patient with tuberculous involvement of the tonsils also presented a granulomatous uveitis manifested by blurred vision. Subjective and objective ocular improvement was noted following the administration of antituberculosis drugs. One patient with cervical and epitrochlear node involvement underwent biopsy of a thickened epididymis; caseating granulomas were noted. Multiple cultures of urine were negative for *Mycobacterium tuberculosis*, and intravenous pyelography revealed no apparent abnormalities.

Tuberculin skin tests were of considerable interest in this group of patients. Table 6 reflects the striking degree of tuberculin hypersensitivity manifested by these patients, when challenged with either one or five tuberculin units intradermally. A group of 26 Malayan patients of similar age with only pulmonary tuberculosis, and 6 patients with only genitourinary tuberculosis are considered for purposes of comparison. Neither group was anergic to five tuberculin units (TU) of PPD-S. Tuberculin reactions, characterized by more than 20 mm of induration with central necrosis and vesicle formation, were noted in 16 of the 29 patients (55%). In the pulmonary tuberculosis comparison group, only 1 patient produced a tuberculin reaction of greater than 20 mm of induration in response to 5

test units. Results of prior tuberculin skin tests were available for 16 of the 29 patients and these data are indicated in Table 7. Fourteen of the patients had had prior reactions of induration measuring more than 10 mm in response to 5 TU of tuberculin antigen, for a period of time ranging from 2 to 11 years prior to admission. Two patients had undergone confirmed tuberculin skin-test conversion (5 test units) during the year prior to admission.

Table 8 reflects the treatment experience with this group of patients. Fourteen patients were treated with dual drug therapy which consisted of isoniazid (INH) and para-aminosalicylic acid, or INH and ethambutol. Another 14 patients followed a similar regimen and, additionally, received 1 gram daily of intramuscular streptomycin for 45 days. One patient was transferred to another medical facility prior to initiation of therapy. The total length of therapy was 24 months for all patients. Only 1 of the 28 treated patients developed evidence of relapse, which was attributed to patient failure.

Four patients with cervical and axillary lymphadenitis presented nonhealing, draining fistulous tracts resulting from incisional biopsy and/or diagnostic drainage procedures performed at peripheral medical facilities. These tracts tended to be chronic, despite lymph node regression while on chemotherapy. All 4 patients required subsequent surgical excision of residual nodes and sinus tracts. Postsurgical healing proved uneventful in the 3 patients with mesenteric adenitis and intestinal tuberculosis. The 2 patients who underwent hemicolectomy

TABLE 6.—PRESENT SKIN TEST

Organs involved	Reaction size of induration in millimeters									
	1 TU				5 TU				Unknown	
	10	10-15	15-20	20	10	10-15	15-20	20	Neg.	+
1. Lymphatic (29)	0	1	0	1	1	6	2	16	0	2
2. Pulmonary (26)*	1	4	1	1	4	10	4	0	0	1
3. Other extra-pulmonary organs	0	1	0	0	3	1	0	0	0	1

*Malayan population with pulmonary tuberculosis only: average age 29.1 yr.

TABLE 7.—PRIOR SKIN-TEST DATA

	Convertors	Known positive	Unknown
Lymphatic (29)	2 (1 yr.)	14 (2-11 yr.)	13

TABLE 8.—TREATMENT EXPERIENCE

Therapy	Number of Patients	Excisional Surgery	Late Complications	Follow-up (Years)
INH + secondary drug	14	3	2*	Median 1.5 (1-2 yr.)
INH + secondary drug + streptomycin	14	4	1**	Median 1.4 (0.5-3 yr.)

*One parotid cutaneous fistula; one treatment failure.
**Chronic abdominal pain and bowel obstruction.

for ileocecal tuberculosis remained free from bowel complaints during a 1-year follow-up period. The other patient, on whom diagnostic biopsy alone was performed, continued to experience intermittent partial bowel obstruction and persistent abdominal pain in the following year.

DISCUSSION

In man an initial event in all forms of primary pulmonary tuberculosis infection is basically a lymphadenitis, leading toward the establishment of a primary complex. In primary tuberculosis of children, massive intrathoracic lymphadenopathy commonly occurs, due to regional extension to peribronchial and peritracheal nodes. The concept of extrapulmonary tuberculosis involving the lymphatic system in adults, however, denotes a more serious involvement and an extended pathogenetic concept.^{1,2,3}

Some human races, such as the Mongoloid of which the Malayan may be considered a subgroup, have acquired extended evolutionary experience with the *tubercle bacillus*; it is generally accepted that these groups manifest a distinct natural resistance to tuberculosis in the form of an ability to develop an immune response to the primary infection, which hastens recovery to a greater extent than is exhibited by other races whose evolutionary experience with the *tubercle bacillus* is much less.⁴ However, the secondary or bacteremic phase of tuberculosis is believed to occur in all races, albeit with varying degrees of lymphohematogenous dissemination and distant-site implantation. Occasionally such metastatic foci produce clinically overt disease early in the pathogenetic sequence, and extrapulmonary manifestations, such as diffuse lymphadenopathy and splenic enlargement, are generally viewed as complications of primary pulmonary tuberculosis. More commonly, however, the appearance of specific immunity causes both pulmonary and extrapulmonary lesions to regress, heal, and enter into a state of dormancy. Such localized pulmonary lesions leave roentgenographic

clues, including Simon's foci, parenchymal scars, and hilar granulomata and calcification. Extrapulmonary lesions may calcify but are generally completely subclinical until, for reasons which are ill defined at present, endogenous reactivation at these niduses produces symptoms.

As outlined above, this review of clinical material supports the concept of a pathogenetic sequence of extrapulmonary lymphatic tuberculosis for a young, adult, military population. Fourteen of 16 patients had demonstrated tuberculin hypersensitivity in the remote past, without a history of pulmonary or extrapulmonary tuberculosis. Generalized lymphatic-system involvement and/or non-lymphatic organ involvement was either delineated or suggested in the majority of patients, emphasizing the generalized dissemination which occurred during the secondary or bacteremic phase of pathogenesis. It is not clear why only 1 of 29 patients demonstrated reactivation of a pulmonary focus, but this does tend to support impressions voiced in the older literature regarding Marfan's Law.^{1*}

In the light of this pathogenetic concept the entity of mesenteric adenitis, and associated intestinal and ileocaecal tuberculosis, deserve special attention. Human strain intestinal tuberculosis is always considered to be secondary to an active pulmonary focus, through the silent ingestion of heavily contaminated sputum.⁵ After invasion of the bowel mucosa, the surrounding lymphoid tissue becomes involved in the inflammatory process. Mitchell⁶ has shown that the incidence of intestinal tuberculosis closely parallels the extent and activity of the pulmonary lesion. However, many cases of proven human strain ileocecal tuberculosis have been reported, in which the primary pulmonary focus could not be detected by chest roentgenography or extensive culture techniques.^{5,7,8} Furthermore, mesenteric lymph nodes

*According to Marfan's Law, those with evidence of healed tuberculous cervical adenitis (healed scrofula) before puberty seldom present active pulmonary tuberculosis in later life. Lymphatic tuberculosis was regarded as a distinct entity, quite separate from other forms of tuberculosis.

are often more involved than is the bowel with respect to the inflammatory response, caseation, and recovery of organisms.⁹ Indeed, tuberculous mesenteric adenitis may occur without an apparent accompanying bowel lesion.⁷ Intestinal tuberculosis can occur by direct extension from diseased pelvic organs or by overwhelming hematogenous dissemination in primary pulmonary tuberculosis, but when this type of involvement is excluded the following pathogenetic sequence is offered: (1) Lymphohematogenous dissemination takes place in the primary phase of the pulmonary disease with spread to mesenteric nodes, perhaps via the subdiaphragmatic lymphatic plexus; (2) Post-primary endogenous reactivation in a lymphoid nidus occurs with secondary bowel involvement. The original pleural, parenchymal or endobronchial focus may indeed be difficult to detect under these circumstances. This concept also has the advantage of embracing ileocecal tuberculosis and mesenteric adenitis as an extension of the extrapulmonary lymphatic tuberculosis concept.

In this study group it is noted that 2 patients with ileocecal tuberculosis and mesenteric adenitis presented no evidence of active pulmonary disease, and that 1 patient had demonstrated a reaction of 9 mm of induration to 5 TU of tuberculin antigen as early as 9 years preceding the present illness. The 3rd patient had active pulmonary tuberculosis together with concurrent ileocecal and mesenteric lymph node involvement, and was known to be tuberculin positive as early as 5 years prior to his illness.

In all 3 patients the surgical findings at the time of laparotomy, and examination of resected specimens revealed mesenteric nodes, rather than bowel, to be the most extensively involved with a granulomatous inflammatory process.

One can only speculate as to the cause of the high degree of tuberculin hypersensitivity exhibited by tuberculous patients with extrapulmonary lymphatic involvement. Present clinical and experimental data do indicate that the immune response to most pathogenic antigens, as in the case of tuberculosis, cannot be initiated without complex steps of phagocytosis and "antigen processing" in the lymphatic system.¹⁰ Conceivably, pronounced tuberculin skin hypersensitivity is the result of a greater stimulation or mobilization of immunologically competent lymphocytes, when lymphatic tissues are directly involved with the offending antigen. Certainly the present study reveals that this tuberculin skin hypersensitivity is unrelated to race, age, or extrapulmonary disease in other organs.

This series is too small and uncontrolled to substantiate rigid judgments regarding therapy. However, the authors do favor a viewpoint of tuberculous lymphadenitis

as but one facet of a generalized disease process that requires extended chemotherapy with at least two drugs, and the eradication of chronic fistulas and fibrotic areas by excisional surgery when clinical response to chemotherapy is suboptimal.

Our experience with chronic draining fistulas has emphasized the great importance of judicious clinical management during the phase when incisional biopsy or drainage is performed for diagnostic purposes. Symptoms of painless enlargement of cervical or axillary lymph nodes in a Malayan patient with a strikingly positive tuberculin skin test suggest a highly probable diagnosis of tuberculous lymphadenitis. Tissue examination is essential for diagnosis and, when feasible, excisional biopsy of involved nodes with subsequent fine-wire skin closure is recommended. The resected tissue should be studied extensively employing special stains, culture and histopathology techniques. Complete sensitivity studies of cultured *Mycobacterium tuberculosis* bacilli should be performed. Although pre-biopsy anti-tuberculosis chemotherapy is not considered necessary, such treatment should be initiated in the immediate post-biopsy state following the establishment of a tuberculous etiology.

Finally, extensive weight loss and bowel complaints in a young Malayan patient with a positive tuberculin skin test should be interpreted to possibly indicate the presence of intestinal and mesenteric tuberculous lymphadenitis. Our limited experience would suggest that if adenitis and contractures of the ileocecal area are extensive, right colectomy with ileo-transverse colon anastomosis may prevent further bouts of obstruction during the chemotherapy and convalescent period in these debilitated patients. A report of our recent experience with ileocecal tuberculosis is presently awaiting publication. Others have reported similar opinions, and failures of exclusion procedures.^{7,12}

SUMMARY

Extrapulmonary lymphatic tuberculosis accounted for 16.7% of admissions for tuberculosis to the Naval Regional Medical Center San Diego, Calif., during the last 4 years. Patients in this series came to medical attention because of: painless enlarging cervical, axillary, and other peripheral lymph nodes; or fever, weight loss, and bowel complaints when tuberculous mesenteric adenitis was present. Combined with a strikingly positive reaction to tuberculin skin-test antigen, these clinical findings should prompt strong suspicion of tuberculous involvement of the lymphatic system in a Malayan individual. Evidence for the diagnosis is strengthened when chest roentgenographic manifesta-

tions of past, or present pulmonary tuberculosis are demonstrated.

Reemphasizing the post-primary reactivation of dormant foci, a pathogenetic sequence is presented to include the concept of tuberculous mesenteric adenitis. For purposes of therapy, tuberculosis of the extrapulmonary lymphatic system in a young adult military population should be regarded as a clinical manifestation of lymphohematogenous dissemination during the post-primary phase of pulmonary tuberculosis, requiring extensive multi-drug chemotherapy and judicious use of excisional surgery.

The present U.S. Navy Tuberculosis Control Program makes no provision for recognition of non-Caucasoid races as ethnic groups at high risk for the development of extrapulmonary lymphatic tuberculosis. The authors feel that this study has documented such ethnic predominance in the Navy tuberculosis population, and has sufficiently delineated the pathogenetic sequence to warrant isoniazid chemoprophylaxis for members with longstanding tuberculin hypersensitivity.

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Control of Streptococcus mutans Infections in Naval Personnel During Routine Treatment

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"Dental caries is an infection, not a hole in a tooth"—Maury Massler, 1966¹

The prevalence of dental caries in military populations in the U.S. is practically 100%, and accounts for a significant portion of the total dental-care requirements of incoming recruits.^{2,3,4} In the recruit setting, inability to completely restore all carious lesions has posed a frustrating problem for Navy dental officers and is compounded by the incremental new disease that occurs during active duty. An important facet of this problem which has considerable military significance has been recently reported by Ludwick, et al,⁴ who note that most of the dental emergencies occurring among Navy-Marine personnel serving in Vietnam were "caries related," including conditions such as pulpitis, periapical involvements, painful carious lesions and defective fillings.

Inadequacy of Present Caries-Prevention Program

Fluoridation of public water supplies in the U.S. has resulted in a considerable reduction in the prevalence of dental caries.⁵ Military recruits from fluoridated areas have significantly lower DMFT (decayed, missing

or filled teeth) scores than men from non-fluoridated areas.⁶ Despite the fluoridation effect, however, the total dental-treatment needs of incoming recruits are still overwhelming; recent estimates reveal that less than 25% of the indicated need for operative dentistry is accomplished at recruit training centers. Even when all essential treatment has been completed at "boot camp" (future submariners, for example), the process of dental caries continues. Evaluation of the Navy's 3-agent stannous fluoride (SnF₂) preventive program has shown that the number of new carious tooth surfaces can be reduced, from a rate of about 2 surfaces per year per man, to approximately 1 surface per year.⁷ We need to do better.

The concept of "plaque control" in preventive dentistry is receiving increased attention in the dental literature today. The possible effect of plaque-control programs on the dental health of large populations has not been fully evaluated,⁸ and it is important to ask what one might reasonably expect to accomplish with this approach in a military population. Unfortunately, most investigations have failed to demonstrate a consistent relationship between plaque and dental caries. Results have ranged from positive correlations (more plaque, more caries) to negative correlations (more plaque, less caries), and several studies have shown no significant correlation between tooth cleanliness and caries.⁹ The relationship between oral hygiene and periodontal disease seems to be more clearly established, and positive effects of a vigorous plaque-control program on the prevention of periodontal disease in a military population may be anticipated.

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The opinions or assertions expressed herein are those of the author and may not be construed as reflecting official views of the Navy Department, or the naval service at large.

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Dental Caries, an Infectious and Transmissible Disease

Recent studies have indicated that dental caries is an infectious and transmissible disease.^{10,11} It is a multifactorial disease in that the variations in caries experience, between and within populations, are associated to some degree with a multitude of affecting variables. The presence of microorganisms with cariogenic potential, in dental plaque, is probably the single most important factor; dental caries does not occur in the absence of cariogenic microorganisms. Unfortunately, several different organisms have been identified as having a role in dental caries, and this has led to some confusion. Evidence is gradually accumulating, however, that *Streptococcus mutans* is probably one of the prime etiological agents in the initiation of dental caries in our population.¹² Studies are currently in progress at the Naval Dental Research Institute to explore possible methods of interfering with the mechanism by which the host acquires this organism,¹³ and controlling the infection after it has already become established.^{14,15,16} Since the prevalence of *S. mutans* in Navy populations is practically 100%, the latter approach is particularly attractive.

Control of *Streptococcus mutans* Infection in Navy Personnel

If one starts with the working hypothesis that *S. mutans* is a prime etiologic agent in dental caries, one of the first important questions to be asked is, "What happens to the prevalence of this organism during the course of normal dental treatment?" Recent findings have shown that operative dentistry and SnF₂ prophylaxis are effective, but incomplete measures for eliminating *S. mutans* from the oral cavity.¹⁴ This is graphically demonstrated in Figure 1 by a sharp reduction in the number of tooth surfaces from which *S. mutans* could be recovered, following the restoration of all carious lesions in 5 subjects. Prior to restoration, all the carious lesions observed in these men were found to harbor *S. mutans*. In 4 out of 5 cases, a further reduction in prevalence of the organism was demonstrated after each of the men had received a conventional SnF₂ prophylaxis, followed by a topical application of 10% SnF₂ solution. It was apparent from this preliminary study that routine dental treatment failed to completely eliminate the cariogenic organisms. Should we, then, wait for new lesions to appear at the next dental examination, and simply repeat the cycle all over again? Or, if we agree that *S. mutans* is an important etiologic agent should we not learn

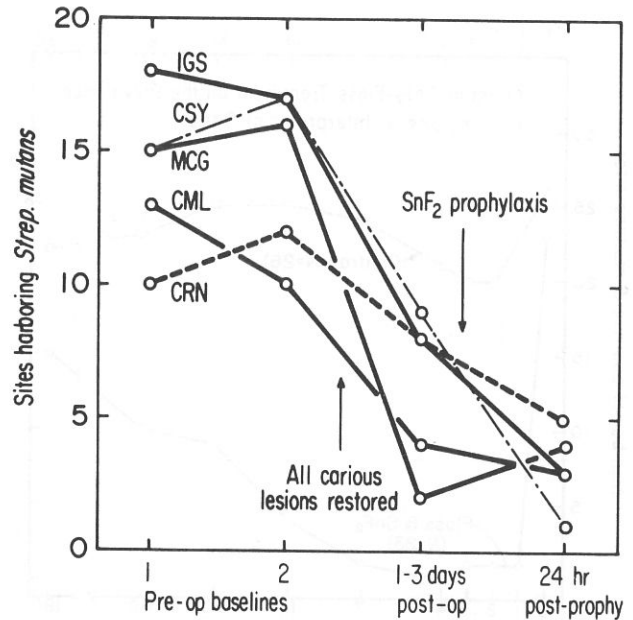


Figure 1.—Effect of operative dentistry and stannous-fluoride prophylaxis on the prevalence of *Streptococcus mutans* in dental plaque obtained from 5 subjects (identified by initials).

how to treat the infection, as well as repair the results of the infection?

Several methods have been suggested for controlling *S. mutans* infections, and a number have already been used.^{17,18,19} Mechanical and chemical methods have been employed, singly and in combination, but none has proved completely successful in eliminating *S. mutans* from human teeth. As a single measure, dental floss has been particularly disappointing in our studies of Navy personnel; even after using 10 different pieces of dental floss 10 consecutive times at a single posterior interproximal site at the same sitting, *S. mutans* persisted at the site. The possibility also exists that, used incorrectly by the patient, dental floss could inadvertently serve to transfer *S. mutans* from an infected site to a noninfected site during routine home care. Loesche²⁰ has even suggested the possibility of a similar transfer role for the dental explorer used in conducting diagnostic examinations.

Our most encouraging results have been observed with the combined use of dental floss, and a 10% topical solution of SnF₂.¹⁶ When 23 interproximal sites in 4 subjects harboring *S. mutans* were treated for 30 seconds, twice daily for 4 consecutive days, many of the originally positive sites became negative and remained free of *S. mutans* for periods of up to 6 months. (See Figure 2) The 26 positive interproximal sites in a control group of 3 men were sampled with dental floss at the same time intervals, and only a marginal and insignificant reduction in the microorganism prevalence

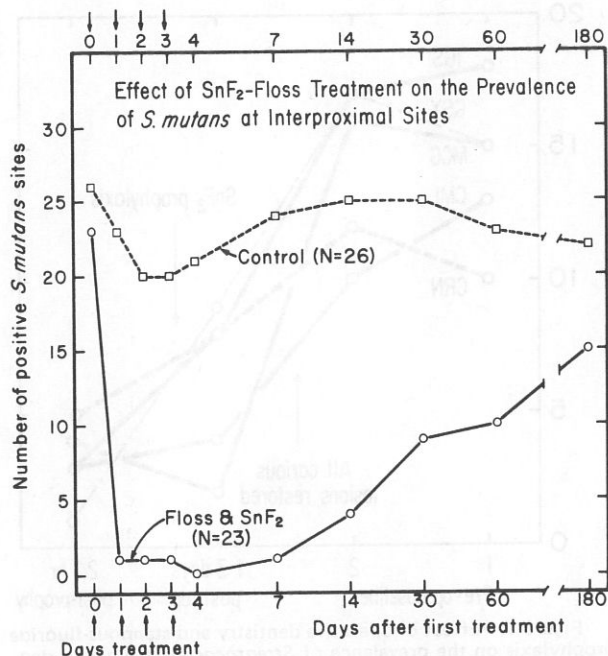


Figure 2.—Effect of multiple stannous fluoride — dental floss treatments on the prevalence of *Streptococcus mutans* in dental plaque obtained from interproximal sites.

was demonstrated. A precise explanation for the effectiveness of the SnF₂ plus floss treatment is not possible at this time, but it would seem to be attributable to the bactericidal properties of SnF₂ solutions.²¹ Since it has been shown that *S. mutans* preferentially colonizes tooth surfaces rather than soft tissue sites in the oral cavity,²² the opportunity for recolonization following effective disinfection is considerably reduced.

In Navy personnel the primary sites for *S. mutans* colonization have been identified as the interproximal and occlusal surfaces of the posterior teeth; buccolingual surfaces, despite the usual abundance of dental plaque at these sites, were rarely found to harbor *S. mutans*.²³

Plaque Control or Specific Infection Control?

In view of recent observations on the ecology of *S. mutans* in human populations, it is possible that the dentist may be lulled into a false sense of security when plaque-disclosing procedures tend to suggest that his patient is "under control." Methods which will enable the dentist to visualize the amount of plaque present in the depths of pits and fissures, and at the contact areas between teeth, are currently not available. The occurrence of high caries-attack rates in patients who present apparent "excellent" oral hygiene is not at all uncommon in the practice of dentistry. On the other

hand, massive amounts of plaque have been observed on the teeth of 17 through 20-year-old Navymen, without clinical or radiographic evidence of dental-caries experience.²⁴ Many of these individuals were found to be noncarriers of *S. mutans*. Follow-up studies of these originally caries-free men were conducted 1 year later: approximately one half of those who had harbored *S. mutans* developed one or more carious lesions, but those whose plaque did not harbor this organism remained caries-free.²⁵

The development of a simple and reliable colorimetric test to demonstrate the presence or absence of *S. mutans* in samples of dental plaque provides a useful tool for the clinician, who wishes to identify subjects and sites where this cariogenic microorganism lurks.²⁶ A number of bactericidal agents are potentially useful to control the incidence of *S. mutans* infections. The readily available 10% solution of SnF₂, and the familiar iodine and zinc-iodide glycerite (FSN 6505-074-3171) which contains 10% iodine, are both bactericidal for *S. mutans*. Gibbons, and coworkers²⁷ noted that the bactericidal effect of iodine on human teeth could be demonstrated only by gaining good access, cleaning the area meticulously, and introducing the agent directly into the test site for an interval lasting 1-2 minutes, under isolation. Although the cariostatic properties of SnF₂ are well known, there is no evidence at the present time that iodine is effective in reducing the incidence of carious lesions in humans.

Research Findings Applied to Clinical Situation

Research has shown that effective delivery of the antiseptic to the inaccessible sites of *S. mutans* colonization will probably represent the most difficult part of any procedure designed to eliminate *S. mutans* from the teeth of patients. A thorough prophylaxis, preferably utilizing one of the chemical agents, is perceived as an important first step which may precede, or accompany the actual restoration of affected teeth. Topical application at each operative appointment, as well as an intensive mechanical and chemical disinfection of the tooth surfaces after all carious teeth have been restored, should be considered. Although dietary modification (sucrose control) and home-care procedures involving flossing, brushing, and mouth-rinsing with materials containing an active agent may be useful in augmenting professional treatment for some well motivated patients, it probably is unrealistic to anticipate great success with these procedures in large populations.²⁸ In experiments carried out over the past few years, we have learned that *S. mutans* infections are extremely difficult to control in human subjects, even under the

most ideal and carefully controlled conditions. With our limited knowledge and lack of available technology, the fallacy of expecting patients to be responsible for control of their own infections should be obvious.

The possible role of other microorganisms which have been associated with the carious process cannot be dismissed. Effective control of *S. mutans* infections in humans does not necessarily imply the control of other potentially cariogenic organisms. Certain strains of *Actinomyces*, for example, have been reported to induce periodontal pathology in laboratory animals with subsequent gingival recession, exposure of the cementum, and development of root-surface caries.²⁹ Recent studies in human populations suggest that the *Actinomyces*, as well as *S. mutans* may play a role in cervical caries, especially in older individuals.³⁰ Although more information is needed to determine the relative importance of various types of oral microorganisms in human dental caries, a vigorous attempt to control known pathogens merits attention in the everyday practice of dentistry.

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INFECTIOUS HEPATITIS OUTBREAK AT SAN DIEGO

A total number of 124 cases (112 cases confirmed) of viral hepatitis A has erupted among Navy recruits at the Naval Training Center San Diego, Calif. The reported cases have been traced to a single infected person who handled food in a recruit galley for 2 days, before admission to the Sick List with hepatitis.

Widespread prophylactic use has been made of immune serum globulin for those at higher risk, and efforts to prevent secondary outbreaks have been made. Attack rate is reported around 1.5%, and a secondary wave of cases is anticipated by early Nov.

Occurring in cycles in the U.S., epidemic hepatitis has, in recent years, afflicted approximately 25 out of every 100,000 Americans annually.

Navy and Marine Corps case rates in the active duty population usually run higher, averaging 60 to 150 cases per 100,000 members each year.

MENINGOCOCCAL DISEASE DOWN

For calendar year 1974, a total number of 6 cases of meningococcal meningitis, with no deaths, is reported to date for active duty Navy and Marine Corps personnel. (For a comparable period in 1973, a total of 17 cases with no deaths was reported.)

OASIS SYSTEM COMING

Scheduled to become operational at NNMC Bethesda in May 1975 is the Out-patient Appointment Scheduling Information System (OASIS), a component of the Triservice Medical Information System (TRIMIS). OASIS is under development at the Air Force Data Systems Design Center, Gunter Air Force Station, Montgomery, Ala.

SAC FOLLOW-UP

Convened 16-20 Sep 1974, the Specialty Advisory Committees selected well qualified applicants for medical residency and outservice training for the academic year 1975-1976. A total of 519 applications were processed for 275 available positions. The candidates applied for 54 programs, and final applications presented for review numbered 509. Of the total number of candidates, 214 were medical officers; 120 were interns; 175 were civilians, 97 of whom were foreign medical graduates.

Look for in-depth report on the SAC Conference in a forthcoming issue of U.S. NAVY MEDICINE.

DENTAL TRAINING COMMITTEE FOLLOW-UP

Convened by the authority of the SG on 29-30 Sep 1974, the Dental Training Committee reviewed candidates and selected dental officers for professional training in FY 1976. There were 48 dentists selected for full-time training at the Naval Graduate Dental School (NGDS) Bethesda, in: comprehensive dentistry, prosthodontics, periodontics, endodontics, oral medicine and maxillofacial prosthetics.

Around 6.9 to 7% of the total Dental Corps strength is slated for full-time training. Other selectees for full-time training include: 47 in naval training

hospitals (oral surgery), and 25 in postdoctoral fellowships (16 at selected naval institutions and 9 in civilian institutions).

OCCUPATIONAL HEALTH SERVICES

The new Executive Order 11807, "Occupational Safety and Health Programs for Federal Employees," strengthens the government's commitment to provide "exemplary" working conditions for Federal workers and supersedes EO 11612 of 26 Jul 1971.

Future and outyear funding and budgeting for a BUMED Occupational Health and Safety Program is developing, to include a Health and Safety Program for BUMED activities, as well as an Occupational Health Program for the entire Navy.

NAVREGMEDCENs San Diego and Long Beach, Calif., have indicated strong interest in developing regional occupational health services.

PHYSICIAN ASSISTANTS (PAs) EMERGING

The first group of 31 PAs completed their training and are now warrant officers, at work in the ambulatory setting of naval dispensaries and outpatient clinics. A second group received orders 1 Nov 1974.

Naval PAs receive 2-year training courses through formal programs at The George Washington University in Washington, D.C., or Sheppard Air Force Base, Tex.

Certification examinations by the National Board of Medical Education, required for all eligible candidates, will be held in Dec 1974. This represents a continuing assessment mechanism; travel/per diem/fees are funded by BUMED.

MEDICAL COPAY EXTENDED

Some medical officers (MOs) who do not qualify for variable incentive pay (VIP) may qualify for continuation pay (COPAY).

MOs serving in pay grades O-4 or O-5, who are undergoing initial residency training and who were on active duty 1 Jun 1974, may be eligible. At these pay grades, the rate of COPAY is 4 times the monthly base pay, and is received yearly. (See ALNAV 91-74)

APPROVAL AUTHORITY FOR CERTAIN ADP SERVICES

By OPNAVINST 5236.2 of 2 Jul 1974, authorization to approve acquisition of automatic data processing (ADP) contractual services or a computer program is delegated to the Chief, BUMED, to a threshold of \$75,000 in a consecutive 12-month period.

In the absence of a certificate of nonavailability from a Government source by the General Services Administration (GSA), the procurement of ADP time and related services from commercial sources is not authorized; activities are without authority to contract for such services. The certificate is required for all procurements of commercial ADP services including those approved by BUMED under delegated authority. (See BUMEDINST 5236.1 of 6 Sep 1974)

The scope of the new SECNAVINST now includes contractual services obtainable through GSA regional ADP sharing exchanges.

HAPPY MARINE CORPS BIRTHDAY . . . 10 NOV . . . 199 YEARS YOUNG 

SCHOLARS' SCUTTLEBUTT



Recently, members of the Training Branch of the Bureau of Medicine and Surgery had a most enjoyable experience. One of our Navy sponsored students in the 1975 program visited, and presented some of his ideas for enhancing the value of our subsidy programs to the student and to the Navy Medical Department. His approach and enthusiasm were refreshing. A strong dedication to Navy medical education, and to the process which it entails, was apparent. His attitude was: "Let me help make it better."

Among the many areas which were discussed, our student visitor offered several very specific and valid recommendations concerning problems of which we were unaware. Some of these will be addressed in future columns, but I would like to consider one of them with you at this time.

One readily apparent discrepancy in our program is that our scholarship students in one school, or even in one class have no way of identifying each other. The value of being able to recognize each other is obvious. With identification would come increased opportunity for communication, exchange of information, increased "esprit de corps," recruiting opportunities, enhancement of the Navy image, development of coordinated aims and objectives, interchange with subsidy program managers, and the opportunity to be represented by chosen delegates to the Bureau and to student medical organizations.

We want all of you to feel that you are a part of the Navy Medical Department. In future editions of this column we will develop more avenues to help you in this regard. We invite you to correspond with us and, if possible, to visit us in Washington. Starting with this issue we will begin to publish a list of our subsidy students located at each school. Organize! Elect a representative. Send us his or her name. We want to correspond with your group, and we want you to feel that you are an active participant in the program.

Students Participating in the 1975 Program (partial list)

<i>Medical School Group</i>	<i>Class of</i>
UNIVERSITY OF ALABAMA	
BURNETTE, Douglas G., Jr.	'75
ELLIS, George H.	'75
GARDNER, Robert K.	'76
GOODMAN, David L.	'76
INGRAM, Chester W., Jr.	'75
LUNDE, Stephen P.	'75
PELFREY, Robert J.	'76
WHEAT, John R.	'77
UNIVERSITY OF SOUTH ALABAMA	
HERLIHY, Charles E., Jr.	'76
LORINO, Gaeton D.	'76
MONTGOMERY, Jay R.	'77
WARREN, Eddie B.	'76
WELLS, Michael A.	'76
DEJARRETTE, Hugh M., Jr.	'76
ROUSE, Clyde C.	'77
UNIVERSITY OF ARIZONA	
CHRISTENSEN, Gary S.	'76
VAN WAGENINGEN, Peter W.L.	'77
UNIVERSITY OF ARKANSAS	
ATKINSON, Penelope	'77
HANIS, Robert C.	'77
HEROMAN, William M.	'75
HERR, Celeste E.	'75
HERR, Harland G.	'75
HOLSTON, John S.	'76
KRAMER, Steven F.	'75
LACHOWSKY, John E., Jr.	'76
LAY, David L.	'77
MARTIN, Michael B.	'75
MC DANIEL, James D.	'76
METTETAL, Charles T.	'75
MONROE, Lance E.	'76

<i>Medical School Group</i>	<i>Class of</i>	<i>Medical School Group</i>	<i>Class of</i>
UNIVERSITY OF ARKANSAS (Con.)		LOMA LINDA	
RAGAN, Joseph N.	'77	ELLIS, David A.	'76
REYENGA, Stanley L.	'75	HODGENS, David W.	'76
ROGERS, Douglas M.	'76	MORPHIS, Cherry L.	'75
SIDWELD, Linda J.	'75	MORPHIS, James G., II	'75
THOMAS, Larry D.	'76	NOEL, Theodore A., II	'76
WOODRUFF, Stephen O.	'76		
CALIFORNIA AT DAVIS		SOUTHERN CALIFORNIA	
PHILLIPS, Richard B.	'75	CARNES, Robert S., III	'77
RAWSON, Beverly A.	'77		
CALIFORNIA AT IRVINE		UNIVERSITY OF COLORADO	
SMITH, Robert W.	'77	COWAN, Bryan P.	'75
STRONG, Richard M.	'75	DANIEL, Thomas E.	'77
		DION, Mark W.	'77
		EDWARDS, Susan M.	'77
		HALBERT, Richard E., II	'76
		HOLLAWAY, Rodney R.	'76
		HURST, John G.	'76
		SCHUMAİK, George M.	'77
		SIEMER, Daniel J.	'77
		SNEDDON, Wallace A.	'77
		SPRITZER, David M.	'76
		VUKICH, David J.	'75
UCLA		CORNELL	
CONOVER, Wayne B.	'77	FORMAN, Samuel D.	'77
KIZER, Kenneth W.	'76	LARNED, David C.	'77
NIELSON, Christopher P.	'76	MC MAHON, Patrick V.	'77
CALIFORNIA AT SAN DIEGO			
ROBINSON, Felipe C.	'75		
WILSON, James R.	'77		
CALIFORNIA AT SAN FRANCISCO			
SAUL, William L.	'77		

SALUTING *the* QUARTER DECK •

A relic of Roman days, when images of the gods were housed in that section of the ship, and were paid homage by everyone as they came aboard.



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FINANCIAL PLANNING

Though fiscal year 1975 is only 3 months old, I'm sure that you are already aware that our financial position has deteriorated as a result of Congressional actions. Additional reductions have occurred within the Navy, and the Department of Defense (DOD). This will cause problems unless we understand the nature and extent of the current fiscal year financial constraints, and the increased importance of prudent financial planning.

Our initial budget for this year contained a number of new programs and expansions. These included implementation of the Occupational Safety and Health Act, improvement in the utilization of physicians at hospitals through the medium of providing secretarial assistance to chiefs of services, and expansion of contract janitorial and security services to relieve our medical staff of these difficult but necessary functions. Of perhaps greater interest to individual physicians and dentists, increases were proposed for attendance at professional meetings, expansion of the Clinical Investigation Program (CIP), and extension of clinical automatic data-processing systems.

You are also aware that total DOD funds and personnel have already been reduced by Congress, and our Medical Department was not excepted. These reductions have resulted in outright cancellation or reduction of the above new and expanded programs, and major reductions in some of our other ongoing programs. Adding to our problem are the effects of price increases on our operations and administrative procedural changes which will hinder BUMED's ability to obtain additional funds and personnel. An example of these changes is the decision of the Chief of Naval Operations (CNO) not to withhold significant reserves, and therefore, cancellation of major claimant midyear review. We cannot assume that funding resources will keep pace with the

volatile nature of the current economy, therefore, we must strive for economy, efficiency, and proper utilization of manpower resources in all our operations in order to avoid, at all costs, the trauma of incurring a Revised Statute 3679 violation.

Our fundamental budget problem is workload. Our total inpatient workload continues to decrease with little or no increase in outpatient visits (except by regionalization), thus making it difficult for the Bureau to retain funding and manpower levels. I recognize that you have made every effort to utilize the capabilities of your staff productively; however, where capability exists, we must attempt to reverse the trend of increased referral of retired members and dependents to the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). We must continue our critical review of nonavailability certificates prior to issuance. In this connection, BUMED is sponsoring a pilot program for automated multiphasic screening as a means of providing expanded health care for our eligibles.

Our current status of resources is such that you must insure that financial planning provides you with the means of approaching your local problems realistically. Alternative courses of action should be thoroughly analyzed and investigated as to cost and overall effect, prior to final selection. There are a number of areas in which local options can effectively impact on financial and manpower planning. Staffing reviews not only are indicated for general management improvement — they become a necessity to keep pace with changing workload patterns within your command. Review of other resource uses cannot be ignored in financial planning. Your planning must be time framed in such a manner as to allow implementation of needed items

if, and when funds become available during the year, but with recognition that time slippage may cause last-minute substitute program implementation, or even total program cancellation. Therefore, each program, item of equipment, and manpower adjustment must be extensively planned well in advance, with a number of action dates to allow implementation or procurement under varying calendar conditions. Above all we are striving for exemplary health-care delivery, with close attention to receiving value for value spent, irrespective of what form of resource has been invested.

Financial and manpower planning, however, is not merely the exercise of good judgment. All known policies and guidance form the basis of sound financial planning; failure to incorporate such guidance leads to erroneous assumptions, incapable of being defended when tested. Limitations are inherent in our fiscal systems. For example, Congressional action provides the legal "floor," which is that amount of dollars that must be utilized for real property maintenance and no other purpose. In the area of health-care delivery, you should be aware that current policies preclude the arbitrary cancellation of clinical services or outpatient drug dispensing, without prior Bureau approval. Recent advice about limiting the accession of direct-hire civilian personnel provides another form of guidance. You should also take into account that high priority items for the Medical Department are the retention of physicians and training, since both of these areas directly affect our ability to provide high-quality medical care.

Every attempt will be made to accommodate requests for redistribution of funds between quarters, but I must point out in all sincerity that your total plan must be based on a "for real" basis. Additional funding may not become available later, to replace funds moved to earlier quarters; therefore, your plans must be made within current authorized fund totals.

I assure you that I and my entire staff are aware of the general nature of the problems being created at this time. Our mission today is basically the same as it always has been — to provide the very best health care. Financial and manpower planning is a tool, the effective use of which can help us perform that mission. It is suggested that this be given wide dissemination to insure an understanding of our current situation, and to promote a spirit of positive cooperation. — BUMED, Code 1.3

ALCOHOLISM REHABILITATION

In recent years the Navy has become a leader in the field of alcoholism rehabilitation. Our active treatment

facilities now include 5 alcohol rehabilitation centers, 14 alcohol rehabilitation units, and 4 alcohol rehabilitation drydocks. These provide for the rehabilitation of about 4,500 Navy and Marine personnel annually, of which approximately 70% are returned to successful duty. Because of this new availability of effective treatment for alcoholism, it is now especially important to consider the problem of that disease among members of our own Navy Medical Department.

In the past we have sometimes tended to ignore alcoholism among our colleagues; but we must now face the fact that this disorder is a potentially fatal illness, and that its incidence among members of the healing professions is startlingly high. It is essential for both the individual and the organization that our Medical Department personnel with alcohol problems be promptly identified and treated.

Early identification of the alcoholic, or potentially alcoholic Medical Corps, Dental Corps, Nurse Corps, or Medical Service Corps officer and hospital corpsman is essential if treatment is to be maximally effective. The experiences of our alcohol rehabilitation centers and units, along with the findings of industrial rehabilitation programs, well demonstrate that we must not wait until the alcoholic asks for help. By waiting, we only allow the disease to become further advanced. Instead, the alcoholic should be ordered into rehabilitation as soon as the diagnosis is established. In making this diagnosis, the amount and pattern of a person's drinking are not as important as is the overall effect of drinking on his or her life. The patient needs rehabilitation if drinking causes problems in any of the following areas: physical and mental health; family adjustment; professional performance; and legal, and financial affairs. The expressed wishes of the alcoholic should not be the primary factor in arriving at the decision for rehabilitation, because anyone with such a problem can be expected to try to avoid entering treatment and will attempt, usually unsuccessfully, to solve the problem alone. Most of the patients in our rehabilitation centers arrive there against their expressed wishes, but become amenable to treatment within 2 or 3 weeks after arrival. They then report appreciation for the doctor who firmly but compassionately confronted them with their problem.

Confronting an alcoholic professional colleague with the facts about his or her disorder is an unpleasant task which requires a high degree of clinical objectivity and courage. Many of us have mixed feelings about alcoholism. We may question the effectiveness of treatment, and we hesitate to harm an associate's career. Confrontation, however, is the most vital initial step in treatment. We must not stand idle when we see a

colleague impaired by alcoholism. His career is already seriously jeopardized by the disease. By confrontation and rehabilitation we must reverse the predictably downward trend of this disorder.

There are a number of Navy Medical Department personnel who are rehabilitated alcoholics, now performing their professional duties quite successfully. These recovered alcoholic physicians, dentists, nurses, Medical Service Corps officers, and corpsmen who are back on duty attest to the effectiveness of the program. I urge all of you to increased awareness and action, in the early identification and rehabilitation of our own Navy medical family members who are afflicted with alcoholism.

Administrative assistance, as well as clinical advice in the management of specific cases of alcoholism in the Medical Department may be obtained from: the Navy Alcohol Rehabilitation Center Long Beach, Calif.; other Navy Alcohol Rehabilitation Centers; or Head, Psychiatry Branch, Bureau of Medicine and Surgery (Code 313). — BUMED, Code 1.☞

NAVY SURGEON GENERAL TESTIFIES

VADM Donald L. Custis, MC, USN, the Navy Surgeon General, recently told a House Armed Services subcommittee that he had to have resources or a realistic Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) to continue acceptable medical care for the Navy. Addressing CHAMPUS and overall military health-care problems, VADM Custis joined the surgeons general of the other services in explaining the crisis in military medicine. He told the subcommittee that the general medical officer/flight surgeon community had decreased over 50% in the last 2 years, from 1800 to 800. Coupled with rising health-care costs, reductions in CHAMPUS benefits, and cuts in the budget, this loss of personnel is at the heart of the current military health care crisis.

VADM Custis also reported that the Navy Medical Department is barely able to keep pace with the health care workload, and has been forced to establish priorities of treatment for active-duty personnel, dependents, and retirees at naval medical facilities. The law requires that active-duty personnel be provided full medical care. If facilities are available, dependents of active-duty personnel will then be provided full medical care. However, the law states that retirees and their dependents "may" be provided medical care. Care for the retiree and his family will therefore be reduced first, VADM Custis said, though he pointed out that CHAMPUS is available to this sector.

The Navy Surgeon General identified several steps which have been taken to help overcome the shortage of physicians. These include increased pay for physicians, the use of nurse clinicians and physician assistants, replacement of physicians by health care administrators in administrative billets, and programmed budget increases for clerical assistance. However, he stressed that these programs will all require financial support and cannot, alone, solve the problems of providing proper medical care for Navy people. — *CHINFO Newsgram*, 40-74.☞

IMPORTATION OF FIREARMS BY MEMBERS OF THE ARMED FORCES

OPNAV Note 8370 sets forth Federal regulations with which military personnel must comply when importing handguns into the U.S. Military personnel must obtain evidence that the legal requirements of their state, or territory of residence have been met. The method of obtaining such evidence is described in this note. The following references apply:

18 U.S. Code 925 (A) (4). Specifies conditions under which military personnel may import firearms and ammunition into the U.S.

26 Control Firearms Report 178.114. Permits military members to import firearms and ammunition to their place of residence.

Bureau of Alcohol, Tobacco and Firearms (ATF) Ruling 74-13. Announces that, when required by the state or territory, a place of residence certification must accompany the import permit for handguns.

Bureau of ATF Publication 603. Contains published ordinances of all states and territories regarding firearms and ammunition. Lists states and territories requiring a place of residence certification before handguns may be imported.

OPNAV Instruction 5840.3. Outlines importation requirements for firearms and ammunition; these requirements will be modified in a future change.

Military personnel wishing to import a handgun into the District of Columbia, Guam, Hawaii, Illinois, Massachusetts, New York, Puerto Rico, or the Virgin Islands must obtain a place of residence certification. When obtaining an import permit the permit license, certification of registration, or firearms identification card must also be obtained and submitted to the Bureau of ATF, along with ATF Form 6A.

ATF Form 6A may be obtained from: Headquarters, Bureau of Alcohol, Tobacco and Firearms, P.O. Box 75, Ben Franklin Station NW, Washington, D.C. 20024. — BUMED, Code 211.☞

RETROACTIVE PAY RAISE MAY BE TAX EXEMPT

Military members, or former members who were either entitled to the combat zone tax exclusion or were in a missing status during all or part of the period between 1 Oct and 31 Dec 1972 may be entitled to a full or partial refund of the Federal income tax withheld from their payment of the retroactive pay increase.

Compensation received for duty while in a combat zone or in missing status is not subject to Federal income tax, with this exception: compensation received by officers in the combat zone category *is* subject to Federal income tax if more than \$500 was received for the period of service involved.

Those who are eligible may obtain a tax refund or a reduction in taxes when they submit their 1974 tax returns.

Defense officials have outlined the following steps which eligible personnel should take to obtain tax refunds:

- Determine the amount of retroactive pay increase attributable to the service performed while in a combat zone, or in a missing status;

- Subtract this amount from the total amount of income reflected in W-2 forms for 1974;

- Enter the difference or remainder in line 9 (wages, salaries, etc.) of Form 1040 or Short Form 1040A, as appropriate;

- Determine the adjusted gross income and appropriate income tax, in accordance with the IRS instruction pamphlet;

- Attach a separate sheet of paper containing a statement explaining that the difference between line 9 and the W-2 forms is the result of combat zone tax exclusion, or missing status; and

- Print at the top of Form 1040, or Short Form 1040A "COMBAT PAY EXCLUDED."

Meanwhile, the military departments are currently making payment of the retroactive pay increase to all members and former members who are affected by the change in effective date from 1 Jan 1973 to 1 Oct 1972.

The change in effective date came on 25 Jan 1974 when the U.S. Court of Appeals for the District of Columbia decided that the President had a constitutional duty to grant, effective 1 Oct 1972, the Federal pay increase mandated by the Federal Pay Comparability Act of 1970.

In compliance, the President issued an executive order on 12 Apr 1974 authorizing the military services to make retroactive payments. — AFPS, No. 1673, 15 Sep 1974.☞

PROTOTYPE AUTOMATED MULTIPHASIC HEALTH TESTING SYSTEM DEVELOPED

A prototype automated multiphasic health testing (AMHT) system is being developed by the Navy Medical Department, under the auspices of the Tri-Service Medical Information System (TRIMIS) program, to meet the increasing demand in military medical facilities for routine physical examinations. Systems analysis and design specifications for the new AMHT system have been completed by personnel of the Naval Medical Data Services Center in Bethesda, and the Outpatient Service, National Naval Medical Center (NNMC), Bethesda, Md.

Under the automated system, a patient's medical history and test data will be organized and processed by a computer. Test results will be compared to norms determined by age and sex. Abnormal test results will be recorded on the patient's report, and suggested follow-up care by a physician will be determined.

Test components for the proposed system include the following measurements or studies: body height, weight, skinfold, and temperature; visual acuity and intraocular tension; auditory acuity; blood pressure and pulse; electrocardiogram; selected clinical laboratory determinations; X-ray; spirometry; health history; and determination of the need for specific examinations on the basis of patient age or sex.

Approximately 80 patients can be processed by the AMHT system during a 7-hour period. Patients will be identified by their Social Security account number, entered into the computer for each test performed.

Procurement of the new system will be completed in Mar 1975, with installation at NNMC scheduled for Feb 1976. If the Navy prototype is successful, the system may be expanded to the Naval Regional Medical Centers at San Diego, Oakland, Philadelphia, and Portsmouth, Va., and to other medical facilities within the military services.

The major patient-oriented goals for the AMHT system are, to:

- Increase emphasis on preventive medicine
- Improve capability of handling increasing numbers of patients
- Utilize physician time more efficiently
- Expedite referral of patients to specialty clinics
- Reduce the time required for inpatient work-ups
- Increase capability of educating patients and hospital personnel
- Provide a data base for research. — BUMED, Code 48.☞

FLIGHT SURGEON BILLETS AVAILABLE

With fewer flight surgeons on active duty, many interesting and challenging billets have become available. Flight surgeons about to be released from active duty, or approaching a projected rotation date, may request a permanent change of duty; they must agree to remain for at least one year at new duty stations within the continental U.S. or, at overseas bases, for the tour length which is required by the Bureau of Naval Personnel.

Many Reserve flight surgeons who have received orders releasing them from active duty are eligible for transfer to a vacant billet of their choice, if they agree to extend their period of active duty.

For specific details about any billet, flight surgeons are encouraged to contact CAPT Will Simmons, MC, USN, Department of the Navy, Bureau of Medicine and Surgery (Code 511), Washington, D.C. 20372. Telephone: Autovon 294-4950.

The following flight surgeon billets are available as of 1 Jan 1975:

MCAS Beaufort, S.C.

MAG-31
MAG-32

NATC Patuxent River, Md.

VP-30
VX-1

MCAS Quantico, Va.

NAS Whidbey Island, Wash.

NARU
VA-128
VAQ-129

MCAS Cherry Point, N.C.

Second MAW

MCAS New River, N.C.

MAG-26
MAG-29

NAS Corpus Christi, Tex.

Branch Dispensary
TRAWING-4

NAS Kingsville, Tex.

Branch Dispensary
TRAWING-2

NAS North Island, San Diego, Calif.

Branch Dispensary, North Island
VS-21
VS-41
HC-3

NAS Glenview, Ill.

NAS Jacksonville, Fla.

Branch Dispensary
VP-16
VP-24
VP-56
HS WING ONE

NAS Cecil Field, Fla.

Branch Dispensary
CVW-7
CVW-8

NAS Key West, Fla.

MCAS El Toro, Calif.

Third MAW

NAS Memphis, Tenn.

NAVSTA Newport, R.I.

NAS Moffett Field, Calif.

Branch Dispensary
VP-9
VP-19
VP-31
VP-46

NAS Miramar, Calif.

VF-121
VF-124
CVW-2
CVW-14
CVW-19

NAVSTA Yokosuka, Japan

CVW-5

NAS Alameda, Calif.

Branch Dispensary

NAS Barbers Point, Hawaii

VP-17
VP-22

MCAS Kaneohe, Hawaii
First Marine Brigade

NAS Pensacola, Fla.
Saufley Field
Whiting Field
TRAWING-5
HELTRARON-18

NADC Warminster, Pa.

NAS Willow Grove, Pa.

NAS Pt. Mugu, Calif.

NAS Norfolk, Va.
Branch Dispensary
CAEWW-12
VRF-31

NAS Oceana, Va.
VC-2
CVW-1
CVW-8
CVW-17

NAS Brunswick, Me.
Branch Dispensary
VP-10
VP-11
VP-23
VP-44

NAS Imperial Beach, Calif.
HS-10

NAS Cubi Point, Republic of the Philippines

NAS Atsugi, Japan

MCAS Iwakuni, Japan
First MAW

NAF Detroit, Mich.

NAS Lemoore, Calif.
VA-122
VA-127
CVW-5
CVW-9
CVW-11
CVW-15
CVW-19
CVW-21

NAF El Centro, Calif.

NAF China Lake, Calif.
VX-5

NAS Bermuda

NAF Naples, Italy

NAF Naha, Okinawa
VC-5

—BUMED, Code 5. ☪

OVERSEAS BILLETS FOR NAVY NURSES

The following billets for Navy Nurse Corps officers are expected to be available at overseas naval medical facilities during the remainder of Fiscal Year 1975:

FACILITY	NO. OF BILLETS	REPORTING MONTH
Nav Hosp Guantanamo Bay, Cuba	3 1	Mar 75 Jun 75
Nav Sta Keflavik, Iceland	2 2	Feb 75 Jul 75
Nav Hosp Roosevelt Roads, Puerto Rico	4	Feb 75
Nav Hosp Rota, Spain	1*	Jun 75
Naval Air Facility Sigonella, Sicily	1 1	May 75 Jun 75
Fleet Support Office Athens, Greece	1	Jul 75
NAVREGMEDCEN Guam, Marianas	2 3 3 2 6 3	Feb 75 Mar 75 Apr 75 May 75 Jun 75 Jul 75
Fleet Activities Sasebo, Japan	2	May 75
Nav Hosp Subic Bay Republic of Philippines	2 4 1 1 1	Immediately Feb 75 Mar 75 Jun 75 Jul 75

*Anesthetist

Nurses interested in these billets should contact the Nurse Corps Detail Officer (CAPT Jean L. Miller, NC, USN, BUMED Code 322) through the chief of the nursing service at their local facility.—BUMED, Code 322. ☪

PREVENTIVE DENTISTRY TECHNICIAN TRAINING

Two places have been reserved for Navy dental technicians in each Preventive Dentistry Specialist Course at the U.S. Air Force School of Health Care Sciences, Sheppard Air Force Base, Wichita Falls, Tex. Any highly motivated career-oriented dental technician in the grade of E-4, or above, is eligible to attend the 8-week course provided he (or she) has a minimum remaining obligated service of 22 months after completion of training.

The purpose of this 8-week course is to train students to: perform periodontal scalings, teach effective oral hygiene procedures, and plan and conduct preventive dentistry programs. Approximately 20% of the curriculum consists of a review of such subjects as oral anatomy and pathology, chemistry, radiology, equipment maintenance, and dental administrative procedures.

Applications for this course should be submitted through the chain of command to the Chief, Bureau of Medicine and Surgery, Code 6114. Technicians will be allocated to the course in the order of receipt of application, and will return to their command upon completion of training. Local commands will be notified of the specific class starting date for the technicians who will attend.

Transportation and \$2.00 daily per-diem costs will be borne by the command to which the nominee is attached. Government housing and messing facilities are available at Sheppard AFB.—BUMED, Code 61.

NAVAL HEALTH RESEARCH CENTER

The Navy Medical Neuropsychiatric Research Unit, San Diego, Calif., was redesignated the Naval Health Research Center on 1 Sep 1974 and acquired expanded responsibility for investigating problems of physical and emotional fitness for naval service. Only emotional or psychiatric problems were previously investigated.

The Center is commanded by CAPT David R. Ten Eyck, MC, USN, and is part of the Naval Medical Research and Development Command.

The scientific director at the Center, Walter Wilkins, Ph.D., will coordinate research activities in 6 divisions:

- Environmental and Social Medicine (headed by Eric Gunderson, Ph.D.)
- Psychophysiology Research (Laverne Johnson, Ph.D.)
- Biological Sciences Research (Earl Edwards, M.S.)
- Stress Medicine Research (CDR Richard Rahe, MC, USN)

- Health Occupations Research (CDR Newell Berry, MSC, USN)

- Prisoner of War Studies (John Plag, Ph.D.).

The Center is located at Point Loma under a host-tenant agreement with the Navy Electronics Laboratory Center, San Diego.—BUMED, Code 71.

POSTDOCTORAL ASSOCIATESHIPS AT NAVY RESEARCH ACTIVITIES

Applications are now being accepted for postdoctoral research associateships available at the following 5 Navy research activities:

- Naval Medical Research Institute, Bethesda, Md.
- Naval Aerospace Medical Research Laboratory, Pensacola, Fla.
- Crew Systems Department, Naval Air Development Command, Warminster, Pa.
- Naval Submarine Medical Research Laboratory, Groton, Conn.
- Naval Health Research Center, San Diego, Calif. (Formerly Navy Medical Neuropsychiatric Research Unit).

Associateships are awarded in the following research areas: experimental medicine, immunology, undersea medicine, aerospace medicine, behavioral sciences, biochemistry, biophysics, environmental stress, microbiology, parasitology, virology, biomagnetics, physiology, and radiation biology.

Under the associateship program, postdoctoral biomedical engineers and medical, biological, and behavioral scientists participate in biomedical research projects conducted in the Naval Medical Research and Development Command (NMRDC) laboratories. The program is a joint effort of the NMRDC and the National Research Council of the National Academy of Sciences, Washington, D.C. The Council screens candidates' records, selects applicants, and approves the scientific merits of the laboratory projects and the credentials of research advisors.

The next program begins 1 Jul 1975. Applications must be submitted by 15 Jan 1975. Supporting documents must be received by 12 Feb 1975.

Candidates must hold the equivalent of an M.D., D.D.S., or Ph.D. degree.

For more details on application, specific fields of interest, and a list of required supporting documents, write to:

Associateship Office (JH 606)

National Research Council

2101 Constitution Avenue NW

Washington, D.C. 20418.

—BUMED, Code 71.

"RED CARD": A NEW APPROACH TO PEDIATRIC IMMUNIZATIONS

An innovative pediatric immunization program was developed at the Naval Regional Medical Center (NAVREGMEDCEN) Portsmouth, Va., when surveys conducted by the Regional Preventive Medicine Service revealed that a significant number of dependent children in the Tidewater area failed to complete an immunization series within the recommended time.

The "Red Card" Immunization Program is designed to:

- Insure that basic infant immunizations are accomplished.
- Provide parents with a record of the early immunizations of their children.
- Insure proper documentation of immunizations in the pediatric health record.
- Provide a permanent, official immunization record upon completion of the basic pediatric immunization series.

The program will also eventually provide a permanent record of the immunization levels of the entire military pediatric population in the Tidewater area.

Only a few items are needed: a plastic immunization card, with a red front and a white back; a recording slip in duplicate; a standard imprinter; and an International Certificate of Vaccination (PHS-731).

Here's how the program works:

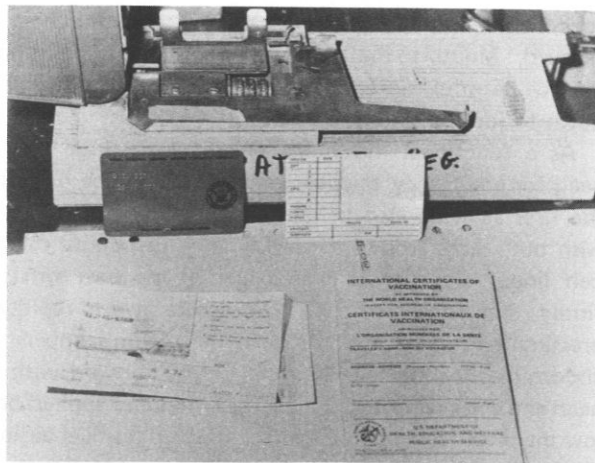
The Regional Preventive Medicine Service receives a copy of the Inpatient Admission/Disposition Record (NAV MED 6000/5) for each child born in the medical center. On the form is printed the baby's full name, and the name and address of the parents.

A red plastic card is then embossed with the name of the baby, and the Social Security number and branch of service of the sponsor. This card is mailed to the parents.

When the parents bring their child to any of the regional immunization clinics, the date of the visit is recorded on the card. The card is then placed in an imprinting machine and is used to transfer information to a two-part immunization recording slip. The red card is then returned to the parents, who are told when to report for the child's next immunization.

The original recording slip is stapled into the child's health record. The duplicate slip is sent to the Preventive Medicine Service.

In the Preventive Medicine Service the duplicate slip is placed in a tickler file according to the scheduled date of the child's next immunization. If a new recording slip is not received within two weeks following this scheduled date, a reminder is sent to the child's parents.



"RED CARD" MATERIALS.—These materials are used in the "Red Card" Immunization Program at NAVREGMEDCEN Portsmouth, Va.: standard imprinter; red plastic card (front and back); recording form in duplicate; and International Certificate of Vaccination (PHS-731).

When the series is completed and all immunizations are recorded on the red card, the card is forwarded to the Preventive Medicine Service. There the information is transferred to an International Certificate of Vaccination (PHS-731), which is sent to the parents. The red card is then destroyed.

If approximately 100 newborns participate in this program each month, the annual cost of material is about \$1,500. — CAPT Eugene J. Clarke, Jr., chief, Preventive Medicine Services, NAVREGMEDCEN Portsmouth, Va. ☐

THE HEIMLICH MANEUVER IN "CAFÉ CORONARY"

Critical choking episodes dubbed "café coronaries" by Henry J. Heimlich, M.D., are encountered in diverse places where laymen must treat the victim immediately. There is no time to summon professional aid.

Dr. Heimlich, director of surgery at Jewish Hospital in Cincinnati, Ohio, has recently publicized the features of a simple procedure that may be applied by any bystander, with considerable ease and success. He has received many grateful letters from parents, physicians, and laymen who have already had occasion to implement his method as described in newspapers and magazines, including the June issue of *Emergency Medicine*. (See *JAMA* 229[7]:746-747, 12 Aug 1974).

Dr. Heimlich stresses that the diagnostic hallmark of café coronary is the inability of the victim to speak, even when conscious. Skin color changes from pale, to blue or black, attend the obvious distress that leads

to collapse unless the victim's airway obstruction is relieved. Mouth-to-mouth resuscitation in this situation may be harmful, since it could drive the bolus further down to lodge even more firmly.

As a functional maneuver that may preclude the need for emergency tracheostomy, Dr. Heimlich directs the first aider to step behind the victim, holding him with both arms around the waist, at or just above the belt line. The rescuer grasps one of his own wrists firmly, then squeezes hard while repeatedly and rapidly pressing his locked forearms into the victim's upper abdomen, allowing the victim to slump forward with head and arms dangling. This sudden pressure applied below the diaphragm compresses the trapped residual air in the lungs, and the bolus (or water in drowning victims) is forcefully ejected.

Dr. Heimlich points out that the same principle may be applied to the unconscious victim. The first aider straddles the buttocks of a victim lying face down, and placing both hands (one on top of the other) just below the victim's diaphragm, pushes forcefully toward the victim's head.

The victim who chokes while alone should do anything he can to apply sharp force just below the diaphragm, such as falling into the edge of a table or sink. The objective is to compress the upper abdomen in order "to pop the obstruction loose," Dr. Heimlich emphasizes.

Through the Dysphagia Foundation, Inc., Dr. Heimlich is publishing a booklet on the maneuver for free distribution to the public. He has requested that anyone who learns of any attempt to apply his method write to him at Jewish Hospital, Cincinnati, Ohio 45229. By analysis of compiled data he will monitor results, and may find it advisable to modify the technique.☛

LEPROSY SEMINARS SET FOR 1975

The Public Health Service of the Department of Health, Education and Welfare has announced the following short seminars on selected medical aspects of leprosy:

LEPROSY: DERMATOLOGICAL ASPECTS (Senior residents in dermatology)	8- 9 Jan 1975 12-13 Mar 1975 14-15 May 1975
LEPROSY: PATHOLOGICAL ASPECTS	22-23 Jan 1975
LEPROSY: MANAGEMENT OF INSENSITIVE AND HYPER-SENSITIVE FEET	4- 6 Feb 1975

The seminars will be held at the U.S. Public Health Service Hospital, Carville, La. Attendees will be provided transportation between New Orleans International Airport and Carville (a distance of 67 miles), but must make their own arrangements for round-trip transportation between their departure point and New Orleans.

There is no registration fee for these seminars. Lodging and meals will be provided on the station. Officers who receive per diem will be charged the standard rate of \$1.50 per meal.

For further information, write:

Chief, Training Branch
U.S. Public Health Service Hospital
Carville, La. 70721☛

NEW ESCORT SHIP NAMED FOR THE LATE HM3 VALDEZ

The Navy ocean escort ship USS *Valdez* (DE-1096), named in honor of HM3 Phil I. Valdez, was commissioned at the U.S. Naval Base, Charleston, S.C., on 27 Jul 1974. The 4200-ton ship bears the name of a hospital corpsman who was posthumously awarded the Navy Cross for saving the lives of two Marines during action in Vietnam.

HM3 Valdez was born in 1946 in Dixon, N.M. He joined the Navy in 1965, and trained as a hospitalman apprentice at the U.S. Naval Hospital Corps School, San Diego, Calif. After advancing to the rate of HN, he served at Nav Hosp Key West, Fla., before assignment to Vietnam duty in Dec 1966 with the First Battalion, First Marine Division, Fleet Marine Force, Pacific.

On the morning of 29 Jan 1967, while serving with Company "B" near DaNang, Petty Officer (then HN) Valdez participated in a helilift in support of Company "H" of the Second Battalion. The platoon came under heavy fire, and several Marines were wounded. According to the citation accompanying his Navy Cross, Petty Officer Valdez:

... ran over 75 yards of open terrain, under constant enemy fire, to aid a fallen Marine. He then moved the wounded man to a safe area and . . . rendered medical assistance. Again exposing himself to enemy fire, [he] moved across approximately 50 yards of open ground to another Marine. While treating the second Marine, he positioned himself between the man and the hostile enemy fire. It was at this time that Petty Officer Valdez was mortally wounded by enemy small-arms fire.



NAMED FOR CORPSMAN.—The USS *Valdez*, a 4200-ton, Knox-class escort vessel has been named in honor of HM3 Phil I. Valdez, who was killed by enemy small-arms fire in Vietnam.



GALLANT CORPSMAN.—HM3 Phil I. Valdez was posthumously awarded the Navy Cross for conspicuous gallantry and intrepidity in action with the First Marine Division in Vietnam. The escort ship USS *Valdez* was named in his honor and joined the fleet in commissioning ceremonies held on 27 Jul 1974 at Charleston Naval Base, S.C.

Advanced to HM3 after his death, Petty Officer Valdez was also posthumously awarded the Vietnamese Military Merit Medal and Gallantry Cross with Palm, from the Government of the Republic of Vietnam.

The USS *Valdez* is a Knox-class escort vessel designed to locate and destroy enemy submarines; it carries 17 officers and 283 enlisted men, and is commanded by CDR Joe Peden, USN. The ship can operate as a unit of a hunter-killer task force, patrol coastal waters for

submarines, screen amphibious or under-way replenishment forces, or escort military convoys.

Senator Pete V. Domenici (N.M.) was guest speaker at the commissioning ceremonies. He was joined by senior naval officials, local naval personnel, members of the Valdez family, and invited guests. — (By courtesy of CHINFO) ☞

COMING IN 1976: ANNIVERSARY CONGRESS OF PAMA

The 50th Anniversary Congress of the Pan American Medical Association (PAMA) will be held in Hollywood, Fla., on 24-29 Oct 1976. Virtually all branches of medicine and surgery will be covered in professional papers, symposia, exhibits, and other presentations.

Surgeons are invited to participate in the activities of the Section on General Surgery by submitting a paper, serving as a panelist, or joining round-table discussions. The title of proposed papers, and an abstract not exceeding 200 words, should be submitted in application.

S. Arthur Localio, M.D., of New York City, is president of the Section on General Surgery. Carlos Alberto Moran, M.D., of Ecuador, is Latin American Chairman.

For further information, write:

Joseph J. Eller, M.D.
Director General
Pan American Medical Association
745 Fifth Avenue
New York, N.Y. 10022 ☞

OFFICIAL INSTRUCTIONS AND DIRECTIVES

BUMEDNOTE 6230 of 9 Jul 1974

Subj: Designation of additional Alert Forces for immunization purposes

Naval construction battalion personnel and aircrew members of units subject to rapid deployment are designated additional Alert Forces and will be provided required immunizations and reimmunizations. Commanding officers will assure that all persons under their jurisdiction, or transferred from their command receive required immunizations, and that records of such immunizations are maintained.

BUMEDNOTE 6240 of 23 Jul 1974

Subj: Commercially prepared frozen sandwiches; standards for

Preparation areas and sandwich ingredients shall be specifically designed and prepared for mass production of frozen sandwiches. By definition, frozen sandwiches, commercial, require thawing in a refrigerator before use; contain only the bread and meat, or cheese portion; and include only ingredients that are adaptable to freezer storage. Each sandwich shall be hermetically sealed, immediately frozen to an internal temperature of 0° F or below, and kept at those temperatures in a central storage freezer. Frozen sandwiches shall be transported to activities in freezer-equipped trucks. Upon receipt, sandwiches shall be stored at 0° F or below, thawed at 34°-40° F, and heated or toasted in conventional, infrared, or microwave ovens before serving.

The following standards apply to shelf life of commercially prepared frozen sandwiches:

- In *commercial freezer* — maximum of 60 days from date of preparation to the date of delivery at activity.
- In *freezer* — maximum of 15 days after delivery at activity.
- In *refrigerator* — maximum of 36 hours after being removed from the freezer; unused sandwiches will then be discarded, unfit for consumption.

Each carton of sandwiches will carry the processor's name, address of the preparation site, and preparation date. Upon delivery to the activity, the processor will mark each sandwich with a "pull date" to indicate the last day on which the sandwich may be offered for sale or consumption.

BUMEDINST 6710.59 of 29 Jul 1974

Subj: Intravenous and inhalation agents to control pain and anxiety in dental outpatients, use of

Intravenous and inhalation agents to control pain and anxiety in dental outpatients will be administered only by and under the *direct* supervision of attending dental officers who have successfully completed 3 years of formal oral surgery residency training in an approved education program.

Standard Form 522 (Request for Administration of Anesthesia and for the Performance of Operations and Other Procedures, rev. 1/73; Navy Supply System stock number 0109-201-5004) must be prepared and signed when these agents are used. Standard Form 517 (Anesthesia; Navy Supply System stock number 0109-201-4404) will also be properly filled out and maintained as a permanent part of the patient's dental record.

Recovery room facilities with provisions for positive-pressure oxygen, suction, and resuscitative drugs and equipment must be immediately available. Patients will be released only after fully recovered, and in the care of a responsible individual when necessary. Upon dismissal following these procedures, written postsedation/post-operative instructions will be furnished each patient.

BUMEDNOTE 6220 of 31 Jul 1974

Subj: Influenza disease and vaccine status, Fiscal Year 1975

A new bivalent influenza vaccine, A/Port Chalmers/1/73 combined with B/Hong Kong/5/72, is available this fall. Inoculation is mandatory for Alert Forces, recruits, and others cited in paragraph 12b(5)(b) of BUMEDINST 6230.1G. The vaccine is also available on a voluntary basis for other active-duty Navy and Marine Corps personnel and dependents. The manufacturer's package insert should be read carefully prior to administration.

BUMEDNOTE 5100 of 9 Aug 1974

Subj: BUMED activity safety officers; training for

During FY 75, safety officers expected to continue serving in such a capacity for a significant period in BUMED-managed activities should attend a 1-week training course developed by the Naval Sea Systems Command Safety School at Bloomington, Ind., if they

did not receive similar training during FY 74. BUMED will authorize and fund travel and per diem costs.

The course content includes: logic of safety; accident causation; hazardous materials; electrical safety; motor vehicle safety; occupational health and hygiene; athletic and recreational safety; contractor operations; hazard recognition, evaluation, and correction; safety of life (fire); accident investigation, summary, and analyses; and safety program management.

Directors, commanding officers, and officers-in-charge of BUMED-managed activities shall nominate eligible safety officers to attend one of the two courses listed in this directive. A nomination and quota request shall be submitted for each officer. Requests shall be forwarded to BUMED (Code 563) no later than 4 Jan 75.

BUMEDNOTE 5100 of 16 Aug 1974

Subj: Safety inspection and advisory services available from Indiana State University

Indiana State University maintains a task group of safety management students who will perform safety inspections, and offer advice and recommendations for improving safety programs at BUMED activities. Activities using this inspection and advisory service must fund costs from available command resources. Transportation costs, and room and board expenses for the task group (5 students) vary; in addition, approximately \$1,100 per week is required to cover University fees, and remuneration for the safety management professor and the task group during an on-site visit.

Safety inspection services may be procured through:

J.V. Adams
Safety Management
Department of Health and Safety
Indiana State University
Terre Haute, Ind. 47809

Telephone: (Area code 812) 232-6311.

In addition to this consultation service, by a separate arrangement with Indiana State University, there is available a cooperative safety management education program. (See next item)

BUMEDINST 5100.8 of 27 Aug 1974

Subj: Safety Management Student Trainee Program

BUMED activities in the U.S., Puerto Rico, and Guam may participate with Indiana State University in a cooperative education program through which University students being formally trained in safety

management are provided the opportunity for on-the-job educational experience, under U.S. Civil Service Commission regulations. The activity benefits from the students' technical knowledge and advice.

Activities whose combined assigned military personnel, civilian employees, and average number of beds occupied total less than 600 may enter into such a cooperative agreement. Larger activities may also enter into such an agreement if a full-time safety manager, responsible to the CO, is already assigned.

BUMED activities interested in participating in this program may write to:

Indiana State University
Department of Health and Safety
West Knisely, Room 6
518 E. Chestnut St.
Terre Haute, Ind. 47809
Telephone: (Area code 812) 232-6311, ext. 2351.

BUMEDNOTE 5100 of 5 Sep 1974

Subj: Safety information resources

This notice contains safety informational material for the use of safety officers at all naval activities. Attachments include: articles, cartoons, and other printed items suitable for display on bulletin boards and for reprinting in local publications; a list of safety periodicals which will be delivered to BUMED activities during FY 75; a list of organizations that promote safe practices in recreational activities; and information about motorcycle safety, fire prevention, and safety hazards related to toys, lawn mowers, architectural glass, and health-care activities.

BUMEDINST 4235.5E of 26 Aug 1974

Subj: Programming of investment equipment requirements

This directive promulgates revised instructions and describes new mandatory procedures for programming BUMED-funded investment equipment requirements.

Each activity under the primary support of BUMED must develop and maintain a formal equipment-replacement program, and a record of anticipated requirements for the 2 subsequent fiscal years. Requests for standard and nonstandard equipment items having a unit cost of \$1,000, or more, will be justified and submitted to BUMED for approval prior to procurement. Purchase of all microfilm, quick copying, dictation and filing equipment, and the lease or rental of any equipment,

materiel, or service must be approved by BUMED regardless of the cost amount involved.

Since 1 Oct 1974, investment equipment budget preparation and management in BUMED has become the responsibility of the Naval Medical Materiel Support Command (NAVMEDMATSUPPCOM) which, upon request, will provide technical assistance to activities experiencing problems in procuring equipment.

The annual budget of investment equipment requirements should have been submitted to NAVMEDMATSUPPCOM by 15 Oct 1974, to include an original and one copy of Investment Equipment Budget, FY 1976 (List 1); and Investment Equipment Budget, FY 1977 (List 2). Future fiscal year budget requirements will be submitted annually to NAVMEDMATSUPPCOM no later than 15 Mar, beginning March 1975.

All budget items for prior years are cancelled at the end of the fiscal year. If previously approved items have not been funded for procurement and are still required, they must be reinstated by inclusion in the current year Priority Listing (List 3). The Command Priority List for FY 1976 will be submitted to NAVMEDMATSUPPCOM as of 1 Jul 1975; thereafter, beginning in 1976, lists will be submitted as of 1 Sep.

All equipment having a unit book value of \$1,000, or more, that was held by individual commands as of 1 Jul 1974, should have been reported to NAVMEDMATSUPPCOM by 30 Sep 1974; quarterly reports shall be submitted thereafter.

BUMEDINST 6320.51 of 27 Aug 1974

Subj: Medical Capabilities Report, MED 6320-19

Beginning 1 Oct 1974, a Medical Capabilities Report (MED 6320-19) must now be submitted on a quarterly basis, reflecting the capability of naval medical treatment facilities as it existed on the last day of the preceding quarter. If significant changes occur between reporting periods, BUMED shall be notified by message, with an information copy to the Armed Services Medical Regulating Office (ASMRO), in order to facilitate the orderly and efficient assignment of patients.

BUMEDINST 5100.5A of 5 Sep 1974

Subj: Flammable/explosive anesthetic agents; discontinuance of

The use of explosive anesthetic agents will be discontinued in all naval medical facilities, except for those major training hospitals approved for graduate-education programs in anesthesiology. Medical personnel are also

advised to beware of other types of hazards, and to observe general safety precautions.

BUMEDINST 6150.28B of 10 Sep 1974

Subj: Clinical laboratory workload reporting system

This directive provides revised instructions for reporting medical laboratory workload data. Reports will be submitted on 2 forms — Laboratory Workload Data (NAVMED 6150/1, Rev. 7/74) and Laboratory Workload Data ([Supplemental] NAVMED 6150/1A, 7/74) — which will be provided through initial distribution. These two forms will be available in the Cognizance Symbol "I" supply system in Jan 1975 under stock numbers 0105-LF-208-4000 and 0105-LF-208-4005, respectively.

BUMEDNOTE 6240 of 10 Sep 1974

Subj: Sanitation and hygiene in food service facilities

The Medical Department representative of each naval activity and ship will: review current command regulations, and determine the CO's policy on improving food-service facilities and promoting hygienic practices of food handlers, in accordance with NAVMED P-5010, *Manual of Naval Preventive Medicine*, Chapter 1. Written inspection reports and recommendations will then be submitted to the CO for his personal review.

Assistance is available upon request from the regional medical centers, environmental and preventive medicine units, and disease vector ecology and control centers.

BUMEDINST 5726.1A of 12 Sep 1974

Subj: Navy Community Service Program

Commands are encouraged to support the Navy Community Service Program, formerly known as the DOD Domestic Action Program. Individuals are also urged to participate voluntarily in community service efforts during off-duty hours. Participation is especially recommended in physical and mental health, family planning, drug, and other related medical/dental community programs, provided such action does not interfere with the mission of the activity.

The Annual Community Service Program Activity Reports were submitted to reach BUMED, Code 44, by 20 Sep.

The direction and coordination of the Navy Community Service Program is now vested in the Assistant Vice

Chief of Naval Operations/Director of Naval Administration (Op-09B).

BUMEDNOTE 5100 of 17 Sep 1974

Subj: Unsafe equipment

Equipment used in medical facilities must be regularly inspected at prescribed periodic intervals to prevent

injury to patients during use. Special attention should be given to such potentially unsafe items as hospital bed-light fixtures, overhead surgical operating room lights, power-driven tables, and Bunsen-type burners.

The following items have been found to be potentially unsafe and are being recalled by the Richards Manufacturing Company: Shea Stapes Drill No. 1260, Richard Stapes-Mastoid Drill No. 1265, Foot Switch No. 23-0111, and Richard Stapes-Mastoid Drill Set No. 13-015. ☞

✠ In Memoriam ✠

CAPT Douglas T. Prehn, MC, USN (Ret.), a urologist whose name is associated with a pathognomonic sign in the differential diagnosis of torsion of the testicle, the "Prehn's sign," died 29 Jun in Wausau, Wisc.

Dr. Prehn was born 1 Aug 1901 in Marathon City, Wisc. He graduated from the University of Wisconsin in 1925 with a B.S. degree, and received his M.D. degree in 1927 from the College of Physicians and Surgeons of Columbia University, N.Y.

Dr. Prehn began his naval career as an intern at Nav Hosp Brooklyn, N.Y., in 1927. In 1929 he served briefly as a member of the staff of Nav Hosp Great Lakes, Ill., before joining the USS *Chaumont*. While aboard the *Chaumont* (1929-1931), he aided in the evacuation of 189 Navy and Marine refugees during an earthquake at Managua, Nicaragua. Subsequent tours of duty as a ward medical officer were served at Training Station Unit, Norfolk, Va.; Nav Hosp Brooklyn, N.Y.; and Nav Hosp Mare Island, Calif. Dr. Prehn also studied at the Naval Medical School in Washington, D.C., and received postgraduate training in urology at the Brady Urological Foundation, New York Hospital, N.Y.

In 1935, after serving 8 months at the U.S. Nav Hosp Canacao, Philippine Islands, Dr. Prehn joined the USS *J.D. Ford* as division medical officer. In this capacity he surveyed the area of the southern Philippines in the USS *Pope*, visiting Zamboanga, the Sultan of Sulu at Jolo, and other islands as far as Tawitawi; his duties during this time also took him to Japan and Chefoo, China. He subsequently served in the USS *Crowinshield* as division medical officer in 1936, and in the USS *Mahan* during President Franklin D. Roosevelt's cruise to South America in 1937.

Following service at the Navy Yard Dispensary in Brooklyn, N.Y., and as assistant Third Naval District medical officer, CAPT Prehn briefly joined the staff of the USS *Spica*. In 1940, he served as urologist at the

Naval Dispensary, Naval Submarine Base New London, Conn., before assuming the position of chief of urology at Nav Hosp Brooklyn, N.Y. Dr. Prehn joined the submarine repair unit servicing the South Pacific, in the USS *Griffin* in 1942; while at sea, he also served in the USS *Gold Star* as senior medical officer.

From 1943 to 1945 Dr. Prehn was chief of urology at the Camp Peary Hospital, Va. He subsequently served as senior medical officer in the USS *California*; as chief of urology at Nav Hosp Chelsea, Mass., (1946-1947); and as fleet surgeon, COMLANTRESFLT. His name was placed on the Retired List in Aug 1953.

CAPT Prehn held the 2nd Nicaraguan Campaign Medal, Yangtze Service Medal, American Defense Service Medal, American Campaign Medal, Asiatic-Pacific Campaign Medal with two bronze stars, Navy Occupation Service Medal, and WWII Victory Medal.

A member of the New York Urological Association, the American Neisserian Society, and the AMA, Dr. Prehn published many professional articles in prestigious medical journals. He was also granted a patent for a formula used to treat fungus infections of the skin.

CAPT Prehn is survived by a daughter, Mary L. Sachse, of 303 Drummers Lane, Wayne, Pa. 19087.

David Ludgate Southey, AIA was born in 1911 and spent his earlier years in Bridgeport, Conn., where he attended high school. He subsequently attended Salisbury Preparatory School, and graduated from the University of Pennsylvania in 1936 with the bachelor of architecture degree.

Following graduation Mr. Southey worked in London, England, as an architect. His distinguished career in government service began in 1941 when he joined the staff of the Chief of Engineers, War Department. In 1943 Mr. Southey volunteered for active duty in the

U.S. Navy, where he progressively advanced in commissioned rank from LTJG to LCDR in 1946. Following a period of active naval service he became a prominent architect in his native Bridgeport, where he practiced until 1952.

Returning to the Navy as a civilian architect for the Bureau of Yards and Docks, Mr. Southey's outstanding ability to design medical facilities received early recognition. In 1953 Mr. Southey joined the staff of the Bureau of Medicine and Surgery, where he remained as the senior architect in the facility design section of the Planning Division, until his death on 27 Aug 1974.

Mr. Southey's professional expertise in designing hospitals won for him both national and international recognition. Foreign nations repeatedly requested his aid in designing their hospitals. This he did willingly, on his own time, never accepting reimbursement for these services. On 10 separate occasions the Chief of the Bureau of Medicine and Surgery (BUMED) gave formal recognition to Mr. Southey's exceptional and dedicated service in the form of specific awards, including 2 Navy Superior Civilian Service Awards and the Navy Meritorious Civilian Service Award. A further indication of his preeminence, and on the basis of his impressive credentials, proven ability, and outstanding architectural accomplishments, Mr. Southey was selected as a member of the prestigious American Institute of Architects (AIA), and the Architectural Association, London, England.

The loss of his professional acumen is keenly felt, especially by BUMED, to which he had dedicated the last 21 years of his life. This truly gentle man, who



AS WE REMEMBER HIM.—In Nov 1972, Mr. David Southey (center) received the Navy Superior Civilian Service Award, one of a succession of civilian awards bestowed upon him during 21 years of dedicated service at BUMED. The award was presented by the former Navy Surgeon General, VADM George M. Davis, MC, USN (left). Mrs. Kathleen Southey (right) was invited to participate in the ceremony honoring her husband.

never expressed a complaint or harsh word, will be long remembered for his characteristic response, "No problem," which exemplified the positive attitude he brought to his desk — to do whatever was necessary to accomplish the task. His professionalism, enthusiasm, quick humor, and loyalty to the Navy Medical Department will be sorely missed by all who knew him. Many Navy shipmates and fellow workers mourn his passing, and extend their sympathy to his beloved wife, Kathleen. ☘



UNITED STATES NAVY MEDICINE

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TEAMMATES.—For Navy nurses assigned to the White House Medical Unit, life is sometimes a picnic. During one such event held recently on the south grounds of the White House, LTJG Joanne K. O'Brien, NC, USNR and LCDR Barbara C. Rodgers, NC, USN exchanged friendly greetings with President Gerald Ford. It's all part of your day when you're on the White House team. (By courtesy of RADM W.M. Lukash, MC, USN, Physician to the President)

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