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NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

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Epidemiological Observations on Filariasis (due to W. bancrofti) in the Military Forces in the Pacific Area: Filariasis caused by W. bancrofti is quite uniformly encountered in native populations throughout most of the military-occupied bases in the warm regions of the Pacific. However, up to the present time the disease has occurred in epidemic proportions in the occupying military forces in but one of the many native endemic regions. In the Samoan group, especially in American Samoa, the cases in military personnel have been numbered in the thousands, with 5 to 70 per cent of certain military

units suffering infections. In contrast, in the New Hebrides, reports indicate that the disease has been encountered rarely if at all, except in troops previously exposed in Samoa. In the Solomons there are on record less than 30 cases which appear to have been contracted locally. In New Guinea, reports indicate that to date no cases of filariasis have appeared in the Australian forces.

Explanations which have been advanced to account for the epidemic occurrence of the disease in one native endemic area and the scarcity or absence of cases in another are: (a) difference in number of troops exposed, or in time of exposure; (b) proximity of natives and troops; (c) variation in incidence of filariasis in the natives in different parts of the Pacific.

It seems unlikely that any of the above factors adequately account for the great disparity which has been noted. The total troop population in those areas where the disease has been rare or absent in military forces has been even greater than that in the Samoan area. Likewise, the period of exposure in other areas has been more than sufficient, judging from the Samoan experience, for clinical manifestation to have appeared. Although the degree of infection in the native population in different regions varies markedly from island to island and from group to group, in general, the prevalence everywhere appears sufficient to form a rich seed-bed of filariasis. Between 20 and 50 per cent of Samoan natives, according to Comdr. Leon Bromberg (MC), USNR, and his co-workers, show microfilariae in the blood. Lt. William J. Perry, H-V(S), USNR, reports 48 per cent of a group of natives examined in the New Hebrides, and surveys on Guadalcanal and New Guinea have shown 5 to 30 per cent, and higher, of the natives there to have microfilariae in the blood.

Originally it was thought that the intimate intermingling of troops and natives, such as occurred in the Samoan area to a far greater extent than in the New Hebrides, Solomons or New Guinea, constituted a factor that might almost alone account for the difference of prevalence. Lt. Elon E. Byrd, H-V(S), USNR, and Lt. (jg) Lyle S. St. Amant, H-V(S), USNR, demonstrated quite conclusively the importance of this factor in American Samoa. These workers found that A. scutellaris var. pseudoscutellaris, a daytime biter, was the principal and probably sole vector of importance. They found that as high as 25 per cent of the mosquitoes of this species collected in the center of native villages harbor infective larvae, and most remarkable, that as collections were made at successively distant points from the village, the natural mosquito-infection rates dropped to zero at a distance of 200 yards. This evidence demonstrated a short flight-range of the mosquito and, as a corollary, suggested that the degree of transmission might largely depend upon the degree of intermingling of natives and troops. That this was actually the case has been demonstrated, for the incidence of infection in separate military

groups, almost without exception, has varied with the observed degree of intermingling.

As important as the factor of propinquity of natives and troops has been in Samoa, it is highly improbable that the lesser degrees of native contact claimed for the Solomons and adjacent islands will adequately explain the occurrence of so few cases in those regions. In such places as Guadalcanal and New Guinea there has, in fact, been considerable intermingling and certainly enough to have led us to expect more cases than the few which have been reported. Furthermore, the presumed vector from the New Hebrides to New Guinea is Anopheles punctulatus var moluccensis, a mosquito with a much longer flight-range. The longer flight range of moluccensis would materially increase this vector's ability to transmit filariasis, and lesser degrees of intermingling would not serve to limit the spread of the disease as it does with the short-ranged vector responsible for transmission in Samoa.

Certainly, on Guadalcanal, where the cycle of transmission for both malaria and filariasis is said to be from infected natives - to moluccensis - to troops, there has been sufficient association of natives, troops and vector to lead to well over 50,000 cases of malaria. In contrast, on this same island, although moluccensis has been found infected in nature with filarial larvae, and a high percentage of the natives have microfilariae in their blood, there apparently have been less than 30 cases of filariasis. A like situation seems to exist in New Guinea where malaria has appeared in many thousand Australian troops with apparently not a single case of filariasis.

From the above consideration it does not seem likely that there is any simple or obvious explanation for the marked discrepancies in incidence of filariasis in military personnel in the various islands of the Pacific. Indeed, a consideration of these and certain other aspects suggests that in contrast to the clearly established epidemiological aspects of Samoan filariasis, where pseudoscutellaris is the vector, elsewhere the problem of transmission is one which largely remains to be solved.

A casual examination of some of the aspects of the problem indicates the complexity of the factors which are involved. As has already been inferred, it must be determined why, if moluccensis is the vector, filariasis in troops has been so remarkably absent under the same conditions of transmission in which malaria, presumably involving the same native sources of infection and the same vector, has occurred in overwhelming numbers. In view of this situation it must be ascertained if A. punctulatus moluccensis actually is the vector and if so, to what extent it is an efficient transmitter of the disease. Another question arises from the knowledge that the blood-forms in natives in the Samoan area are of a non-periodic variety in contrast to the periodic variety noted in the Solomons. This raises the old question of the possibility

of the existence of specific differences in the worm itself, with consequent differences in host-susceptibility, having an important bearing on the problem of transmission. Another source of possible confusion is the fact that from recent reports (Major Wilbur Downs, (MC), AUS) it is known that at least five species of birds harbor microfilariae and that the larvae may be found in bats and lizards as well. Whether these animal infections have any role as a source of human infections remains to be determined. Also, the apparent existence of a large animal reservoir immediately suggests the possibility that natural infections found in various species of mosquitoes need not necessarily indicate that the species concerned is a vector of human filariasis. Complicating the situation further is the occurrence, reported by Perry, of W. malayi in the Tonkinese of the New Hebrides. It is clear that the role of these and possibly of other factors remaining to be discovered must be elucidated before we can reach the correct solution of the problem of transmission.

The following conclusions may be derived from the above considerations:

1. There exists a marked dissimilarity in the incidence of filariasis (W. bancrofti) in troops which have occupied various Pacific island bases where the disease is endemic in natives.

2. The disease has manifested itself in epidemic proportions only in certain Central Pacific islands where filariasis in the natives is of a non-periodic type, where A. scutellaris pseudoscutellaris is the vector, and where there has been an intimate intermingling of natives and troops.

3. In contrast, in islands of the New Hebrides, Solomons and New Guinea where all of the elements for transmission would appear to be present, but where a periodic type of microfilaria is observed in natives, and where A. punctulatus moluccensis apparently is the vector, filariasis has occurred in troops only sporadically, or not at all.

4. The need for control is obvious where pseudoscutellaris, filarial-infected natives and military personnel co-exist, either on islands presently occupied or those which later may become occupied. Furthermore, efficacious methods of control are possible, since the mechanism of transmission is well understood.

5. In contrast, on Pacific islands where another mosquito vector is involved, and where the disease exists in a high proportion of natives, the extent to which control measures are essential remains problematical; the methods to employ are not known; indeed, the entire problem requires elucidation.

6. Finally, despite the apparent lack of hazard to military personnel in the New Hebrides, the Solomons and New Guinea as shown by past experience, the very lack of knowledge makes it precarious to assume that filariasis will continue to be unimportant whatever may be the existing condition in these areas. The need for clarification of the entire problem is urgent and clear. (J.J.S.)

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The Effect of Diathermy on Tissues in which Tantalum is Implanted: Experiments have been carried out at the Naval Medical Research Institute to determine the effect of diathermy on tissues in which tantalum has been implanted. Although further studies are indicated and planned, a preliminary report has been issued because of the importance of the findings.

The experiments recorded in this preliminary report were conducted on nine rabbits. In seven of these animals operative procedures were carried out under sterile conditions. On one side the sciatic nerve was exposed and wrapped in 0.0005 inch tantalum foil. On the other side a small piece of tantalum plate measuring 20 x 5 x 0.5 mm. was embedded among the muscle fibers of either the gluteus or hamstring groups. The wounds in both sides were closed with cotton sutures. Two unoperated rabbits were given diathermy to test the dosage.

Five days following operation the hind legs of the animals were exposed to diathermy administered with the DeForest Short Wave Diathermy or the Intra-Therm Short Wave Diathermy. The pads of the apparatus were applied to the lateral aspects of both hind legs for through and through delivery. The current was applied for a period of 20 minutes with variations of voltage and milliamperage.

Eight days following operation the animals were killed. The sciatic nerves and the muscles bordering the implanted tantalum were inspected for gross damage and then removed for histological examinations.

The results of this study indicate that diathermy may cause extensive damage to tissues contiguous to implanted tantalum. This damage appears as acute inflammation, edema and atrophy of muscle, with hemorrhage. In addition there is degeneration of the axones of the sciatic nerve with acute inflammation and hemorrhage in the epineurium. This damage was marked following the use of a diathermy apparatus working on the principle of conduction (DeForest). Only minimal tissue damage attended the use of a diathermy apparatus based on the principle of electrostatic induction. (Intra-Therm). (N.M.R.I. Project X-133.)

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Shock Therapy in Psychiatric Disorders: During the past seven years in this country, the "drastic" therapies (insulin, metrazol and electro-shock) have played a progressively more prominent role in the treatment of selected psychiatric disorders. For a brief period following its introduction shock treatment was administered to all types of cases indiscriminately, with the hope that it would materially alter what was generally appreciated to be the uniformly poor prognosis of many kinds of mental illness.

Careful study soon indicated that shock treatment was not a universal panacea, and its use was then more properly restricted to the treatment of the three major functional psychoses - schizophrenia, manic-depressive psychosis and involutional melancholia. With more experience and greater technical familiarity, it became apparent that certain of the schizophrenic reaction types, which occur with a rapid onset in young people and are characterized by a loosely organized psychosis, were more apt to benefit by adequate insulin shock therapy than were the affective psychoses - those in which mood disturbances predominate in symptom picture. Convulsions brought about therapeutically by analeptic drugs (camphor derivatives for the most part) and by induced electrical currents applied to the skull have found their greatest sphere of psychiatric usefulness in the treatment of the depressions of manic-depressive psychosis and involutional melancholia.

Statistical reviews of adequate follow-up studies conducted by conservative investigators, indicate that approximately 45 per cent of carefully selected cases of schizophrenia treated by properly administered insulin therapy remained asymptomatic throughout an observation period of seven years.

An even more satisfactory recovery rate is obtained in treating involutional melancholia with convulsive therapy, as 70 to 90 per cent of these malignant depressions undergo remission within a period of one month to six weeks. This is in striking contrast to a spontaneous recovery rate of approximately 30 per cent within the first three years of illness.

The results obtained in the management of manic-depressive psychosis are intermediate. A depression can be readily terminated successfully by metrazol or electro-shock with about the same frequency as can involutional melancholia. However, there is little evidence to support the belief that this treatment more than temporarily alters the likelihood of recurrence of subsequent depressions or elations.

While shock therapy has a definite place in the management of certain of the major psychoses - notably schizophrenia, manic-depressive psychosis and involutional melancholia - its use in the management of the psychoneuroses is as yet a relatively unexplored field, and considerably more research investigation is required before a clinical trial is indicated. Sub-shock doses of insulin adequately buffered by glucose to control the degree of induced hypoglycemia

have been found useful adjuncts in the temporary control of anxiety and tension as well as beneficial in the treatment of the toxic-confusional states induced by drugs. The relief from anxiety afforded by electro-narcosis and electro-shock is still in the experimental stage and is not recommended for general clinical application.

Since the advent of electro-shock, this form of therapy has more or less supplanted the use of metrazol. Electro-shock affords a better control of the situation; it is more easily given; and the patient experiences none of the disagreeable effects which usually attend metrazol therapy. Its use in the management of some of the psychiatric reactions to combat, however, should be restricted to authorized experimental investigation.

Considerable skill and clinical experience are required in the administration of these treatments if serious complications - skeletal fractures and dislocations, prolonged coma, cardiovascular and pulmonary sequelae - are to be avoided. It has been amply demonstrated that the remission rate is proportionate to the technical skill and clinical acumen of the therapist.

In the treatment of naval personnel, shock therapy should be limited to the patients with psychoses who are being given definitive care at the Navy Units designated for this purpose (U. S. Naval Hospital, Bethesda, Maryland; the Naval Units at St. Elizabeth's Hospital, Washington, D. C.; U. S. Public Health Service Hospital, Fort Worth, Texas; Napa State Hospital, Napa, California and U. S. Naval Base Hospital #6). It is believed that the definitive care of psychiatric patients deserves special consideration and should be restricted to Navy Units where supervision by trained personnel can be given.

Preliminary preparation of the patient for all shock treatment should include careful physical and neurological examinations. An electrocardiogram and X-ray of the chest and thoracic spine are necessary to rule out cardiac, pulmonary, and skeletal pathology which are definite contraindications to the use of drastic therapy. Electroencephalographic studies should be performed when facilities are available. The recommended use of curare or beta-erythroidine in the hands of experienced administrators precludes a high incidence of the osteologic complications of convulsions.

It is the policy of the Units designated for the care of psychiatric patients to obtain written consent for the use of convulsive therapy from a responsible member of the patient's family. In this manner the family can be informed of the fact that treatment is being undertaken with the hope of improving the patient's chances for recovery, and in addition, if untoward sequelae result, the burden of responsibility has been legally shared.

Shock therapy has a restricted application in the treatment of selected psychiatric patients in the Naval Service. (W.F.K.)

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Penicillin in the Treatment of Experimental Infections with Spirillum Minus and Streptobacillus Moniliformis (Rat-Bite Fever): A rather debilitating and, at times, serious disease which follows the bite of a rat and is called rat-bite fever has been known for many centuries. It has been established that this disease may result from infection due to either Spirillum minus or Streptobacillus moniliformis. Infections due to the latter organism may occur also in epidemic form when the bite of a rat is not the source of the infection.

Following the bite of the rat the initial wound usually heals without signs of local inflammation. Seven to twenty-one days later the disease may begin with induration at the site of the bite; suppuration usually does not occur. Lymphangitis and fever with or without chills then develop. The fever persists for several days, is followed by remission, and then a second bout of fever with temperature as high as 106°F. may occur. This relapsing type of fever is said to be fairly characteristic of the disease. The duration of the disease may be only a matter of days, but at times it may be several weeks. A maculopapular rash usually occurs during one of the exacerbations and may become hemorrhagic or morbilliform. Severe muscular and articular pains usually are present in some stage of the disease. Leukocytosis accompanies the disease, and counts as high as 20,000 leukocytes per cubic millimeter have been recorded. Moderate anemia also develops. Falsely positive Wassermann reactions have long been known to occur in the presence of this disease.

Arsenicals have been found satisfactory in the treatment of Spirillum minus infections, although arsenical therapy is occasionally followed by undesirable reactions. In the treatment of infections due to the Streptobacillus moniliformis, arsenicals have not proved of value nor have any of the sulfonamide compounds. Gold therapy has been shown experimentally and clinically to be of value in the treatment of Streptobacillus moniliformis infections. However, gold therapy, also, at times may be followed by toxic reactions.

In the search for a more desirable therapeutic agent in the treatment of rat-bite fever due to either Spirillum minus or Streptobacillus moniliformis, Heilman and Herrell have examined the effect of penicillin on experimentally-produced infections. In their studies fifty mice were infected with Spirillum minus. Twenty-five were treated with penicillin and twenty-five were untreated. The blood of all of the surviving untreated mice with one exception was found to contain spirilla during the thirty-seven days of observation. The blood of the twenty-five treated mice contained no spirilla after the first day of treatment

with penicillin. No relapses occurred and no spirilla could be found in the blood subsequently.

Eighty-six mice were subjected to infections due to Streptobacillus moniliformis. Of the forty-three untreated mice, forty-two died. All forty-three mice treated with penicillin survived. These studies suggest that penicillin may prove useful in the treatment of infections in man due to either Spirillum minus or Streptobacillus moniliformis. (Proc. Staff Meet. Mayo Clin., May 17,'44)

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The Use of Bacterial Antigens in the Diagnosis of Disease by Agglutination Tests: The Naval Medical School, Bethesda, Maryland, supplies for diagnostic agglutination tests the following bacterial antigens:

Eberthella typhosa "O"
Eberthella typhosa "H"
Salmonella paratyphi
Salmonella schottmuelleri
Proteus OX-19
Proteus OX-K
Brucella abortus
Pasteurella tularensis
Leptospira icterohemorrhagiae
Leptospira canicola

These bacterial antigens are prepared in a concentrated form and sent out in small bottles in total amounts as requested. Where no amount is specified, the needs of the activity are estimated as well as possible.

Before use, one part of antigen must be thoroughly mixed with nine parts of diluent as directed on the label. Further, since the great majority of all such tests set up, turn out positive in low dilutions, or negative, it has been found that much time and material may be saved by routinely setting up only the first five tubes in the dilution series with each antigen chosen. Later, a full 10-tube dilution series may be run on any that show agglutination in the fifth tube, or on which for other reasons a full test is desired. On this basis 0.25 c.c. of concentrated antigen plus 2.25 c.c. diluent gives enough antigen suspension for a five-tube test. Thus 10 c.c. of concentrated antigen is enough for about 25-40 tests, depending upon how many 5-tube and 10-tube dilution racks are set up.

It is desirable that activities anticipate their needs in terms of tests to be run and request amounts accordingly so as to have a supply on hand for not over three to four months' use. Taking into account the various possible unfavorable conditions that may unavoidably exist during shipment or occur after receipt, it is believed that complete reliance should not be placed in the trustworthiness of these antigens after the date stamped on the label, which allows for a four months' use period.

The agglutination of specific organisms by the diluted serum of a patient has long been used as a diagnostic aid in a variety of infectious diseases. The procedure is undoubtedly of some value but only when correctly performed and when interpreted in relation to other laboratory and clinical data. Several points should be stressed for agglutination tests in general:

1. Reliable antigens are essential. They should be prepared by persons skilled in biologic work and should be carefully tested for specificity and potency.

2. Agglutination merely reflects an individual's previous biological contact with the same or a related antigen, and a positive result does not necessarily mean that the presenting illness accounts for the demonstrable antibody. Such possibilities as an anamnestic response because of past infection either manifest or subclinical, previous artificial immunization, or infection with an unrelated organism having an antigenic fraction in common with the test agent, must be borne in mind.

3. The production of agglutinins in the blood stream in sufficient titer to be demonstrated by agglutination technic requires a matter of days. Hence, as a diagnostic aid, agglutination tests are of value only late in the course of a disease to confirm the diagnosis or establish one where a definite diagnosis has not yet been reached. Generally speaking, a minimum of seven to ten days is required for the appearance of agglutinins once antigen in satisfactory amounts is provided. More important than the results of an isolated test is the observation of the quantitative changes so characteristic of antibody behavior during the course of an infectious process, namely, an increasing titer during the active phase and a gradual decrease thereafter, i.e., the curve is more important than a spot observation.

4. In most diseases in which agglutination tests are used there are also other valuable diagnostic studies such as culture or animal inoculation which, if carried out, will often give valuable information before agglutination methods would be helpful.

Specific diseases in which agglutination tests are most often used can be considered separately.

TYPHOID FEVER: The Widal test is generally positive by the end of the second week of typhoid fever and reaches maximal titer during the third and fourth weeks. Both "H" and "O" antigens are supplied by the Naval Medical School. The "H" or flagellar antigen is a formolized killed suspension of motile typhoid bacilli, while the "O" consists primarily of bacterial somatic factors. The technic of the agglutination test is the same regardless of which type is used. The titer for "O" is thought to be of greater significance than that for "H", being more likely to reflect present infection and less influenced

by previous diseases or immunization. Both types should be used in order to eliminate the possible confusing results in instances of infection with organisms possessing either an "O" or "H" fraction in common with the typhoid bacillus. It is not unusual to find agglutinins in appreciable titer for several weeks after the administration of typhoid vaccine and this fact should be taken into account in the interpretation of an isolated test. Possible errors of interpretation are thus minimized when repeated Widal tests are performed during the course of the disease. The importance of the recovery of the typhoid bacillus from the blood, urine or stools is to be stressed rather than the Widal reaction.

PARATYPHOID FEVER: Most of the remarks included under typhoid fever are applicable here. The majority of cases of paratyphoid fever can be diagnosed and differentiated by repeated Widal tests on the patient's serum set up against Eberthella typhosa "O" and "H", and Salmonella paratyphi and Salmonella schottmuelleri. Here again, the recovery and identification of the causative organism is to be emphasized rather than sole reliance upon the Widal. The Enteric Pathogen Laboratory at the U. S. Naval Medical School is equipped to carry on complete identification of any organism showing the biologic characteristics of the group and sent in for study. Antigens prepared from S. paratyphi (Paratyphoid A), and S. schottmuelleri (Paratyphoid B) are distributed by the Naval Medical School and should be used and interpreted with full knowledge of the limitations of the test.

SALMONELLA FOOD INFECTIONS: Owing to the wide antigenic overlapping existing among the many Salmonellae known to have produced gastroenteritis, agglutination tests are of no value in specifically diagnosing and differentiating a separate case, and hence bacterial antigens for these infections are not supplied by the U. S. Naval Medical School. A full range of antigens in experienced hands might reveal some useful information in studying a large group of cases in one outbreak. Here again, the isolation of a causative organism is the important point. Any organisms isolated, showing the characteristics of the group, may be sent to the U. S. Naval Medical School Enteric Pathogen Laboratory for a complete examination and identification.

BACILLARY DYSENTERY: Only in rare instances of chronic infection are agglutination tests of value in the diagnosis of bacillary dysentery. Recovery of a member of the Shigella group from the stools is the only reliable diagnostic method. Agglutination tests may well play a minor role in certain epidemiologic studies of dysentery, but since at least 18 antigenically distinct varieties of Shigellae may cause dysentery, such tests are obviously impractical for routine use and hence the antigens are not furnished by the Naval Medical School. The Enteric Pathogen Laboratory, U. S. Naval Medical School, is equipped to perform complete identification of any organism, showing the biologic characteristics of the group, which is sent in for study.

BRUCELLOSIS: Agglutination tests in the diagnosis of this disease have met with varied success in different hands. The antigen commonly used is prepared from smooth cultures of B. abortus and is applicable regardless of what strain (abortus, mellitensis, or suis) is suspected. As with the Widal the important objective is to demonstrate change in titer during the course of a disease, a single test being of little value. Many persons, especially meat handlers, veterinarians, and consumers of raw dairy products, may show an appreciable titer despite the absence of clinical complaints. The results of agglutination tests should be viewed in conjunction with the clinical course and such other laboratory technics as cultures, animal inoculations, skin tests, and opsonic indices. Determination of the species of Brucella causing a disease cannot be made from antibodies present in the patient's serum. Isolation of the organism is essential for this information. Some cross reactions exist between P. tularensis and members of the Brucella group but rarely in titer high enough to cause confusion. However, it is usual and considered good practice, when Brucellosis or Tularemia is suspected, to set up racks with both antigens.

TULAREMIA: The difficulty experienced in cultivating P. tularensis makes the inoculation of animals and serologic tests on the patient's blood of considerable value. Agglutinins appear in titer of over 1:20 by the end of the second week, reach a peak from the fourth to seventh week, fall gradually during convalescence, and persist in low dilutions for years after all symptoms have disappeared. Antigen for this test is prepared at the Naval Medical School from a smooth, supposedly non-virulent, strain of Pasturella tularensis. Guinea pigs may be inoculated with any material obtainable from an open ulcer, from enlarged regional lymph nodes, and from blood.

TYPHUS AND OTHER RICKETTSIAL DISEASES: An antigenic fraction is common to certain of the rickettsiae and the somatic portion of several of the proteus bacilli. This forms the basis for the Weil-Felix reaction which is a laboratory procedure of considerable worth. Agglutinins appear toward the end of the second week of symptoms, increase during the remainder of the course, and disappear gradually during convalescence.

The usual behavior of blood serum from cases of the three main rickettsial fever groups when studied in agglutination tests against the two proteus organisms found to be of value is as follows:

	OX-19	OX-K
Typhus Fever (Epidemic and Endemic)	positive	negative
Rocky Mountain Spotted Fever Group	positive	negative
Tsutsugamushi Disease (Scrub Typhus Group)	negative	positive

The value of strain OX-2 and of H (flagellar) antigens is not believed to be great enough to justify their distribution by the Naval Medical School.

Two questions of theoretic importance have been raised in connection with the Weil-Felix reaction, and didactic statements cannot be made with regard to either. These questions are: (1) the possible confusion which might result in individuals who have had typhus prophylaxis, and (2) the possible confusion which might result in those with concomitant infection with proteus bacilli or certain strains of pseudomonas. The demonstration of the typical change in titer as a disease progresses should minimize such difficulties. The complement-fixation test is very useful in diagnosing and differentiating these Rickettsial diseases.

LEPTOSPIROSIS (WEIL'S DISEASE): Leptospira icterohemorrhagiae is agglutinated in surprisingly high titer by the sera of patients suffering from Weil's disease. Such agglutinins appear after the "septicemic" phase has passed and are demonstrable for some time after recovery. It should be stressed that the organisms can be demonstrated in the blood early in the disease (before jaundice appears) by culture and by animal inoculation. This statement deserves special emphasis at this time since it is being recognized that disease syndromes may be caused by strains of leptospirae antigenically distinct from Leptospira icterohemorrhagiae. Only rarely may the disease be diagnosed by the demonstration of leptospira on darkfield examination of blood or urine. Fibrin filaments and other artifacts exhibiting effects of Brownian movement have on many occasions been erroneously identified and reported as leptospirae. The Naval Medical School furnishes antigens for both L. icterohemorrhagiae and L. canicola (cause of canine hepatitis and suggested as the cause of a few human outbreaks). Whether the living or killed cultures of leptospira are furnished outlying activities depends largely upon their location and the facilities for shipment and preservation. Killed cultures are reliable for diagnosis only for several days after preparation.

MISCELLANEOUS: Isolated instances in which agglutination tests other than those considered would be of value undoubtedly occur but not with frequency great enough to justify the manufacture and stocking of the large variety of antigens which would be required. The staff of the Naval Medical School stands in readiness to assist and advise on all problems that may arise in the diagnosis and epidemiology of infectious states. (F.W.F.)

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A discussion of the use of anti-sera in laboratory practice is in preparation and will appear in the near future.

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Improved Plague Vaccine Available: An improved type of plague vaccine has recently become available. BuMed specifications for plague vaccine have accordingly been changed, and since open contracts for all biologicals do not contain an exchange or return order, all U. S. Naval Medical Supply Depots and Storehouses were advised (Medical Supply News Letter No. 6-44, dated June 1, 1944) to survey and destroy their present stock of plague vaccine and obtain replenishments of the improved type of vaccine.

Medical officers should likewise survey and destroy any plague vaccine held in stock in their ship or station and obtain replenishments of the improved vaccine. The new vaccine will be requisitioned under the same Medical Supply Catalogue number (S1-180 Anti-Plague Vaccine) and will carry the label of the Cutter Laboratories. (D.F.S.)

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The Frequently-Encountered Dermatological Diseases: It has been suggested that brief clinical descriptions of the more commonly encountered skin diseases might prove of value to medical officers who are not dermatologists. In this issue, following a brief introduction, the pyogenic dermatoses, impetigo and ecthyma, are discussed. It is planned in subsequent numbers of the News Letter to include brief items on the following conditions: furunculosis, sycosis vulgaris, the fungus infections, psoriasis, scabies, acne, pityriasis rosea, dermatitis venenata, drug eruptions and urticaria. These descriptions have been prepared by Lt. J. M. Shelton (MC), USNR, and will of necessity be brief and didactic. Suggestions regarding therapy will also be brief and incomplete. It is recommended that the standard dermatological texts and the excellent Military Manual of Dermatology be consulted for more complete information. An attempt will be made to recommend only those drugs and vehicles that are readily available and easily prepared.

It may be of value to make a few suggestions in regard to the general therapy of skin diseases.

1. Over-treatment is more often the cause of prolonged disability than under-treatment. One should not become impatient with slow improvement and attempt "to make the skin clear." It is always best to treat an eruption conservatively, particularly when the exact diagnosis or etiology is obscure.

2. Ointments and occlusive dressings do not do well on weeping, vesicular or macerated eruptions. Wet dressings of boric acid, potassium permanganate (1:5,000), or Burow's (aluminum acetate) solution (1:20) are better. In acute itching or burning eruptions it is often helpful to apply these wet compresses ice cold.

3. The appearance of small papules and vesicles at the edge of the area being treated is usually a sign of irritation from the medicament being employed, and should be regarded as a warning.

4. If definite improvement (however slow) is evident, one should think twice before changing to more drastic therapy.

5. Ambulatory patients should always be warned that, if the prescribed medication produces redness, itching, burning or an obvious change for the worse in the appearance of the eruption, the medication should be discontinued at once and the patient should report back to the sick bay.

IMPETIGO CONTAGIOSA

Etiological Agent: Streptococci, Staphylococci, or both.

Clinical Features: This eruption is the result of superficial invasion of the skin by pyogenic cocci. Involvement is ordinarily confined to the epidermis. Scars are not produced.

The primary lesion is a vesicle or bulla which quickly becomes purulent, ruptures and dries, forming the typical yellow, honey-colored crust. This crust is so superficial that it appears to have been "stuck on" the skin. The rate of spread is often rapid, large irregular patches or disseminated small crusted lesions appearing in a matter of days. The face and ears are most frequently involved.

Other skin lesions such as those of scabies and dermatitis venenata may become secondarily infected with the pyogenic cocci following scratching. This is called "impetiginization" and the crusts produced are similar to those of ordinary impetigo. Pediculosis capitis (head lice) is found in conjunction with impetigo of the face, neck, and ears sufficiently often to justify looking for pediculi and nits in all such cases.

Treatment: Many antiseptic preparations have been recommended. The most important single measure is the preliminary removal of the crusts. A simple but effective procedure is to soak the crusts off once or twice daily with wet soapy cotton. A handful of cotton is soaked in warm water and then rubbed over a cake of toilet soap until it is well impregnated with soap. This is applied as a poultice for 20 minutes. The soap (and crusts) are then wiped off with wet cotton, the skin is dried, and three per cent ammoniated mercury in lanolin is gently rubbed on the affected areas. The ointment should be carried well beyond the margins of the lesions to prevent peripheral spread.

If healing is prolonged or new lesions continue to develop, a change may be made to the twice-daily application of 2 to 4 per cent aqueous solution of silver nitrate following the removal of the crusts.

Various sulfonamide ointments have been recommended for impetigo and other pyogenic dermatoses. Too often these produce contact dermatitis or are followed by sulfonamide sensitization. Their use is not recommended for the ordinary case.

Occlusive dressings should not be employed. The lesions are best left exposed to the air. Adhesive tape should not be applied since rapid spread of the eruption often takes place under the tape.

Fractional superficial X-ray therapy (35 r twice weekly) will occasionally be found of value in treatment-resistant cases. This should be administered only by a radiologist or dermatologist. Four such treatments are ordinarily adequate.

ECTHYMA

Etiology: Streptococci or Staphylococci, as in Impetigo.

Clinical Features: The lesions of Ecthyma are similar to those of Impetigo but are more deep-seated. Scars are often produced. The legs are most frequently involved. The essential lesion is a deep-seated pustule which eventuates in a superficial ulcer covered by a thick tenacious yellow-brown crust. The lesions may be single or multiple, involving both legs. The crusts are usually dime to dollar-sized and surrounded by an erythematous zone. Trauma or insect bites are often the exciting causes. This disease is reported as being a frequent cause of disability among military personnel in Africa and has been seen in many cases returned from the Pacific area.

Treatment: As in impetigo, daily removal of the crusts is of prime importance. The soap-poultice method is satisfactory. The local use of 2 per cent silver nitrate solution 2 to 3 times daily has proved of value. Two to five per cent ammoniated mercury ointment, 2 per cent aqueous solution of gentian violet, 2 per cent tincture of iodine, and the sulfonamides (applied locally) have all been reported as effective. If a sulfonamide is used, the drug should be applied either dry (powder or crystals) or suspended in glycerine (15 to 25 per cent). If a sulfonamide ointment is desired, an emulsion-type base should be employed and not vaseline or lanolin.

Emulsion-type ointment base (from Military Manual of Dermatology):

Sulfonamide	5.0	Stearyl Alcohol	10.0
Sodium Benzoate	0.1	Cetyl Alcohol	3.0
Spermaceti	10.0	Glycerine	10.0
Sodium Lauryl Sulfate	1.0	Water	65.0

Heat the water, glycerine and sodium lauryl sulfate. Melt lipoid ingredients. Mix the two thoroughly and continue stirring until cool.

Fractional X-ray therapy (75 r once weekly) for 4 to 6 treatments will often prove helpful in the recalcitrant case. One should beware of continuing X-ray treatment in any skin disease beyond the fourth week (or dose) if definite improvement is doubtful. X-ray is not ordinarily a curative agent in skin therapy, but only an adjuvant measure. The late effects of over-radiation are pathetic and serious. It cannot be over-emphasized that all X-ray therapy should be the responsibility of a well-qualified expert. The ordinary dental or radiographic X-ray apparatus is not suited for therapy, and should never be used to give the patient a "shot of X-ray."

When X-ray therapy has been employed, the dosage (in "r" units) should always be recorded in the patient's health record. This will be of tremendous importance if X-ray is again considered for treatment at another naval medical facility. It is well also to record the factors employed in giving the treatments, i.e., KV, MA, skin-distance and filtration time.

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War Surgery in Africa: The following passages are quoted from a paper on this subject by Major General W. H. Ogilvie which appeared in the April 1944 number of the British Journal of Surgery:

"Within the last year blood and plasma have been given farther forward, more rapidly, and in larger amounts, until the attitude of today is that no hemorrhage, however profuse, need be fatal if the injury from which blood is being lost can be repaired, and that no shock is irreversible if it be put into reverse with sufficient energy. A transfusion of 3 pints in the first quarter of an hour and of 6 pints in the first hour is not unusual.

"Death from hemorrhage is not the only danger that blood can avert. There is increasing evidence that severe infection is as much the result of the blood-loss that allows it as of the bacteria that cause it.

"The realization that blood must be used to replace blood is one that has come slowly and as the result of experience. Every surgeon has been taught the value of plasma. I myself came to the Middle East after a year's experience in Abyssinia, during which I had preached and distributed plasma, believing that plasma was the chief need of the forward units. It was only when I saw that the men whose hemoglobin had been restored early resisted infection better than those who had a normal blood pressure but a deficient cell content, and when I went to Forward Areas during battle and appreciated the number of men losing blood at a rate far beyond plasma replacement who could yet be saved and returned as fit soldiers, that I changed my views, first reluctantly, later wholeheartedly.

"In the treatment of burns there has been an increasing tendency to regard the need to combat shock as overshadowing the local treatment. Shock is a certainty in a bad case, sepsis a probability, and badly burnt patients may be killed by local treatment commenced before their circulatory equilibrium is established. There has also come a realization that the shock of burns is not a temporary state that can be dispelled by the magic of plasma, leaving the patient safe for surgery or evacuation. Resuscitation restores the circulatory equilibrium but the adverse forces continue at work for some time, and the patient needs re-resuscitation with more plasma at intervals for days, and a constant watch on his blood pressure and hematocrit readings, lest he slip into that state from which there is no recovery. Large amounts of plasma are needed, and in a severe case the first 3 pints should be run in in five minutes each, if necessary under pressure. Eight to 12 pints in the first forty-eight hours and 30 or more pints in the first five days are often required."

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Liquid Plasma; Danger of Mercury Poisoning: Recent experience suggests that the prolonged or excessive use of liquid plasma containing merthiolate 1:10,000 as a preservative can lead to mercury poisoning. Since merthiolate is 49.6 per cent mercury, one liter of liquid plasma contains 50 mgm. of mercury. Although human albumin also has a 1:10,000 merthiolate concentration, it contains only 1/5 as much mercury in osmotically equivalent amounts because it is five times concentrated. Dried plasma with 1:35,000 merthiolate contains only 14 mgm. mercury per liter. Therefore, when large amounts are to be given to a patient, liquid plasma containing merthiolate should not be used, but rather, albumin, dried plasma, or liquid plasma without merthiolate. The appearance during plasma therapy of diarrhea, proteinuria, oliguria, casts or red blood cells in the urine where none existed previously should indicate cessation of all intravenous therapy with solutions containing mercury until the cause of these symptoms can be ascertained. (S.T.G.)

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Removal of Slough from Deep Burns: Under the supervision of the Subcommittee on Infected Wounds and Burns of the National Research Council efforts are being made by several investigators to find a substance which, when applied to deep burns, will hasten the separation of the slough and thereby shorten the period that must elapse before skin grafting may be carried out.

Various proteolytic enzymes have been tried, among them papain (obtained from the fruit of the papaya tree) and pepsin. Beard, working with papain, found it necessary to introduce into the papain solution an activator for the enzyme, and cysteine was employed for this purpose. Also, at first salicylate was added as an agent for the denaturation of the protein (mostly collagen) to be

digested. Toxic symptoms developed from absorption of the salicylate, and so it was replaced by urea. In some clinical experiments these mixtures when applied to third degree burns removed all devitalized tissues within three to five days. However, in certain instances the papain rapidly became inactivated after reaching the burned area.

A substance that offers much more promise is pyruvic acid. Harvey and his co-workers at the Yale Medical School have found that the application of certain acids to the burned area results in rapid separation of the slough. While citric, phosphoric and other acids accomplished the same purpose with varying degrees of efficiency, pyruvic acid was found to be the best. The reason why pyruvic acid is superior to the others is not clear, although it has been suggested (Howes) that it may be because of its action as a strong reducing agent.

When pyruvic acid at a pH of 1.9 is generously applied locally, in an 8 per cent cornstarch paste, it markedly hastens the separation of the slough in standard deep thermal burns in the dog. The slough separates completely in about 72 hours. It separates in one piece, there being no evidence of digestion of the slough itself. The surrounding skin appears undamaged.

The resultant base of the wound is, grossly, pink subcutaneous tissue. Histologically at the time of complete separation of the slough (72 hours) there is evidence of the presence of early granulation tissue, i.e., budding capillaries with proliferating endothelial cells and early fibroplasia. Within an additional 48 hours there is well developed granulation tissue both grossly and histologically. The base of the wound after complete separation of the slough is immediately acceptable for successful skin grafting.

The problem of infection thus resolves itself. The experimental wound can be covered with a graft which has taken, even before the slough is completely separated in the comparable control wound.

When the burn is more superficial and the damage extends only into the derma, with preservation of the deeper epidermal elements, this method of treatment brings about the separation of the slough through the development of a cleavage plane within the derma. The wound then re-epithelizes from the residual skin islands. It is apparent that this method, when properly utilized, does not necessarily result in the conversion of deep second degree burns into third degree burns.

The separation of the slough takes place more slowly when the cleavage plane is within the derma, but excellent healing takes place without grafting. It is therefore apparent that mixed burns can be successfully treated under the same dressing.

Entirely similar results have been obtained in instances of accidental burns in man, although the number of cases treated so far is small. (OEM cmr-83. Progress Report #14, May 2, '44.)

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These investigations are in an experimental stage and are mentioned here only because of their general interest. Pyruvic acid in amounts adequate for general use is not now available. Efforts are being made to find better vehicles or ointment bases.

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Chemotherapy of Tuberculosis: It has been demonstrated that certain chemical compounds administered to guinea pigs can influence favorably the course of experimental tuberculosis in these animals. These compounds include N,N'-didextrose sulfonate (promin), disodium formaldehyde sulfoxylate diaminodiphenylsulfone (diasone) and 4,2'-diaminophenyl-5'-thiazolesulfone (promizole).

Experiments with these drugs have received wide publicity and led patients suffering from tuberculosis to believe that they might benefit by treatment with them. The Committee on Therapy of the American Trudeau Society (Medical Section of the National Tuberculosis Association) has, therefore, issued the following statement with respect to the present status of the chemotherapy of tuberculosis:

"Promin, diasone, promizole and certain related compounds appear to possess in varying degree the striking ability to restrain the development of experimental tuberculosis in guinea pigs. It is recognized that experimentally-induced tuberculosis in guinea pigs offers many contrasts with clinical tuberculosis in human beings, even though the causative organism is the same.

"It is the opinion of the Committee that the clinical and roentgenological data so far made available to the Committee on the action of diasone in human tuberculosis is as yet inadequate both quantitatively and qualitatively to permit, even tentatively, a positive evaluation of its curative effects upon tuberculosis in humans. The Committee believes that there is at this time no adequate basis for the optimistic implications of the magazine articles or of the releases to the press which are now so well known to both the profession and public. It is believed, on the contrary, that such implications are distinctly unwarranted and not in accord with the clinical evidence which has been reviewed by the Committee. The Committee regrets exceedingly that the magazine articles mentioned previously were published in spite of efforts on the part of both the Committee and the clinician quoted to stop their publication.

"Until controlled studies of adequate scope have been reported, it is recommended that none of these drugs be used for treating tuberculous patients except under conditions which will appreciably add to our knowledge of their clinical action, and in the presence of adequate facilities to protect patients effectively from their potentially serious toxic effects. Patients and physicians must also be reminded of the provisions of the federal regulations which prohibit the distribution of a drug in the experimental phase of development to other than research institutions to which the material is assigned by the manufacturer for either laboratory or clinical investigation. The Committee is informed that other clinical investigations are now in progress, and it is the expressed opinion of the Committee that such further well-controlled clinical investigation is distinctly desirable.

"Any use of chemotherapeutic agents, including diasone, in the treatment of tuberculous patients must, therefore, be regarded as purely a project in clinical investigation. It must be again emphasized that such use is not without hazard and that the roentgenological and clinical evidence reviewed by the Committee gives no justification at this time for any attitude concerning the value of these drugs in patients other than one of critical interest."

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The Use of the Navy Radium Plaque Adaptometer: There may be some misunderstanding of the purpose of the Navy Radium Plaque Adaptometer. It is only a screening test. It cannot be pretended that the adaptometer measures ability in night lookout duties. Many studies have been made concerning the possible prediction of night performance by measurement of retinal sensitivity, but none has been successful. This is because night performance depends upon intelligence, training, and motivation even more than upon retinal sensitivity. However, when low retinal sensitivity or "night blindness" can be demonstrated in night lookout candidates, it is obvious that even intensive training cannot make them good night lookouts. The Navy Radium Plaque Adaptometer has been designed to screen out rapidly personnel of low retinal sensitivity.

Interviews and scoring of night duty performance have been unsuccessful thus far in preventing men of low retinal sensitivity from standing night watches. The Navy Radium Plaque Adaptometer will eliminate a small proportion of men and pass a large proportion of men. Since the test must be rapid, the safety factor must be high. However, there is statistical assurance that men who are exceedingly sensitive to low illumination will surely be included for night duty.

The test is not expected to predict ability. Following the elimination of the poorest men even at the expense of a small group of fairly good men, but

without danger of eliminating excellent personnel, a program for night training is indispensable. At the present time great efforts are being made to improve training methods, but apparatus for training is difficult to prepare. Eventually personnel in the training program through experience will become efficient in selecting men for night lookouts. Until training programs are in actual operation, the use of the adaptometer remains imperative. (R.H.P.)

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Deaths Following Parenteral Injection of Doryl Powder: The occurrence in a military hospital of a death following the injection of Doryl powder has prompted the Commissioner of Food and Drugs to issue a warning to the Army and Navy with respect to this preparation. In all, fifteen deaths are known to have resulted in the United States from its parenteral administration.

Over a period of approximately ten years Doryl has been marketed by Merck and Company as a solution containing 0.25 milligram (1/260th grain) of carbamylcholine chloride in 1 c.c. of water. This solution is intended for hypodermic injection for the relief of urine retention. Doryl powder was marketed initially in 1938 and was also packaged in ampoules. These ampoules contained 150 milligrams (2-1/3 grains) of the powdered drug which was intended to be dissolved in water for ophthalmologic use as eye drops.

The ampoules of the two preparations and their labels were generally similar in appearance. Each label bore the statement "Do Not Use Intravenously." The label on the Doryl powder (for ophthalmologic use) failed to bear adequate warning against unsafe dosage and method of administration, and the statement "Sufficient to make 20 c.c. of a 0.75 per cent Solution for Ophthalmological Use" did not constitute adequate directions for the appropriate and safe use of the drug.

Merck and Company are now putting up the powder for ophthalmological use in bottles, each containing 450 milligrams. The label is different in appearance from the label of the solution for hypodermic use and bears the word "POISON." Other statements on the label are: "For Local Ophthalmological Use Only", and "Caution, For External Use Only."

Notwithstanding the efforts which have been made to remove the ampoules of Doryl powder from the market and the wide publicity accorded the deaths which have occurred, this latest fatality shows that there is still a possibility of isolated ampoules remaining in the hands of government hospitals.

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Diphtheria in Europe: There has been a striking increase in the prevalence of diphtheria in Northwestern Europe. Although complete data are not available for 1943, the accompanying table graphically portrays the rising

tide of diphtheria that is sweeping over Europe. When it is realized that these figures are for the most part from occupied countries and represent controlled reports, they are all the more remarkable. Detailed data are not available from France and Belgium, but reports from numerous sources refer to the epidemic character of this disease in these countries.

REPORTED CASES OF DIPHTHERIA

	Germany	Netherlands	Norway	Denmark	Belgium	France
1935	132,930	1,762	625	3,807	1,780	17,431
1936	149,973	1,544	361	2,149	1,916	16,264
1937	146,666	1,079	413	1,348	2,090	19,164
1938	149,490	1,272	187	871	2,537	16,800
1939	143,585	1,273	72	1,106	2,419	14,019
1940	138,397	1,730	138	860	2,265‡	13,568
1941	173,161	5,501	2,609	917	4,271	20,018
1942	236,645	19,537	8,349	1,370	5,464	31,466
1943	282,859	53,469*	20,268†	2,527	16,072	40,697†

* 51 weeks.
† 11 months
‡ 5 May - 31 August missing.

(War Dept. Tech. Bull., Med. Intell. Abstracts #6, Apr. 20, '44.)

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Entries in NAVMED Forms L and H-4 (Dental): Both forms are filed in the jackets of individuals for whom the forms are made out. A great deal of otherwise avoidable work results when full names are not given, illegible copies are submitted, or incomplete entries are made because there are often several jackets with the same surname, first name, and middle initial on file.

It would be helpful to all concerned if officers responsible for entries in the above forms will insert full name (including middle name), rank or rating, and serial number in the space reserved for the name of the person examined or treated. (R.S.D.)

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Meeting of Roentgenologists: The Radiological Society of North America and the American Roentgen Ray Society will hold a joint meeting at the Palmer House in Chicago, September 24 to 29, 1944.

Dr. D. S. Childs, the Executive Director of the joint meeting, has written the Bureau extending to interested medical officers of the Navy a cordial invitation to attend the meeting.

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Excerpts from Current Directives Regarding the Temporary Promotions of Officers (Ensigns and Above) as of June 7, 1944. The following excerpts from current directives should govern medical officers in making recommendations regarding the temporary promotion of officers:

General Rules: BuPers C/L 222-43, Paragraph 4.

(a) "General service officers shall not be found physically qualified unless physically fit to perform all of their duties at sea or on foreign stations."

(b) "Officers of the retired list and special service reserve officers shall not be found physically qualified unless physically fit to perform the duties to which assigned at the time of examination."

NOTE: If there should be a question regarding an officer's physical fitness for promotion, it is recommended that a preliminary report of physical examination on NAVMED Form Y (in duplicate) accompanied by a letter of transmittal requesting instructions be submitted to the Bureau of Naval Personnel via the Bureau of Medicine and Surgery. The letter should include a definite statement regarding the officer's fitness to perform all duty or duties assigned, as his class may require, and, if pertinent, a transcript of his current Health Record.

In every case the medical officer should list, under "History of illness" all significant entries noted in the Health Record and Medical Abstract, and certify whether or not the Health Record has been reviewed.

Examination Waived: BuPers C/L 222-43, Paragraph 5. "Provided appointee was apparently qualified physically on the date appointment is made by the President, the physical examination is waived."

(a) If no medical officer is available to conduct such examination within a period of one month following receipt of promotion authority.

(b) In the event appointee suffers wounds in the line of duty subsequent to the date the appointment is made by the President and it was not practicable to conduct such examination prior to the date the appointee suffered such wounds.

The provisions of each promotion authority should be carefully scrutinized. Recent promotion authorities (example, ALNAV 86-44) have contained the following provision:

Limited Duty: "Any officer not physically qualified for sea duty because of wounds incurred in line of duty prior to date of this message to be considered physically qualified for promotion if physically fit for other than sea duty and not under hospital treatment."

Recent promotion authorities (example, BuPers C/L 113-44) have excepted the following from promotion:

Excepted from Promotion:

(a) Those described in paragraph 3 of BuPers C/L 222-43 (officers under disciplinary action, personnel in a "missing" or "prisoner of war" status, officers on sick leave or under treatment in hospitals, etc.)

(b) Any officer who has retirement proceedings pending in his case.

(c) Any officer who, as a result of a board of medical survey, is to be re-examined to determine physical qualifications for duty.

In determining "fitness to perform all duties at sea or on foreign service", the standards for original commission or enlistment tabulated in Chapter 11, M.M.D., do not apply. The following promotion requirements should be used as a guide:

Physical Standards

Vision: Paragraph 1431(g), M.M.D. - "In the case of promotion of officers the nature of the duties of the candidate should be considered but, as a general rule, an officer of the Line below the grade of lieutenant commander should have not less than 8/20 each eye, unaided by lenses and capable of correction by lenses to 20/20 together with binocular vision, unaided by lenses, of not less than 10/20."

Color Perception: Paragraph 1520(f), M.M.D. - Color Perception. "As the Edridge-Green Lamp is the qualifying test after original appointment, no recommendation shall be made in the case of officers failing to pass the Stilling's Test (or American Optical Co. Plates - Ed.) until checked with the Edridge-Green Lamp. If the officer passes the latter test his color vision shall be reported as normal, but should he be unable to pass this test he should be reported as failing to pass the Edridge-Green Lamp Test and considered color blind."

Hearing: Paragraph 1436(b), M.M.D. - "In the case of promotion of officers the nature of the duties of the candidate should be considered, but, as a rule, less than 7/15 binaural hearing of the spoken voice (ordinary conversation) is a disqualifying defect." (B.H.A.)

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Public Health Foreign Report:

Disease	Place	Date	Number of Cases
Dengue Fever	Honolulu, T.H., U.S.A.	Mar. 16-31, '44	10
		Apr. 1-15, '44	17
Plague	Bolivia, Arrayan	March 1944	4 (3 fatal)
	Br. East Africa, Uganda	Mar. 25-Apr. 1, '44	1 (1 fatal)
	Egypt, Ismailiya	Apr. 1-7, '44	11 (2 fatal)
		Apr. 8-14, '44	28 (7 fatal)
	Suez	Apr. 8-15, '44	7 (5 fatal)
	Port Said	Apr. 22-29, '44	2 (1 fatal)
	Fr. West Africa, Dakar	Apr. 15-22, '44	1 (fatal)
			2 (suspected fatal)
	Hawaii, T.H., U.S.A.	Mar. 10, '44	1 (fatal)
	India, Calcutta	Apr. 8-15, '44	2 (1 fatal)
	Indochina	Mar. 11-20, '44	4
	Madagascar, Tananarive	January 1944	2 (1 fatal)
		February 1944	1 (1 fatal)
	Morocco, Casablanca	Apr. 1-10, '44	1
Smallpox	Algeria	Mar. 11-20, '44	34
	Bolivia, La Paz	March 1944	25 (10 fatal)
	Potosi	March 1944	7 (1 fatal)
	Oruro	March 1944	6
	Br. East Africa, Uganda	Mar. 18-25, '44	100
		Mar. 25-Apr. 1, '44	180
		Apr. 1-8, '44	170
	French Guinea	Mar. 11-20, '44	26 (4 fatal)
	India, Bombay	Mar. 25-Apr. 1, '44	260 (75 fatal)
		Apr. 1-8, '44	227 (53 fatal)
	Calcutta	Apr. 1-8, '44	407 (fatal)
		Apr. 15-22, '44	340 (fatal)
	Indochina	Mar. 11-20, '44	70
	Italy, Palermo	March 1944	19
	Ivory Coast	Mar. 11-20, '44	41 (3 fatal)
	Nigeria	Mar. 18-25, '44	278 (34 fatal)
	Niger Territory	Mar. 11-20, '44	34 (4 fatal)
	Sudan (French)	Mar. 11-20, '44	57 (3 fatal)
	Turkey	February 1944	2,456

(Pub. Health Rep., Apr. 28, May 5, 12 & 19, '44.)

To: All Ships and Stations. P2-3/P3-1(012-41)
BUMED-Y-AFR

Subj: Malaria - Recommendations for Suppressive Treatment (Chemoprophylaxis).

1. General considerations:

a. Although there is no drug known which will prevent mosquito-borne infection with malaria, atabrine and quinine, when properly employed, delay the onset of symptoms of the disease. These drugs are therefore useful to keep men on their feet during urgent military operations when illness from any cause must be kept at an absolute minimum.

b. Eventually, when suppressive treatment is discontinued, many individuals who have been infected will become acutely ill with malaria. Recent evidence, however, indicates that when suppressive treatment with atabrine is taken as recommended, a high proportion of infections with Plasmodium falciparum will never become clinically active. In such cases it appears that continuous suppression may lead to complete cure. It also seems probable that suppressive treatment with atabrine may lessen the severity of symptoms when clinical activity supervenes during its routine use. Fortunately, increased parasite resistance to atabrine does not appear, even after prolonged suppressive usage. Clinical attacks which occur in spite of suppressive treatment respond promptly to further treatment with atabrine in the usual clinical doses.

c. A serious disadvantage in the use of suppressive treatment is that it may dangerously conceal the amount of malaria which may be gradually seeding a unit. The apparent freedom from malaria may lead to carelessness in the enforcement of malaria discipline. Commanding officers of such units are apt to regard truly preventive measures such as mosquito control and individual protective measures as not necessary. If the risk of infection is sufficiently great to necessitate the use of suppressive treatment, it is all the more important to stress truly preventive measures. As excellent as atabrine has proved itself in those military situations which deny the possibility of control by truly preventive measures, its continued use, to the neglect of and as a substitute for such measures, is inexcusable. As an illustration of the menace of silent seeding, one of the most serious outbreaks of malaria occurred in an organization which, prior to entering combat, employed suppressive treatment for many months. Later, upon entering combat, a large portion of previously accumulated latent cases became acutely ill. Malaria appeared in epidemic proportions at the very time suppression was most desired.

2. Drug of choice:

a. When suppressive treatment is essential, atabrine is the drug of choice. Not only does limitation of supply preclude routine use of quinine, but experience

has shown that atabrine is more effective and, as a rule, is better tolerated and preferred by troops. In very rare instances, when individuals are unable to tolerate atabrine, quinine may be employed in 10-grain daily doses as a substitute, provided that a medical officer has specified that this is necessary.

3. Untoward effects of atabrine:

a. In the early phases of initiating a program of suppressive treatment, it is not uncommon for a certain proportion of individuals to show symptoms of intolerance. Under conditions of improper administration, a high percentage of untoward reactions has been experienced in occasional groups. Usually in such instances it is found that the drug was administered on an empty stomach. Often the fairly large initial dose of two tablets (0.2 gram) will cause trouble in individuals; occasionally one tablet may do so. Reactions are unusual when one-half tablet (0.05 gram) is employed. Whenever diarrhea and enteritis have been prevalent in groups prior to the first administration of the drug, the amount of intolerance has been excessive. Concomitant seasickness is another predisposing cause for untoward reactions.

b. The most common untoward symptoms experienced are nausea and vomiting, usually coming on several hours after taking the atabrine. Abdominal cramps and diarrhea are not unusual. Later on, during the continued administration of the drug, a yellowish discoloration of the skin may appear. This is not a sign of toxicity, but is due to the dye character of the drug, and will disappear after the drug is discontinued.

c. After the phase of initial intolerance is over, it will be found that less than one per cent of any group will be unable to continue with the drug. Medical officers, by correcting the mistakes pointed out above and by reducing the dose for temporary periods in individuals who experience difficulties, will find but rare cases of persistent intolerance.

d. Experience to date has given no evidence of toxicity from long-continued use of atabrine in suppressive doses. No ill effects whatever have been noted in large groups of men who have taken the drug continuously for more than a year. Extensive investigation has failed to show that atabrine in the usual doses has any effect upon the flight capacities of flying personnel. It is hardly necessary to state that widely circulated rumors that continued use of atabrine might cause impotence or sterility have no basis in fact whatsoever.

4. Plasma concentration of atabrine during suppressive treatment:

a. Although atabrine is promptly absorbed from the intestine, tissues must first be saturated before a plasma concentration of the drug effective for

suppression of malaria is attained. Experimental studies indicate that half of the maximum level attainable on a given suppressive dose is reached after the first week. Thereafter, the level increases at a rate of 50 per cent per week. Thus, for practical purposes, it may be considered that the maximum level is attained at the end of the fourth week. Following cessation of administration, the rate of decline of the plasma level is also 50 per cent per week. This knowledge concerning the rate of building up and dropping off of the plasma level can be used to advantage in determining proper doses of atabrine to employ during field operations when consumption of the drug by troops in combat is apt to be irregular.

b. The exact plasma concentration necessary to suppress symptoms is not established with certainty. In fact, it is likely that the required concentration is different in different individuals and perhaps varies from time to time in the same individual, depending upon physiological and other factors. It is known that there is great variability in the plasma level attained in a group of men given the same dosage of drug. However, with the dose recommended in paragraph 6a below, it appears probable that an effective level for suppression is maintained in all but a few exceptional individuals.

5. Occurrence of clinical symptoms during suppressive treatment:

a. In highly malarious regions, especially under the stress of combat, suppressive treatment may fail to prevent clinical symptoms in a certain percentage of cases. The factors that permit these "break-through" attacks are not definitely known but by far the most important is failure to take the prescribed doses of the drug. In practice, even under the best of conditions, some doses are missed. In combat, much greater irregularity in taking the drug generally prevails. For this reason recommendations are made in paragraph 6 below for augmented dosage of atabrine to foresee and compensate for those conditions in which there is increased likelihood of failure to take the drug.

b. Clinical attacks occurring during suppressive treatment should be given a course of clinical treatment, following which suppressive treatment should be resumed, if still indicated.

6. Administration of atabrine for suppressive treatment:

a. The recommended method is to give one tablet of atabrine (0.1 gram, 1-1/2 grains) daily at the evening meal, total of 0.7 gram per week. This routine dosage leads to relatively few cases of initial intolerance and virtually no cases of continued intolerance.

b. Under conditions of great military urgency, such as actual combat, the dose of atabrine may be increased for short periods to two tablets daily. It is

important that these larger doses be administered only after troops have become adjusted to the smaller dosage routine, and that they be reduced promptly when the critical period is over.

c. Occasionally, after troops have returned from strenuous combat, a considerable number of "break-through" attacks may occur despite the prescribed administration of one tablet (0.1 gram) daily. Under such circumstances, the malaria rate may be reduced by giving three tablets (0.1 gram each) daily after meals, under medical supervision, for a period of 3 to 5 days. The routine schedule of one tablet daily should then be resumed.

d. Methods of increased dosage or "loading" may also be used in certain situations before men are sent into active combat in highly malarious regions. The administration of two tablets of atabrine (0.1 gram each) daily for one week preceding the mission will establish a plasma level sufficient to allow for possible irregularity in taking the drug during the succeeding week. Increased dosages should be employed only in critical situations where a high malaria incidence would present a hazard to the mission to be accomplished.

e. If conditions are urgent enough to necessitate suppressive treatment, it is equally urgent that a proper system for supervising the administration of the drug be required. This is the responsibility of the unit commander. It is recommended (1) that the drug be administered by roster to both officers and men; (2) that a competent non-commissioned officer witness the actual swallowing of the drug by each individual; (3) that, by checking the roster regularly, all individuals who have failed to take the drug be required to report and take sufficient dosage to equal the amount missed; (4) that men on detached duty, such as patrol, be given drug sufficient for the period they are to be away and explicit directions for taking it.

7. When to start suppressive treatment:

a. In the past medical officers have on occasion instituted suppressive treatment in their organizations prior to arrival at a malarious base. Upon landing they have found that none of the other troops were employing chemosuppression. On certain bases, control measures have succeeded to the extent that atabrine suppression is no longer required. Thus, before initiating a program of suppression, it is best to request instructions by dispatch from the area malaria control officer. If specific instructions cannot be obtained, medical officers should advise their commanding officers to withhold atabrine until after arrival and consultation with the permanently based malaria control unit at the malarious base concerned. If atabrine is found to be indicated at that time, suppressive treatment may be started after arrival without any fear that the situation may get out of hand.

b. There are certain advantages in starting suppressive treatment one or two weeks in advance of exposure when it is known that suppression will be required. First, opportunity is afforded to discipline officers and men in the routine of taking atabrine. Second, such reactions of intolerance which may sometimes accompany the first few doses are experienced before the men engage in combat activities. Third, effective plasma concentrations of the drug are achieved earlier during the period of exposure.

c. Landing on a malarious base under active combat conditions demands that the routine of administration be well established before arrival. If the malaria situation appears to be potentially very dangerous, even "loading" (as described above) may be instituted during the preliminary period prior to landing.

d. In rare instances, a medical officer will not be able to estimate satisfactorily the necessity of employing suppressive treatment, or he may not be convinced of its desirability under the peculiar circumstances in which his unit will function. In such a case the conservative approach is to place the majority of the unit on suppression, but to omit a sample of sufficient size as a control and determine by the incidence of malaria in that group whether atabrine should be continued on all, or whether it may be safely stopped.

e. In heavily seeded units which are to re-enter combat after a period of relative inactivity, it is usually advisable to increase the group mean atabrine blood levels, prior to the onset of combat activities, by administering "loading" doses as described above.

8. When to discontinue suppressive treatment:

a. Previously, it has been recommended that upon withdrawal to non-malarious, or relatively non-malarious areas, suppressive treatment be stopped. In heavily malaria-seeded units, the results, even when the troops were staggered off treatment, have been most unsatisfactory. Hospital facilities have been flooded, and repeated relapses have been so numerous that major portions of units have been unable to rehabilitate or to undertake essential training maneuvers for periods of many months.

b. The present tendency is to continue the employment of suppressive treatment in heavily infected units for the duration of their activities in the theater of war, whether upon a malarious or non-malarious base.

c. In units evacuated to non-malarious areas in which it is probable that heavy seeding with malaria has not taken place, the drug may be discontinued as follows: stop the drug in a representative sample of two or three hundred men for a period of four weeks, but continue it in all others. This will permit

an estimate of the amount of malaria to be expected in the entire unit and indicate whether suppression must be continued or can be safely stopped.

d. In any case where it is deemed advisable to stop suppressive treatment, it is preferable that atabrine in suppressive dosage be continued four weeks beyond the period of last exposure to malaria. Present evidence indicates that the employment of atabrine beyond the period of exposure will result in a "suppressive cure" in a considerable proportion of suppressed, latent P. falciparum infections.

ROSS T. McINTIRE
Vice Admiral (MC), USN
Chief of Bureau

RESTRICTED

To: All Ships and Stations.

Op13D-hc
Serial 139013
5 20 89
31 May 1944

Subj: Norfolk Naval Hospital, Portsmouth, Virginia - Redesignation of.

1. In order to eliminate confusion in the delivery of mail to the several hospitals located in the Norfolk area, the Norfolk Naval Hospital, Portsmouth, Virginia, is hereby redesignated:

U. S. Naval Hospital
Portsmouth, Virginia.

2. Bureaus and offices concerned take necessary action.

--SecNav. James Forrestal.

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To: All Ships and Stations.

BUMED-AM1-HEC
A21/A11(073-42)
15 May 1944

Subj: Aviation Pilot Selection Tests, Administration of.

Ref: (a) Joint BuMed-BuPers Procurement Directive No. 13-44, BuMed A21/A11(073-42), AM1-HEC, Pers-364, WDJ, ON/23, dated 15 Mar 1944.
(b) (Confidential) NavMed 247, Examiner's Manual, Aviation Cadet Selection Tests.

Encl: (A) Lists of supplies contained in Examiner's Kit.

1. Reference (a) directed that the initial Flight Physical Examination include the Aviation Classification Test (ACT), the Mechanical Comprehension Test (MCT), and the Biographical Inventory (BI).

2. The primary function of these tests is the identification of those candidates who have the greatest probability of success in flight training and the elimination of those who have a high probability of failure. Only those applicants who successfully pass these tests will be given the remainder of the aviation physical examination.

3. Effective upon receipt of this directive the procedures described in reference (b) shall be followed in determining the qualifications of all applicants for flight training. These procedures supplant any and all procedures previously directed relative to the administration, scoring, and reporting of psychological tests given to applicants for flight training.

4. Owing to the impracticability of distribution to all activities where testing might be done, the testing materials listed in enclosure (A) are sent only to

commanding officers of naval air stations, naval auxiliary air stations, naval aircraft carriers, Marine Corps air stations, Marine Corps Air Wings 1, 2, 3, 9, Marine Corps Air Wings Pacific, fleet air wings, and Casus; to directors of naval officer procurement, and to officers in charge of branch offices, ONOP. Other activities should make use of the nearest facilities available for this portion of the examination. Where no such facilities are available, a request for the necessary supplies may be directed to BuMed (Division of Aviation Medicine). Activities to which these materials have been supplied are directed to expedite the testing of personnel referred to them for this purpose.

5. Where the complement of a ship or station includes a flight surgeon or aviation medical examiner, this officer shall be directly responsible for the administration, scoring, and reporting of these tests. In all other ships and stations where these tests are given, the senior medical officer shall assume the responsibility for administration, scoring, and reporting.

6. The actual administration and scoring of these tests may be delegated to H-V(S) officers, HC officers, aviation technicians, or other qualified personnel provided that the medical officer concerned assumes responsibility.

7. Enclosure (A) is a list of materials which are included in the Examiner's Kit. These materials are forwarded under separate cover to those activities indicated in paragraph 4. Additional supplies of testing materials may be procured by request addressed to BuMed, Attn: Division of Aviation Medicine. Items are to be ordered separately rather than as a kit.

--BuMed. Ross T. McIntire.

ENCLOSURE (A)
BUREAU OF MEDICINE AND SURGERY
NAVY DEPARTMENT, WASHINGTON: D. C.
List of Supplies Contained in Examiner's Kit
Naval Aviation Cadet Selection Tests

1. Examiner's Kits are sent to activities where it is anticipated that psychological examinations for flying will be administered. Quantities of each item are adjusted to the expected needs of the addressee.

2. Additional supplies may be procured from BuMed. The quantity of each item required should be specified separately and not be requesting additional kits. Additional supplies should be ordered well in advance of the date they are needed.

3. Examiner's Kits contain the following items:

(a) (Confidential) NAVMED 247, Examiner's Manual, Aviation Cadet Selection Test

(b) (Restricted) NAVMED 181, Aviation Classification Test (ACT) Form 1
(c) (Restricted) NAVMED 182, Aviation Classification Test (ACT) Form 2
(d) (Confidential) NAVMED 203, Aviation Classification Test (ACT) Form 1 Scoring Key
(e) (Confidential) NAVMED 204, Aviation Classification Test (ACT) Form 2 Scoring Key
(f) (Restricted) NAVMED 179, Mechanical Comprehension Test (MCT) Form 4
(g) (Restricted) NAVMED 180, Mechanical Comprehension Test (MCT) Form 5
(h) NAVMED 199, Aviation Classification Test (ACT) and Mechanical Comprehension Test (MCT) Answer Sheets
(i) (Confidential) NAVMED 201, Mechanical Comprehension Test (MCT) Form 4 Scoring Key
(j) (Confidential) NAVMED 202, Mechanical Comprehension Test (MCT) Form 5 Scoring Key
(k) (Restricted) NAVMED 178, Biographical Inventory (BI) Form 3
(l) NAVMED 200, Biographical Inventory (BI) Answer Sheets
(m) (Confidential) NAVMED 205, Biographical Inventory (BI) Scoring Key X
(n) (Confidential) NAVMED 206, Biographical Inventory (BI) Scoring Key Y
(o) (Confidential) NAVMED 207, Biographical Inventory (BI) Scoring Key Z
(p) NAVMED 241, Results of Naval Aviation Cadet Selection Tests
(q) Electrographic Pencils

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To: All Ships and Stations.

BUMED F33-ECH-EJB
L16-8(071-41)

Subj: Circular Letter F, Ration Record Return, Form 36 - Cancelation and Replacement of.

22 May 1944

1. Subject letter and form have been revised and are replaced by the instructions and Form NavMed HF-36 reproduced below. These instructions and forms are effective 1 July 1944. Copies of Circular Letter F, Ration Record, will be printed and distributed to holders of the Manual for insertion therein.

2. Requests for additional copies of the revised letter may be directed to BuMed. Reproduction of subject revised circular letter and form (NavMed HF-36) follows.

--BuMed. L. Sheldon, Jr.

APPENDIX D, MANUAL OF THE MEDICAL DEPARTMENT
BUREAU CIRCULAR LETTER F

Subj: Ration Record, NavMed HF-36.

(a) The Ration Record shall be prepared daily and submitted to the medical officer in command. The original of the Ration Record for the last day of each month shall be forwarded to the Bureau from all hospital ships and all naval hospitals, except mobile and base hospitals, on the first day of the following month.

(b) Bureau Circular Letter F, on the subject of supernumerary patients, is now in the process of revision and will be promulgated to the service in the near future. Any of the provisions of that letter which may conflict with this letter are hereby superseded.

(c) The instructions applicable to columns I, II, III, and IV are as follows:

(1) Column I - This column itemizes the various classes of personnel by personnel groups. When personnel of classes for which no provision has been made on the form are hospitalized or subsisted, they shall be properly designated and reported on one of the blank lines in the appropriate section of this column.

(2) Column II (a) - Enter total muster days for each class of patients, staff personnel, and duty personnel other than hospital staff, admitted or attached to the hospital for any purpose. Muster days for all personnel shall be computed by the formula for computing sick days for naval personnel; i.e., by excluding the day of admission or reporting and including the day of discharge, death, transfer, or detachment (art. 1827(2), N.R.). There can be no fractional muster days. Total muster days reported must equal the sum of columns (b) and (c) except in section F, Rations Sold.

(3) Column II (b) - Enter number of days the personnel concerned were not subsisted by the hospital. This will be only the days for which personnel are not entitled to subsistence in kind such as authorized leave, subsisting out at own expense, etc. It does not include days for which subsistence in kind is prepared but not taken because of liberty or other reasons personal to the individuals concerned.

(4) Column II (c) - Enter number of days the personnel concerned were subsisted by the hospital. The sum of columns II (b) and II (c) must equal the total muster days reported in column II (a), in all sections except F.

(5) Column III - The data required in subcolumns (a), (b), and (c) are the respective cumulative totals to date for the month of the corresponding subcolumns of column II. Instructions applicable to column II are applicable to this column.

(6) Column IV - The data to be recorded in subcolumns (a), (b), and (c) are the respective cumulative totals for the fiscal year to date. Unless otherwise directed by the medical officer in command, column IV need be completed only in the Ration Record for the last day of each month, in which case the respective totals to be reported will be the sum of the corresponding column in the report of the last day of the previous month plus the amount in the corresponding subcolumn of column III for the last day of the month for which the report is prepared.

(d) The horizontal lines are numbered 1 to 127, inclusive. The subsistence or hospitalization rate, as may be applicable, and the manner of effecting collection of charges is indicated in the instructions pertaining to each line. The data to be entered on each line are as follows:

(1) Section (A) - PATIENTS, NAVAL, ACTIVE DUTY

Line 1 - Officer, Navy, active
Report all patients who are officers of the Regular Navy in an active-duty status. Subsistence checkages at the rate specified in the annual naval appropriation act shall be effected by means of NavS&A Form 534, Hospital Ration Notice, which shall be prepared locally and submitted to the disbursing officer carrying the accounts of the officer concerned.
Line 2 - Officer, Naval Reserve, active
Report all patients who are officers of the Naval Reserve in an active-duty status. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 1.
Line 3 - Officer, Navy and Naval Reserve, retired, active
Report all patients who are retired officers of the Regular Navy and Naval Reserve in an active-duty status. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 1.
Line 4 - Officer, Marine Corps, active
Report all patients who are officers of the Regular Marine Corps on active duty. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 1.
Line 5 - Officer, Marine Corps, Reserve, active
Report all patients who are officers of the Marine Corps Reserve in an active-duty status. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 1.
Line 6 - Officer, Marine Corps and Marine Corps Reserve, retired, active
Report all patients who are retired officers of the Regular Marine Corps and Marine Corps Reserve in an active-duty status. Checkage for

subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 1.

Line 7 - Officer, Women's Reserve, Navy, active

Report all patients who are officers of the Women's Reserve of the Navy in an active-duty status. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 1.

Line 8 - Officer, Women's Reserve, Marine Corps, active

Report all patients who are officers of the Women's Reserve of the Marine Corps in an active-duty status. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 1.

Line 9 - Nurse, Navy and Naval Reserve, active

Report all patients who are nurses of the Regular Navy or Naval Reserve in an active-duty status. Reimbursement for subsistence in kind furnished nurses at the rate specified in the annual naval appropriation act will be effected by the Bureau. When nurses are being credited on the rolls of the disbursing officer with subsistence allowance in lieu of subsistence in kind, checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 1.

Line 10 - Cadet Nurse Corps

Report all patients who are members of the Cadet Nurse Corps. No checkage or reimbursement for subsistence is involved for patients in this category.

Line 11 - Midshipman, Navy, active

Report all patients who are midshipmen of the Regular Navy under instruction at the U. S. Naval Academy. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 1.

Line 12 - Midshipman, Naval Reserve, V-7, active

Report all patients who are midshipmen of the Naval Reserve, Class V-7, in an active-duty status. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 13 - Midshipman, Women's Reserve, V-9, active

Report all patients who are midshipmen of the Women's Reserve, Class V-9, of the Navy in an active-duty status. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 14 - Cadet, aviation, Naval Reserve, V-5, active

Report all patients who are aviation cadets of the Naval Reserve, Class V-5, in an active-duty status. Reimbursement for subsistence at the

rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 15 - Trainee, Naval Reserve, V-12

Report all patients who are trainees of the Naval Reserve, Class V-12, in an active-duty status. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 16 - Trainee, Marine Corps Reserve, V-12

Report all patients who are trainees of the Marine Corps Reserve, Class V-12, in an active-duty status. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 17 - Enlisted, Navy, active

Report all enlisted patients of the Regular Navy on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 18 - Enlisted, Naval Reserve, active

Report all enlisted patients of the Naval Reserve on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 19 - Enlisted, Navy, Fleet Reserve, F3, 4, 5, active

Report all enlisted patients of the Fleet Reserve, Classes F3, 4 and 5, on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 20 - Enlisted, Navy, retired, active

Report all enlisted, retired patients of the Regular Navy on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 21 - Enlisted, Women's Reserve, Navy, V-9

Report all enlisted patients of the Women's Reserve of the Navy, Class V-9, on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 22 - Enlisted, Women's Reserve, Navy, V-10

Report all enlisted patients of the Women's Reserve of the Navy, Class

V-10, on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 23 - Enlisted, Marine Corps, active

Report all enlisted patients of the Marine Corps on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 24 - Enlisted, Marine Corps Reserve, active

Report all enlisted patients of the Marine Corps Reserve on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 25 - Enlisted, Fleet Marine Reserve, Class 1, active

Report all enlisted patients of the Fleet Marine Reserve, Class 1, on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 26 - Enlisted, Marine Corps, retired, active

Report all retired enlisted patients of the Marine Corps on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 27 - Enlisted, Women's Reserve, Marine Corps

Report all enlisted patients of the Women's Reserve of the Marine Corps, on active duty. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 28 - General-court-martial prisoners serving sentence

Report only general-court-martial prisoners admitted from naval prisons or other places specifically designated for confinement of general-court-martial prisoners. Do not include prisoners awaiting trial by general court martial, or awaiting sentence; these cases shall be included on lines 1 to 27, as indicated. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required nor will any charges be collected locally.

Line 29 - Reserved

Line 30 - Reserved

Line 31 - Reserved
Line 32 - Reserved
Line 33 - Reserved
Line 34 - Subtotal, patients, naval, active
Enter totals of lines 1 to 33, inclusive.

(2) Section (B) - PATIENTS, NAVAL, NOT ON ACTIVE DUTY

Line 35 - Officer, Navy, retired, inactive
Report all patients who are retired officers of the Regular Navy in an inactive-duty status. Subsistence checkages at the rate specified in the annual naval appropriation act shall be effected by means of Nav-S&A Form 534, Hospital Ration Notice, which shall be prepared locally and forwarded to the Bureau of Supplies and Accounts, Field Branch (Master Accounts Division), Cleveland 15, Ohio. Do not include on this line enlisted men retired with officer rank under the provisions of the act of 7 May 1932. Report such personnel on line 40. Refer to the Register of Commissioned and Warrant Officers of the United States Navy and Marine Corps for listing of personnel in this category. Detailed reports of hospitalization are not required.
Line 36 - Officer, Naval Reserve, retired with pay, inactive
Report all patients who are officers of the Naval Reserve, retired with pay and in an inactive-duty status. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 35. Detailed reports of hospitalization are not required.
Line 37 - Officer, Marine Corps, retired, inactive
Report all patients who are retired officers of the Marine Corps in an inactive-duty status. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 35. Do not include on this line enlisted men retired with officer rank under provisions of the act of 7 May 1932. Report such personnel on line 42. Refer to the Register of Commissioned and Warrant Officers of the United States Navy and Marine Corps for listing of personnel in this category. Detailed reports of hospitalization are not required.
Line 38 - Nurse, Navy, retired, inactive
Report all patients who are retired nurses in an inactive-duty status. Checkage for subsistence shall be made at the same rate and shall be accomplished in the same manner as for officers reported on line 35. Detailed reports of hospitalization are not required.
Line 39 - Enlisted, Navy, Fleet Reserve, F3, 4, 5, inactive
Report all patients who are members of the Fleet Reserve, Classes F3, 4, 5, in an inactive-duty status. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required.

Line 40 - Enlisted, Navy, retired, inactive
Report all patients who are retired enlisted men in an inactive-duty status. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Include on this line enlisted personnel of the Navy retired with officer rank in accordance with the act of 7 May 1932. Refer to the Register of Commissioned and Warrant Officers of the United States Navy and Marine Corps for listing of personnel in this category. Detailed reports of hospitalization are not required.
Line 41 - Enlisted, Fleet Marine Reserve, Class 1, inactive
Report all patients who are members of the Fleet Marine Reserve, Class 1, in an inactive-duty status. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Detailed reports of hospitalization are not required.
Line 42 - Enlisted, Marine Corps, retired, inactive
Report all patients who are retired enlisted men of the Marine Corps in an inactive-duty status. Reimbursement for subsistence at the rate specified in the annual naval appropriation act will be effected by the Bureau. Include on this line enlisted personnel of the Marine Corps retired with officer rank in accordance with the act of 7 May 1932. Refer to the Register of Commissioned and Warrant Officers of the United States Navy and Marine Corps for listing of personnel in this category. Detailed reports of hospitalization are not required.
Line 43 - Ex-Naval and Marine Corps personnel, discharged, retained in hospital
Report all Navy and Marine Corps patients discharged from the service without retired or retainer pay while a patient in the hospital, and retained for treatment after discharge. Include also honorably discharged enlisted men admitted to hospital while electing homes on receiving ships (art. 1412 N.R.). Detailed reports of hospitalization are not required nor will any charges be collected locally, or by the Bureau.
Line 44 - Beneficiary, Naval Home
Report all patients who are beneficiaries of the Naval Home. Detailed reports of hospitalization are not required nor will any charge be collected locally or by the Bureau.
Line 45 - Pensioner
Report all Navy pensioners hospitalized. Do not include pensioners hospitalized as Veterans' Administration beneficiaries. The sum total of pension checks received shall be deposited with the disbursing officer for credit to "Miscellaneous Receipts in the Treasury." Upon admission and again upon discharge, a letter report shall be made to the Veterans' Administration direct, giving pensioner's name, pension number, home address, and date of admission, and requesting information as to the per diem rate of pension payable to the hospital.

Line 46 - Reserved
Line 47 - Reserved
Line 48 - Reserved
Line 49 - Reserved
Line 50 - Reserved
Line 51 - Subtotal, patients, naval, not on active duty
Enter totals of lines 35 to 50, inclusive.

(3) Section (C) - PATIENTS, SUPERNUMERARY

Line 52 - Army Officer & Nurse, active, Regular & Reserve
Report all patients who are Army officers, Regular and Reserve, including the Women's Army Corps, nurses, and Army aviation cadets on active duty. Charges for subsistence shall be collected locally at the rate specified in the annual naval appropriation act. Funds collected shall be deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy" prior to the close of business on the last day of each month. Report detailed data for these patients on line 1 of section G. Detailed reports of hospitalization are not required. However, when active Army personnel are hospitalized, the Individual Statistical Report of Patient (NavMed Form Fa) shall be completed in each case in accordance with the instructions applicable to naval personnel and forwarded to the Bureau of Medicine and Surgery. In addition to the above, the duty stations shall be notified of the individual Army patients admitted for treatment, giving the diagnosis, dates of admission and discharge, and such other data as may be requested by the local command.
Line 53 - Army enlisted, active, Regular & Reserve
Report all patients who are enlisted personnel of the Army, both Regular and Reserve, including the Women's Army Corps, on active duty. Detailed reports of hospitalization are not required nor will any charges be collected locally or by the Bureau. However, when active Army personnel are hospitalized, the Individual Statistical Report of Patient (NavMed Form Fa) shall be completed in each case in accordance with the instructions applicable to naval personnel, and forwarded to the Bureau of Medicine and Surgery. In addition to the above, the duty stations shall be notified of the individual Army patients admitted for treatment, giving the diagnosis, dates of admission and discharge, and such other data as may be requested by the local command.
Line 54 - Coast Guard officer, active
Report all patients who are officers of the U. S. Coast Guard in an active-duty status, including the Women's Reserve. Detailed report of hospitalization shall be submitted monthly. The total number of muster days reported in column (a) of the Ration Record must agree with the number of sick days reported on the monthly detailed report of hospitalization. No charges are to be collected locally, as reimbursement for

hospitalization at the per diem rate prescribed by the Federal Board of Hospitalization will be effected by the Bureau. In addition to the monthly report of hospitalization, which shall be forwarded to this Bureau, the following reports are also required: (1) Federal Security Agency, U. S. Public Health Service (June 1941), Form 1971F shall be completed in each case and forwarded direct to the Surgeon General, U. S. Public Health Service. If forms are not on hand, they may be obtained by requesting same from the Public Health Service, Washington, D. C., Bethesda Station. (2) The Individual Statistical Report of Patient (NavMed Form Fa) shall be completed in each case in accordance with the instructions applicable to naval personnel and forwarded direct to Coast Guard Headquarters, Washington, D. C.

Line 55 - Coast Guard enlisted, active

Report all enlisted patients of the Coast Guard on active duty, including the Women's Reserve. Instructions under line 54 are applicable to the personnel to be reported on this line.

Line 56 - Veterans' Administration beneficiary

Report only those patients whose admission and treatment have been authorized in writing by the proper Veterans' Administration official. Telephonic authorization for admission must be confirmed in writing. Detailed reports of hospitalization are not required nor are any charges in connection with hospitalization to be collected locally. Reimbursement for hospitalization will be effected by the Bureau.

Line 57 - Employees' Compensation Commission beneficiary

Report all patients who are civil employees of the United States admitted under proper authority for treatment of injuries or occupational diseases incurred "WHILE IN THE PERFORMANCE OF THEIR OFFICIAL DUTIES" as defined in part 2, pages 11-16 inclusive, Regulations Governing the Administration of the United States Employees' Compensation Act of September 7, 1916, as Amended, Relating to Civil Employees of the United States, and as Extended to Emergency Relief Employees and Others. No charges are to be collected locally as reimbursement for hospitalization will be effected by the Bureau. Detailed report of hospitalization shall be submitted monthly, but the number of sick days reported on the detailed report of hospitalization of Employees' Compensation Commission patients will not necessarily agree with the number of muster days reported in column (a) of the Ration Record, due to the difference in method of computing sick days for this class of patients for reimbursement purposes. Sick days applicable to Employees' Compensation Commission patients, as reported in the detailed report of hospitalization of Employees' Compensation Commission patients, are to be computed in every instance by including the day of admission and excluding the day of discharge.

Line 58 - Army retired personnel

Report all retired Army officers, nurses, and enlisted personnel in a

inactive-duty status. (See art. 1204 N.R.) Charges for subsistence of these personnel shall be collected locally at the rate specified in the annual naval appropriation act. Funds collected shall be deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy", prior to the close of business on the last day of each month. Report detailed data for these patients on line 3 of section G. No other detailed reports are required.

Line 59 - Dependents

Report all patients who are dependents of personnel of the U. S. Navy, Marine Corps, and Coast Guard, other than those who are beneficiaries of State aid under the Emergency Maternity and Infant Care Program. The charge for subsistence is included in the per diem charge for hospitalization of $1.75. The total charge accrued for hospitalization shall be collected and deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy", prior to the close of business on the last day of each month. Reference: BuSandA ltr L10-5(1) NH (AB), dated 7 April 1943. For additional instructions see line 4 of section G. Detailed reports of hospitalization are not required.

Line 60 - Dependents, State-aid beneficiaries

Report all patients who are dependents of personnel of the U. S. Navy, Marine Corps, and Coast Guard and are also beneficiaries under the Emergency Maternity and Infant Care Program of one of the several States. The charge for subsistence is included in the per diem charge for hospitalization at the uniform reciprocal per diem rate established by the Federal Board of Hospitalization. Charges for hospitalization furnished this group shall be billed by the hospital direct to the State health agency concerned and the amount so collected shall be deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy", prior to the close of business on the last day of each month. For additional instructions see section G, line 5. Detailed reports of hospitalization are not required.

Line 61 - Civilian, humanitarian, nonindigent

Report all patients admitted under authority of Bureau Circular Letter F, from whom reimbursement for the cost of hospitalization is to be collected by the hospital at the uniform reciprocal per diem rate established by the Federal Board of Hospitalization. The charge for subsistence is included in the per diem charge for hospitalization. The total charge accrued for hospitalization shall be collected and deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy", prior to the close of business on the last day of each month. For additional instructions see section G, line 6. Detailed reports of hospitalization are not required.

Line 62 - Civilian, humanitarian, indigent

Report all patients admitted under authority of Bureau Circular Letter

F, from whom reimbursement for the cost of hospitalization or subsistence cannot be collected. Detailed reports of hospitalization are not required nor will any charges be collected locally or by the Bureau.

Line 63 - British armed forces

Report all patients who are members of the armed forces of the British Empire. Detailed report of hospitalization shall be submitted monthly. The total number of muster days reported in column (a) of the Ration Record must agree with the number of sick days reported on monthly detailed report of hospitalization. No charges are to be collected locally, as reimbursement for hospitalization at the per diem rate prescribed by the Federal Board of Hospitalization will be effected by the Bureau through the lease-lend program.

Line 64 - French armed forces

Report all patients who are members of the French armed forces. Instructions under line 63 are applicable to the personnel to be reported on this line.

Line 65 - Netherlands armed forces

Report all patients who are members of the Netherlands armed forces. Instructions under line 63 are applicable to the personnel to be reported on this line.

Line 66 - U.S.S.R. armed forces

Report all patients who are members of the Russian armed forces. Instructions under line 63 are applicable to the personnel to be reported on this line.

Line 67 - Other foreign military personnel

Report all patients who are members of the armed forces of other foreign countries who may be admitted for hospitalization and treatment upon the request of the individual's commanding officer. No collections locally or otherwise, shall be made for this class of supernumerary. If personnel of more than one nation are to be reported, lines 74 to 78 may be utilized. Detailed reports of hospitalization shall be submitted monthly. Separate reports shall be submitted for each nation involved.

Line 68 - British Embassy and mission personnel

Report all patients who are members of the British Navy attached to the British Embassy and missions. No collections, locally or otherwise shall be made for this class of supernumerary. Detailed reports of hospitalization shall be submitted monthly.

Line 69 - State Department, Foreign Service officer

Report all patients who are officials of the State Department or the U. S. Consular Service. Individual detailed reports of hospitalization shall be submitted promptly upon completion of hospitalization. The total number of muster days reported in column (a) must agree with the number of sick days reported on the monthly and individual detailed reports submitted during the month. No collection for subsistence will be made locally; reimbursement for hospitalization will be effected by the Bureau.

Line 70 - U. S. Coast and Geodetic Survey
Report all patients who are members of the U. S. Coast and Geodetic Survey. Detailed report of hospitalization shall be submitted monthly. The total number of muster days reported in column (a) of the Ration Record must agree with the number of sick days reported on the monthly detailed reports of hospitalization. No charges are to be made locally as reimbursement for hospitalization at the per diem rate prescribed by the Federal Board of Hospitalization will be effected by the Bureau.
Line 71 - U. S. Maritime Service
Report all patients who are members of the U. S. Maritime Service. Instructions under line 70 are applicable to the personnel to be reported on this line.
Line 72 - U. S. Merchant Marine
Report all patients who are members of the U. S. Merchant Marine. Detailed reports of hospitalization are not required nor will any charges be collected locally or by the Bureau.
Line 73 - Prisoner of war
Report all patients who are prisoners of war. If prisoners of more than one nationality must be reported on this line, lines 74 to 78 may be utilized. No collections, locally or otherwise, shall be made for this class of supernumerary. Detailed reports of hospitalization shall be submitted monthly.
Line 74 - Reserved
Line 75 - Reserved
Line 76 - Reserved
Line 77 - Reserved
Line 78 - Reserved
Line 79 - Subtotal, patients, supernumerary
Enter total of lines 52 to 78, inclusive.
Line 80 - Total all patients
Enter total of lines 34, 51, and 79, inclusive.

(4) Section (D) - HOSPITAL STAFF PERSONNEL

Line 81 - Officer, Navy and Naval Reserve
Report in columns (a) and (b) all officers attached to the hospital staff except those who are patients and are therefore to be reported on lines 1 and 2, as applicable. Marine officers attached to the Marine Guard shall also be reported on this line. The total of column (b) shall equal column (a), inasmuch as officers are at all times entitled to subsistence allowance in cash in lieu of subsistence in kind. Charges for meals furnished officers and their guests shall be checked in the accounts of the individual officers at the rate of $0.25 per meal or $0.75 per ration. Letters requesting checkage in individual accounts shall indicate separately the number of meals sold each officer and the charge therefor,

the number furnished guests of each officer and the charge therefor, and the total meals furnished both and the total charge therefor. The total number of rations sold officers of the hospital staff shall be reported in column (c) of line 118 and the total number of rations furnished guests of staff personnel shall be reported in column (c) of line 119. Separate letters of checkage shall be made for personnel to be reported on separate lines. Copies shall be assembled by applicable line numbers and submitted with the Ration Record.

Line 82 - Officer, Women's Reserve, Navy

Report in columns (a) and (b) all officers of the Women's Reserve attached to the hospital staff except those who are patients and are therefore to be reported on line 7. The total of column (b) shall equal column (a), inasmuch as these officers are at all times entitled to subsistence allowances in cash in lieu of subsistence in kind. Instructions under line 81 relative to charges for and reporting of meals furnished officers and their guests are applicable to officers reported on this line.

Line 83 - Nurse, Navy and Naval Reserve

Report all nurses attached to the hospital staff except those who are patients and are therefore to be reported on line 9. Do not include nurses performing duty at other activities but who have been assigned quarters and messing facilities at hospital nurses quarters. Ordinarily nurses attached to naval hospitals are entitled to subsistence in kind only. However, in those cases where specific authority has been granted to credit the accounts of nurses with subsistence allowances in lieu of furnishing subsistence in kind, meals furnished such nurses and their guests shall be charged and reported as specified in the instructions applicable to line 81. Charges for meals furnished guests of nurses, who are being subsisted in kind, shall be checked in the accounts of the individual nurses at the rate of $0.25 per meal or $0.75 per ration. Letters requesting checkage in individual accounts shall indicate the number of meals furnished guests of individual nurses and the charge therefor. The total number of rations furnished guests of nurses shall be reported in column (c) of line 119. Copies of letters of checkage shall be submitted with the Ration Record and shall be assembled as specified under line 81.

Line 84 - Cadet Nurse Corps

Report all personnel who are members of the Cadet Nurse Corps attached to the hospital staff. No checkage or reimbursement for subsistence is involved for personnel in this category.

Line 85 - Hospital Corps, enlisted man.

Report all enlisted men of the Hospital Corps attached to the hospital staff. Hospital corpsmen attached to the hospital for instruction by orders of the Navy Department and those attached to the Hospital Corps School or to any command other than the hospital proper, whether for duty or for instruction, shall not be reported on this line. Such person

shall be reported on the applicable line in section E. There shall be reported in column (c) only those muster days applicable to hospital corpsmen who are entitled to subsistence in kind in lieu of commuted rations. Hospital corpsmen being credited with commuted rations shall be reported in column (b) as not subsisted and meals sold such personnel and their guests shall be reported in section F in accordance with the instructions applicable to line 81. Letters requesting checkage in individual accounts shall indicate separately the number of meals furnished the individual hospital corpsman and the charge therefor, the number furnished guests of the hospital corpsman and the charge therefor, and the total meals furnished both and the total charge therefor.

Line 86 - Hospital Corps, enlisted WAVES, V-10

Report all enlisted personnel of the Women's Reserve in the Hospital Corps, Class V-10, attached to the hospital staff. Instructions under line 85 are applicable to the personnel to be reported on this line.

Line 87 - Other naval enlisted man

Report all naval enlisted men other than hospital corpsmen attached to the hospital staff. This line should include mail specialists, tailors, ship service specialists, etc. Instructions under line 85 are applicable to the personnel to be reported on this line.

Line 88 - Other naval enlisted WAVES, V-10

Report all enlisted personnel of the Women's Reserve other than those in the Hospital Corps attached to the hospital staff. This line should include mail specialists, tailors, ship service specialists, etc. Instructions under line 85 are applicable to the personnel to be reported on this line.

Line 89 - Marine Guard

Report all personnel of the Marine Guard, except officers, attached to the hospital. Instructions under line 85 are applicable to the personnel to be reported on this line.

Line 90 - Civil employees, other than excepted group

Report in columns (a) and (b) all civil-service employees attached to the hospital staff except those who are entitled, under the provisions of the Schedule of Wages, to subsistence in kind as part compensation in lieu of salary. Unless a naval or convalescent hospital within the continental limits of the U. S. has employees in the special-duty service classification, all civil-service employees at such hospitals should be reported on line 90. Inasmuch as the employees to be reported on this line are not entitled to subsistence in kind, in lieu of salary, the days attached (column (a)) and the days not subsisted (column (b)) shall be the same. Under the mandatory provisions of the Schedule of Wages, employees of the Commissary Service (including maids) shall be checked for the value of at least one meal per working day (BuMed Ltr F2-RM-LL/L16(121), dated 13 Nov 1943). These checkages shall be reflected in the "Other Deductions" column of the civil pay roll. The number

of meals covered by these checkages shall be converted into the equivalent number of rations and reported in column (c), line 121. The sale of meals to other employees in this category is a matter within the discretion of the medical officer in command, provided that in each instance an advance deposit is made with the disbursing officer (art. 621-6-(f)-(3)-(a); arts. 2121-3-(h) and 2179-5-(e)-(2), BuSandA Manual). Charges, at the rate of $0.25 per meal, shall be made against the individual advance deposits, and the number of meals so furnished shall be converted into the equivalent number of rations and reported in column (c) line 120. Copies of letters of checkage shall be submitted with the Ration Record.

Line 91 - Civil employees, special-duty service

Report all employees of the special-duty service attached to the hospital staff who are furnished subsistence in kind in lieu of salary. No charges for subsistence will be made locally and no collections will be effected by the Bureau.

Line 92 - Civil employees, excepted group

Report all civil employees of the excepted group attached to the hospital staff. This line shall be used exclusively by the Naval Hospital, Balboa and Coco Solo, Canal Zone, and at other hospitals where employees of this group have been specifically authorized by SecNav. No charges for subsistence will be made locally and no collections will be effected by the Bureau.

Line 93 - Red Cross representative

Report all Red Cross representatives attached to the hospital staff except those who are patients and are therefore to be reported on line 61. The total reported in column (b) shall equal column (a), inasmuch as Red Cross representatives are not entitled to subsistence in kind at Government expense. Charges for meals furnished Red Cross representatives shall be checked against the individual advance deposits at the rate of $0.25 per meal or $0.75 per ration. Letters requesting checkage against the individual advance deposits shall indicate the number of meals furnished each Red Cross representative and the charge therefor. The total number of rations furnished Red Cross representatives shall be reported in column (c) of line 120.

Line 94 - Reserved

Line 95 - Reserved

Line 96 - Reserved

Line 97 - Reserved

Line 98 - Reserved

Line 99 - Subtotal, hospital staff personnel

Enter totals of lines 81 to 98, inclusive.

(5) Section E - PERSONNEL ATTACHED, OTHER THAN HOSPITAL STAFF

Line 100 - Officer, Navy and Naval Reserve

Report in columns (a) and (b) all officers not actually attached to the hospital proper for duty. This line shall include all officers attached for instruction, for temporary duty, or attached to the Hospital Corps school or other separate commands. The total of column (b) shall equal column (a), inasmuch as these officers are at all times entitled to subsistence allowance in cash in lieu of subsistence in kind. Instructions under line 81 relative to charges for and reporting of meals furnished officers and their guests are applicable to officers reported on this line.

Line 101 - Officers, Women's Reserve, Navy

Report in columns (a) and (b) all officers of the Women's Reserve not actually attached to the hospital proper for duty. This line shall include all officers attached for instruction, for temporary duty, or attached to the Hospital Corps school or other separate commands. The total of column (b) shall equal column (a), inasmuch as these officers are at all times entitled to subsistence allowance in cash in lieu of subsistence in kind. Instructions under line 81 relative to charges for and reporting of meals furnished officers and their guests are applicable to officers reported on this line.

Line 102 - Nurse, Navy and Naval Reserve

Report all nurses not actually attached to the hospital proper for duty. Include on this line nurses attached for instruction, for temporary duty, or attached to the Hospital Corps school or other separate commands who have been assigned quarters and messing facilities in the hospital. Instructions under line 83 are applicable to nurses to be reported on this line.

Line 103 - Hospital Corps, enlisted man

Report all enlisted men of the Hospital Corps not actually attached to the hospital proper for duty. This line shall include all hospital corpsmen attached to the hospital for instruction by order of the Navy Department, those attached to the Hospital Corps school for instruction, for temporary duty, or to other separate commands. Instructions under line 85 are applicable to the personnel to be reported on this line.

Line 104 - Hospital Corps enlisted WAVES, V-10

Report all enlisted personnel of the Women's Reserve in the Hospital Corps, Class V-10, not actually attached to the hospital proper for duty. This line shall include all WAVES in the Hospital Corps attached to the hospital for instruction by order of the Navy Department, those attached to the Hospital Corps school for instruction, for temporary duty, or to other separate commands. Instructions under line 85 are applicable to the personnel to be reported on this line.

Line 105 - Hospital Corps school, enlisted man

Report all enlisted men of the Hospital Corps attached to the Hospital Corps school for duty. Instructions under line 85 are applicable to the personnel to be reported on this line.

Line 106 - Hospital Corps school, enlisted WAVES, V-10
Report all enlisted personnel of the Women's Reserve in the Hospital Corps, Class V-10, attached to the Hospital Corps school for duty. Instructions under line 85 are applicable to the personnel to be reported on this line.
Line 107 - Trainees, Naval Reserve, V-12
Report all trainees of the Naval Reserve, Class V-12, who are attached to the hospital for duty or for instruction. Instructions under line 85 are applicable to the personnel to be reported on this line.
Line 108 - Other naval enlisted man
Report all naval enlisted men other than hospital corpsmen not actually attached to the hospital proper for duty and who therefore cannot be properly reported on line 87. Instructions under line 85 are applicable to the personnel to be reported on this line.
Line 109 - Other naval enlisted WAVES
Report all enlisted personnel of the Women's Reserve, other than in the Hospital Corps, not actually attached to the hospital proper for duty and who therefore cannot be properly reported on line 88. Instructions under line 85 are applicable to the personnel to be reported on this line.
Line 110 - Civil employees, other than excepted group
Report all civil employees assigned to commands other than the hospital proper. Instructions under line 90 are applicable to the personnel to be reported on this line.
Line 111 - Reserved
Line 112 - Reserved
Line 113 - Reserved
Line 114 - Reserved
Line 115 - Reserved
Line 116 - Subtotal, personnel attached, other than hospital staff
Enter totals of lines 100 to 115, inclusive.
Line 117 - Total, hospital staff personnel and personnel attached, other than staff personnel
Enter total of lines 99 and 116.

(6) Section F - RATIONS SOLD

Line 118 - Military personnel
Report in column (c) of this line the number of rations (expressed in thirds, if necessary) sold at the rate of $0.25 per meal or $0.75 per ration to officers, nurses, Hospital Corps enlisted men and women, and any other military personnel. The total value of such rations as checked in the accounts of the individual must agree with the number of subsistence days reported in column (c). The amount checked on the pay rolls shall be credited to the appropriation "Medical Department

Navy." Separate letters of checkage shall be made for meals furnished each class of personnel. Copies shall be assembled by classes of personnel and submitted with the Ration Record.

Line 119 - Military personnel for guests

Report in column (c) of this line the number of rations (expressed in thirds, if necessary) sold at the rate of $0.25 per meal or $0.75 per ration to military personnel for their guests. The total value of such rations, as checked in the accounts of the individuals to whom such subsistence is chargeable, must agree with the number of rations reported in column (c). The amount checked on the pay rolls shall be credited to the appropriation "Medical Department, Navy." Copies of letters of checkage for meals furnished guests shall be submitted with the Ration Record.

Line 120 - Civilian personnel, advance deposits

Report in column (c) of this line the number of rations sold to civilian employees and Red Cross representatives. The total number of such rations as checked against advance deposits must agree with the number of subsistence days reported in column (c). The amount collected for meals sold by advance deposits shall be credited to the appropriation, "Medical Department, Navy." Separate letters of checkage shall be made for meals furnished civilian advance depositors and Red Cross representatives. Copies of these letters shall be assembled separately and submitted with the Ration Record.

Line 121 - Civilian employees, pay-roll checkages

Report in column (c) of this line the number of rations (expressed in thirds, if necessary) sold at the rate of $0.25 per meal or $0.75 per ration to commissary employees and maids under the mandatory provisions of the Schedule of Wages. The number of such rations, as checked on the pay rolls, must agree with the number of subsistence days reported in column (c). The amount checked on the pay rolls shall be credited to the appropriation, "Medical Department, Navy."

Line 122 - Veterans' Administration, out-patient

The total number of rations (expressed in thirds, if necessary) served to out-patients of the Veterans' Administration by hospitals authorized to furnish such meals shall be reported in this line. No collections for subsistence shall be made locally, as reimbursement will be effected by the Bureau at the rate of $0.25 per meal or $0.75 per ration.

Line 123 - Reserved

Line 124 - Reserved

Line 125 - Reserved

Line 126 - Subtotal, section F

Enter total in subcolumn (c) of lines 118 to 125, inclusive.

Line 127 - Grand total, all personnel

Enter total in subcolumn (c) of lines 80, 117, and 126.

(7) Section G - STATUS OF LOCAL COLLECTIONS

This section has been set up in order to eliminate detailed reports of services furnished for which charges are collected locally, by providing a means of reporting the necessary data on the Ration Record. Insofar as the Bureau is concerned, this section need be completed only in the record for the last day of each month. However, the hospitals may find it desirable to complete this section daily or weekly in order to avoid confusion and delay at the close of each month in locating errors and reconciling the data with the record of collections and other related records.

Personnel hospitalized or subsisted and from whom charges are collected locally, other than those already indicated in this section, shall be reported on one of the blank lines under the caption "Class of Patient."

(a) The horizontal lines are numbered 1 to 13, inclusive. The subsistence or hospitalization rate, as may be applicable, is indicated in the instructions below:

Line 1 - Army officers and nurses, active
Collections for subsistence shall be effected locally at the per diem rate specified in the annual naval appropriation act. Collections shall be deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy." Detailed report of hospitalizati is not required.
Line 2 - Army personnel, retired
Collections for subsistence shall be effected locally from all retired Army personnel, officer or enlisted, at the per diem rate specified in the annual naval appropriation act. Collections shall be deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy." Detailed report of hospitalization is not require
Line 3 - Dependents
Collections for hospitalization of dependents of the Navy, Marine Corps and Coast Guard, other than those who are beneficiaries of State aid under the Emergency Maternity and Infant Care Program, shall be made at the rate specified in current instructions. (See Alnavsta 02, dated 29 January 1944.) Collections shall be deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy." Detailed report of hospitalization is not required.
Line 4 - Dependents, State-aid program
Collections for hospitalization of dependents of the Navy, Marine Corps, and Coast Guard who are beneficiaries of the State emergency and infant care program of one of the several States shall be made at the uniform reciprocal per diem rate as established annually by the Federal Board of Hospitalization. Collections shall be deposited with the

disbursing officer for ultimate credit to the appropriation "Medical Department, Navy." Detailed report of hospitalization is not required.
Line 5 - Civilian, humanitarian, nonindigent
Collections for hospitalization of civilian, humanitarian, nonindigent shall be made at the uniform reciprocal per diem rate as established annually by the Federal Board of Hospitalization. Collections shall be deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy." Detailed report of hospitalization is not required.
Line 6 - Reserved
Line 7 - Reserved
Line 8 - Reserved
Line 9 - Reserved
Line 10 - Reserved
Line 11 - Reserved
Line 12 - Reserved
Line 13 - Enter totals of lines 1 to 12, inclusive.

(b)

(1) Column 1. Enter the total sick days applicable to each class of patient during the month for which the report is submitted. Sick days shall be computed in the same manner as for naval personnel; i.e., excluding the day of admission and including the day of discharge, death, transfer, etc. (art. 1827 (2), N.R.). There can be no fractional days.

(2) Column 2. Enter the per diem rate of charge for the service rendered.

(3) Column 3. Enter only the total amount accrued during the month for which the report is being submitted. This figure is obtained by multiplying the number of sick days by the applicable rate as reported in column 2.

(4) Column 4. Enter the total amount of accruals this month which have actually been collected and deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy", prior to the close of business on the last day of the month.

(5) Column 5. Enter the total amount of the accruals this month which remain uncollected at the end of the month for which the report is submitted.

(6) Column 6. Enter the total amount of the accruals of previous months which have actually been collected and deposited with the disbursing officer for ultimate credit to the appropriation "Medical Department, Navy", prior to the close of business on the last day of the month.

(7) Column 7. Enter the amount of the accruals of previous month liquidated by other than cash collection. There shall be reported in

this column that portion of amounts previously reported as accrued and uncollected which have been determined to be uncollectible because of:

(a) Erroneous classification of the patient, or patients, in a previous report.

(b) Determination of indigency after previously having been reported as nonindigent.

(c) Death of a destitute patient.

(d) Other legitimate reason.

Each such liquidation by other than cash collection of the total charge accrued shall be explained fully under "Remarks."

(8) Column 8. This amount shall be obtained by subtracting the sum of the amounts reported in columns 6 and 7 of the current report from the amount reported in column 8 of the report for the previous month.

(9) Column 9. The total collected and deposited this month shall be the sum of the amounts reported in columns 4 and 6.

* * * * * *

NavMed-MF-96(Rev. 5/44)

RATION RECORD

TO: Medical Officer in Command
BuMed

U. S. NAVAL HOSPITAL, _____ FOR: _____, 19__

	I. PERSONNEL CLASSIFICATION	II. THIS DATE			III. THIS MONTH TO DATE			IV. THIS FISCAL YEAR TO DATE		
		a. ATTACHED	b. NOT SUBSISTED	c. SUBSISTED	a. ATTACHED	b. NOT SUBSISTED	c. SUBSISTED	a. ATTACHED	b. NOT SUBSISTED	c. SUBSISTED
	A. PATIENTS, NAVAL, ACTIVE DUTY									
1	OFFICER, USN									
2	OFFICER, USNR									
3	OFFICER, USN & USNR, RETIRED									
4	OFFICER, USMC									
5	OFFICER, USMCR									
6	OFFICER, USMC & USMCR, RETIRED									
7	OFFICER, W-V, USNR									
8	OFFICER, WR, USMC									
9	NURSE, USN & USNR									
10	CADET NURSE CORPS									
11	MIDSHIPMAN, USN									
12	MIDSHIPMAN, USNR, V-7									
13	MIDSHIPMAN, W-V, USNR, V-9									
14	CADET, AVIATION, USNR, V-5									
15	TRAINEE, USNR, V-12									
16	TRAINEE, USMCR, V-12									
17	ENLISTED MAN, USN									
18	ENLISTED MAN, USNR									
19	ENLISTED MAN, USNFR, F-3,4,5									
20	ENLISTED MAN, USN, RETIRED									
21	ENLISTED, W-V, USNR, V-9									
22	ENLISTED, W-V, USNR, V-10									
23	ENLISTED MAN, USMC									
24	ENLISTED MAN, USMCR									
25	ENLISTED MAN, USFMR, C1-1									
26	ENLISTED MAN, USMC, RETIRED									
27	ENLISTED, WR, USMC									
28	GENERAL COURT MARTIAL PRISONER									
29										
30										
31										
32										
33										
34	SUBTOTAL, SECTION A									
	B. PATIENTS, NAVAL, NOT ON ACTIVE DUTY									
35	OFFICER, USN, RETIRED									
36	OFFICER, USNR, RETIRED WITH PAY									
37	OFFICER, USMC, RETIRED									
38	NURSE, USN, RETIRED									
39	ENLISTED MAN, USNFR, F-3,4,5									
40	ENLISTED MAN, USN, RETIRED									
41	ENLISTED MAN, USMFR, C1-1									
42	ENLISTED MAN, USMC, RETIRED									
43	EX-USN & USMC, DISCH. & RETAINED									
44	BENEFICIARY, NAVAL HOME									
45	PENSIONER									
46										
47										
48										
49										
50										
51	SUBTOTAL, SECTION B									
	C. PATIENTS, SUPERNUMERARY									
52	ARMY OFFICER & NURSE, ACTIVE DUTY									
53	ARMY ENLISTED, ACTIVE DUTY									
54	COAST GUARD OFFICER, ACTIVE DUTY									
55	COAST GUARD ENLISTED, ACTIVE DUTY									
56	VETERANS' ADMIN. BENEFICIARY									
57	EMPLOYEE COMP. COM. BENEFICIARY									
58	ARMY RETIRED PERSONNEL									
59	DEPENDENT									
60	DEPENDENT, STATE-AID BENEFICIARY									
61	CIV., HUMANITARIAN, NON-INDIGENT									
62	CIVILIAN, HUMANITARIAN, INDIGENT									
63	BRITISH ARMED FORCES									
64	FRENCH ARMED FORCES									
65	NETHERLANDS ARMED FORCES									
66	U.S.S.R. ARMED FORCES									
67	OTHER FOREIGN MILITARY PERSONNEL									
68	BR. EMBASSY & MISSION PERSONNEL									
69	STATE DEPARTMENT									
70	U.S. COAST AND GEODETIC SURVEY									
71	U.S. MARITIME SERVICE									
72	U.S. MERCHANT MARINE									
73	PRISONER OF WAR									
74										
75										
76										
77										
78										
79	SUBTOTAL, SECTION C									
80	TOTAL, ALL PATIENTS									

D. HOSPITAL STAFF PERSONNEL

81	OFFICER, USN & USNR			X			X			X
82	OFFICER, W-V, USNR			X			X			X
83	NURSE, USN & USNR									
84	CADET NURSE CORPS									
85	HOSPITAL CORPS, ENLISTED MAN									
86	HOSPITAL CORPS. ENL. WAVES V-10									
87	OTHER NAVAL ENLISTED MAN									
88	OTHER NAVAL ENLISTED WAVES V-10									
89	MARINE GUARD									
90	CIV. EMP. OTHER THAN EXCEPTED GROUP			X			X			X
91	CIV. EMP. SPECIAL DUTY SERVICE									
92	CIV. EMP. EXCEPTED GROUP									
93	RED CROSS REPRESENTATIVE			X			X			X
94										
95										
96										
97										
98										
99	SUBTOTAL, SECTION D									

E. PERSONNEL ATTACHED, OTHER THAN HOSPITAL STAFF

100	OFFICER, USN & USNR			X			X			X
101	OFFICER, W-V, USNR			X			X			X
102	NURSE, USN & USNR									
103	HOSPITAL CORPS, ENLISTED MAN									
104	HOSP. CORPS, ENLISTED WAVES, V-10									
105	HOSP. CORPS SCHOOL, ENLISTED MAN									
106	HOSP. CORPS SCH., ENL. WAVES, V-10									
107	TRAINEE, USNR, V-12									
108	OTHER NAVAL ENLISTED MAN									
109	OTHER NAVAL ENLISTED WAVES									
110	CIV. EMP. OTHER THAN EXCEPTED GROUP			X			X			X
111										
112										
113										
114										
115										
116	SUBTOTAL, SECTION E									
117	TOTAL, SECTION D AND E									

F. RATIONS SOLD

118	MILITARY PERSONNEL	X	X		X	X		X	X	
119	MILITARY PERSONNEL FOR GUESTS	X	X		X	X		X	X	
120	CIV. PERSONNEL (ADVANCE DEPOSITS)	X	X		X	X		X	X	
121	CIV. EMPLOYEE (PAYROLL CHECKAGES)	X	X		X	X		X	X	
122	VETERANS' ADMIN. OUT-PATIENT	X	X		X	X		X	X	
123										
124										
125										
126	SUBTOTAL, SECTION F	X	X		X	X		X	X	
127	GRAND TOTAL, SUBSISTED	X	X		X	X		X	X	

G. STATUS OF LOCAL COLLECTIONS

	CLASS OF PATIENT	(1) SICK DAYS THIS MONTH	(2) PER DIEM RATE	(3) AMOUNT ACCRUED THIS MONTH	(4) ACCRUALS THIS MONTH COLLECTED & DEPOSITED	(5) ACCRUALS THIS MONTH UNCOLLECTED	(6) ACCRUALS PREVIOUS MONTHS COLLECTED & DEPOSITED	(7) ACCRUALS PREVIOUS MONTHS OTHERWISE LIQUIDATED	(8) ACCRUALS PREVIOUS MONTHS UNCOLLECTED	(9) TOTAL COLLECTED & DEPOSITED THIS MONTH
1	ARMY OFFICER AND NURSE, ACTIVE									
2	ARMY PERSONNEL, RETIRED									
3	DEPENDENT									
4	DEPENDENT, STATE-AID BENFICIARY									
5	CIV., HUMANITARIAN, NON-INDIGENT									
6										
7										
8										
9										
10										
11										
12										
13	ENTER TOTS. OF LINES 1 TO 12, INCL.									

REMARKS:

SUBMITTED:

Personnel Officer

APPROVED AND FORWARDED:

Medical Officer in Command

RATION RECORD (BACK) NAVMED HF-36(Rev. 5/44)