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NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

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Thrombosis and Dicumarol Therapy: The phenomena of thrombosis have secured scant attention until recently. Thrombosis, and embolism which frequently results therefrom, no longer have to be looked upon as inevitable and unavoidable.

Thrombosis occurs under a variety of conditions:

A. In relation to surgery (more often pelvic and gastro-intestinal surgery).

B. Following childbirth.

C. With certain infections (coagulase-positive strains of streptococci, staphylococci, and at times other organisms).

D. Following the use of immobilizing apparatus (splints and casts).

E. In frostbite, diabetes, and in other conditions in which physical changes have occurred in the blood vascular system such as those resulting in coronary thrombosis, thrombophlebitis, etc.

F. In association with malignant growths.

Certain abdominal operations are more likely to be followed by thrombosis and pulmonary embolism than others. These include resection of the stomach, exploratory laparotomy in inoperable cancer, colostomy, enterostomy, intestinal resection, operation for ruptured appendix, and cholecystectomy. Repair of umbilical, femoral or inguinal hernias, hysterectomy, and operations on the brain and spinal cord have frequently been followed by thrombotic phenomena. About 93 per cent of the postoperative fatalities due to pulmonary embolism are in patients over forty years of age. The number of deaths that occur from this cause after operations for malignant lesions is excessive compared with those from operations for other conditions. In contrast, deaths from pulmonary embolism almost never occur following thyroidectomy. It would seem that thrombosis in many cases is due to local tissue damage which causes the elaboration of a coagulating substance. The immediate causative factor may be an excess of prothrombin production, or the liberation into the blood stream of thromboplastic substances through tissue injury or by plateletolytic action. Thrombosis occurs frequently when mesenteric or pelvic veins are unduly disturbed.

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Thrombosis following surgery or parturition occurs almost wholly between the fourth and fourteenth day. There are two significant changes that occur during this period, namely, (1) an increase in the number of blood platelets in the circulating blood and (2) an adhesiveness of the blood platelets. These changes begin about the fourth day, reach a maximum about the tenth day, and recede to normal in another 10 days.

In infections caused by organisms which liberate a coagulase, thrombosis occurs after the infection has become established. The toxin elaborated by certain streptococci may cause a thrombotic tendency by a plateletolytic action. S. hemolyticus is both hemolytic and plateletolytic. The author believes that every hemolytic agent is also plateletolytic.

When thrombosis follows the use of splints, it occurs after two or three days, but not necessarily at the point of greatest splint pressure.

The further development and progression of venous thrombosis is not stopped by ligation of the vein involved. Ligation will prevent clot movement, but thrombosis may occur elsewhere or result from, and centrally to, the trauma of the ligation. In unilateral ligation an unexpected thrombus may appear on the contralateral side. Although bilateral ligation is now common, it may not offer the protection desired. The resulting edema and discomfort from this procedure may be troublesome and persists frequently.

Two effective anticoagulants are available. Heparin, the natural anticoagulant, was first isolated from the liver as its name indicates. Dicoumarol was discovered by Karl Paul Link of the University of Wisconsin. The prevention of the occurrence of dicoumarol in cattle feed by preventing the spoilage of any clover that goes into it is saving the lives of hundreds of cattle, and the availability of dicoumarol for use in therapy is saving and will continue to save thousands of human lives.

These two drugs extend the prothrombin time; heparin does so by its actior on the prothrombin in the blood, dicoumarol by its action on the prothrombin-producing cells of the liver. It will be seen, therefore, that heparin has an immediate although transient effect. With dicoumarol there is a lag of from ten to twelve hours before the effect is noticeable by the Shapiro modification of the Quick method, using diluted plasma. Since heparin acts on the blood prothrombin, a blood coagulation test may be used for determination of its activity when it is being used. When both drugs are used, only the test for plasma prothrombin time is necessary. Small oral doses of dicoumarol enhance the effect of heparin.

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Dicoumarol is one of the many potent drugs which must be followed closely by reliable estimations of their activity when used. The single-stage method for prothrombin determination is adequate when properly executed. The reliability of the technic is improved by the following considerations:

1. Use a standardized thromboplastin.

2. An unvarying end point should be established in each laboratory. (The author and his co-workers consider that their end point is always identical. They use a wire loop which they pass through the solution. The clot is thus lifted from the clear fluid the instant it forms.)

The safe level of the effect of dicoumarol therapy is double the normal prothrombin time when whole plasma is used. A number of clinics have found by the use of diluted (12.5 per cent) plasma that the sensitivity and reliability of this prothrombin test is greatly increased. The hazard of hemorrhage is eliminated by this modification. A safe level of therapeutic activity when using the dilute plasma test is three times the normal. At these levels, namely, twice the normal time on whole plasma, and three times the normal time on dilute plasma, the author and associates do not, with but rare exception, encounter hemorrhage or thrombosis.

In treatment with dicoumarol, the amount used during the first twenty-four hours should be 500 mg. and given in two doses, 300 and 200 mg., twelve hours apart. If the prothrombin time is shortened (faster than normal) before the initial dose, or if the patient is over 70 kilos, then 700 mg. should be used and given in two doses, 400 mg. and 300 mg., twelve hours apart. Prothrombin determinations on both whole and dilute plasma should be made daily, the first at the time of the initial dose to record the normal.

The third and subsequent doses of dicoumarol are governed entirely by the prothrombin time. It is usual to give 100 mg. every other day, and an additional 50 mg. on the intervening day if the prothrombin time has not reached the level desired.

During a protracted period of dicoumarol therapy the prothrombin time is allowed to return partially toward normal. The author does this by not giving every other one of the usually scheduled doses of dicoumarol. By thus allowing the natural return of the prothrombin time partially toward normal, the hazard of hemorrhage is further reduced, if not entirely eliminated. A prompt response toward lessening of the prothrombin time is indicative of an

active liver. This procedure is especially important when the anticoagulant is used over extended periods and in ambulant cases. The possibility of uncontrollable hemorrhage in anticoagulant therapy has been completely overcome by the results obtained from the use of single doses of from 60 to 100 mg. of vitamin K. Fresh whole blood transfusion is useful should an emergency requiring it arise.

As has been suggested, it is challenging to contemplate the effect that would be produced on the morbidity and mortality rates among the older age group by the reduction of one-third or more in the tendency of the blood toward thrombosis. When there is a history of a previous thrombosis, anticoagulant therapy is a necessary procedure in abdominal surgery.

The discovery of dicoumarol together with the more sensitive test for the determination of prothrombin time, using dilute plasma, has led to several other important considerations. One of these is the effect of aspirin and other salicylates in unduly prolonging the prothrombin time. This prolongation of the prothrombin time can be neutralized by small amounts of vitamin K. It was also noted by Link that the xanthines shorten the prothrombin time. That others may not be in agreement with Link's observation may be due to inaccuracies in the test used. The thrombosis that occurs in patients receiving whole digitalis has not been fully explained. Elsewhere the author has suggested that the saponin, digitonin, may be responsible. Favorable to this hypothesis is the hemolysis and plateletolysis that occurs with snake venom saponins; unfavorable is nonshortening of the prothrombin time in some cases. It would seem sound to avoid or at least to control, during a period when anticoagulant effects are desired, the intake of drugs that may increase the tendency toward thrombosis or impede or neutralize the activity of any agents being used for their anticoagulant effects.

At a staff meeting of the Mayo Clinic in 1945, Col. E. V. Allen stated: "The use of both measures (venous ligation and anticoagulants) has brought interest in venous thrombosis to a place of desirable prominence. It is safe to predict that medicine stands on the threshold of new and satisfying experience in this field. Sometime in the future there may be no valid reason why the coagulability of the blood in man may not be maintained indefinitely and safely at a level which will not permit intravascular thrombosis." That future is now the present.

Summary: Through the use of anticoagulants, (1) the prothrombin time can be extended to a safe level and thereby thrombosis can be prevented and controlled; (2) the results from prothrombin time determinations are used to control the therapeutic level of dicoumarol action thus preventing thrombosis or

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hemorrhage; and (3) during the period of dicoumarol therapy, drugs having a similar or contrary effect to that of dicoumarol should be restricted. (From Recent Special Guest Lecture by Christian P. Segard at the National Naval Medical Center)

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Anticoagulants in Coronary Thrombosis: Emboli and thromboses in various parts of the arterial system are recognized complications of coronary thrombosis. These complications have usually been attributed to narnowing of the arterial lumen and stasis in the blood-flow, but recent observers have noted that an increased prothrombin activity occurs in patients with coronary thrombosis. This is in agreement with the observation of de Takats that patients with coronary thrombosis show an increased resistance to heparin.

Following the discovery that heparin can prevent thrombus formation in the coronary tree and resulting myocardial infarction, physicians began to consider the use of heparin clinically. There are difficulties and even dangers in this use of heparin. The introduction of dicoumarol gave fresh impetus to the study of treatment in coronary thrombosis.

Peters et al. have used dicoumarol in a series of 50 patients with coronary thrombosis, among whom the incidence of clinical embolism was 2 per cent as against 16 per cent in a control group. The mortality rate in the dicoumarol-treated group was 4 per cent, compared with 20 per cent in the untreated group. Although dicoumarol was given for at least six weeks and sometimes much longer, no serious toxic effects and no hemorrhages were noted; however, in three patients microscopic hematuria was found. Dosage was determined entirely by the prothrombin time using diluted plasma (12.5 per cent) for which the normal is from 85 to 100 seconds with the technic used. The usual dose of dicoumarol is 300 mg. This can be repeated daily unless the prothrombin time of 12.5 per cent plasma reaches 400 seconds, which, with the test reagents and technic as used, is the upper limit of safety.

From the results of this study it is emphasized that this treatment should be given only when there is a laboratory for the estimation of the prothrombin time. Definite contraindications are hepatic disease and any blood dyscrasia. Special care must be exercised in the presence of hypertension, and the dicoumarol-like action of salicylates and quinine must be borne in mind. Hemorrhage, should it occur, can be controlled by vitamin K activity through the intravenous administration of menadione bisulphite 37.5 mg.

A preliminary study, similar in scheme to that of Peters et al., was carried out by Wright, who used the prothrombin time of undiluted plasma as

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his guide. The normal time here was from 13 to 17 seconds, and dicoumarol was discontinued if the time exceeded 30 seconds. Of 43 patients selected because of complications known to be associated with a very high mortality rate, only 25 per cent died, compared with an anticipated rate of from 60 to 70 per cent; while of 33 patients having their first or second uncomplicated attack of coronary thrombosis, 12 per cent died as compared with an anticipated mortality rate of from 20 to 30 per cent.

It has been confirmed by Peters et al. that one risk in using digitalis for the heart failure of coronary thrombosis is its tendency to increase the clotting time of the blood, and the question arises whether dicoumarol neutralizes this danger. It was found that the prothrombin time is shortened after the intravenous administration of theophylline with ethylenediamine, and also of theophylline sodium acetate. A similar effect was obtained by the oral administration of the methylxanthines (theophylline with ethylenediamine, theobromine, and theobromine sodium acetate). This is not a new observation.

The writer suggests that a careful review of the treatment of coronary thrombosis is called for. (Lancet, Oct. 12, '46 - Annotation)

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Study on the Effect of Aminophylline on the Prothrombin Time in Man: In 1944, Link and his co-workers published a series of observations on the action of certain xanthines on the prothrombin time of several experimental animals. They were able to demonstrate that large single doses of caffeine, theophylline, theobromine, aminophylline, and other xanthines, when given orally to the dog, rabbit, or rat, induced a state of hyperprothrombinemia which was readily detectable in diluted (12.5 per cent) plasma. When these animals were given 3,3'-methylenebis-(4-hydroxy-coumarin) with the methylxanthines, the expected hypoprothrombinemia was partially neutralized. Relatively large therapeutic doses of aminophylline (12, 24, 36 mg./kg. by mouth daily) produced a hyperprothrombinemic effect in dogs detectable in from 2 to 5 days, and maintained for periods as long as 30 days. Link and his co-workers suggested that since their results indicated that the methylxanthines not only render the blood hypercoagulable, but also counteract such a potent hypothrombinemic agent as 3,3'-methylenebis-(4-hydroxy-coumarin), it is conceivable that their use in man might augment the tendency for thrombus formation.

It was to determine the effect of therapeutic doses of aminophylline on the prothrombin time of man that this study was undertaken. Employing a small series of human subjects, the authors carefully planned and carried out their controlled experiments in which aminophylline was administered (1) in small

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oral doses, (2) in large oral doses (with the production of the mild toxic symptoms, anorexia, slight nausea and nervousness) and (3) in doses of 0.5 Gm. intravenously. The determinations of prothrombin time were made on 12.5 per cent plasma by the Quick method as standardized by Aggeler et al. No significant changes in the prothrombin time were observed.

From the results of this study the authors conclude that aminophylline used therapeutically probably does not involve any increased threat of intravascular clotting. (Am. J. M. Sci., Oct. '46 - Breytspraak and Greenspan)

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The Toxic Effects of Prolonged Ingestion of DDT on Dogs with Special Reference to Lesions in the Brain: Tremor followed by incoordination, muscular twitching, flaccidity, and other manifestations of impairment of the central nervous system have been observed in a variety of animals given DDT (Cameron and Burgess; Draize, Nelson and Calvery; Lillie and Smith; Neal and associates; Orr and Mott; Smith and Stohlman; Nelson and Calvery). Similar symptoms, lasting for months, developed in a man subsequent to inunction of an acetone solution of DDT (Wigglesworth).

Studies were made upon 8 dogs fed an ample diet supplemented by vitamins. These dogs were in excellent health before the experiment was started. They were given a solution of 10 per cent DDT in peanut oil by stomach tube in doses ranging from 150 to 350 mg./kg. The preparation was given daily except when the systemic reaction brought about by the previous dose was excessive; sometimes several days elapsed before use of the preparation was resumed. When the animals were too ill to eat, no attempt was made to force-feed them. There were 9 controls: 5 untreated, 2 which received peanut oil by stomach tube for 90 days in an amount equivalent to that used as a solvent for the DDT given in experimental animals (3 cc./kg. daily), and 2 which were given peanut oil and subsequently denied food until they lost 20 and 31 per cent their body weight respectively. Four of the animals given DDT died.

From clinical observations as well as physiologic and electroencephalographic data, it appears that in dogs the cerebellum is the chief portion of the nervous system on which DDT acts. The same would seem to hold pathologically, inasmuch as degenerative changes in DDT-intoxicated dogs were restricted to the cerebellum, especially the dentate and roof nuclei. The degenerative changes in the cerebellum were regarded as slowly progressive, since they were found only when relatively large doses were given over prolonged periods of time.

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The systemic symptoms which occurred in some of the animals were not open to pathologic interpretation, since nothing of significance aside from slight to moderate degenerative change in the liver was observed. (Am. J. M. Sci., Oct. '46 - Haymaker et al.)

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The Fulminant Form of Epidemic Hepatitis: Lucke and Mallory of the U. S. Army Institute of Pathology, Washington, D. C., report in the American Journal of Pathology of September 1946 upon studies made on the fulminant form of epidemic hepatitis.

These authors state that a fulminant form of epidemic hepatitis which runs a fatal course in less than 10 days has appeared during the past 3 years. In a new series of 196 cases of fatal hepatitis which occurred in the U. S. Army between August, 1943, and April, 1945, approximately one-half (53 per cent) were of this type. By contrast, not a single such case was observed during the Army epidemic of 1942, and only one during the Swedish epidemic of 1927; then the median duration of fatal hepatitis exceeded 5 weeks. The clinical features and pathologic changes of the fulminant form differ significantly from those of the subacute variety which predominated in previous epidemics.

On the basis of epidemiology the present series includes 29 examples of the endemic and 72 of the epidemic variant of "spontaneous" hepatitis, and 77 cases presumed to be "homologous serum hepatitis" following trauma and transfusions of blood or blood derivatives. From an analysis of the cases it is evident that the epidemiologic type does not determine the clinical form of hepatitis, whether fulminant or more protracted.

This study is based principally on 94 cases in which the clinical course of the disease did not exceed 9 days. Thirty-nine others with a duration of from 10 to 19 days have been used to supply additional information, for in many of them the lesions were indistinguishable from those of the more fulminant form. The remainder of the series, i.e., the subacute cases, which clinically and pathologically resemble those of the 1942 epidemic, are considered only in connection with certain analyses, such as the significance of geographic factors.

No precise information is available as to whether the mortality rates are the same or different in the several epidemiologic variants. The average mortality during the period covered by this study was 0.3 per cent. Serum hepatitis tended to run a considerably more rapid course than the naturally

occurring disease, but otherwise there were no discernible differences, either clinical or pathologic, between these variants.

Clinically, fulminant hepatitis was characterized by a sharp and stormy course. It usually was ushered in by one of two syndromes: (1) an "infectious" type in which high fever, chilliness, malaise, and general aching dominated the picture, and (2) a "gastrointestinal" type with anorexia, nausea and epigastric discomfort in the foreground. These two types were represented in approximately equal proportions, and during various epidemics often occurred side by side. The subsequent clinical manifestations bore no relation to the prodromal symptoms. Because of the brevity of the course, the initial symptoms sometimes merged with those of the terminal stage.

Temperature records were available for 68 of the fulminant cases. In all but one the onset was febrile. The temperature ranged from 95° to 104° and averaged 102° F., the fever declining usually with the onset of jaundice. During the final stage of the disease there was almost invariably a sharp rise in temperature coincident with profound cerebral disturbances.

In contrast to the deep jaundice commonly observed in the subacute form, the degree of jaundice in fulminant hepatitis was often mild. Several anicteric cases are included in this series.

Among noteworthy laboratory findings were moderate degrees of nitrogen retention and lowering of blood sugar.

Lesions other than those in the liver were relatively slight; the changes found in "spontaneous" and in "inoculation" hepatitis were in every respect similar. The lesion of the liver was characterized by extreme and often complete destruction of hepatic cells, and by a marked inflammatory reaction. Typically, the involvement was uniform. The gross appearance of the liver was considered not pathognomonic and gave no indication either of the extent of parenchymatous destruction or of the degree of inflammatory infiltration. The liver usually was flaccid and moderately shrunken, and the capsule was smooth or finely wrinkled. The cut surface most often presented an exaggerated "nutmeg" pattern, although sometimes it resembled that of an acutely congested spleen.

Microscopically, the destructive process was limited specifically to liver cells. Even in the more rapidly fatal cases the earliest stages of cell disintegration could not be observed; the dead cells had undergone lysis and the resultant debris had already been removed. The inflammatory infiltration was most conspicuous at the lobular peripheries and less so within the lobular

remnants. The predominating cells were mononuclear forms - reticulo-endothelial derivatives, plasma cells, and lymphocytes. Regenerative hyperplasia of surviving parenchyma was minimal and confined to biliary tract epithelium rather than to hepatic cells. There was often a marked disparity between the apparent age of the lesions and the duration of symptoms. The pathologic changes in the liver were, in many instances, obviously older than the clinical history suggested; less frequently the reverse was true.

The spleen usually showed acute congestion and hyperplasia of its component cells. Focal areas of necrosis were common in the follicles and in the pulp.

The kidneys in the majority of cases were the site of marked fat storage, especially within the cells of the proximal convoluted tubules. The storage was not associated with significant degenerative changes; it probably was the result of the sudden liberation of large amounts of fat from the destroyed liver cells. There was no correlation between the degree of fat storage and nitrogen retention. The rapid destruction of the hepatic parenchyma did not lead to the development of the "hepatorenal syndrome" as it is usually defined.

Despite the marked nervous disturbances in the terminal stage of hepatitis, histologic findings in the brain were usually slight and consisted of mild non-specific degenerative changes.

The mechanism of jaundice in fulminant hepatitis is complex. The extensive and often complete destruction of liver cells must be considered a chief cause. No adequate explanation can be offered for the occasional occurrence of entirely anicteric cases of fulminant hepatitis.

Ascites was present in approximately one-fourth of the cases of fulminant hepatitis. The principal factor in its production is believed to be acute venous stasis in the liver.

The factors responsible for the appearance, during recent epidemics, of hepatitis in a fulminant form are difficult to assess. It is suggested that more or less interrelated host factors, such as fatigue, trauma and nutritional disturbances, rather than the infecting dose or strain of the etiological agent, play a dominant part.

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Rickettsialpox - A Newly Recognized Rickettsial Disease: During July 1946, a peculiar febrile disease characterized by an initial lesion and an eruption of a vesiculo-papular type was reported to the National Institute of Health. The outbreak occurred in a housing development in New York City, and cooperative studies were undertaken, with members of the city health department and the authors participating in various phases of the work. An investigation of 80 cases during the succeeding 10 weeks disclosed a strikingly uniform clinical entity.

Because of a clinical resemblance to chickenpox and because the organism isolated from one patient (M.K.) has the morphological and cultural characteristics of rickettsiae, the name "rickettsialpox" is proposed. This organism produces illness in mice and guinea pigs and grows well in the yolk sacs of fertile eggs. Ether-extracted yolk-sac antigens have been prepared which fix complement with convalescent serums drawn from typical cases. This reaction is apparently specific insofar as it has been tested, except for cross reactions with Rocky Mountain spotted fever. Certain similarities of the organism isolated from M.K. to R. conori, the causative agent of fièvre boutonneuse, have been pointed out, but further work will be necessary before any conclusion about further similarities is possible.

Sussman recently reported three cases resembling those observed by the authors. Clinical and epidemiological features of the disease and description of the arthropod vector will be presented in later papers.

Since this paper was submitted for publication, a second strain of rickettsialpox organisms has been isolated from the blood of a patient, M.S. The strain from M.S. is culturally and immunologically indistinguishable from the strain from M.K. (Pub. Health Reps., Nov. 8, '46 - Huebner et al.)

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Further Notes on Penicillin: At a recent meeting of representatives of the Food and Drug Administration and Basic Manufacturers of Penicillin the following questions, among others, were considered and the answers determined upon as noted.

1. What method or methods are desirable for the determination of penicillin G in crystalline penicillin? Decided: N-ethyl piperidine method.

2. In order for a manufacturer to label his product as crystalline sodium penicillin G, what per cent penicillin G should be present?

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Decided: 90 per cent G, potency not under 1500 units per mg.

3. What limit of penicillin K in commercial penicillin should be established? Decided: Not above 30 per cent in parenteral and oral forms and no limit for topical forms.

4. Should the regulations on the labeling of penicillin be amended to allow a change in the expiration date for penicillin in oil and wax stored at room temperature? Decided: Yes, 12 months for calcium penicillin, and 18 months for crystalline potassium penicillin. (Under the present regulations, of the two crystalline salts, only the crystalline potassium penicillin may be used in oil and wax.)

5. Should the regulations be amended to allow the use of Type II glass for parenteral penicillin? Decided: Yes.

6. Is crystalline penicillin sufficiently stable in solution to warrant the labeling, "sterile solutions may be kept in the refrigerator for seven days without significant loss in potency"? Decided: No, 3 days only. Crystalline penicillin in solution below pH 6.0 at from 8° to 14° C. is stable for only 3 or 4 days. Therefore, it was decided to change the labeling so physicians would not be misled by thinking crystalline penicillin solutions are stable for 7 days as is now indicated on many labels. If, however, the penicillin solution is buffered and the pH is kept up to 6.0 or better, it keeps standard potency for at least 7 days. (Crystalline penicillin is defined as the heat-stable crystalline sodium or potassium salt of one or more kinds of penicillin. To be heat-stable it must withstand exposure to a temperature of 100° C. for 4 days.)

One manufacturer's representative discussed the use of an infrared spectroscopic procedure in determining the purity of different penicillins. It is claimed that by this procedure the kinds and the amount of each penicillin in a mixture can be established in a matter of a few minutes and with great exactness.

It was pointed out by the Food and Drug Administration that it believed that penicillin K had been badly maligned in the past, causing unwarranted destruction of stock, and although much weaker than the other penicillins, it is still a good drug.

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It was also agreed that in tablet form, when kept at room temperature, amorphous penicillin is stable for 12 months and crystalline penicillin is stable for 18 months.

It was decided that the test for clarity would be satisfactory if no discernible turbidity is shown in a 48-hour solution which has been kept at or under 15° C.

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Levels of Penicillin in the Blood after the Use in the Vagina and the Rectum of Suppositories Containing Penicillin Calcium: Based upon recent studies on the use of penicillin suppositories (100,000 units), the authors in a preliminary report state that significant penicillin levels in the blood were obtained by both the vaginal and rectal routes when one, two, or three suppositories were used. Cleansing enemas were given before using the rectal suppositories. Determinations were made three and five hours after the suppositories were inserted. Somewhat higher blood levels were obtained after three suppositories were used vaginally than when three were used rectally. This may have been due to the presence in the rectum of a group of colon bacilli which produce penicillinase.

From the results obtained so far the authors advocate the use of these suppositories as a routine prophylactic measure in the preparation of patients for delivery, especially those patients in whom premature rupture of the membranes has occurred. This also might apply to the preparation of patients for cesarean section and subtotal, total abdominal, or vaginal hysterectomy.

Suppositories containing penicillin have been used in the treatment of acute vaginitis in a small number of ambulatory patients. The local results and rapid symptomatic relief in these patients have been most encouraging. This part of the study will be continued and reported at a later date. (Staff Meetings of the Mayo Clinic, Oct. 16, '46 - Lovelady et al.)

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Maintenance of Penicillin Blood Levels After A Single Intramuscular Injection of Penicillin in Various Oils: The authors are carrying out studies to determine the most satisfactory diluent for penicillin from the standpoint of maintaining a blood level of 0.1 unit/ml. over a period of 24 hours after a single intramuscular injection.

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Of the several diluents studied in a series so far of 254 injections in 36 ambulatory patients, a prolonged penicillin blood level was observed most frequently after the use of 300,000- or 1,000,000-unit doses of penicillin in either hydrogenated cottonseed oil (melting point, 40° C.), or in beeswax and peanut oil. The amount of penicillin per ml. was 300,000 for each diluent.

It should be emphasized that there has been a remarkable variation in blood levels taken at stated times from different patients receiving the same dose at the same intervals. This variation has been noted by other workers in similar studies.

A dose of 300,000 units of penicillin in hydrogenated cottonseed oil maintained a penicillin level of 0.1 unit/ml. for at least 6 hours in about 80 per cent of the cases, whereas a dose of 300,000 in the beeswax peanut oil mixture maintained that level in 66 per cent of the cases. Twelve hours after the 300,000 units in hydrogenated cottonseed oil was injected, a blood level of 0.1 unit per ml. was present in only about 16 per cent of the cases, whereas with the beeswax peanut oil mixture a blood level of 0.1 unit/ml. was present in none. In a dose of 1,000,000 units these two preparations gave a 24-hour penicillin blood level of at least 0.1 unit/ml. in 38 per cent of the cases for hydrogenated cottonseed oil and 40 per cent for the beeswax peanut oil mixture, as well as producing higher penicillin blood levels at the 6- and 12-hour intervals after injection. In general, the results from either of these preparations have been very similar in the hands of these workers. However, from their experience, the extemporaneous preparation of a suspension of penicillin in hydrogenated cottonseed oil has seemed to have a practical advantage over the penicillin in beeswax and peanut oil in that it melted considerably more rapidly under a hot-water tap, was less viscid at any given temperature, and stayed liquid longer after having been heated.

It seems probable that a dose of 1,500,000 units of a very finely ground calcium penicillin of high potency suspended in hydrogenated cottonseed oil (melting point, 40° C.), which can be made fluid under a hot-water tap and dispersed in a disposable syringe, would maintain a penicillin blood level of 0.1 unit/ml. for 24 hours or longer in nearly all cases. (Science, Nov. 1, '46 - Cannon et al.)

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Influenza Virus Vaccine in Children: Immunization of adults with inactive influenza virus has been reported by Hirst, Rickard, and Friedewald. A mild febrile response and inflammation at the site of injection were noted. However, much more severe reactions have been reported verbally by numerous others, particularly by members of the Armed Forces.

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Because of the lack of any information about dosage, or reaction of children to the vaccine, 16 children of from 1 to 8 years were given influenza virus vaccine, types A and B, in various amounts. The first four patients were given 0.25 c.c. of the vaccine subcutaneously and their temperature was recorded every 4 hours for 36 hours or until normal. Since one patient had a mild local and systemic reaction, and another a slight febrile response, six children were given 0.5 c.c. of the vaccine subcutaneously and observed similarly to the previous group. A mild local reaction was noted in every subject of this group and a slight febrile reaction in about one-half. None of the patients appeared extremely ill nor did the local reactions seem much greater than in the previous group. It was decided to increase the dose to the normal adult dose of 1 c.c. for six patients in an age group similar to that tested previously. All patients had an increase in the local reaction and two of the patients were acutely ill, one having a generalized convulsion at the height of the fever. Both of the acutely ill patients were normal within 48 hours. The two oldest patients who were given 1 c.c. had no systemic reaction and the local reaction was about the same as in those younger.

The observations made in this series of patients showed that the febrile reaction in children is much more frequent than that noted in adults. The reaction from 1 c.c. was much too severe to recommend the general use of this amount of vaccine for children. The reaction to 0.5 c.c. of the vaccine is about the same as that in adults to 1 c.c. The reaction to 0.5 c.c. of the vaccine is mild and the authors consider this dose optimal and all that will be tolerated for active immunization against types A and B influenza virus. To increase the immunity, this dose can be repeated, perhaps in two weeks. (J. Pediat., Oct. '46 - Grant)

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Propane Gas for Dental Prosthetic Laboratories Afloat: The following information is quoted from BuShips Allowance Lists - General Amendment No. 382, dated 25 October 1946:

"It is requested that Group S37-1-LDP, Part II, in Bureau of Ships Allowance Lists (Consolidated) or the sheet No. 71 Series in separate Hull Allowance Lists, completed or under preparation, for all ships having a prosthetic dental laboratory be amended to include the following:

B:	51C2166-40:	Cylinder, propane, 40 lb. capacity (spec. ICC-4B-240, BuShips Dwg. No. 493658) *One (1) - initial allowance Three (3) - spares	:No:*:
C:	51G238-10	Gas, propane (for 40 lb. cylinders listed above, Stock No. 51C-2166-40)	:lb:160:

"Propane gas cylinders and propane gas as authorized herein may be obtained for subject vessels (AD 15, 17-19, 21-29, 31, 36; AH 12-17; AR 1, 5-7, 12-14, 19-21; ARG 4-11, 16, 17; ARH 1; ARV 1, 2; AS 11-19, 22-26; BB 48 -) not scheduled for disposal by submission of 'not-in-excess' requisition through regular supply channels. It will be the responsibility of the Outfit Supply Activity to furnish subject equipment to the authorized vessels under construction."

(Dental Div., BuMed)

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(Not Restricted)

Compressed Air Change in Dental Operating Rooms of Ships: The many requests received by the Naval Medical Supply Depots for "hose and nozzle for use in connection with converting the source of compressed air in ship's dental operating rooms from air compressors to ship's service low pressure air system" indicate that there is widespread misunderstanding of the construction of dental operating units.

The dental operating units which are to receive the compressed air from the ship's low-pressure air system have a hose and nozzle built in as integral parts. This assembly is permanently connected to a length of 1/4 inch seamless copper tubing which terminates 8 inches above the deck in a threaded brass coupling adapter for 3/8 inch pipe. The ship's compressed air supply should be connected to this adapter.

(Not Restricted)

The compressed air should be supplied to the dental operating unit through seamless copper tubing, filtered and controlled by a pressure regulator in the line to deliver not more than 40 pounds per square inch nor less than 25 pounds per square inch. (Dental Div., BuMed)

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(Not Restricted)

Opportunity to Become a Flight Surgeon: Demobilization has resulted in a depletion of flight surgeons below the requirements necessary for the Naval Aviation Program. Further applications for training in Aviation Medicine leading to the designation, Naval Flight Surgeon, are requested. The next class in Aviation Medicine will convene at the Naval Air Station, Pensacola, Florida, January 6, 1947. This training will be limited to medical officers of the rank of lieutenant commander or below.

The course of instruction consists of approximately two months of didactic work covering applied aviation physiology; eye, ear, nose, and throat; psychiatry; and other subjects applicable to aviation medicine. Following the didactic work, students are assigned to flight indoctrinational training and ground school work for approximately six weeks. Upon completion of the entire syllabus of training, the student is designated as a Naval Flight Surgeon and receives his wings.

Medical officers of the regular Service of the rank of lieutenant commander or below who are interested in this phase of Navy medicine are urged to submit their applications including recommendation of their CO by letter or dispatch to the Bureau as soon as possible. (Professional Div., BuMed)

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(Not Restricted)

Professional Services of Dental Officers: Paragraph 5112.4 Manual of the Medical Department, U. S. Navy, directs that, "Whenever dental treatment, not officially authorized, is undertaken for humanitarian reasons, a detailed statement of all the facts pertaining to each case shall be attached to the NavMed K." At certain stations this directive is not being complied with.

Current Navy Regulations and decisions of the Judge Advocate General limit the professional services of naval dental officers to personnel on the active and retired list of the Navy and Marine Corps. However, legislation which would provide dental treatment for dependents of naval personnel and some other civilians in certain isolated areas may be introduced in the 80th Congress. If enacted into law, it will become necessary to procure additional

(Not Restricted)

dental officers, nurses, and enlisted personnel for the purpose of accomplishing the added dental treatment without adversely effecting the primary function of the Navy Dental Corps, which is to provide adequate dental treatment for the personnel of the naval establishment on active duty.

In view of the foregoing, and in order that the Bureau of Medicine and Surgery may be advised of all stations where dental treatment is being rendered for humanitarian reasons to persons not in the naval service, it is requested that the directive contained in paragraph 5112.4, Manual of the Medical Department, be complied with. (Dental Div., BuMed)

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(Not Restricted)

Applicants Wanted for Transfer to MCAS: Applications are desired from inactive and active duty H(S) and temporary USN officers for transfer to the proposed Medical Allied Sciences Corps. See Alnav 587 on page 38.

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(Not Restricted)

Changes to be Made in Copies of Manual of the Medical Department: Certain changes in the Manual of the Medical Department have been directed as specified in:

Circular Letter 46-158 (See page 21.)
Circular Letter 46-159 (See page 31.)
Circular Letter 46-163 (See page 34.)

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(Not Restricted)

Public Health Foreign Reports:

Disease	Location	Date	No. of Cases
Plague	China, Chekiang Prov., Wenchow	Aug. 11-20, '46	48
	Peru	August '46	3
Smallpox	Colombia	September '46	68 (1 fatal)
	Mexico	August '46	38
Typhus Fever	Columbia	September '46	69 (5 fatal)
	Mexico	August '46	209

(Pub. Health Reps., Nov. 1, '46)

(Not Restricted)

Note for Inactive and Active Duty H(S) and Temporary USN Officers:

See Alnav 587 on page 38 re the proposed Medical Allied Sciences Corps.

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Circular Letter 46-158 29 October 1946 (Not Restricted)

To: All Ships and Stations

Subj: Manual of the Medical Department, advance changes in

1. The following advance changes in the revised edition of the Manual of the Medical Department are published for the information of all concerned, effective immediately.

2. Delete paragraph 2215.4 and substitute the following:

2215.4. If the individual does not reenlist immediately, the Health Record shall be closed and forwarded to the Bureau. Upon delayed reenlistment, a new NAVMED-H-1 and NAVMED-H-2 shall be prepared by the medical officer and medical abstracts of previous service requested from the Bureau. Entries indicating reenlistment shall be made on the cover and on NAVMED-H-5 (Abstract of Service).

3. Delete paragraph 2183 and substitute the following:

2183

Standards for Appointment of Enlisted Men to Warrant or Commissioned Rank and of Warrant Officers to Higher Rank.—An applicant for warrant or commissioned rank whose medical record shows that he has had a clearly defined infection with syphilis, must have serological examinations of his blood and cerebrospinal fluid at the time of preliminary physical examination. Any clinical or serological evidence of active or latent syphilis during the past two years, or of central nervous system involvement at any time, is disqualifying for appointment.

4. Delete paragraph 2140.1 and substitute the following:

Standards for Applicants for Enlistment.—2140.1. Minimum height without shoes for acceptance of an applicant for enlistment in the Navy or Marine Corps is 63 inches. The maximum height is 76 inches. The weight must be proportional to height and build. The figures in the table (par. 2137) are for use as a general guide.

5. Delete paragraph 2140.4(c) and substitute the following:

(c) A height of more than 76 inches (75 inches under 18 years of age) or less than 63 inches.

(Not Restricted)

6. Delete paragraph 21141.2(b) and substitute the following:

(b) Naval Aviation Observers (Navigation or Tactical).—Candidates shall be physically qualified and temperamentally adapted for duty involving flying in accordance with existing standards for candidates for flight training leading to the designation of naval aviator or naval aviation pilot, except that the ACT, MCT, and BI tests are not applicable, and shall not be administered. Reports of examinations shall be made on NAVMED-AV-1's as provided in paragraph 21146. In each case that a NAVMED-AV-1 is forwarded to the Bureau appropriate entries shall be made on the individual NAVMED-H-9 (Aviation Medical Abstract) of the individual's Health Record.

7. Delete paragraph 16A9.2 and substitute the following:

16A9.2. He shall require prompt information regarding all patients whose condition is unsatisfactory, and shall maintain lists of those in a serious or critical condition. Within the continental limits he shall keep the next of kin, or others who may have a proper interest, fully advised regarding patients in a critical condition. Outside the continental limits he shall notify the Commandant Marine Corps or Bureau of Naval Personnel as appropriate, by dispatch, providing sufficient information for notification of the next of kin or others who may have a proper interest.

8. Delete paragraph 12B9 and substitute the following:

12B9

Reports of Medical Officer to Officer of the Deck, etc.—12B9.1. Injuries or deaths of personnel, damage, destruction or loss of Medical Department property, and any important occurrence coming under the observation of the medical officer of a ship or station shall be reported to the officer of the deck or other proper official for entry in the log or journal of the ship or station.

12B9.2. He shall report all patients in a serious or critical condition to the commanding officer or officer of the day and furnish necessary information for the notification of next of kin.

9. Delete paragraph 21134 and substitute the following:

21134

Physical Examination for Training in, or Continuance in, Deep-Sea Diving.—21134.1. Accepted candidates shall conform to the following standards:

(a) History of disease.—Any of the following shall be disqualifying: (1) Tuberculosis, asthma, chronic pulmonary disease; (2) Chronic or recurrent sinusitis, otitis media, otitis externa; (3) Chronic or recurrent orthopedic pathology; (4) Chronic or recurrent gastro-intestinal disorder; (5) Any definite neuropsychiatric disorder; (6) Chronic alcoholism; (7) No candidate shall be accepted with a history of syphilis, unless there has been adequate treatment and no signs of activity or organic involvement are discovered (See Section 12).

(b) Age.—Candidates shall not be considered for initial training in diving beyond the age of 30 years - the most favorable age being 20 to 30. All divers upon reaching the age of 40 shall be examined in accordance with paragraph 21134.3.

(c) Weight.—Diving candidates should be rugged individuals but without tendency toward obesity. Fat absorbs about five times the volume of nitrogen as does lean tissue and due to the low circulatory rate of fatty tissue the nitrogen is eliminated very slowly, thus acting vastly to increase the incidence of bends. It is considered in general that candidates should present no greater than 10 percent variation from standard age-height-weight tables. Consideration will be given, however, to applicants whose overweight is considered due to heavy bone and muscular structure.

(d) Vision.—A minimum of 15/20 vision bilateral, corrected to 20/20 shall be required. This requirement is not made for underwater work but for the retention of relatively high physical standards for hazardous work in connection with diving and salvage operations. Ophthalmoscopic examination shall be normal.

(e) Color vision.—Color vision shall be normal as determined by the standard A.O. Naval test plates.

(f) Teeth.—The applicant shall meet the standards for enlistment (paragraph 2150.2). A high standard of dental hygiene is mandatory. Pyorrhoea alveolaris shall be disqualifying.

(g) Ears.—Acute or chronic disease of the auditory canal, membrana tympani, middle or internal ear shall be disqualifying. Perforation or marked scarring and/or thickening of the drum shall be disqualifying. The eustachian tubes must be freely patent for equalization of pressure changes. Hearing of each ear shall be normal as determined by paragraphs 2130-2131.

(h) Nose and throat.—Obstruction to breathing and/or chronic hypertrophic or atrophic rhinitis or ozena shall disqualify. Septal deviation is not disqualifying in the presence of adequate ventilation. Hypertrophic or septic tonsillitis shall be disqualifying pending tonsillectomy. Presence or history of chronic or recurrent sinusitis is cause for rejection.

(i) Respiratory system.—The lungs shall be normal as determined by physical and X-ray examination.

(j) Cardiovascular system.—The cardiovascular system shall be normal in all respects as determined by physical examination and tests as may be indicated. The blood pressure shall not exceed 140 MM systolic or 85 MM diastolic. In cases of apparent hypertension repeated daily blood pressure determinations should be made for final decision, bearing in mind that a valuable indication of undesirable excitable temperament is often revealed by vasomotor manifestations (See (n) below). Persistent tachycardia and arrhythmia except of sinus

type, evidence of arteriosclerosis (an ophthalmoscopic examination of the retinal vessels shall be included in the examination), varicose veins, marked or symptomatic hemorrhoids, shall be disqualifying.

(k) Gastrointestinal system.—Candidates subject to gastrointestinal disturbances shall be disqualified.

(l) Genito-urinary system.—The following shall be disqualifying: (1) Chronic or recurrent genito-urinary disease or complaints (normal urinalysis required); (2) Active venereal disease or repeated venereal infection; (3) History of clinical or serological evidence of active or latent syphilis within the past five years, or of cardiovascular or central nervous system involvement at any time. An applicant who has had syphilis but who may be considered under above limitations must have a normal serological study of blood and spinal fluid.

(m) Skin.—There shall be no active acute or chronic disease of the skin on the basis of infectiveness and/or offensiveness in close working conditions and interchange of diving apparel.

(n) Temperament.—The special nature of diving duties require a special appraisal of the candidates' emotional, temperamental and intellectual fitness. Past or current symptoms of a definite neuropsychiatric disorder or organic disease of the nervous system shall be disqualifying. No individual with a history of any form of epilepsy or head injury with sequelae shall be accepted. Neurotic trends, emotional immaturity or instability and asocial traits, if of sufficient degree to militate against satisfactory adjustment shall be disqualifying. Stammering or other speech impediment which might become manifest under excitement is disqualifying. Intelligence must be at least normal.

(o) Ability to equalize pressure.—All candidates shall be subjected in a recompression chamber to a pressure of 50 pounds per square inch to determine their ability to clear their ears effectively and otherwise to withstand the effects of pressure. Due consideration must be given to the presence of an upper respiratory infection which temporarily may impair the ability to equalize, owing to congestion of the eustachian tube.

(p) Individual susceptibility to oxygen shall be tested by determining candidate's ability to breathe oxygen without untoward effects at a pressure of 60 feet (27 pounds) for a period of 30 minutes.

21134.2. Annual physical examination of all divers will be conducted in January as prescribed in 12E52 and in accordance with standards stipulated above.

21134.3. Qualified deep-sea divers who desire to continue in that specialty and are about to reach the age of 40 shall be examined by a board of medical officers appointed by the senior officer present. At least one member of the board shall be qualified as a deep-sea diver or in submarine medicine. The report of the examination on NAVMED-Y with the recommendation of the board as to whether the individual is or is not physically qualified to continue as a deep-sea diver shall be forwarded to the Bureau for final decision and in time to reach the Bureau before the man attains the age of 40. A certain

latitude may be allowed for a diver of long experience and a high degree of efficiency in diving. He must be free from any diseases of the cardiovascular, respiratory, genito-urinary, and gastro-intestinal systems, and of the ear. His ability to equalize air pressure must be maintained. A moderate degree of overweight may be disregarded if the diver is otherwise vigorous and active.

10. Delete paragraph 2128.3 and substitute the following:

2128.3. Any midshipman whose vision in either eye during his period of service falls below 15/20 may be subject to rejection, except those specifically designated for staff corps.

11. Delete paragraph 2141.2 and substitute the following:

2141.2. Applicants for enrollment in the Naval Reserve Officers Training Corps, or appointment in the Naval Reserve, may be allowed a greater variation in weight, the defect to be noted and recommended as "not considered disqualifying":

(a) When the weight is in excess of the maximum standard for appointment if the individual is large boned and muscular; the circumference of the abdomen is less than that of the chest at expiration by standard methods of mensuration; and the pulse and blood pressure, roentgenographic cardiothoracic diameter, and electrocardiogram are conclusively normal.

(b) When the weight is less than the minimum standard for appointment, if the individual is slender and wiry; no evidence of cachectic or marasmic disease is present; and basal metabolic rate, cardio-circulatory functional test and X-ray for chest condition, are conclusively normal.

12. Delete paragraph 3318.1 and substitute the following:

Disposition of Patients.—3318.1. Except as otherwise provided in paragraph 3318.2 or by special authority granted by the Bureau of Naval Personnel or Commandant, U. S. Marine Corps, no patient who has been surveyed shall be disposed of until the activity submitting the report has been informed, by receipt of the returned copy or by other official notification, of the action taken by the Navy Department on the report.

13. Delete paragraph 225.6 and substitute the following:

225.6. When an officer is discharged from treatment at a naval hospital by T (TRANSFERRED) and directed to proceed to his home to await action of a naval retiring board, the naval hospital having custody of his records shall make appropriate entries in the Health Record showing that the officer concerned has been ordered to proceed to his home to await action of a naval retiring board. The President of the Naval Retiring Board shall enter the

(Not Restricted)

Board's findings in the Health Record and shall forward the Health Record to the Bureau of Medicine and Surgery direct. The hospital shall enter the officer's home or temporary mailing address in the Health Record.

--BuMed. Ross T. McIntire

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Circular Letter 46-159 31 October 1946 (Not Restricted)

To: All Ships and Stations

Subj: Changes in Reporting of Patient Census (Weekly Dispatch Report of Patient Census and NAVMED-I, Report of Patients).

Refs: (a) Par. 5144, MMD, 1945.
(b) Par. 5111, MMD, 1945.
(c) Par. 513, MMD, 1945.
(d) CirLtr No. 46-115, dtd 1 Aug 1946.

1. Effective immediately, the "Weekly Dispatch Report of Patients Census", formerly required of all naval hospitals in the continental United States and in the fourteenth naval district is discontinued. Reference (d) is hereby canceled.

2. All hospitals and hospital ships shall forward NAVMED-I (report of Patients) to the Bureau of Medicine and Surgery by air mail not later than Friday of each week for the week ending at midnight Wednesday. The special

treatment centers shall, in addition, report the total number of patients for each specialty for which designated and submit this information along with NAVMED-I.

3. All shore-based naval activities, other than hospitals, having any authorized bed capacity shal forward NAVMED-I (Report of Patients) to the Bureau monthly. Heretofore, activities with a capacity of 25 or more beds forwarded NAVMED-I weekly, and activities with less than 25 beds did not have to submit this report.

4. It is directed that the title of NAVMED-I be changed to read "Report of Patients".

5. In accordance with the above the Manual of the Medical Department is modified as follows:

Delete reference (a).

Delete reference (b) and substitute the following:

5111

NAVMED-I (Report of Patients).—Each hospital (including naval, base, military government, and other types) and each hospital ship shall forward NAVMED-I (Report of Patients) direct to the Bureau, by air mail, not later than Friday of each week for the week ending the preceding Wednesday at midnight. An additional report shall be submitted as of midnight 31 December. Each other shore-based naval activity having any authorized bed capacity shall forward NAVMED-I (Report of Patients) direct to the Bureau not later than the 5th of each month for the preceding month. The report shall be forwarded even though there have been no admissions or discharges during the period covered. Instructions for the preparation of NAVMED-I are printed on the reverse side of the form.

Reference (c) line 1, column 2, page 474, change to read "Report of Patients".

Reference (c) line 10, page 477, delete.

--BuMed. Ross T. McIntire

Circular Letter 46-160 31 October 1946 (Not Restricted)

To: Comdts, NDs and PRNC
Professors of Naval Science

Subj: Annual X-Ray examination of the chest of NROTC and other naval personnel undergoing instruction and under the cognizance of the Professors of Naval Science.

This letter from the Chief of BuMed directs that annual x-ray examination of the chest of subject persons be made and become a part of the annual physical examination although they need not be made at the same time. Mobile photofluorographic units should be scheduled for this work.

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Circular Letter 46-161 31 October 1946 (Not Restricted)

To: Medical Department Activities

Subj: Appointment of Safety Officers.

Ref: (a) N.C.P.I. 190

1. The Bureau of Medicine and Surgery has appointed a Safety Engineer with responsibility for establishing and maintaining an effective safety program in all activities of the Medical Department.

2. Accordingly, the Medical Officer in Command of each activity shall immediately appoint a safety officer who shall be charged with responsibility for aggressive and continuous leadership in accident prevention. The Safety Officer shall: (a) be responsible for the organization of a safety program for all personnel on the station, (b) direct the preparation of all report forms, NAVEXOS 107 and NAVEXOS 2243, and (c) transmit to O.I.R. monthly NAVEXOS 109-110 and 1212, and quarterly NAVEXOS 111.

3. It is recommended that the safety function be assigned as a collateral duty of the Maintenance Officer. In those activities with more than 800 personnel, the Safety Officer should secure for his safety inspector an individual with ability and tact, and if possible with accident prevention experience.

4. The Bureau Safety Section will assist and cooperate in safety matters at all times, and will welcome constructive suggestions to improve safety

(Not Restricted)

conditions and reduce the current high accident rate in Medical Department activities.

--BuMed. Ross T. McIntire

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Circular Letter 46-162 1 November 1946 (Not Restricted)

To: Comdts, NDs, All BuMed Activities (Cont.)

Subj: Personnel Allowances During Demobilization - Roll-up Schedule of.

Ref: (a) BuPers Circular Letter 195-46 of 30 Aug 1946.
(b) BuMed Circular Letter 46-146 of 2 Oct 1946.

Encl: (A) BuMed Roll-up Schedule.

This letter from the Chief of BuMed cancels reference (b), furnishes a revised Roll-up Schedule for the period 1 November 1946 to 1 March 1947, and points out that the schedule is subject to further revision as conditions warrant.

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Circular Letter 46-163 1 November 1946 (Not Restricted)

To: All NavStas and MarCorps Activities

Subj: Instructions for Submitting Weekly Morbidity Report, NAVMED-172 (Rev 4-45); changes in.

1. The following changes in the manner of reporting morbidity on the Weekly Morbidity Report, NAVMED-172, will be effective with the report for the week ending 16 Nov 1946.

2. In Section I, report number of New Admissions (A) and Readmissions (RA), total for all causes. At present only new admissions, A, are reported under this heading. The changed procedure will provide the figure, A plus RA, which is the total number of persons admitted to the sick list from a duty status.

3. In Sections II and III, report total number of cases under the various diagnoses taken up as New Admissions (A), Admitted Contributory Disability (ACD), Diagnosis Established or Corrected (EC), and Additional Diagnosis (AD). At

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present only New Admissions (A) are reported under the specified diagnoses. The revised procedure will show the sum of A, ACD, EC, and AD, which figure indicates the total case incidence for a given disease.

4. In Section II, there are blank spaces for entering four additional diagnoses. The following diagnoses will be reported in the four blank spaces:

Septic Sore Throat
Rheumatic Fever
Gastroenteritis, Acute
Diagnosis Undetermined (2122)

5. Pending the reprinting and distribution of the revised NAVMED-172, it is desired that the present form (rev. 4-45) be used with the following modifications:

a. In Section I, change "A (New Admissions)" to "A plus RA."
b. In Sections II and III, change "A (New Admissions)" to "A, ACD, EC, and AD."
c. In Section II, add the diagnoses listed above.

6. Naval hospitals will report both patients and staff on the Weekly Morbidity Report. At present, hospitals include only staff personnel on this report. The revised procedure will provide a more accurate gauge of the incidences of the reported diseases.

7. The following change in the Manual of the Medical Department is promulgated in advance of distribution of printed changes:

Par. 35D2: In the first sentence, delete the words "covering duty personnel only".

--BuMed. Ross T. McIntire

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Circular Letter 46-164 6 November 1946 (Not Restricted)

To: All Ships and Stations

Subj: Personnel Accounting System.

(Not Restricted)

Refs: (a) NAVPERS 15,642, Revised March 1946, No. PERS-201.
(b) ALNAV 490-46 dated 29 Aug 1946.

1. It has been directed by the Chief of Naval Personnel (ref (a)) that a new Personnel Accounting System be instituted in the Naval Establishment. By ref (b) responsible authorities are directed to take necessary action to insure full compliance with instructions contained in ref (a).

2. The instructions contained in ref (a) provide for the following:

(a) In Part I, paragraph 3(j)(3), page 2, which deals with enlisted personnel - "...Medical Survey Boards shall survey a man into one of the limited duty categories as part of the survey report."

(b) In Part I, paragraph 4, which deals with officer personnel -

(1) In subparagraph (e) - "Officers shall be assigned to the limited duty categories on the basis of medical surveys, waivers, and other entries in their health records."

(2) In subparagraph (f) - "In the absence of a disqualifying entry in a survey, waiver, or health record, an officer shall automatically be classified as (QUAL) qualified for all duty."

(3) In subparagraph (g) - "In the future all Medical Survey Boards shall survey an officer into one of the limited duty categories as part of the survey report."

3. Instructions contained in ref (a) for assignment of limited duty symbols are as follows:

(a) In the cases of enlisted personnel, see Part I, paragraph 3(j). Where a question of physical disability is involved, paragraph 3(j)(1) provides for review by a Medical Officer who shall comply with the provisions of letters in effect on limited duty. The appropriate limited duty symbol shall be assigned and an authenticating entry shall be made in both the Health and Service Records. A Form Y shall be forwarded to the Chief of Naval Personnel via the Chief of the Bureau of Medicine and Surgery for confirmation.

Attention is invited to paragraph 3(g), Part I, which states "That part of any directive which refers to designating men as 'limited

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duty' or 'special assignment' or 'qualified for mobilization ashore only' (SA, ISA, or QMAO) is hereby cancelled."

Attention is invited to paragraph 3(h), Part I, which states "The duty limitations of enlisted personnel shall henceforth be designated as prescribed in the instructions for Block (18) of the Personnel Accounting Card." (See ref (a), Part III, paragraph 138).

(b) In the cases of officer personnel, see Part I, paragraph 4 - Where a question of physical disability is involved, paragraph 4(e) provides for assignment to the limited duty categories on the basis of medical surveys, waivers, and other entries in the health records. Paragraph 4(f) provides that in the absence of a disqualifying entry in a survey, waiver, or health record, an officer shall automatically be classified as (QUAL) qualified for all duty.

Where a question of physical disability is involved, only the Chief of Naval Personnel may change an officer's designator. (Ref (a), Part I, paragraph 4(b)). This would be done upon receipt of appropriate recommendation in NAVMED Form M or Y submitted by the medical officer in charge of the health record of the officer concerned.

Attention is invited to paragraph 4(d), Part I, which states "The duty limitation categories of officers shall henceforth be designated as prescribed in the instructions for Block (18) of the Personnel Accounting Card."

4. It has been stated by the Chief of the Bureau of Naval Personnel that this Accounting System was not intended to reflect any Navy Department policy as to retention or promotion. It has further been stated that at no time was it intended that this table would present any promise of retention on active duty or reflect any promise of promotion. It was constructed for, and intended to, present limitations of duty of any group of Naval personnel.

5. In view of the foregoing it should be clearly understood that in the case of officers, physical fitness for promotion or unfitness for service should be determined strictly on the basis of the officer's physical fitness or unfitness to perform his duties at the time these determinations become pertinent. The determination of physical fitness for promotion, or of physical incapacity for service, shall not be influenced by any prior or present limited duty classification of any officer concerned. Such determination must be made in accordance

(Not Restricted)

with instructions, by an independent evaluation on the part of the appropriate board of medical examiners when an officer becomes due for promotion; or by a Naval Retiring Board in the event an officer is being considered for retirement by reason of physical disability.

6. In making recommendation that an individual be placed in a QUAL or in a limited duty classification, medical officers are to be guided by the physical fitness of the individual concerned. Should an individual feel that his duty classification is not representative of his physical fitness, or should local authorities feel an individual's case warrants reclassification or reevaluation, the case should be taken up for reconsideration as outlined in paragraph 3 above.

--BuMed. Ross T. McIntire

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ALNAV 587 7 November 1946 (Not Restricted)

Subj: Applications Desired for Transfer to Medical Allied Sciences Corps

Applications are desired from Reserve and temporary USN officers for transfer to the regular Navy in a proposed Medical Allied Sciences Corps. Such officers as are selected may be ordered to active duty if they so desire or be retained on active duty until legislation to establish their classification is authorized or fails of enactment. In general this program will be conducted in accordance with the regulations governing transfer to the regular Navy under Public Law 347 and the application procedure contained in BuPers C/L 288-45 revised. Local board interview and report is not required. Commandants and/or commanding officers shall forward all applications to the Bureau of Naval Personnel via the Bureau of Medicine and Surgery. Age and physical requirements are the same as for medical, dental, and hospital corps officers. Educational qualifications require a doctor's degree in their specialty. Applications are desired in the following fields: acarology, bacteriology, biology, chemistry, entomology, epidemiology, genetics, malacology, nutrition, parasitology, physics, physiology, psychology, pathology, mammology, malariology, zoology, public health (industrial hygiene), virology, and public health (medical statistics). The restrictions as to submission of requests within six

(Not Restricted)

months after release to inactive duty or resignation do not apply and applications will be considered until a closing date is specified. All commanding officers are directed to give this full distribution. Commandants are directed to give this wide publicity including newspaper and radio.

--SecNav. James Forrestal

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ALSTACON 31 October 1946 (Not Restricted)

Subj: Civilian Medical Treatment of Enlisted Personnel on Terminal Leave.

Owing to numerous inquiries concerning civilian medical treatment of enlisted personnel on terminal leave the following information is furnished. The instructions contained in Part III, Chapter I, Manual Medical Department also cover enlisted personnel on terminal leave. Claims should be submitted accordance paragraphs 318 and 3110 Manual Medical Department for emergency treatment only as distinguished from elective treatment. Whenever practicable patient should apply to the nearest naval or other federal hospital utilizing naval hospital whenever possible inasmuch as the cost of treatment in civilian or federal hospitals other than naval may not be defrayed by Navy after terminal leave expires. These instructions do not apply to officers on terminal leave (Refer AlStaCon 312032 October 1945). Instructions regarding enlisted men admitted direct to naval hospitals are contained in AlStaCon 252059Z September 1946.

--SecNav. James Forrestal

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