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HEALTH

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ARMY SERVICE FORCES ★ WAR DEPARTMENT

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HEALTH

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SUMMARY

LEYTE CAMPAIGN Analysis of the Leyte-Samar phase of Philippine Campaign shows medical operations to have been severely hampered by the tactical situation, major problems being faced in unloading and setting up fixed hospitals, in providing satisfactory mobile support to forward units, in the poor sanitary situation, and in medical resupply. (See pages 2-10.)

NONEFFECTIVE AND ADMISSION RATES Except for the Pacific Ocean Areas and Alaska, May noneffective rates were lower than April in overseas commands, and the average noneffective population overseas has declined from 290,000 in January to 214,000 in May. The U. S. noneffective rate continues to increase, reaching 101 per 1,000 strength in June, as a result of heavy evacuation from overseas. The admission rate for the Army overseas also declined in May, as did the U. S. rate in June. The possible effects of returnees from overseas upon Z/I admission rates are discussed. (See pages 11-16.)

IWO JIMA CAMPAIGN Disease constituted a small problem at Iwo Jima, but one-third of the Marine strength landed became battle casualties. The desirability of further implementing plans for reducing evacuation from the target was again demonstrated. (See pages 17-21.)

DISEASE IN PHILIPPINES With troops on Luzon and in Manila certain communicable disease rates have skyrocketed to new heights for the theater, among them those for venereal disease, diarrhea and dysentery, and hepatitis. (See pages 22-24.)

HOSPITALIZATION OVERSEAS Fixed and mobile hospital facilities overseas amounted to 8.1 percent of strength on 1 June. Only in the Southwest Pacific, where many of the units present were not operating, was there any sign of crowding. Redeployment schedules provide for matching the Pacific strength build-up with adequate hospitalization, and thus far the schedules are being met. Transfer of the evacuable hospital population in the European Theater has been highly successful. (See pages 30-35.)

TREND OF EVACUATION Early evacuation of patients from the European area is expected to make it possible to cease the use of troop transports for this purpose after July. The total lift of Army patients was 44,000 in June, much lower than the May peak of 56,500. (See pages 38-39.)

HOSPITALIZATION IN THE Z/I The Z/I hospital population increased further during June, reaching 245,000 in the general hospital system alone. In the general hospitals proper there were 192,000 patients remaining and 130,000 beds occupied. Dispositions from convalescent hospitals increased to 19,000 in June, 37 percent to duty. The bed authorization of station and regional hospitals increased in June in response to increasing troop strength. Nurse strength remains in excess in the Z/I, but limited shortages of Medical Corps officers and of enlisted men also continue. A large turnover in Z/I medical personnel will occur in the next few months. (See pages 40-46.)

MORTALITY Through April 1945 there were about 230,000 deaths in the Army, 77 percent from battle causes, 18 percent from nonbattle injuries, and five percent from disease. (See pages 47-49.)

UTILIZATION OF MEDICAL OFFICERS The increased medical load in the Z/I is being met by the early return of 1,000 Medical Corps officers from the European surplus. The need for staffing redeployed units with adequate numbers of specialists, the presence in the Z/I of a considerable proportion of medical personnel without overseas experience, and other factors, create special problems in the redeployment, readjustment, and discharge of medical officers. (See pages 50-53.)

MEDICAL ASPECTS OF LEYTE-SAMAR CAMPAIGN

The invasion of the Philippines was the largest Pacific operation yet undertaken, involving an entire field army for the first time. Acceleration of the assault date, extremely bad weather, and most inhospitable terrain created a difficult medical situation. The rugged terrain of mountains, swamp, and jungle during the rainy season made it difficult to retrieve the wounded. Isolation of small units, limited transportation, mud and more mud hindered the functioning of hospital units. Delays in primary treatment, in evacuation from the island, and in return to duty were the inevitable results.

Problems of outstanding importance were:

1. Unloading and setting up hospitals. The situation offshore impeded their unloading, and poor sites plus lack of engineering aid delayed their opening.

2. Although an adequate number of beds had been planned for the operation, there were too many fixed and too few mobile units. This fact, coupled with difficulties of unloading and construction, forced the evacuation of a considerable number of patients whom it should have been possible to return to duty.

3. The overall disease situation was not serious but the problem of sanitation created by the presence of the friendly civilian population was more intense than ever before in the experience of the theater. Civilians also required medical care which had to be provided by tactical commanders from the limited facilities available for the troops.

4. Resupply by inflexible medical maintenance units resulted in shortages and overages of many items.

Casualties

During the assualt phase of the campaign for the Central Philippine Islands of Leyte and Samar, the U. S. Army forces suffered about 2,900 men killed, 9,700 wounded, and 800 missing. Based upon the average strength of the total force on the island between 20 October and 31 December, casualty rates were comparatively low at 0.19 men killed, 0.64 wounded, and 0.05 missing per thousand men per day. These rates are very similar to the army rates which obtained during the Sicilian invasion. The rates for the Sicilian campaign were 0.20, 0.73, and 0.16 men killed, wounded, and captured or missing per thousand men per day respectively. During the Iwo Jima operation, which is summarized on pages 17 to 21 casualty rates were of an entirely different order. The experience of the XXIV Corps on Leyte is also available for the entire operation and its daily rates of 0.22, 0.73, and 0.01 killed, wounded, and missing are only about two-thirds the corps rates for Sicily, and one-half those for the campaigns in France, the Low Countries and Germany. The casualty rate experienced by the XXIV Corps during the assualt phase only, would be about twice as high as those for the entire operation. (See HEALTH for May for a discussion of casualty rates by campaigns and by echelon.) The divisional admission rate for wounded on Leyte, 1.34 per thousand men per day, is slightly higher than that for Sicily, but lower than those for the European Theater. Although daily casualties are not available for the X Corps, those for the XXIV are shown in the chart on the following page.

Similar data for the 7th, 77th, and 96th Infantry Divisions provide the following percentage distributions of the number of men wounded per division per day during the assualt and mopping-up phases. The greatest number of men wounded on any division-day was 226 in the 96th Infantry Division on 23 October.

D-Day for Leyte, 20 October 1944, was preceded by intensive air and naval bombardment of shore defenses, the islands guarding the entrances to Leyte Gulf having been secured on D-3. The Japanese force on Leyte was originally estimated at 27,000 men. The Sixth Army was assigned two reinforced corps, each of two divisions plus service troops, and army troops totalling in all some 124,000 men. At the end of the campaign nine divisions were engaged, four having arrived as relief and to provide reinforcements during the assualt phase, and one

MEDICAL ASPECTS OF LEYTE-SAMAR CAMPAIGN (Continued)

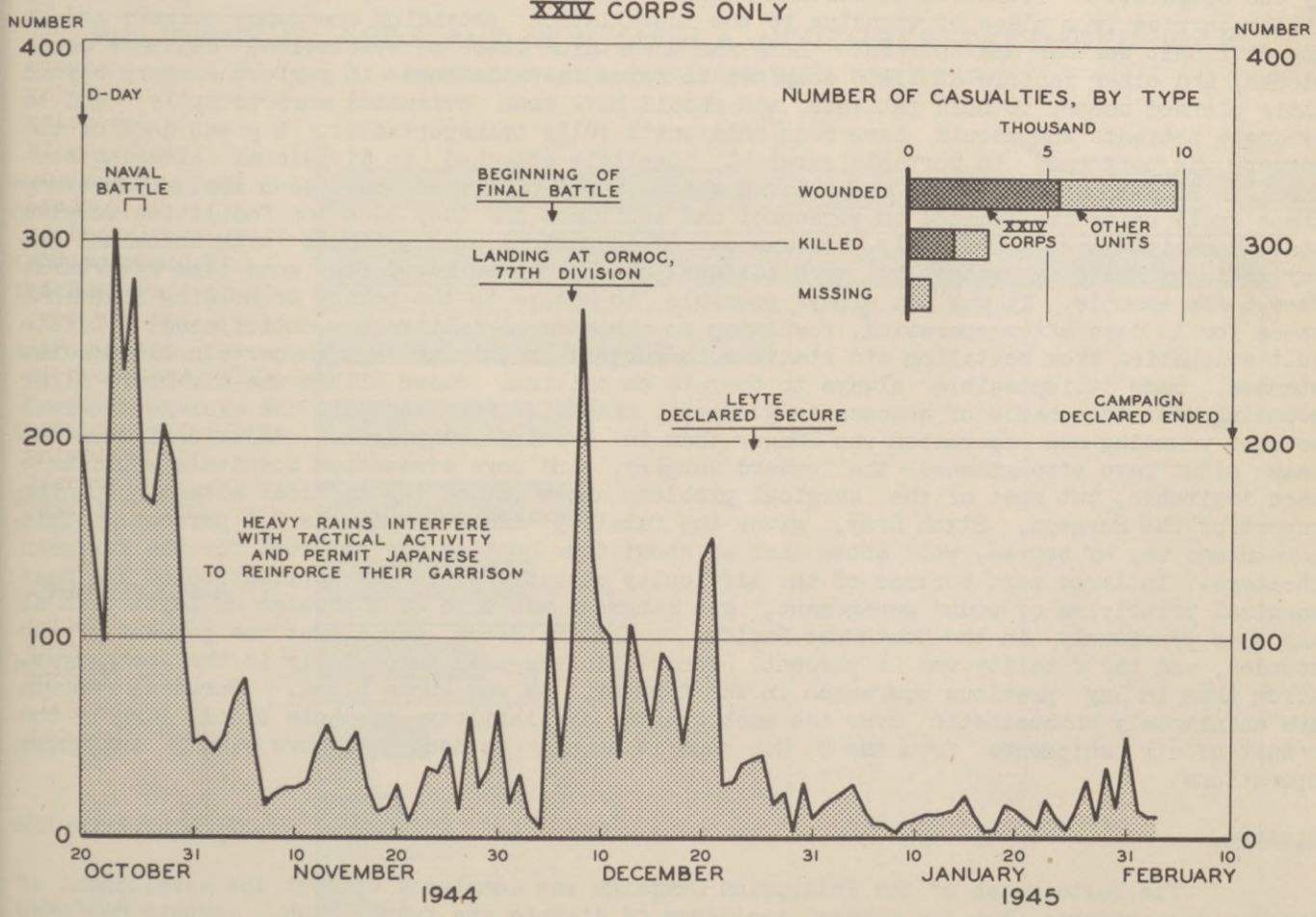
PROPORTION OF DIVISION-DAYS ON WHICH
GIVEN NUMBER OF MEN WERE WOUNDED
7th, 77th, and 96th Infantry Divisions

Number of Casualties per Division	Percent of Division-Days		
	Assault Period	Mopping Up	Total
TOTAL	100.0	100.0	100.0
None	10.8	31.7	19.6
1 through 9	33.2	49.1	39.8
10 through 19	14.5	14.2	14.3
20 through 29	13.8	5.0	10.1
30 through 39	4.8	-	2.8
40 through 59	7.8	-	4.6
60 and over	15.1	-	8.8
Number of Division-Days	166	120	286

during the period of mopping-up. Because of the magnitude and timing of the projected campaign, troops were mounted from every major port in New Guinea and the occupied parts of the Netherlands East Indies, and the XXIV Corps, a Pacific Ocean Areas task force, was redirected to Leyte while enroute for Yap in the Carolines. Initial progress was made against stiffening Japanese resistance and during the first week of combat U. S. forces sustained about 2,200 men killed, wounded, and missing, 63 percent of them by the XXIV Corps. On 24 October

NUMBER OF MEN WOUNDED DAILY DURING LEYTE CAMPAIGN

XXIV CORPS ONLY



MEDICAL ASPECTS OF LEYTE-SAMAR CAMPAIGN (Continued)

the Japanese attempted a full-scale naval attack against the Leyte landing forces. Until 26 October, when it became evident that the U. S. fleet had driven off the Japanese fleet, tactical activity ashore was limited to consolidation of areas already gained and to some small-scale localized fighting. U. S. forces continued to gain until early in November, when exceptionally heavy seasonal rains began, and quickly made transport almost impossible and enabled the Japanese to reinforce their garrison by sea. Under cover of the weather small convoys of Japanese troops arrived from the Visayas and Luzon, while enemy planes from Luzon, where excellent weather prevailed, harrassed the single airfield available to the Sixth Army as well as its supply dumps and shipping. That considerable numbers of Japanese troops were landed is evidenced by the fact that a count of Japanese killed and captured on 28 February 1945 was in excess of 75,000.

By 31 December, the assault phase of the Leyte operation was over. The campaign had proceeded in the form of a pincers with the X and the XXIV Corps on the north and south respectively as the X Corps moved westward and then south. After an amphibious landing had placed the X Corps beyond the central ridge of mountains bisecting the island, the XXIV Corps moved north attracting part of the Japanese troop concentration in the Ormoc area on the west coast of Leyte. On 7 December, the 77th division of the XXIV Corps landed near Ormoc and split the Japanese forces. By the end of December only mopping-up remained as Japanese troops, virtually surrounded, were killed in great numbers. In January and February American casualties were relatively light as the remaining enemy units were cleared out of the northwest corner of Leyte, and as isolated, bypassed groups were hunted out.

Even during the combat period, Leyte became a staging and base area for future movements throughout the Philippines. By 30 October, only ten days after the landing, 183,000 troops were on the island, and at the end of the year strength had increased to 246,000.

Surgical Care

Although the statistical incidence of battle casualties was comparatively low during the Leyte campaign as a whole, adequate surgical care of patients was rendered difficult by the comparative isolation of certain forward units in the field, by the frequently long litter carries from place of wounding to the installation providing emergency surgery and by the difficult weather and terrain. Long and uncertain lines of evacuation, Japanese roadblocks, and other factors at times combined to force installations to perform surgery beyond their planned scope, to hold patients who should have been evacuated more promptly, and to evacuate patients who should have been held until fully transportable. A great deal of the surgery was performed in portable surgical hospitals attached to divisional clearing stations. These hospitals saved many lives which would otherwise have been lost. However, these small units are limited in personnel and equipment and they lack the facilities to give post-operative care. The early performance of operations upon patients with abdominal injuries is of great importance but such patients should not be moved for some time afterward. Here, for example, it was not always possible to adhere to the policy of holding abdominal cases for 10 days after operation, resulting in a higher mortality than anticipated. Difficult evacuation from battalion aid stations to surgery, requiring days in certain extreme instances, made it impossible always to operate on critical cases within the six hours after wounding when the chance of success is greatest, and it is reported that the average interval between wounding and operation was longer than in previous campaigns. Additional surgical teams might have strengthened the forward surgery, and more evacuation hospitals would have been desirable, but most of the surgical problems arose out of the tactical situation. The report of the Surgeon, Sixth Army, gives the fatality among wounded as 5.6 percent. This percentage is, of course, well above that of about four customarily reported for the European theaters. In large part because of the difficulty encountered in the application of the best surgical principles of wound management, gas gangrene was more of a problem on Leyte than at any time previously in the Southwest Pacific. The incidence was almost one percent of the wounded, and the fatality was 24 percent. Penicillin was used more widely in the Leyte operation than in any previous operation in the theater, as was whole blood. Surgical reports are unanimously enthusiastic over the much greater availability of whole blood, largely the result of air shipments from the U. S., and it should be used even more widely in future operations.

Disease

The Leyte phase of the Philippine Campaign was completed without the development of any serious epidemic, but the general incidence of disease was fairly high, certain new disease problems were encountered, and the question of field sanitation assumed new importance because of the civilian population. The accompanying chart summarizes the major causes of admission during November and December for the U. S. forces in the Philippines in contrast

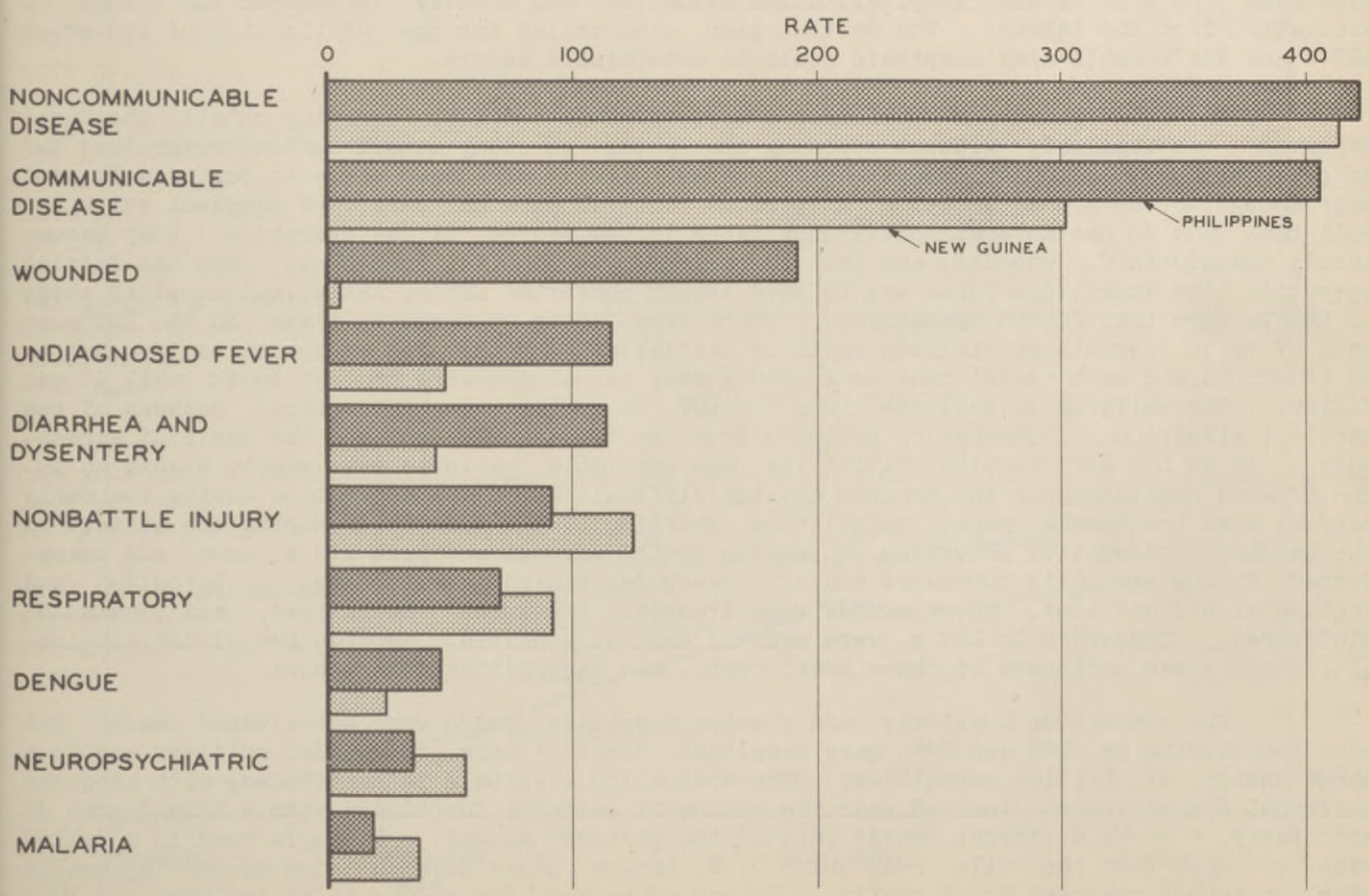
MEDICAL ASPECTS OF THE LEYTE-SAMAR CAMPAIGN (Continued)

with those remaining in New Guinea. The most common disease-groups were the undiagnosed fevers, the diarrheal diseases, and the respiratory diseases. Malaria caused little difficulty because it was not generally endemic on Leyte, because the XXIV Corps was not heavily seeded with malaria, and because suppressive atabrine discipline was fairly well maintained by both corps. Dengue became a problem as the campaign advanced, the Philippine admission rates reaching 49 in December for all troops and 68 for the Sixth Army. Because of its atypical clinical character dengue was not always recognized as such, and the true incidence probably exceeds that reported. Rates for the diarrheal diseases were fairly high. Flies were very prevalent, and use was made of DDT in fly control. The sanitary habits of the civilian population, made worse by Japanese occupation, menaced the health of troops. The situation was more acute than it might otherwise have been because absolutely no restrictions were placed upon fraternization with the civilian population. As liberators the troops received and purchased quantities of food and delicacies prepared by friendly Filipinos under uncertain sanitary conditions, a fact which goes far to explain the high incidence of diarrhea and dysentery encountered in the operation. Amebic dysentery, seldom seen in New Guinea, increased considerably in prevalence. Satisfactory sanitation was at all times difficult to achieve, not only because of the civilian population and the tendency to station troops in or near barrios and towns, but also because many areas had a high water table which was further accentuated by the torrential rains and which hampered the disposal of waste. The incidence of respiratory disease was increased by the weather, but did not become a serious problem. Bad weather was also involved in the admission of a considerable number of patients with feet painful and swollen as a result of living in water-filled fox-holes and jungle mud for periods of seven to 24 days, often without change of footgear. Skin diseases generally were troublesome.

Although not statistically important during the active phase of the Leyte operation, certain other diseases deserve mention. Of greatest interest is schistosomiasis, which was met on Leyte and Samar for the first time in the Southwest Pacific. The first cases, which were diagnosed in the middle of December, resulted from earlier exposure. Although the possibility of contracting the disease had been recognized prior to the campaign, and information made available to the troops, the danger was not fully appreciated and instructions

PHILIPPINE ISLANDS AND NEW GUINEA, NOVEMBER-DECEMBER 1944

ADMISSIONS PER THOUSAND MEN PER YEAR



MEDICAL ASPECTS OF THE LEYTE-SAMAR CAMPAIGN (Continued)

were too little heeded. Unless vigorous command action succeeds in minimizing the exposure incident to bathing and any type of contact with contaminated fresh water, the disease can attain military significance in endemic areas. Absence of the snail harboring the parasite does not guarantee absence of the parasite itself. By the end of April, 884 cases of the disease, contracted on Leyte and Samar, had been reported in the Theater, the majority of which had to be evacuated to the Z/I. The true incidence is probably higher. Analogous, but far better controlled because of previous bitter experience, is scrub typhus. Combat suits impregnated with dimethyl-phthalate were worn by X Corps troops. Only 13 cases had been reported from the Philippines by the end of December. There were 86 in January, however, after which incidence declined. Poliomyelitis caused 39 scattered admissions and 14 deaths during November and December. Neuropsychiatric admissions were lower for troops in the Philippines than for those in New Guinea. Although difficult and prolonged combat is reported to have increased the incidence of neuropsychiatric disorders among combat troops, its general level remained quite low. There was also no appreciable amount of venereal infection. Surveys of civilians revealed that the great majority had intestinal worms of one type or another. Although within the period of the Leyte operation a high rate of infection among troops would not be expected, U. S. troops showed increasing evidence of such infection, especially hookworm, and it may later constitute something of a problem in the Philippine area. Ten to 15 percent of the civilians examined were also found to have filariasis, a serious mosquito-borne disease but one which becomes active only after repeated infection over a long period. Only two cases had been reported by the end of April in U. S. troops, and these may have been acquired in other areas previously. Plague and cholera were not encountered. Hepatitis increased very sharply toward the end of the combat period, a rate of two for November giving way to 7 in December and 63 in January for all troops in the Philippines.

Hospitalization

According to the medical plan the Sixth Army was to be provided with 3,650 mobile beds, including 1,250 in two specially equipped station hospitals. In addition, the Army had 1,000 beds in clearing stations and 225 beds in nine portable surgical hospitals. Army Service Command was assigned 5,000 general hospital beds and 2,650 station hospital beds, all scheduled to arrive by 30 November. Loading difficulties prevented the departure of one field hospital for the target. Although the medical plan may have called for sufficient hospitalization to support the Leyte operation, inability to place units in operation as scheduled made for a difficult hospitalization situation and greatly influenced the volume of evacuation from the island. The medical plan also called for the utilization of converted LST's and APA's until Army hospitals could be established ashore.

The LST's and APA's performed a most valuable service, carrying on all the functions of a hospital ship without exposing the latter to enemy attack against which they had no protection. These craft render their greatest service when used early in the assault, and near enough to the scene of action to perform initial surgical care. If hospital ships are held back and do not move up until much later in the course of the operation, they become merely transports for wounded, and fail to perform true hospital functions. For the initial operation, the amphibious force was to have enough converted LST's, APA's, and hospital ships to handle more than 20,000 casualties. There were to be 23 surgical teams on the LST's on each of which certain specialists would be available, but the plan of specialization had to be abandoned and each vessel took care of whatever casualties were brought to it until it was filled. The shifting of patients from one LST to another was impractical because of the tactical situation. Transfer of patients from the beaches was done on the basis of expediency. If an LST with hospital facilities was available patients were simply placed on it. The crowded conditions on the beaches and the difficulties of transportation during the early days at most beachheads permit very little shifting of the wounded. During the assault on the beaches, casualties occurring on landing craft were given first aid at once and transferred to the specially converted craft. Beach casualties were treated in battalion and regimental aid stations, where wounds were dressed, fractures immobilized, and plasma administered. Transfers to LST's were made as soon as possible. Through D+4 almost all initial surgery was performed on these naval craft, and very little done ashore.

The evacuation hospitals and station hospitals which were established early and were functioning by D+2 and D+4 gave excellent surgical care to wounded soldiers and to a large number of civilian casualties. The evacuation hospitals in particular, with adequate personnel and equipment located near the source of patients, functioned with a high degree of efficiency. As U. S. forces moved inland the picture changed. A single road in a valley with its lanes into the hills over which U. S. troops could advance soon became impassable with continuous rain and truck traffic. It was not unusual for troops to be isolated on high ground by high water, Japanese road-blocks, or impassable roads. There was no continuous advancing line. Unlike the portable surgical hospitals and clearing companies, the evacua-

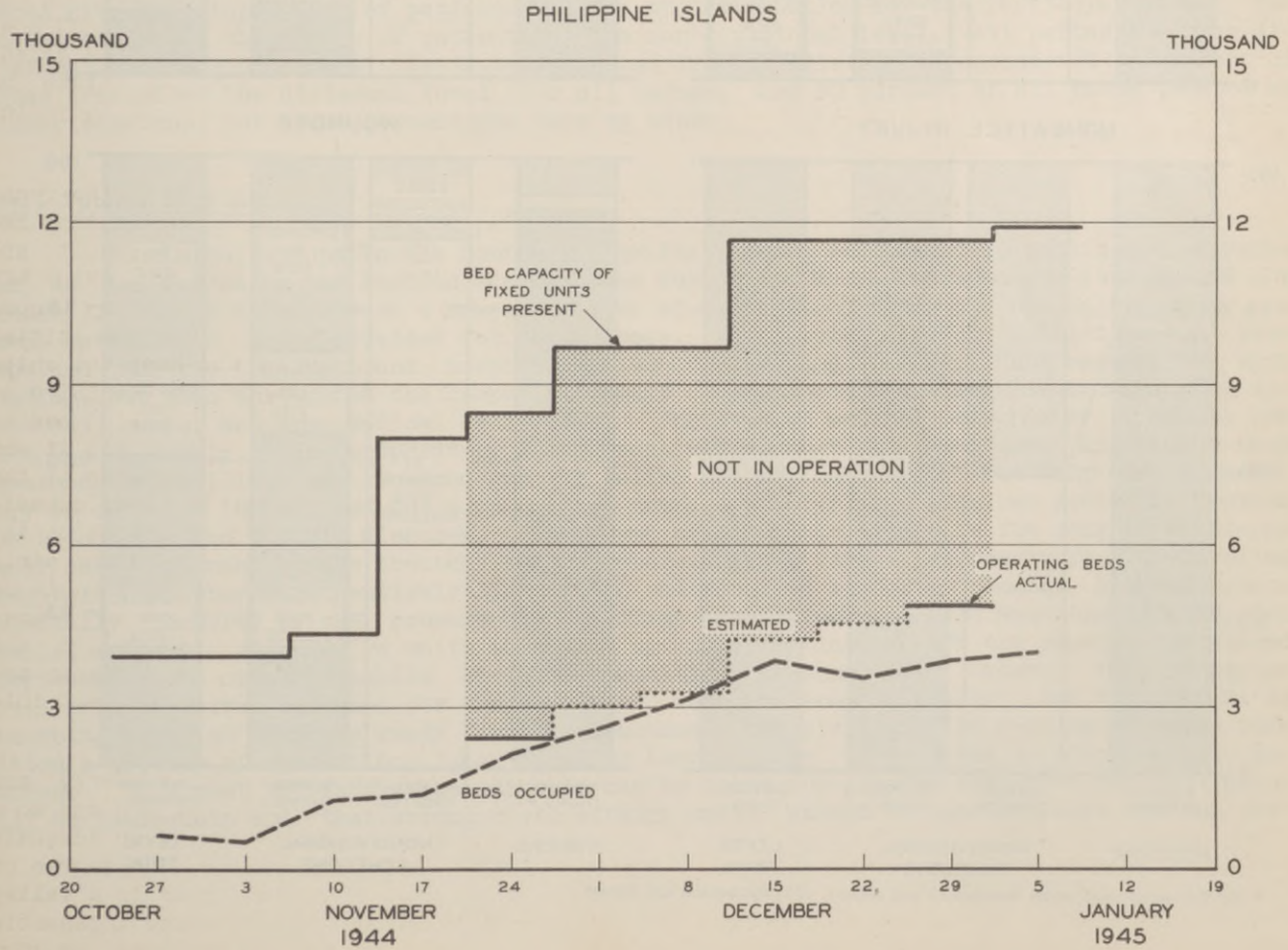
MEDICAL ASPECTS OF THE LEYTE-SAMAR CAMPAIGN (Continued)

tion and station hospitals which were first set up could not be moved forward under these circumstances. Smaller forward hospitals were on occasion shelled out of position, and the perimeters of some were penetrated by the enemy. Because of large zones of responsibility, with long lines of communication, some divisions found it desirable to set up convalescent camps for minor cases in order to prevent loss of manpower.

Difficulties in the way of immediate establishment of fixed hospitals ashore were manifold. The beachhead was narrow and the few suitable sites were pre-empted by various headquarters. Constant enemy air raids not only slowed up construction but destroyed some of the equipment. Because of swampy land, constant rain, and mud, the available sites posed formidable problems of construction, drainage, and sanitation. The sanitation problem had been accentuated by the condition in which the Filipinos and the Japanese had left the soil and surroundings. Engineering facilities were devoted to building and repairing roads and airfields, so that hospitals obtained the engineering help only after long delays and great difficulty. In consequence, construction and drainage were not well planned and were not integrated with other engineering efforts. Engineering help on sanitation problems was lacking, Medical Department personnel was diverted from its intended function, and the functioning of hospitals was delayed. The accompanying chart portrays the capacity of fixed units present in the Philippines, an estimate of the number actually in operation, and the number of fixed beds occupied according to radio reports. On 24 November, 34 days after D-day, only 2,400 beds were in operation out of 8,500 present. On 29 December there were 4,900 beds in operation out of 11,800 present.

The general shortage of evacuation hospitals in the Pacific handicapped the Leyte operation from the start, and it was necessary to employ both station and general hospitals in a mobile capacity. Although considerable relief was afforded early in the operation by Navy ships, fixed units ashore could not be used as such soon enough to hold the volume of evacuation down to the desired level. The 1st Convalescent Hospital, scheduled to arrive 20 November, arrived at Leyte on 6 December and was not ready until 18 December. Civilian needs

CAPACITY AND OCCUPANCY OF FIXED HOSPITALS
PHILIPPINE ISLANDS



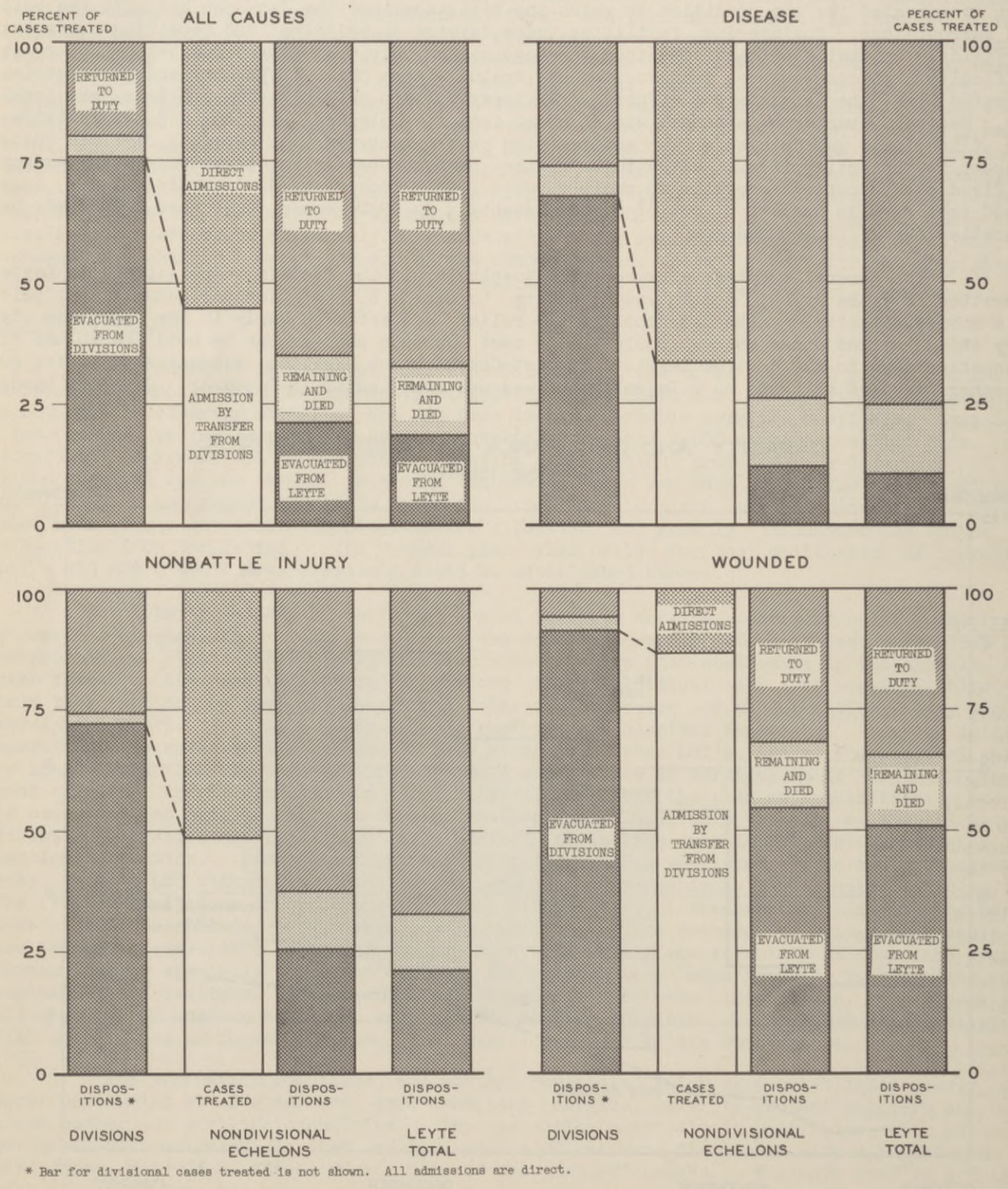
MEDICAL ASPECTS OF THE LEYTE-SAMAR CAMPAIGN (Continued)

further depleted the effective capacity of Army hospitals. It was necessary to evacuate to New Guinea and Saipan patients who would be fit to return to duty by the time they arrived.

Evacuation

After the first phase of the operation, with the discontinuance of evacuation to ships, evacuation of casualties at Leyte was complicated by many difficult factors. A 15-day

DISPOSITIONS OF ADMISSIONS DURING LEYTE CAMPAIGN
AS PERCENTAGES OF CASES TREATED AT EACH ECHELON



* Bar for divisional cases treated is not shown. All admissions are direct.

MEDICAL ASPECTS OF THE LEYTE-SAMAR CAMPAIGN (Continued)

policy was adhered to as much as possible, but the terrain, weather, distance, transportation shortages, and enemy action (including snipers) combined at times to render evacuation unsatisfactory or even impossible. As the lines of evacuation lengthened Sixth Army assumed control of many units previously under X Corps, and a medical group was given the mission of coordinating evacuation from divisions to hospitals as well as to beaches and airfields. Evacuation to the forward hospitals was slow and difficult, in some cases requiring more than 48 hours. The rough and mountainous terrain, the swamps, the mud, and the rain made evacuation uncomfortable and dangerous. Ambulances, especially the 3/4-ton, were very effective but too few in number. Jeep and $\frac{1}{4}$-ton ambulances were of little use. Vehicles were especially short in the XXIV Corps units which had been loaded for Yap. DUKW's, weasels, and M-29 cargo carriers proved their worth as they could traverse almost any type or condition of terrain. When possible, evacuation by water was effected for both safety and comfort. Air evacuation helped to solve this problem for the wounded whom it was safe to move by air, especially from the Ormoc region.

Similar problems were confronted in the evacuation from Leyte. Because of overcrowding ashore some of the hospital ships evacuated to base areas patients who would have been able to return to duty after only a short convalescence, but the situation improved in November in this respect. Evacuation from the Leyte area was begun on D-day by APA's and LST's. Although patients arrived in rear bases on LST's in good condition, for hospital care and transportation over such great distances as obtained in this operation, hospital ships are to be preferred. After D+7, LST's were no longer used for evacuation. The first hospital ship to effect evacuation did so on D+6. The medical plan called for evacuation from Leyte during daylight hours only or in case of emergency, but on D-Day evacuation at night was necessary. Some air evacuation, via C-47 planes, took place on D+6, but it was not until D+16 that it became a regular service.

The panels on the previous page show, separately for disease, nonbattle injury, and wounded patients, the admissions and dispositions at the divisional and at all other levels of command in the Philippines. The cases are presented as percentages of the numbers of patients treated at each level during November and December. All bars but the second in each panel give the disposition of patients treated at that echelon for the particular cause. The second bar shows the source of patients at the non-divisional level, all patients at the divisional level being direct. Patients evacuated from the divisions represented 76 percent of those treated at the divisonal level for all causes, and 45 percent of all those treated at higher echelons, but these percentages vary by cause.

Civil Public Health

On Leyte, troops in the Southwest Pacific faced a serious civil public health problem, as had forces in the Pacific Ocean Areas during the Marianas Campaign (see HEALTH for January). Civil affairs were a responsibility of tactical commanders, special military and naval detachments being provided for the purpose. No special medical facilities had been provided for the treatment and hospitalization of civilians, however, and especially upon landing, but also throughout the campaign, their care placed a considerable burden upon divisional, corps, and army medical facilities. The problem was not only one of personnel but also one of supply. The preparatory bombardment and assault on the beaches dislocated many thousands of civilians who required general relief and medical care. Not only was it necessary to care for the wounded but also a large number of civilians required medical attention for both acute and chronic diseases. It became necessary to divert a few Army hospitals to their care, and many others treated lesser numbers. There were a few weakly staffed civilian hospitals but they were entirely inadequate and required support. Combat divisions were especially hampered by the presence of civilian casualties. A need was keenly felt for special medical civil affairs units to be set up and operating by D+1 and capable of forward displacement in order to handle civilian casualties as they might occur. The Philippine Civil Affairs Units attached for the operation were too weak medically, but were useful in absorbing civilian patients ready for convalescence. The civil affairs problem on Leyte permitted a preview of conditions later faced on Luzon and to be expected in other Pacific advances. In almost any future operation it can be taken for granted that civilian sanitation will be inadequate and that strong civil affairs units should be provided with medical per-

MEDICAL ASPECTS OF THE LEYTE-SAMAR CAMPAIGN (Continued)

sonnel, equipment, and supplies. This problem is receiving special attention in the determination of logistic requirements for future operations.

Supply

The medical plan of the Sixth Army called for a five-day supply in the hands of assault troops and a thirty-day supply for all others. Original planning was for a 60-day period only, and for 300,000 troops. Thereafter it was planned to rely upon resupply ships and to divert to the new base area shipments intended to fill theater requisitions. Medical items carried by resupply ships consisted only of Medical Maintenance Units (MMU's). Since the ordinary MMU contains less than 700 items as compared to the 3,000 to 3,500 eventually needed for a balanced supply, there soon occurred shortages in many important items.

The X Corps plan for all medical units called for loading sufficient supplies and equipment for three days on their organic transport and on their personnel, the remainder to be bulk-loaded. The corps had also an emergency resupply of two MMU's, one of which was never unloaded because of damage to the ship carrying it. In general, the X Corps suffered no shortage of critical items. Certain important items of supply were, however, soon out of balance. Lack of adequate screening for fly control is also mentioned as a problem. The ordinary MMU's were not well suited to the needs of a corps which did not have hospitals under its jurisdiction. There were many items which were either useless to corps or in too great supply.

The medical supply situation for the XXIV Corps was complicated by the fact that this corps was originally loaded for Yap, redirected en route to the target, and committed in greater force than had been planned. Nevertheless, its reports state that medical supplies were generally adequate. Shortages occured in certain individual items of importance, especially drugs, among them such items as foot powder, bismuth subcarbonate, tincture of opium aspirin, and even atabrine and halazone. Medical reports for this corps also point out that its MMU's,designed for 6,000 men for 30 days, lacked some necessary items altogether and were short in others. An initial important loss of medical supply items occurred during the first days of the operation when unloading had been hastened so that the transports might escape an approaching Japanese naval force. Additional important losses in succeeding days resulted from the new suicide dive-bomber tactics of the enemy against which defense had not yet been devised.

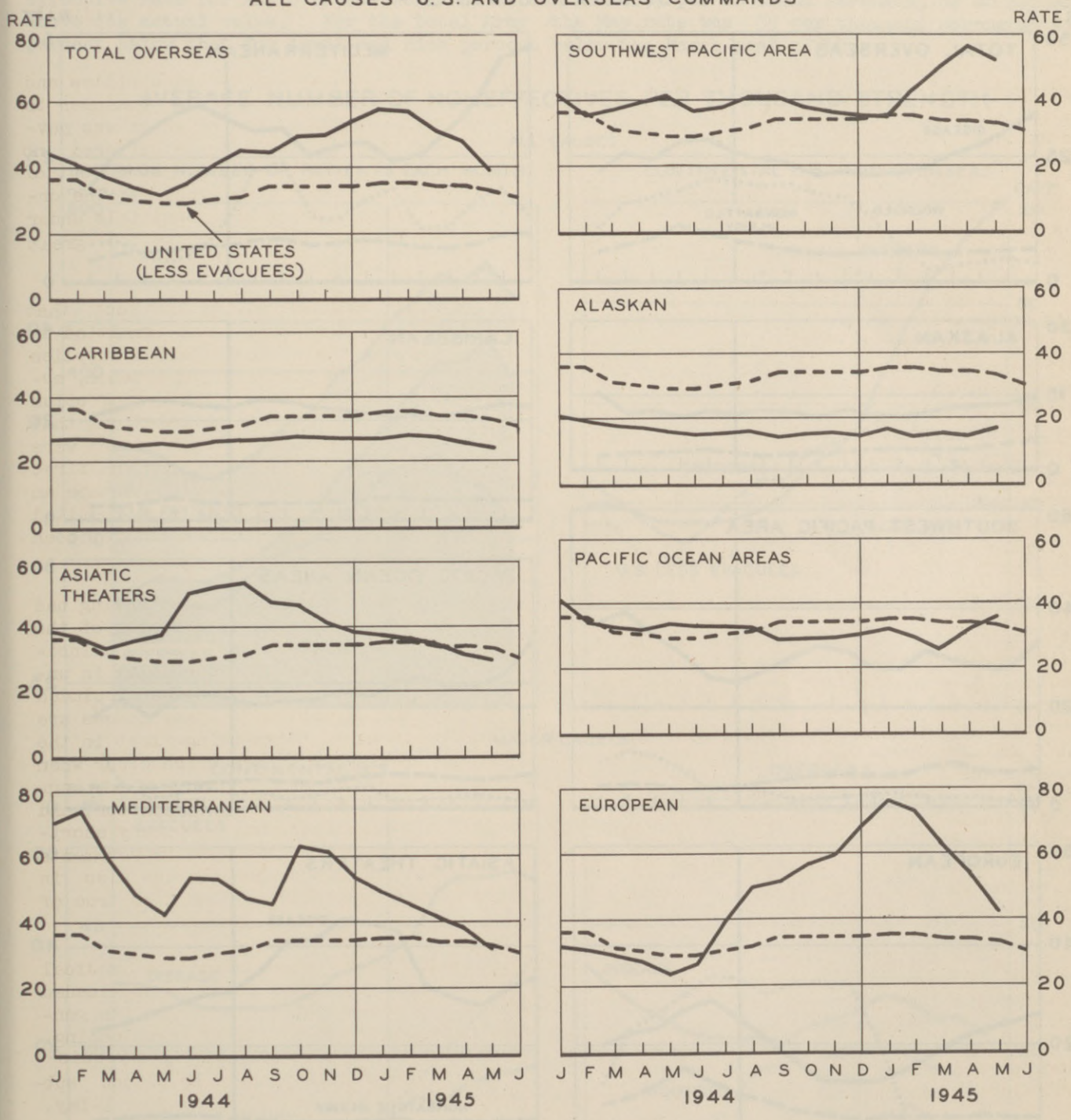
The divisions reported varying experience with medical supplies, some having had ample quantities and others having run short. One reason for shortages in a number of the most important items is that, for the first 60 days the medical supply plan depended principally upon Medical Maintenance Units from resupply ships, and there was serious delay in unloading. Less than half the total planned MMU's were available. Deficiencies included slowness in depot construction and a lack of both dunnage and tarpaulin. Other losses are attributable to improper loading and unloading, resulting in many items being lost in the final transfer from ship to shore, entirely apart from the inevitable losses which occur when transference is taking place in combat. Also, one division lost 10 to 25 percent of its supplies when a dump was struck by Japanese bombs. Lengthening of lines of communication, and the difficult transport problem in this area would inevitably result in many temporary shortages at the division level. Coordination of evacuation and supply effected some improvements in one division with an acute problem. Air drops were useful in this connection and also in delivering whole blood. An adequate supply of whole blood was available, as was also true of penicillin.

The supply problem on Leyte again demonstrates the need for assurance that medical supplies can be promptly unloaded. Their tonnages are so small that they could be top-loaded on resupply ships and so be made available in emergency before the ship discharged its general cargo. The greatest single medical supply problem at Leyte was the delay in unloading. Also this operation showed the necessity for placing with the U.S. port of supply a requisition for a balanced stock of items not included in MMU's, the requisition to be placed substantially in advance of the landing and phased for arrival 30, 60, and 90 days after D-Day.

NONEFFECTIVE RATES

The charts below and on the following page show the total noneffective rate and its principal components for each of the overseas theaters and for the Army overseas and in the United States. All major commands except the Pacific Ocean Areas and the Alaskan Department experienced lower rates in May. The May rates for the Pacific Ocean Areas have been estimated because the theater reports are incomplete. It was assumed that the troops on Okinawa had the same disease and nonbattle injury experience as obtained during the first months of the Philippines Campaign. The Pacific noneffective rate for wounded is based on more com-

AVERAGE NUMBER OF NONEFFECTIVES PER THOUSAND STRENGTH
ALL CAUSES - U. S. AND OVERSEAS COMMANDS

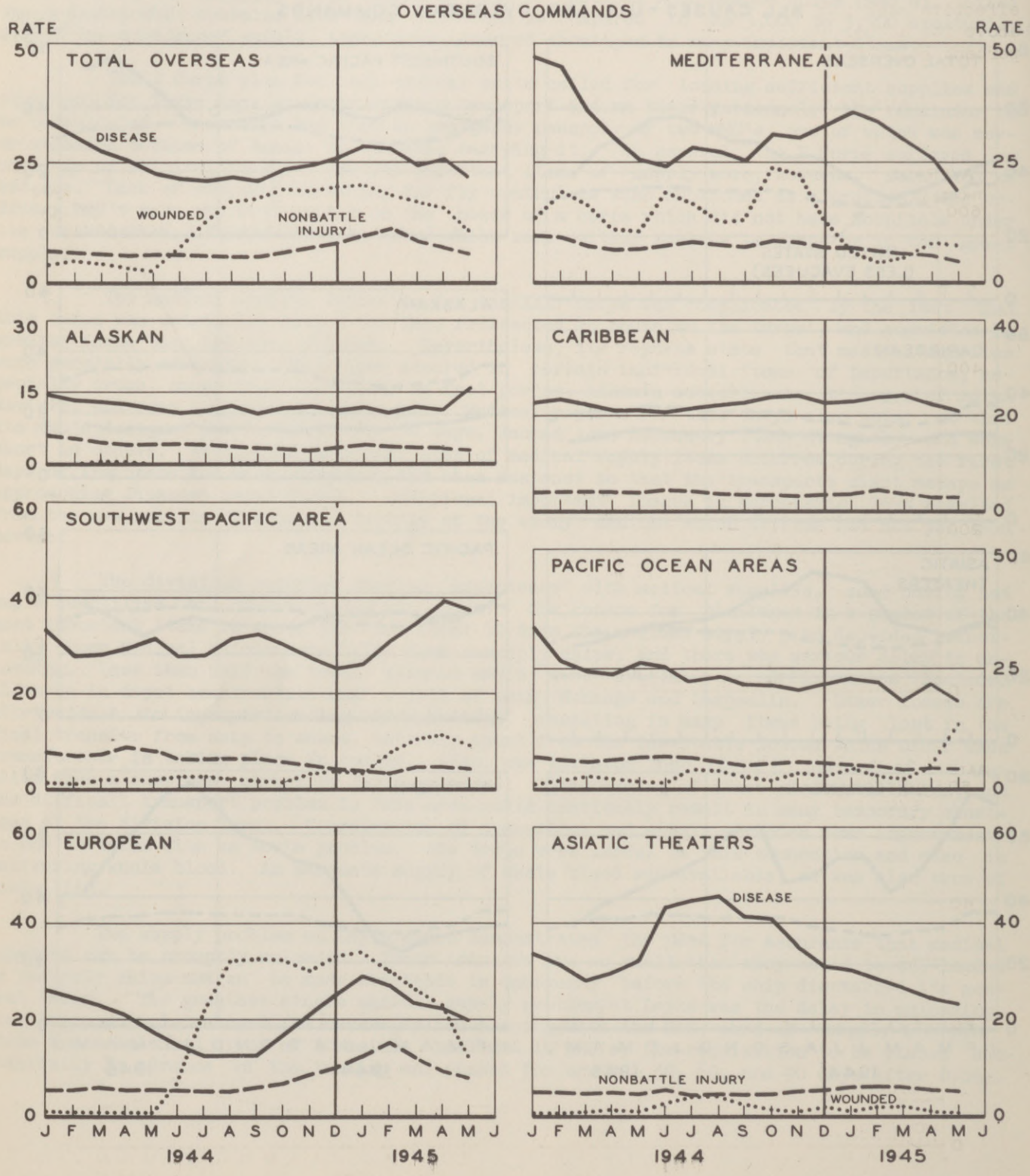


NONEFFECTIVE RATES (Contined)

plete data than the rates for the other components. Large numbers of patients wounded on Okinawa have been evacuated to base areas where reporting is complete. The rate of 14 wounded per thousand strength is the highest in the experience of the theater, and exceeds the peak Southwest Pacific rate of 12. The rate for wounded in the Southwest Pacific declined in May together with the rates for disease and nonbattle injury, reflecting the decreased morbidity and smaller number of casualties during the concluding phases of the Philippines Campaign.

AVERAGE NUMBER OF NONEFFECTIVES PER THOUSAND STRENGTH

OVERSEAS COMMANDS

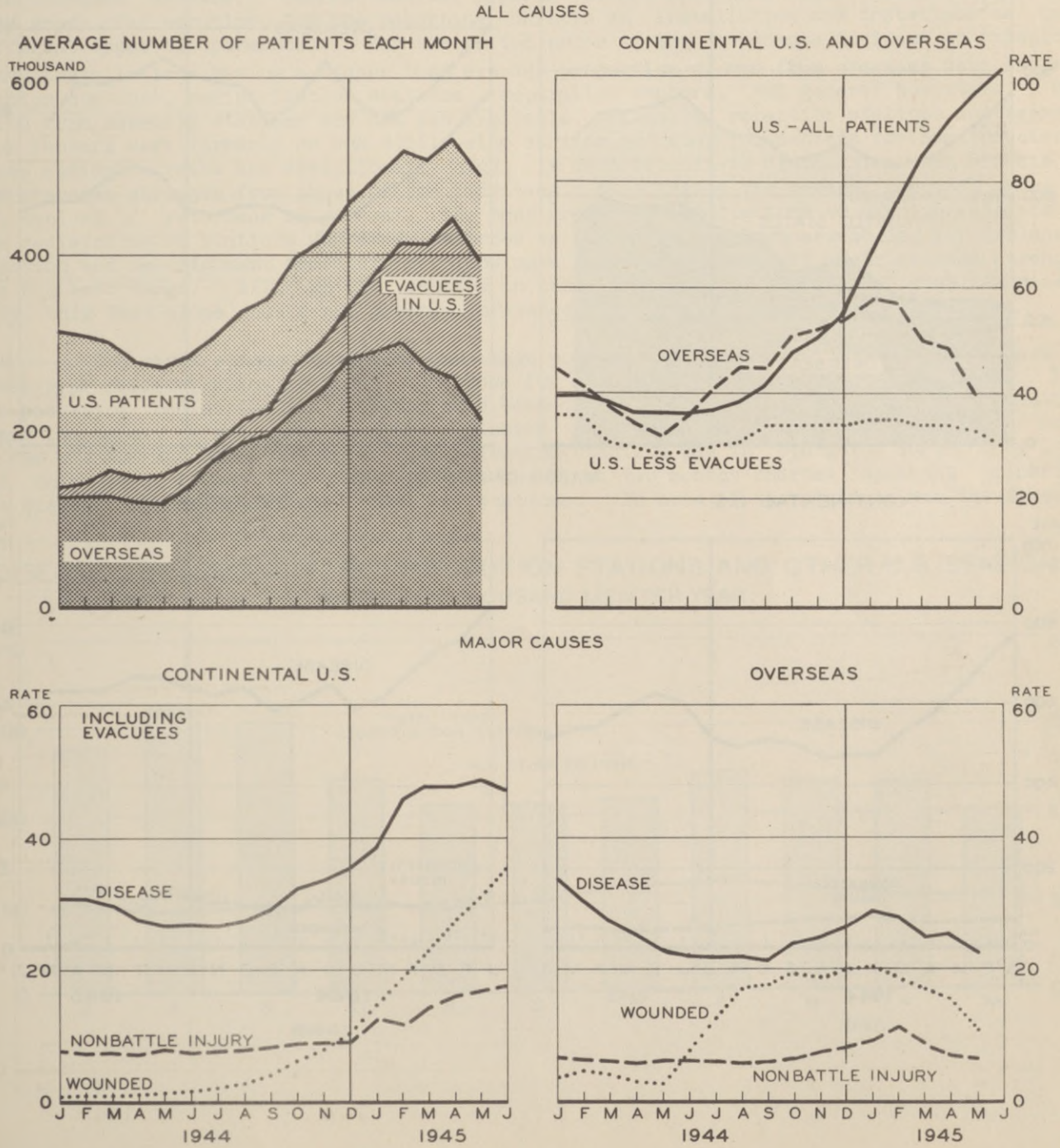


NONEFFECTIVE RATES, U. S. AND OVERSEAS

During May there was a decline in the total noneffective rate for the Army overseas for the fourth successive month. The evacuation of 215,000 patients from overseas hospitals during the first five months of 1945, coupled with generally declining admission rates, has reduced the overseas noneffective population from an average of 290,000 in January to 214,000 in May.

During June the total U. S. noneffective rate, including evacuees, continued to increase, reaching 101 per thousand strength. Correction of this rate to exclude evacuees reduces it to 30 per thousand strength, somewhat lower than the corrected May rate of 33. For troops overseas the May rate was 39 per thousand strength, 18 percent below that for April. If no patients had been evacuated from the overseas theaters to the United States, the noneffective rate for May overseas would have been about 73 per thousand strength, or 88 percent above its actual value. For the total Army the May rate was 59 per thousand strength, six percent below that for April and nine percent below the March peak of 65.

AVERAGE NUMBER OF NONEFFECTIVES PER THOUSAND STRENGTH



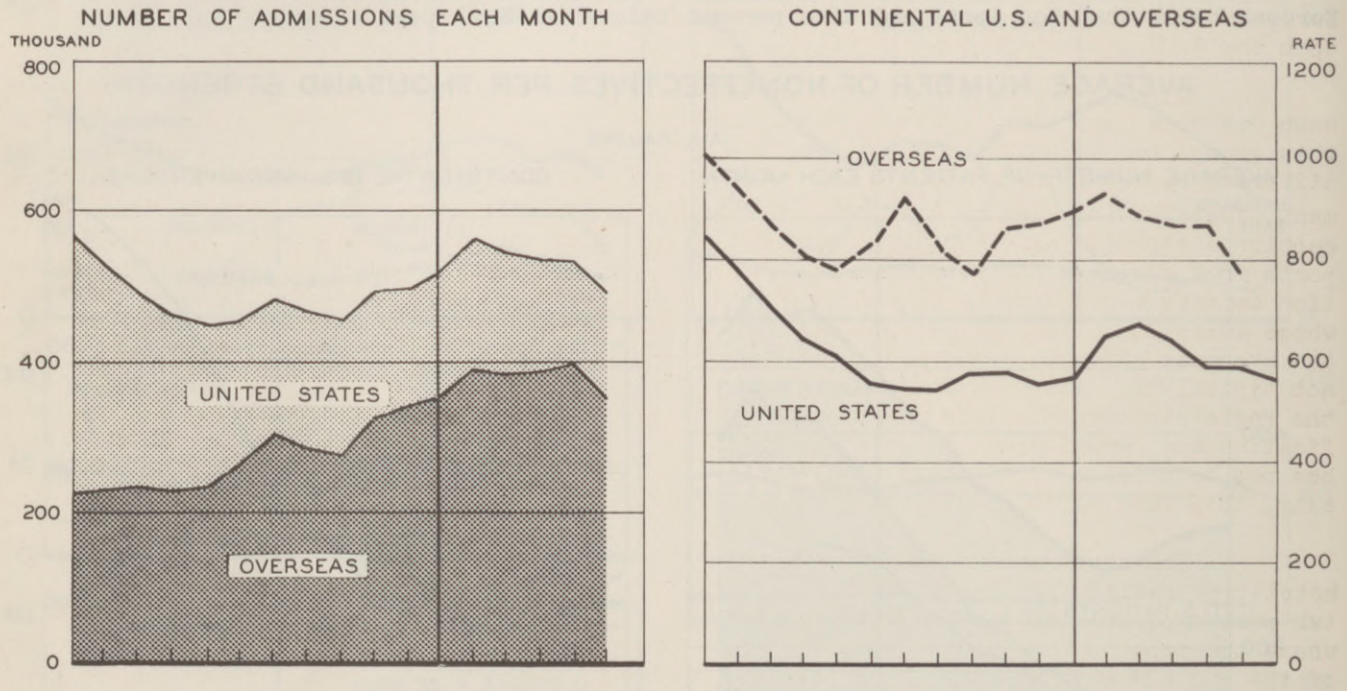
DISEASE AND INJURY

DISEASE, INJURY, AND BATTLE CASUALTY ADMISSIONS

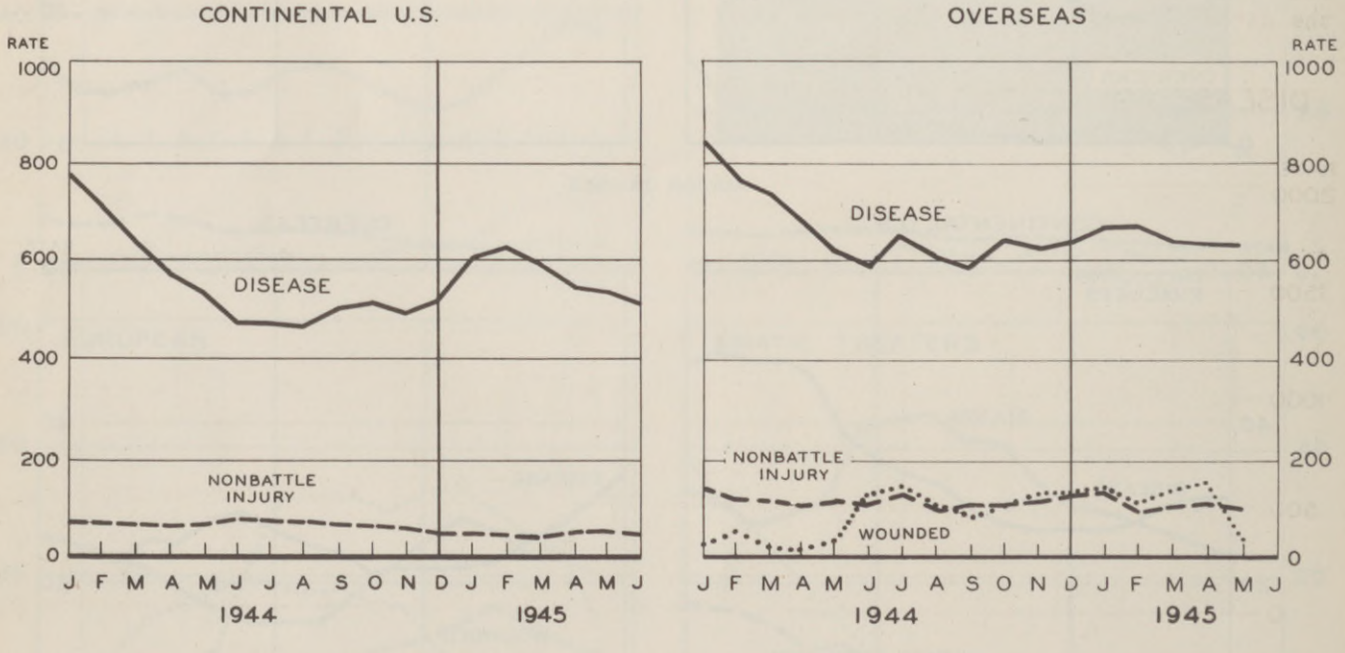
The end of the war in Europe resulted in an immediate drop in the number of admissions to hospital and quarters in the Army overseas. During May the number of admissions overseas was 352,000, or 11 percent lower than the 397,000 admitted during April. The admission rate for all causes declined in the same proportions from 878 admissions per thousand men per year in April to 778 in May. Whatever effect the redeployment of troops may have upon the U. S. admission rates is not yet evident, as is discussed on pages 15 and 16. The June rate for disease in the U. S. is 514 in comparison with 538 in May, but admissions for nonbattle injury increased slightly to 53 per thousand men per year.

DISEASE, INJURY, AND BATTLE CASUALTY, ADMISSIONS PER THOUSAND MEN PER YEAR

ALL CAUSES



MAJOR CAUSES



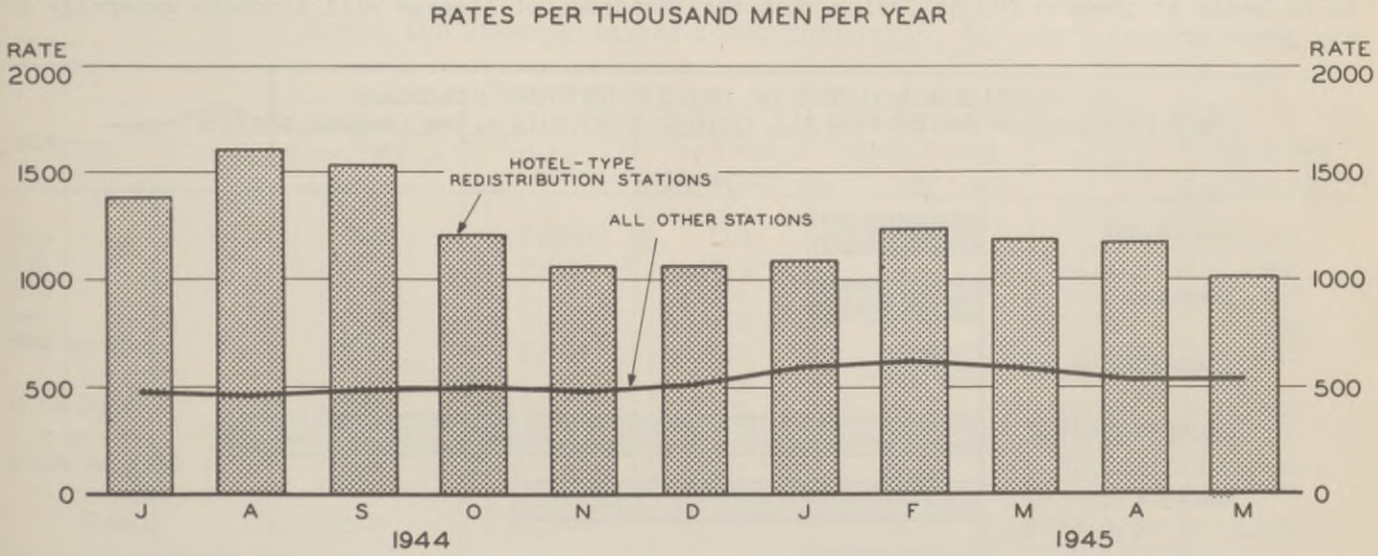
EFFECT OF RETURNEES UPON Z/I ADMISSION RATES

The health of troops in the Z/I during 1944 and the first half of 1945 has been far more favorable than could have been expected. Except in American bases and in the European Theater, however, the disease picture overseas has caused some concern, largely because of communicable diseases. It is only natural to ask what effect large numbers of returnees from overseas theaters will have on the presently favorable Z/I admission rates. One dramatic change has already occurred, namely the incidence of malaria. Current admission rates for malaria acquired in the Z/I are less than one per 1,000 per year, but about 25 for malaria acquired overseas. Returnees to the Z/I may develop diseases formerly of low incidence or absent from the U. S. or may be carriers of the infectious agents of these diseases. The venereal diseases may come to constitute more of a problem in the Z/I than formerly as increasing numbers of men return from overseas. Routine medical examinations prior to embarkation for the Z/I and at reception stations as well as quarantine regulations are provided to minimize the risk of importation of disease. Moreover, admission rates for disease in the European Theater have been highly favorable, so that the immediate effects of redeployment upon the U. S. admission rate for all disease may well be very slight.

Through May only a relatively small proportion of the strength in the U. S. had seen overseas service. Current medical reports do not provide a ready means of isolating this group for scrutiny, for the reporting unit is an installation and installations have different types of personnel. For the period prior to the movements incident to redeployment, installations having a higher than average proportion of men from overseas were the reception stations, redistribution stations, separation centers, and general hospitals. Reports from assembly stations are not yet available. Since the reception stations and separation centers were formerly or are still also serving as reception centers for new inductees, whose admission rates are exceptionally high, it is difficult to distinguish the effects of the overseas strength from those of the inductees. Also, since the general hospital group is not typical of returnees in general, the best group of installations to examine consists of the redistribution stations where men returned on rotation have been assembling for reclassification and reassignment immediately following a furlough. However, their average strength has not been large. Although the turnover in these stations exceeds that of stations generally, this fact alone should not greatly influence their admission rates.

The chart at the bottom of the page compares the admission rates for disease in hotel-type redistribution stations with those for all other posts, camps, and stations. The two post-type redistribution stations have been omitted because they are located at stations where the impact of returnees upon the admission rate would be difficult to evaluate. None of the six AGF and ASF hotel-type redistribution stations was in operation during July 1944 and only one in August, so that rates for the first two months charted represent primarily the disease experience of the three AAF stations. In none of the stations was the disease

DISEASE ADMISSIONS IN REDISTRIBUTION STATIONS AND OTHER U.S. STATIONS
RATES PER THOUSAND MEN PER YEAR



EFFECT OF RETURNEES UPON Z/I ADMISSION RATES (Continued)

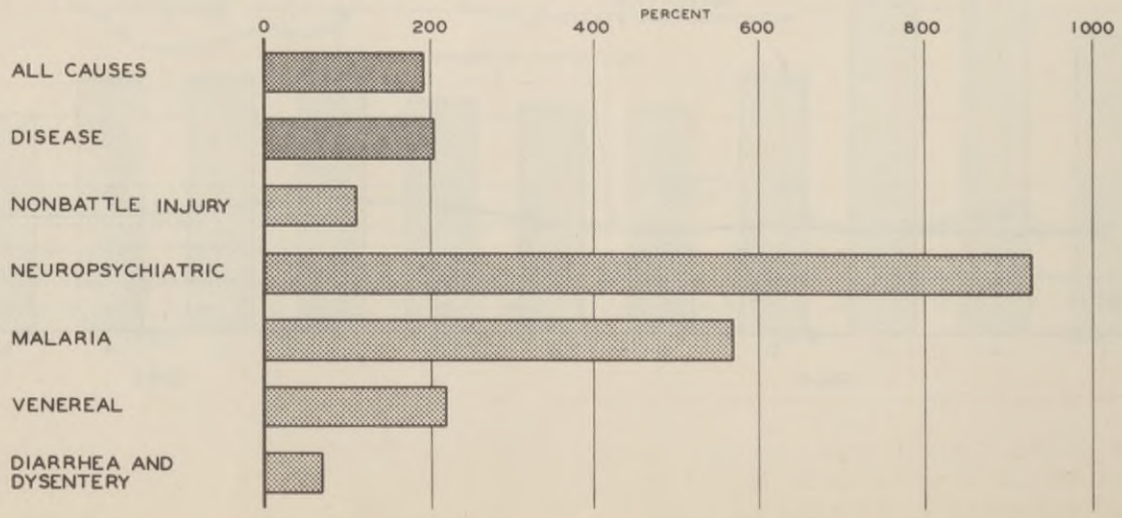
rate as low as the U. S. average for the period, the range being from 104 to 350 percent of the U. S. average, and the combined rate for all the redistribution stations is just twice that for all other stations. The reason for the wide variation is not known, but it is believed to lie in differences in administrative policy rather than in the selection of the men sent to the various stations.

For the period March through May 1945 rates have been obtained for the major causes of admissions. The difference between the disease rate of 1,120 for redistribution stations and that of 555 for all other stations during this interval represents chiefly admissions for neuropsychiatric diseases and for malaria. The high rates for these two diagnoses account for about 60 and 20 percent of the difference respectively. The following chart presents selected admission rates for the redistribution stations as percentages of the parallel average rates for all other stations. The neuropsychiatric admission rate of 408 is more than nine times that for all other staions combined. The highest rates are those of 444, 882, and 930 for the three AAF redistribution stations. For the ASF and AGF stations the average neuropsychiatric admission rate during these three months was only 64 per 1,000 men per year. This difference is not based on any usual margin between rates for AAF and for other personnel. This is most readily seen from the fact that, when the general hospitals are excluded, and AAF stations compared with all other stations, the neuropsychiatric admission rates are of the same order. It is not known whether the high rates for redistribution stations reflect characteristic differences in AAF personnel selected for rotation, or in diagnostic criteria and hospitalization policy at AAF redistribution stations.

Although the effect of returnees upon Z/I admission rates cannot be predicted with any certainty, one group, namely the evacuees, has already exercised some influence upon the Z/I admission rate. These patients now comprise almost 10 percent of the Army strength in the U. S. and the bulk of the general hospital population. It is of interest to note, therefore, that the general hospitals have greater numbers of admissions for neuropsychiatric diseases, malaria, venereal diseases, and hepatitis than would be expected from the experience of stations generally. Much of the difference doubtless arises from the fact that these installations are general hospitals rather than that they house large numbers of men from overseas. Even were the entire differential attributable to this fact, however, it would remain true that, by increasing the size of this highly selected population, Z/I admission rates for certain diseases would be affected to some extent. For example, exclusion of the general hospitals and their strength would reduce the reported neuropsychiatric admission rate for May from 49 to 34 per 1,000 men per year. However, with the progress of redeployment the relative influence of the general hospital population will decline until large numbers of patients are brought back from the Pacific.

Review of the outlook for Z/I admission rates during redeployment is necessarily inconclusive, and the experience of the assembly stations will be watched with interest. Although there are indications that admission rates for certain diagnoses may increase, there is no basis at present for believing that the incidence of disease will increase generally to any great extent.

ADMISSION RATES OF REDISTRIBUTION STATIONS
AS PERCENT OF RATES FOR ALL OTHER STATIONS IN THE UNITED STATES



MEDICAL ASPECTS OF IWO JIMA OPERATION

The taking of Iwo Jima, as the first breach in the enemy's home defenses, warrants close study from the Army point of view even though the Army played no real part in the operation. Medically the operation is noteworthy chiefly for its casualty experience, one of the most severe of the war, and for the heavy load of evacuation from the objective. On many counts its conduct reveals the effect of lessons well learned in the Marianas. However, certain outstanding problems merit attention:

1. Further improvement in the use of the LST for triage and emergency surgery;
2. The need for hospitalization ashore very early in the operation;
3. The desirability of holding in the combat area patients able to return to duty in a short period.

Airplane spraying of DDT, at first from carrier-based planes, was a notable feature of the sanitary control exercised. The incidence of disease was low, but the proportion of wounded dying of wounds was the highest of any large Marine Corps operation in the Pacific, over seven percent.

The enemy garrison had been estimated in intelligence reports at about 15,000 troops, against whom were debarked 61,000 combat Marines. The total Landing Force, including both Navy and Marine personnel, comprised about 70,000 men. On D-Day, 19 February, about 30,000 men of the 4th and 5th Marine Divisions of the V Marine Amphibious Corps were landed, and all assault forces were ashore by D+5. In the face of a numerically superior force the Japanese, rather than counterattack the beachheads, elected to fight from prepared positions in caves, pillboxes, and underground fortifications in order to exact the highest possible price for the island. The Marines advanced slowly but steadily across the island, splitting the enemy force into two groups on D+8. On 16 March, after 26 days of combat, Iwo Jima was declared secured, but active fighting continued for another ten days. At the conclusion of the operation the count of Japanese dead and captured was 23,000: Marine casualties totalled about 5,460 dead, of whom 22 percent had died of wounds, 14,460 living wounded, and 45 missing. In addition there were about 2,000 casualties among Navy medical and service personnel.

Although Tarawa was more intense in that its average daily casualty rate of 47 per 1,000 strength is more than three times that of 14 for Iwo Jima, the length and intensity of Iwo Jima mark it as perhaps the toughest battle in Marine Corps history. The much longer Marianas Campaign produced about 21,500 Marine casualties but the average daily rate was lower at approximately eight per 1,000 per day. Okinawa was considerably less severe, the average rate through 28 May being about three per thousand men per day for Marine as well as for Army troops. As may be seen from the table below, the medical plan for the operation anticipated a campaign of 14 days during which it was expected that 31 percent of the landing force would become battle casualties. Although the length of the operation was underestimated, and the average daily casualty rate overestimated, the total number of casualties

ACTUAL AND EXPECTED MARINE CORPS CASUALTIES, IWO JIMA

Day	Expected			Actual		
	Percent of Total Force	Number a/		Percent of Total Force a/	Number	
		Total	Dead and Missing		Total	Dead and Missing
D	5.0	3,050	610	3.2	1,963	562
D+1	5.0	3,050	610	1.7	1,013	223
D+2	3.0	1,830	366	1.5	914	218
D+3	3.0	1,830	366	1.3	772	182
D+4 to D+13	15.0	9,150	1,830	12.9	7,869	2,012
D to D+13	31.0	18,910	3,782	20.6	12,531	3,197
D+14 to D+35	-	-	-	12.2	7,438	2,309
Total	31.0	18,910	3,782	32.8	19,969	5,506

a/ Based on the Marine Corps strength landed, 61,000 men. If the 31 percent is applied to the total Landing Force of 70,000 the expected casualties of 22,000 compare with about 21,000 sustained by both Marine and Navy personnel of the Landing Force.

MEDICAL ASPECTS OF IWO JIMA OPERATION (Continued)

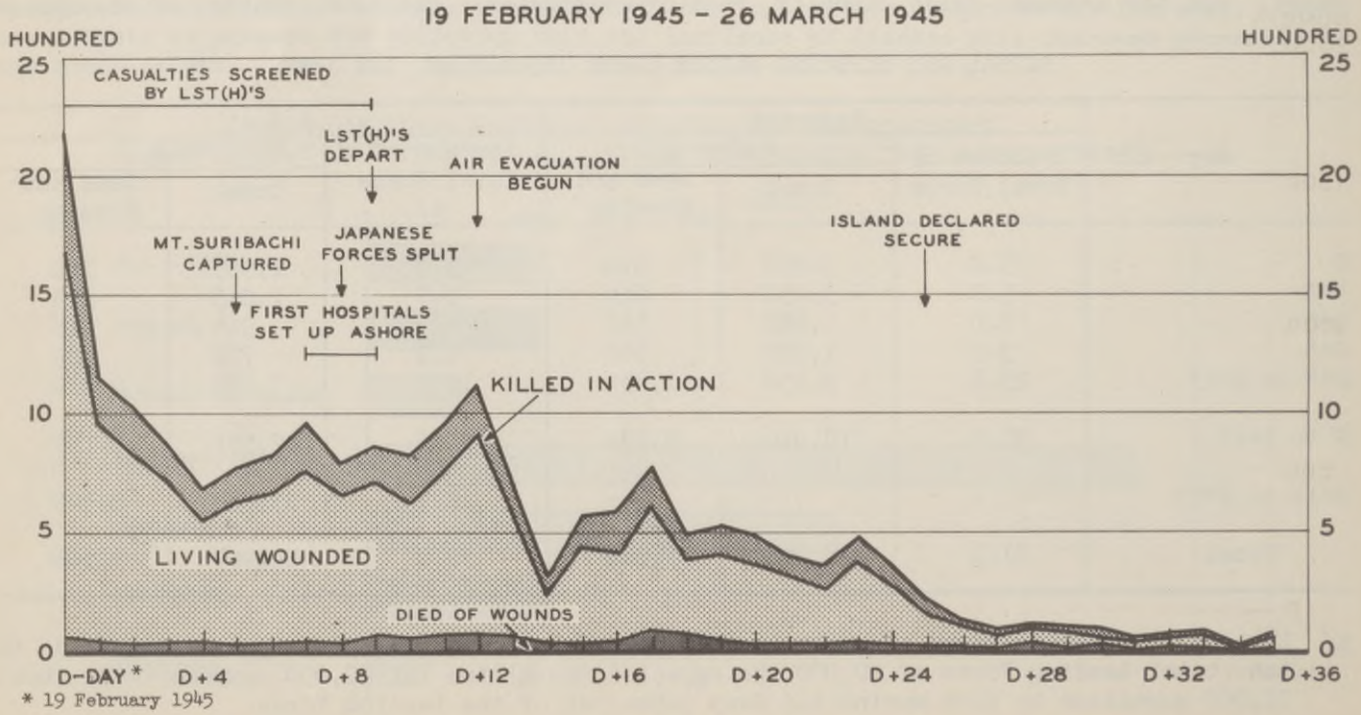
expected closely approximates the number actually sustained. The forecast was relatively accurate with respect to the proportion killed or missing, the observed percentage being 28 and the forecast 20 percent. The daily Marine Corps casualty experience is shown graphically below in absolute form and by type of casualty.

The medical plan called for the use of four specially prepared and staffed LST's to effect triage and administer emergency surgery to patients evacuated from the beaches in small craft, typically LVT's and DUKW's. The LST's were used much more successfully than at Saipan, but the four medical officers and 27 corpsmen provided to each proved insufficient to cope with the great volume of casualties, and additional personnel was drawn from APA's and from one of the Marine divisions. Medical reports on the operation suggest the need for eight medical officers and 37 corpsmen on each LST modified to serve as an off-shore emergency hospital in amphibious operations, or for the temporary attachment of equivalent personnel from hospitals waiting to be sent ashore. Difficulties were also experienced with the pontoon barges used to receive casualties alongside and with the transfer of casualties from the barge to the tank deck. Medical reports propose that doors be cut in the sides of hospital LST's to provide direct access to the tank deck. During the initial assault phase, when the beach evacuation stations were being set up and equipped only with the greatest difficulty, the LST(H)'s treated shock, dressed wounds, placed splints, and administered other forms of first aid in addition to providing emergency surgery and effecting triage to the transports. The first patients were received aboard at H+40 minutes. Then, as later, DUKW's proved extremely valuable for the transportation of patients to the ships off shore. At times they were the only craft available which could negotiate the surf. In addition they picked up patients at hospitals ashore and obviated the necessity for transferring serious cases to boats on the beach. Enlargement of the beachhead gradually permitted divisional medical service to be instituted, but the divisional medical battalions were unable to establish their hospitals until D+8 and D+9. Within the divisional area patients were evacuated along the normal chain with divisional medical battalions furnishing second echelon medical service. Forward of the battalion aid station evacuation was extremely difficult and hazardous because of the unusually rocky, creviced, desolate, and exposed ground on which litter bearers were forced to operate. Ambulance service between the battalion aid stations and the divisional field hospitals was also markedly hampered by the terrain. The difficult and exposed terrain contributed materially to a high casualty rate among forward medical personnel. Losses among divisional medical personnel were extremely heavy and the 4th and 5th Marine Divisions were offered a corps medical company on D+5 for replacement purposes.

Crowded and difficult beach conditions prevented the landing of corps installations during the first days of the assault, and never during the operation did these units have

MARINE CORPS CASUALTIES DURING IWO JIMA OPERATION

19 FEBRUARY 1945 - 26 MARCH 1945



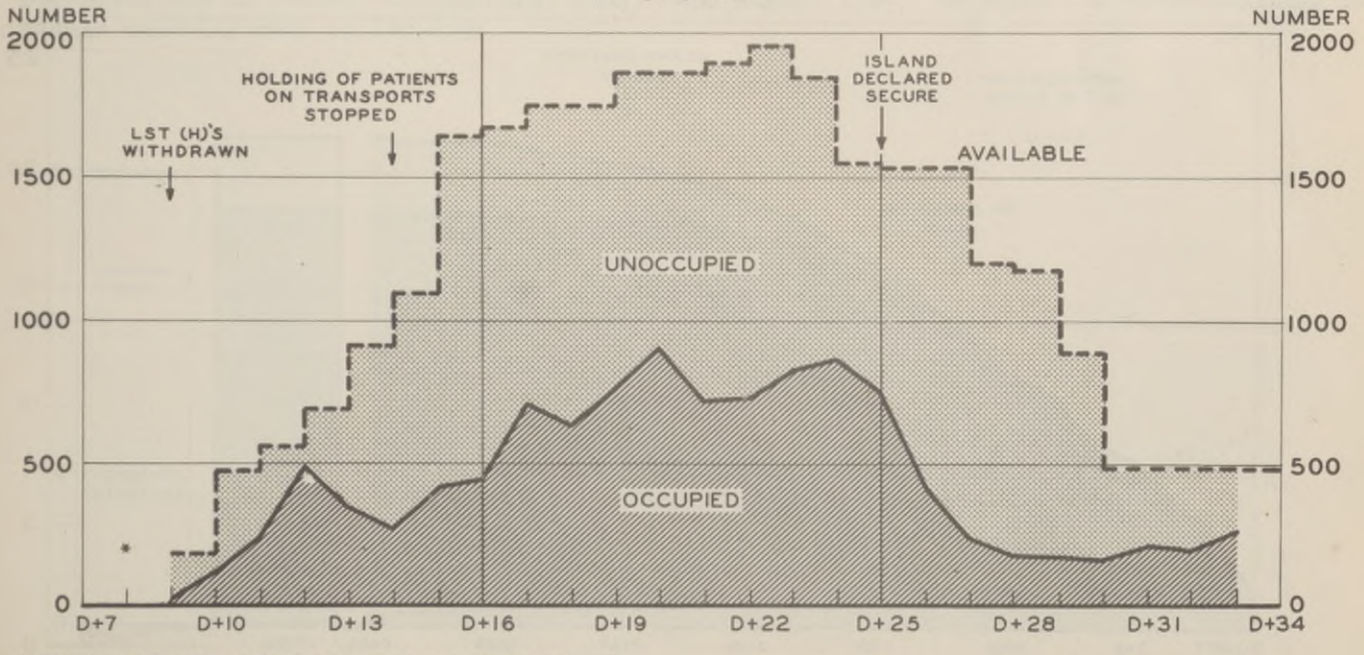
* 19 February 1945

MEDICAL ASPECTS OF IWO JIMA OPERATION (Continued)

adequate space. Three medical units were attached to the V Amphibious Corps to augment the divisional medical services: a medical battalion, an evacuation hospital, and an Army field hospital. This was the first time the Navy had used its new evacuation hospital. One company of the corps medical battalion established the first corps hospital on D+7, providing specialized neurosurgical and ophthalmological care. Strengthened by a divisional neuropsychiatrist, it also provided a facility for controlling the disposition of all neuropsychiatric patients. The other two companies set up a hospital in support of the Third Marine Division and began to receive casualties on D+11.

Although it had been planned that each combat division should have the support of a corps hospital, the evacuation hospital which had been provided for the 4th Division was not needed in exclusive support of the 4th Marine Division largely because this division had ready access to evacuation facilities on the beach and at the airfield, and its own divisional hospital facilities proved adequate. In consequence this unit, which established two small hospitals beginning on D+8, provided only highly specialized surgical care to the 4th Marine Division and was able to accept patients from the other divisions, from among corps troops, and from the air evacuation unit after their rejection as air evacuees. One section also provided an orthopedic service for all troops. The Army field hospital which opened on D+12 was used in support of the Fifth Marine division and was the farthest forward of the three corps hospitals. Reinforced by two surgical teams drawn from a station hospital provided for the garrison force, it bore the brunt of the heavy toll of casualties endured by this division. Also designated by plan to care for civilian and PW casualties, it was spared any civilian casualties by the evacuation of all civilians from the island prior to the assault. To a large extent heavy operative loads were shared by the corps hospitals under the coordination of the corps surgeon. With the opening of the first corps facilities it was possible for all initial surgery to be performed ashore, and the four LST(H)'s departed the target area on D+9 carrying evacuees, after having processed 6,100 patients in ten days. Throughout the operation hospital capacity was never taxed, as seen in the chart below which includes divisional as well as corps hospital capacity. The transports also provided a considerable holding capacity afloat, permitting an unreported number of patients to return to duty in the combat area. Until D+14, when the directive was rescinded, patients requiring less than two weeks to fit them for duty were to be retained aboard ships in the target area until facilities ashore could receive them. The opportunity for such transfer never presented itself and on D+14 the landing force command requested that such patients be evacuated to base areas. Under the plan departing ships had been transferring to remaining ships any patients expected to be fit for duty within the prescribed interval. This could have been prevented had triage been effected with this likelihood in mind, patients being placed on specific ships, preferably the AK's scheduled to remain longest at the objective.

BEDS AVAILABLE AND OCCUPIED IN CORPS AND DIVISIONAL MEDICAL UNITS
IWO JIMA



* An unknown number of beds were available on D+7 and D+8.

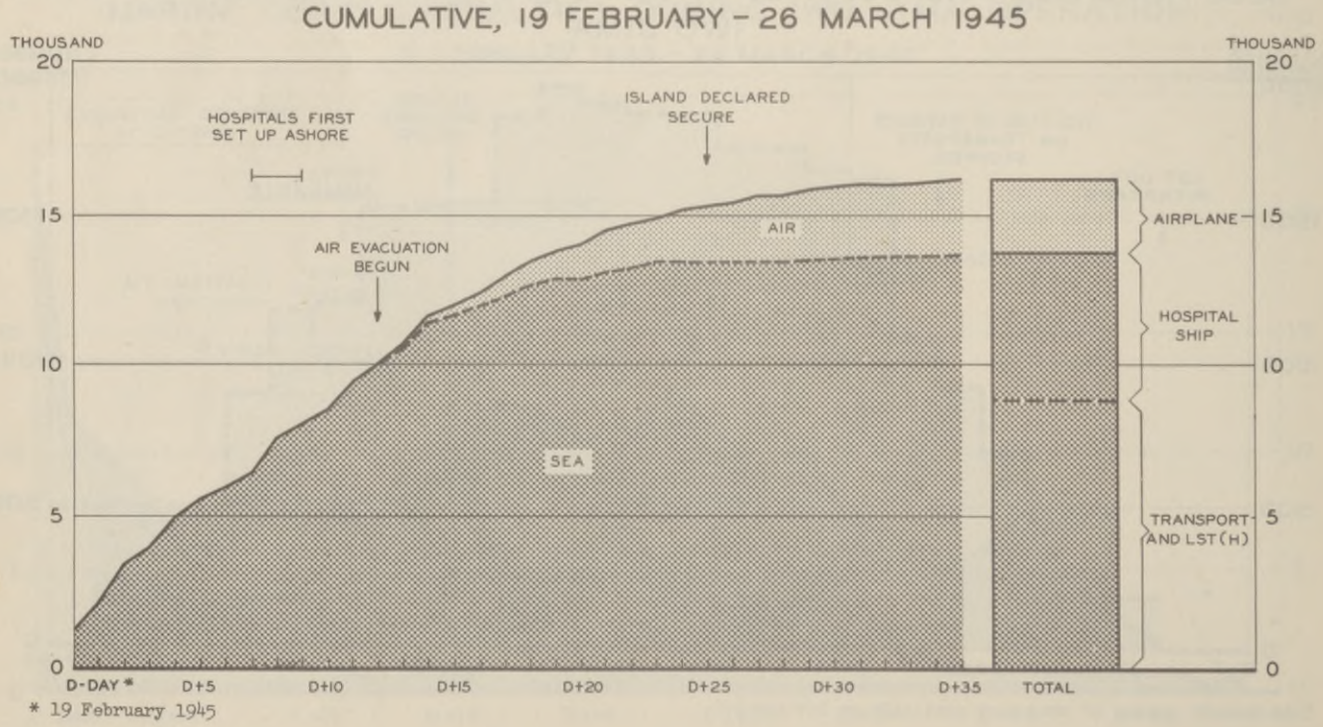
MEDICAL ASPECTS OF IWO JIMA OPERATION (Continued)

Navy medical reports on the Iwo Jima operation reveal comparative satisfaction with evacuation procedures and results. Shore to ship evacuation presented certain difficulties mentioned above in the discussion of the LST(H)'s, and the lack of hospital facilities ashore early in the operation caused constant concern lest bad weather intervene to prevent the embarkation of patients. For the first five days patients were evacuated from the beaches to ships at a rate of almost 1,000 daily. The first hospital ship arrived on D+1, departing with 623 patients on D+2. Two others arrived and departed on D+5 with 868 patients. On D+6 nine transports retired with 1,469 patients, bringing the total to about 3,000 evacuees. By D+12, when air evacuation was begun, 8,200 patients had been evacuated. The accompanying chart shows the progress of evacuation in cumulative form. In all about 16,200 patients were evacuated to both Army and Navy facilities in the Marianas. Hospital ships provided roughly 30 percent of the total lift, transports 55 percent, and air 15 percent. Five hospital ships had made in all nine trips by D+23, their last departure date.

Air evacuation, which also provided 15 percent of the lift on Saipan, had been inaugurated there without proper medical screening of patients. However, on Iwo Jima air evacuation was conducted in excellent fashion, and there were no deaths aboard the planes. Patients were screened for air evacuation both at the hospital making the transfer and at the evacuation unit on the airstrip. About 2,500 patients were evacuated by air by D+35, or about 100 per day, twice the expected lift of 50 per day. On each of five days more than 200 patients were evacuated by air. There were times when air provided the only means of evacuation from the island because of unfavorable conditions at sea or lack of facilities afloat.

Although the volume of patients evacuated is noteworthy and was apparently handled satisfactorily, it represented a considerable loss to the landing force. A sample of 3,700 casualties who passed through one evacuation station provides a basis for estimating the approximate cost of the extensive evacuation. Forty percent of this group was estimated to need less than 14 days of treatment and an additional 37 percent between 14 days and one month. If these proportions held true for all the evacuees, realization of a 14-day evacuation policy would have made it possible to return to duty in the target area 6,500 of the 16,200 actually evacuated. Reference to curves of the rate at which patients generally return to duty (see HEALTH for February 1945) yields a somewhat lower estimate of 4,500 to 5,000, but this also is considerable. The shorter the operation, of course, the less point there is in holding patients for return to duty in the combat area, but it seems essential that methods be provided for insuring that such high relative losses not be sustained by the Army in the landing operations to come (see HEALTH for April 1945). Taken in relation to the number of wounded, the number of evacuees of all types was even higher for Iwo Jima than for

PATIENTS EVACUATED FROM IWO JIMA
CUMULATIVE, 19 FEBRUARY - 26 MARCH 1945



* 19 February 1945

MEDICAL ASPECTS OF IWO JIMA OPERATION (Continued)

the Marianas Campaign. The Iwo Jima ratio of one evacuee for one wounded contrasts with 0.9 evacuee for one wounded during the Marianas Campaign.

Available naval medical reports make no critical evaluation of surgical care, but there are several factors which bear upon this question. One is that 7.8 percent of the wounded are recorded as having died of wounds, higher than in any other large Marine operation in the Pacific. Another, more favorable, is that ample quantities of whole blood, blood plasma, and serum albumin were available and used. Prior to departure from Saipan all ships were issued supplies of whole blood and one LST designated as a blood bank. During the operation whole blood was available from the Navy's advanced blood bank on Guam, about 4,000 pints having been received and issued at Iwo Jima. Serum albumin was felt to have definite value to front-line medical units.

Tetanus, which occurred frequently among PW and civilian casualties on Saipan and Tinian, was not encountered at Iwo, perhaps because of routine administration of antitoxin to captured enemy wounded. Also, the relatively high incidence of gas bacillus infection among U. S. wounded observed on Saipan and Tinian was lacking in the Iwo Jima operation, according to preliminary Navy reports.

In view of the large number of battle casualties it was fortunate that disease hazards were minimal or well controlled. The health of the force has been described as excellent throughout the operation. Noneffectives from nonbattle causes increased gradually to about 3,000 on D+18 and remained at that level throughout the remainder of the operation. Sanitation was satisfactory, and there were no important outbreaks of intestinal diseases or other epidemics. There was no evidence of the existence on the island of malaria, dengue, filariasis, typhus, cholera, plague, smallpox, diphtheria, or venereal disease. The chief problems of sanitation centered about the disposal of the dead, of human excreta, and of ration tins and food remnants. Galleys were not permitted to operate until screening was completed, and only the water brought in for drinking purposes was authorized as such. DDT was widely used for hand-spraying against insect vectors of disease, and on D+9 two carrier-based planes began distribution by air and continued as the tactical situation permitted. By D+22 it was possible to employ land-based planes from Saipan for this purpose. One was slightly damaged by enemy fire. Immediate and striking in its effect upon adult flies, airplane distribution of DDT was properly regarded as an adjunct to, not a substitute for, the indispensable land-labor methods of field sanitation.

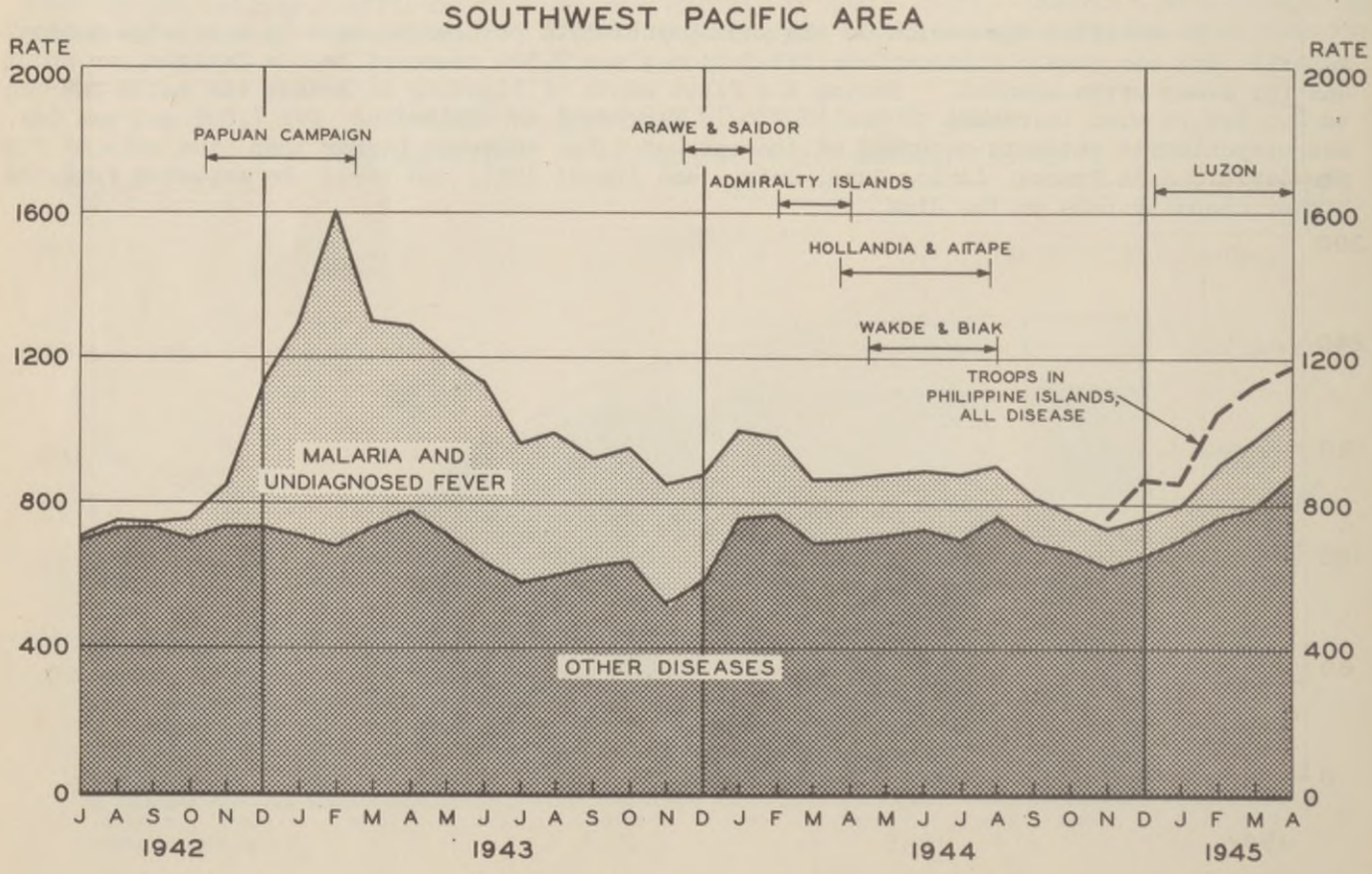
No detailed discussion of the neuropsychiatric problem appears in available medical reports, but one possibly incomplete tabulation gives 2,300 cases of battle fatigue, or about one for every seven wounded. During the first month of fighting in France the ratio was one to 8.5 but it soon increased to one to 4.6. Expressed as admissions per 1,000 men per day, neuropsychiatric patients occurred at the rate of 1.6, somewhat higher than the rate of 0.9 for divisions in France during June, July, and August 1944, as would be expected from the higher casualty rate on Iwo Jima.

CURRENT DISEASE PROBLEMS IN THE PHILIPPINES

Although the active phase of the Leyte Campaign was completed without the development of a serious disease incidence in the Philippines, with the invasion of Luzon admission rates for disease began a sharp upward climb to a level unprecedented since admission rates for malaria were brought under control in 1943. The chart at the bottom of the page outlines the trend of morbidity in the Southwest Pacific, making it plain that the phenomenally high rates of early 1943 were a direct consequence of the failure to control malaria. The current high rates, in contrast, are based upon other diseases which in aggregate now cause proportionately more admissions than ever before in the history of the theater. Although the future trend of disease incidence in the Southwest Pacific cannot be predicted with confidence, it has surely advanced to an entirely new level which challenges the best efforts of both preventive medicine personnel and command. In essence, troops have been placed in a densely populated region among friendly but disease-ridden people practicing poor sanitation and despoiled by war and the Japanese occupation. The rise in morbidity is of special importance in the light of the use of the Philippines as a staging area for U. S. forces and also as an indication of some of the problems likely to be encountered in densely populated Asiatic territories in the future. No restriction is placed upon fraternization with civilians.

Changes in admission rates for venereal disease, hepatitis, and diarrheal disease are spectacular. Malaria and undiagnosed fevers also have increased in incidence, and many other diseases are now being reported either for the first time in the Southwest Pacific or more frequently than before the Philippines were retaken. The charts on the opposite page summarize the recent trends in the more common diagnoses of interest and provide a comparison of rates for troops in New Guinea, for Sixth Army forces on Luzon, and for all troops in the Philippines. The panel for venereal disease has only one other parallel during the war, namely the experience of the Mediterranean Theater after the invasion of the Italian mainland and the fall of Naples (see HEALTH for March 1944). The entire theater rate moved from five in January to 84 per 1,000 men per year in April under the impact of the rise in Philippine rates from two to 113 in this period. In the Mediterranean Theater the rates advanced from an average of 35 to 40 for the first nine months of 1943 to 53 in October, 83 in November, and 121 in December. Forces in New Guinea continued to have satisfactorily low admission rates. Although Manila is undoubtedly the source of the majority of infections, all areas are contributing to the gravity of the problem as troops increasingly mingle with the friendly civilian population. Long service in New Guinea has made for a degree of sexual starva-

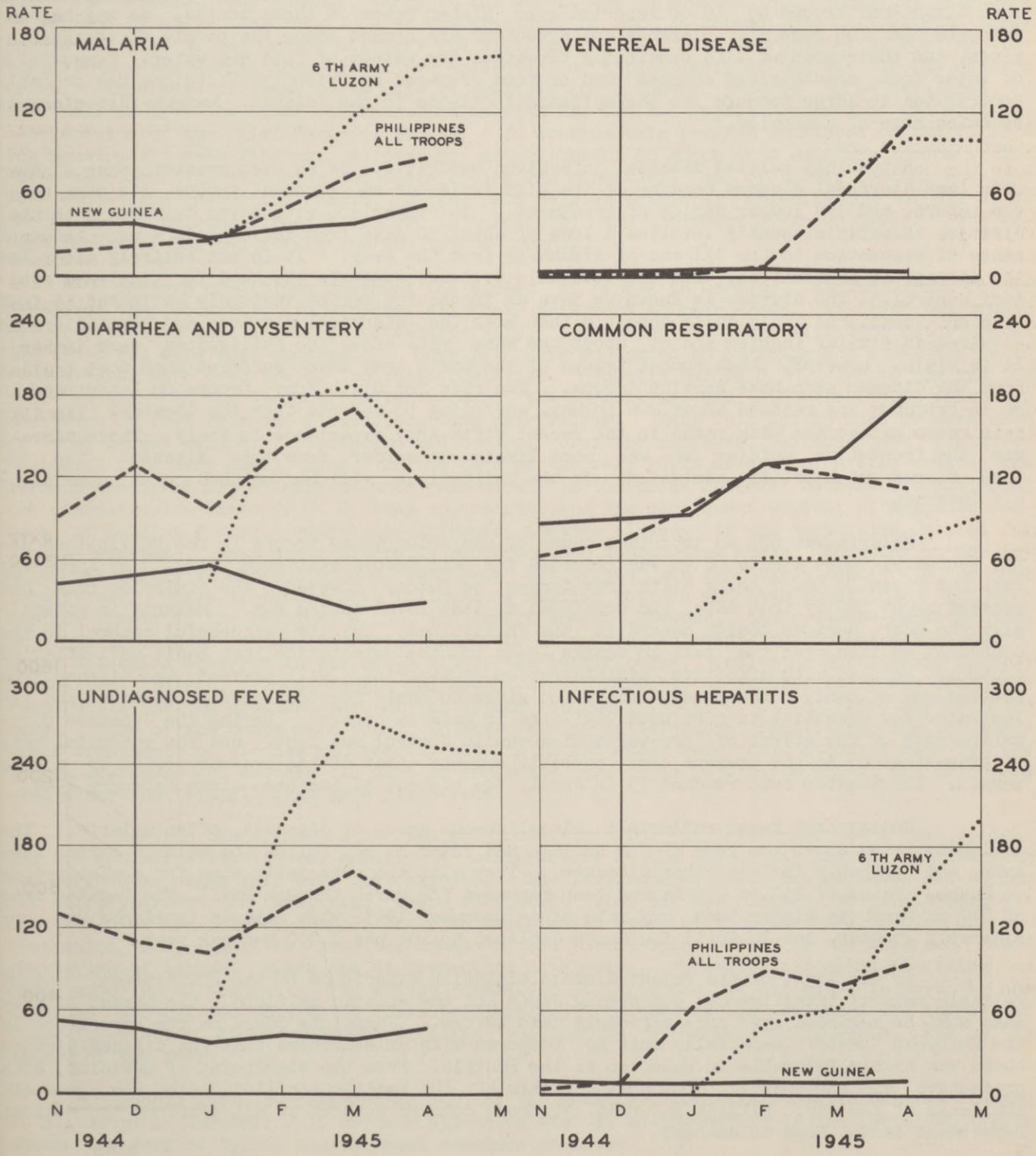
DISEASE ADMISSIONS PER THOUSAND MEN PER YEAR, SOUTHWEST PACIFIC AREA



CURRENT DISEASE PROBLEMS IN THE PHILIPPINES (Continued)

tion in the troops stationed in the Philippines, where the conditions now favor sexual exposure. The venereal disease rate among civilians is high, and civilian destitution is common. Prostitution is widespread. Manila, to which large numbers of troops have access, lacks adequate recreational facilities but affords large quantities of alcohol. The failure of medical examination of prostitutes as a venereal disease control measure is again well proven here. Much more emphasis must be placed upon recognized and accepted venereal disease control measures if the current epidemic is to be curbed. With theater concurrence The Surgeon

ADMISSIONS PER THOUSAND MEN PER YEAR, SELECTED DISEASES
SOUTHWEST PACIFIC AREA



CURRENT DISEASE PROBLEMS IN THE PHILIPPINES (Continued)

General sent to the Philippines military and civilian venereal disease specialists from his staff to survey the situation and to consult with theater authorities. Numerous recommendations have been made, some of which have already been acted upon, and others of which are being further developed. Four additional venereal disease control officers have already been sent to Manila.

Diarrheal disease was moderately prevalent in the Southwest Pacific prior to the invasion of the Philippines, admission rates of 40 to 65 being reported during the first nine months of last year. After a steady rise in November and December the admission rate for the theater as a whole reached 119 in March, above the previous peak of 113 registered at the height of the Papuan Campaign in December 1942. For troops in the Philippines the initial admission rates of 85 to 130 were superseded by rates of 141 and 171 in February and March, and Sixth Army troops on Luzon reported even higher rates in these months, as may be seen from the chart on page 27. Diarrhea and dysentery are common among the people of the Philippines, and their mode of life constantly threatens the safety of food and water. Consumption of water from unauthorized sources and of food prepared by friendly Filipinos has probably contributed in large measure to the epidemic incidence in the Islands. Amoebic dysentery is becoming more of a problem.

A possibly related disease, infectious hepatitis, is an even greater cause of concern than diarrheal disease because of its high incidence among combat troops, its more serious nature, and its longer period of treatment. In comparison with seven days for diarrheal disease, hepatitis usually involves a loss of about 30 days from duty and is a more frequent cause of evacuation to the Z/I and of discharge from the Army. It is not entirely clear how the disease is transmitted, but the available evidence suggests the need for tightened sanitary control. The disease is known to have an incubation period variously estimated at four to eight weeks, and it is quite possible that both the diarrheal diseases and hepatitis were acquired in similar fashion and at about the same rate after the Philippines were invaded. It is plain, however, that combat troops of the Sixth Army have suffered much more heavily from the disease than have service troops. The rate for Sixth Army troops on Luzon rose to 50 in February and reached about 200 in May. according to reports from the theater. The current rates exceed the peak rates in the recent Fifth Army experience in Italy. There also it was the front-line soldier who was most likely to suffer from this disease. The future course of hepatitis admissions in the Philippines will be watched with considerable interest.

Malaria was not an important cause of admission among troops in the Philippines until February, when a rate of 48 was recorded for all troops stationed there. By April the rate had risen to 86. Among Sixth Army forces on Luzon, however, the admission rate had reached about 160 by that date, and continued at that level during May. Malaria is potentially the most serious health hazard in the Philippines, but its successful control in the Southwest Pacific over the past 18 months leads to the expectation that basic anti-malarial control, coupled with effective administration of atabrine, will prevent the disease from getting out of hand. The present situation gives no basis for complacency, however, and illustrates how essential is continued vigilance in malaria control. During the Japanese occupation much of the effect of pre-war anti-mosquito control was lost, and the potential rate of transmission at the present time probably exceeds that of the pre-war period by a wide margin. The theater rate reached 75 in April, the highest it has been since February 1944.

Undiagnosed fever reflects a miscellaneous group of diseases, often malaria. The admission rates shown on page 23 for undiagnosed fever do not follow the malaria curve, however, and probably include other diseases. They also are especially high for combat troops on Luzon, rates of 250 to 275 having been reported for March through May. The theater rate of 117 in March is higher than any rate since December 1943 when malaria incidence was considerably greater, but in April incidence declined to 104 per 1,000 men per year.

In the light of the recent disease admission experience of the Philippines, and of reliable medical intelligence concerning Japan and the Asiatic mainland, the threat of disease must be regarded even more seriously than before. Judgments based on the experience in the European Theater especially must be tempered with an awareness that the disease picture there was highly favorable in relation to the Pacific. From the standpoint of medicine, both preventive and therapeutic, the coming phases of the Pacific conflict offer the greatest challenge of the war. Without informed, vigorous command support at all echelons the Medical Department cannot hope to succeed.

TYPHUS IN GERMANY

United States troops first encountered typhus fever among civilians in Germany during March 1945, and by the end of May 12,100 cases had been reported in 301 localities in the American occupied territory alone. Many other cases probably have not been recognized because of concomitant symptoms of other diseases and because of advanced starvation. Moreover, in British and especially in Russian occupied territory the incidence is perhaps even higher. Although there have been only a few mild cases among U. S. troops, who are louse-free and also protected by immunization, its prevalence in the civilian population of Germany makes typhus a real menace to the health and well-being of Army troops. The vigilant control presently in effect appears to be highly successful, but the decisive test will come only with cold weather in the fall and winter.

Typhus has always existed in Europe, especially in the eastern part, notably Russia, the Balkans, and Poland. Early in the war it was introduced into Germany by prisoners of war and by slave laborers. Under the pressure of war it spread not only within these groups but also to the German military and civilian population. Unprotected by routine immunization, the German Army sustained epidemics of typhus early in the war on the eastern front. Knowledge of these facts made it possible for a control program to be developed in the fall of 1944 by SHAEF in consultation with the U.S.A. Typhus Commission and with the coordination of the Chief Surgeon, ETOUSA. In outline this program consisted of the following measures: case finding; delousing; establishment in March of a sanitary cordon at the Rhine where routine delousing and disinfesting was mandatory; use of border control stations for processing returning French, Dutch, and Belgian patriots; immunization of all U. S. troops and of persons directly exposed to infection; and treatment of known cases. The effectiveness of DDT has revolutionized typhus control.

Certain conditions fostered the spread of typhus in Germany. As the German forces retreated they attempted to withdraw all their prisoners to rear areas. At first the transfer of prisoners was accomplished successfully, but as the military situation deteriorated the transfers were less successful. Some prisoners succeeded in escaping and a few scattered typhus cases have been traced to these fugitives. Shortly before U. S. troops reached the zone adjacent to the Czechoslovakian border, the Germans marched 12,000 to 15,000 prisoners southward on foot from the Flossenberg Camp near Weiden. Many fell bytthe road or were shot if they lagged behind. Discipline and control over the marchers collapsed and fugitives scattered into many small towns. In the face of the very rapid advance of Allied armies, the Germans abandoned any attempt to move prisoners. In the brief interval between liberation of the concentration camps by U. S. Army spearheads, and the subsequent arrival of adequate numbers of holding forces, many louse-infested inmates already in the incubation period for typhus "escaped". Many camps literally exploded into surrounding areas. Rounding up the inmates was partly successful around each camp but typhus was thoroughly seeded in numerous localities. These instances have followed a similar pattern and have constituted the most serious threat in the British, U. S., and French areas. However, the epidemic remained more or less localized in the industrial areas or in regions adjacent to concentration camps. Major epidemics occurred in virtually all of the larger camps, including Buchenwald, Dachau, Nordhausen, Belsen, Flossenberg, and Mauthausen. Directly or indirectly these camps are responsible for the greater part of the typhus reported in the U. S. occupied part of Germany. Some of the camps were found to have fairly satisfactory facilities for the large scale treatment of clothes and bedding but in no instances were real attempts made by the German overseers and doctors to curb or eradicate the louse population among the prisoners even after the initial cases were discovered.

Despite the existence of favorable conditions for the development of a real epidemic, the general situation was relatively satisfactory at the end of May instead of alarming and serious as might well have been expected. The incidence of new, active cases has fallen off sharply except in localities where sufficient time has not elapsed to permit complete harvesting of the primary crop of civilian cases which resulted from the infiltration of concentration camp fugitives into the homes of the townspeople. Despite the wide and rapid scattering of typhus, there are at present no developing, spreading epidemics in cities or camps under U. S. control. The abrupt cessation of incidence is explained in part by the vigorous control measures which have been applied, in part by the continued low degree of louse-infestation in the general civilian populations of Germany and Austria, and by the season of the year.

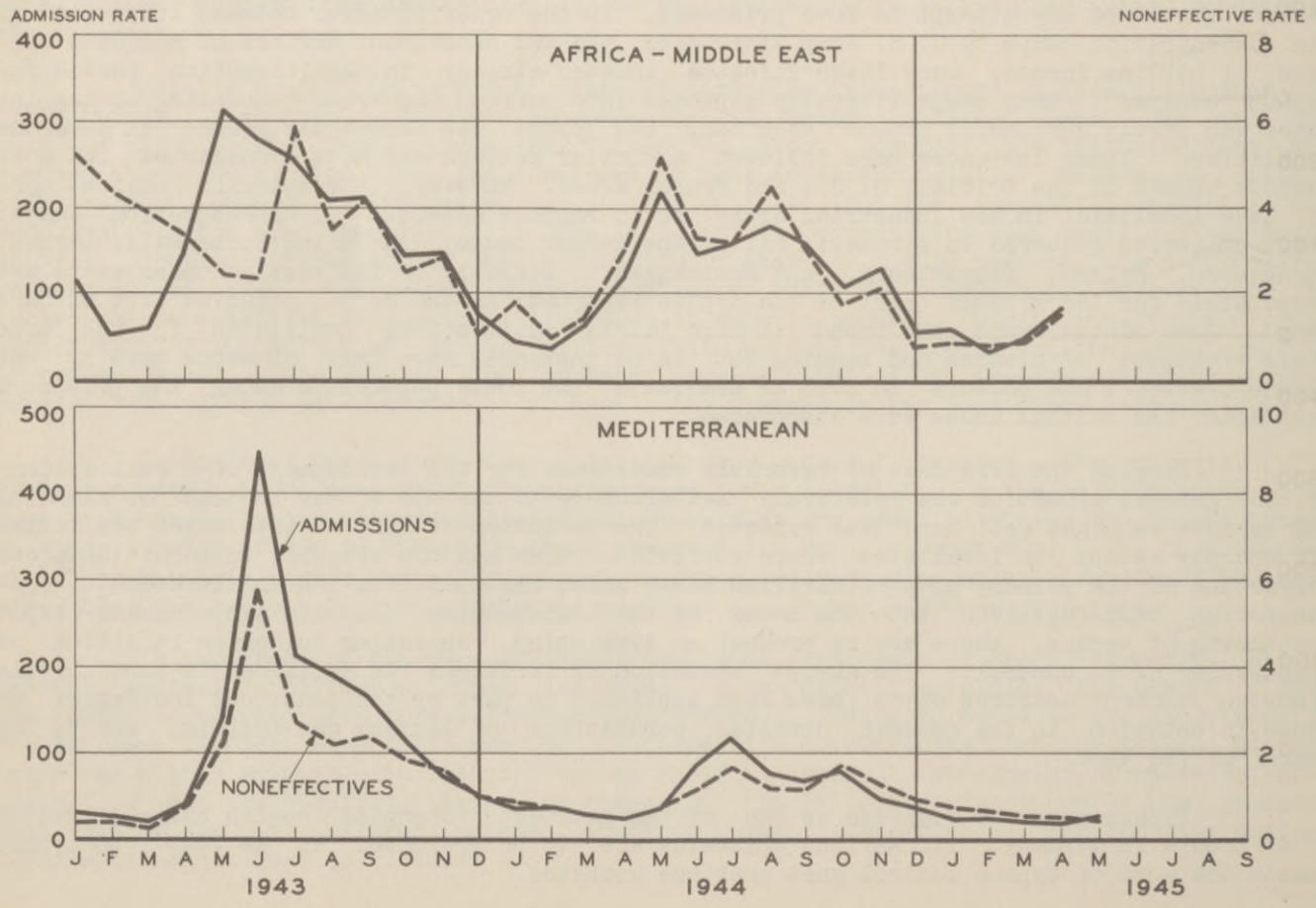
Typhus must be regarded as one of the greatest potential health hazards facing U. S. troops in Germany. If serious epidemics are to be prevented in the 1945-1946 typhus season the work of typhus control must continue unabated.

DIARRHEA AND DYSENTERY OVERSEAS

The diarrheal diseases present a serious and continuing problem to Army forces overseas. In most base areas sanitary control is good, but excessively high rates are characteristic of the Asiatic theaters, of the Philippines, and of the Africa-Middle East Theater. The chief dangers now lie in forward areas, especially in the Pacific, where operations in territory heavily populated by peoples of primitive sanitary standards will require rigid command control if high noneffective rates are to be avoided. The recent experience of the Southwest Pacific Area underscores this warning. As may be seen from the chart below, a reasonably low theater rate was maintained in 1944 prior to the invasion of the Philippines. Thereafter, both admissions and noneffectives rose rapidly to entirely new heights, the March rate of 119 being the highest in the history of the theater. The April rate of 90 represents a definite improvement, but only more stringent regulation of the sanitation of the troops in the Philippines can be expected to keep diarrheal diseases under control in this important staging area, where the rates are, of course, even higher than the theater rates, as discussed on pages 22 to 24

The potentially explosive character of diarrheal disease is illustrated by the 1943 epidemic in North Africa, when the theater reported an admission rate of 445 per 1,000 men per year. Such sharp epidemics have usually been confined to smaller areas, but certain theaters have very marked seasonal variations. Perhaps the most characteristic is that of the Asiatic theaters, where the April rise to a rate of 116 marks a further development in the direction of the seasonal peak usually registered in July. It should be noted, however, that the Asiatic rates for the first four months of 1945 are well below those for the comparable months of 1944, and that the January and February rates are the lowest ever recorded in these theaters. The rate in the Africa-Middle East Theater increased by 80 percent during April, but it is far below the April rates for 1943 and 1944. There are as yet no indications of a serious rise in incidence in the Pacific Ocean Areas. Consolidated medical reports from that theater do not include the Okinawa operation, however, and preliminary radio reports suggest a sharp rise in admission rates for the Pacific Ocean Areas during the last week in May. Preventive measures taken during the invasion of Okinawa include airplane spraying of DDT and it is hoped that incidence may have been reasonably well controlled.

DIARRHEA AND DYSENTERY, ADMISSIONS PER THOUSAND MEN PER YEAR AND AVERAGE NONEFFECTIVES PER THOUSAND STRENGTH

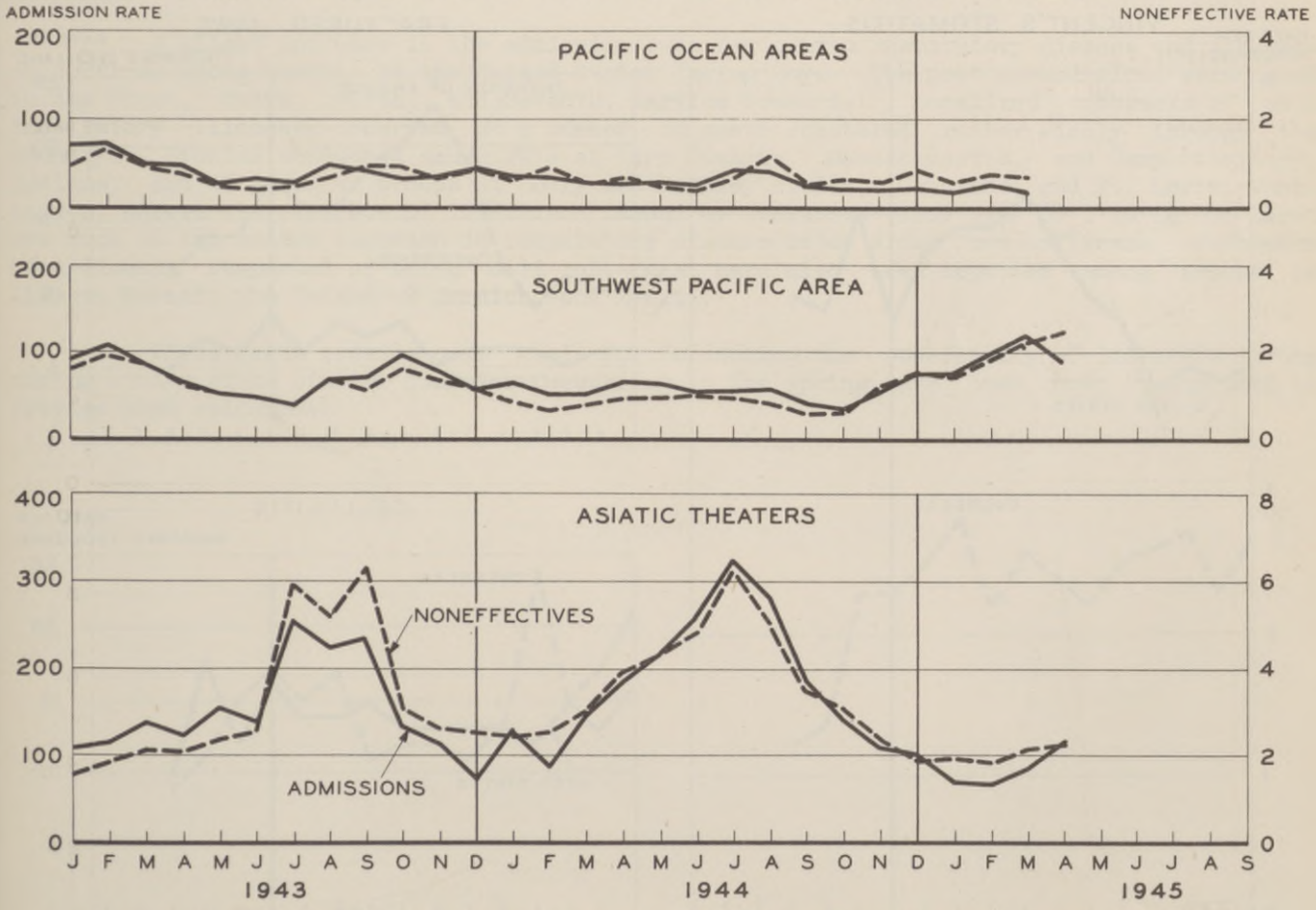


DIARRHEA AND DYSENTERY OVERSEAS (Continued)

The charts below and on the preceding page give the noneffective as well as the admission experience for those theaters in which diarrhea and dysentery constitute an important problem. It will be recalled that the noneffective rate represents the admission rate modified by average time lost. Fortunately the diarrheal diseases require relatively short lengths of treatment, 1944 figures being about 7 days for diarrheal disease and 14 days for all disease, for example. This fact operates to limit the noneffective rates for diarrheal diseases. Although the April noneffective rate of 2.4 per thousand men per day in the Southwest Pacific is a new peak for that area, no theater reports current noneffective rates as high as those of 4.0 and 3.0 recorded by the Asiatic and Africa-Middle East theaters in April 1944. The Asiatic rate of 2.2 for April 1945 was far above the noneffective rate for any other communicable disease, and this was also true in the Southwest Pacific. However, the noneffective rate of 3.6 for neuropsychiatric diseases in the Southwest Pacific was substantially above that of 2.4 for diarrhea and dysentery.

The magnitude of the diarrheal disease problem, especially at this time of year in certain of the theaters, calls for the most stringent controls possible. Larger proportions of troops will move into the forward areas of the Pacific where the environmental hazards are already serious, and possible areas of future operations, notably the Asiatic mainland, will be even more hazardous than regions now occupied. In order to control the incidence of diarrheal diseases, such measures as the following must be taken and strictly enforced: prohibitions on the consumption of unauthorized food and water; sanitary control of camp-sites and facilities; careful selection and supervision of all persons connected with food handling and dispensing; control of flies; treatment of water; disinfection of raw fruits and vegetables; proper sterilization of mess utensils; strict individual sanitary discipline; and application of the newer chemical and mechanical methods, including newer Army laboratory methods for detecting infected food handlers, described in recent Army publications.

DIARRHEA AND DYSENTERY, ADMISSIONS PER THOUSAND MEN PER YEAR AND AVERAGE NONEFFECTIVES PER THOUSAND STRENGTH



DISEASE AND INJURY

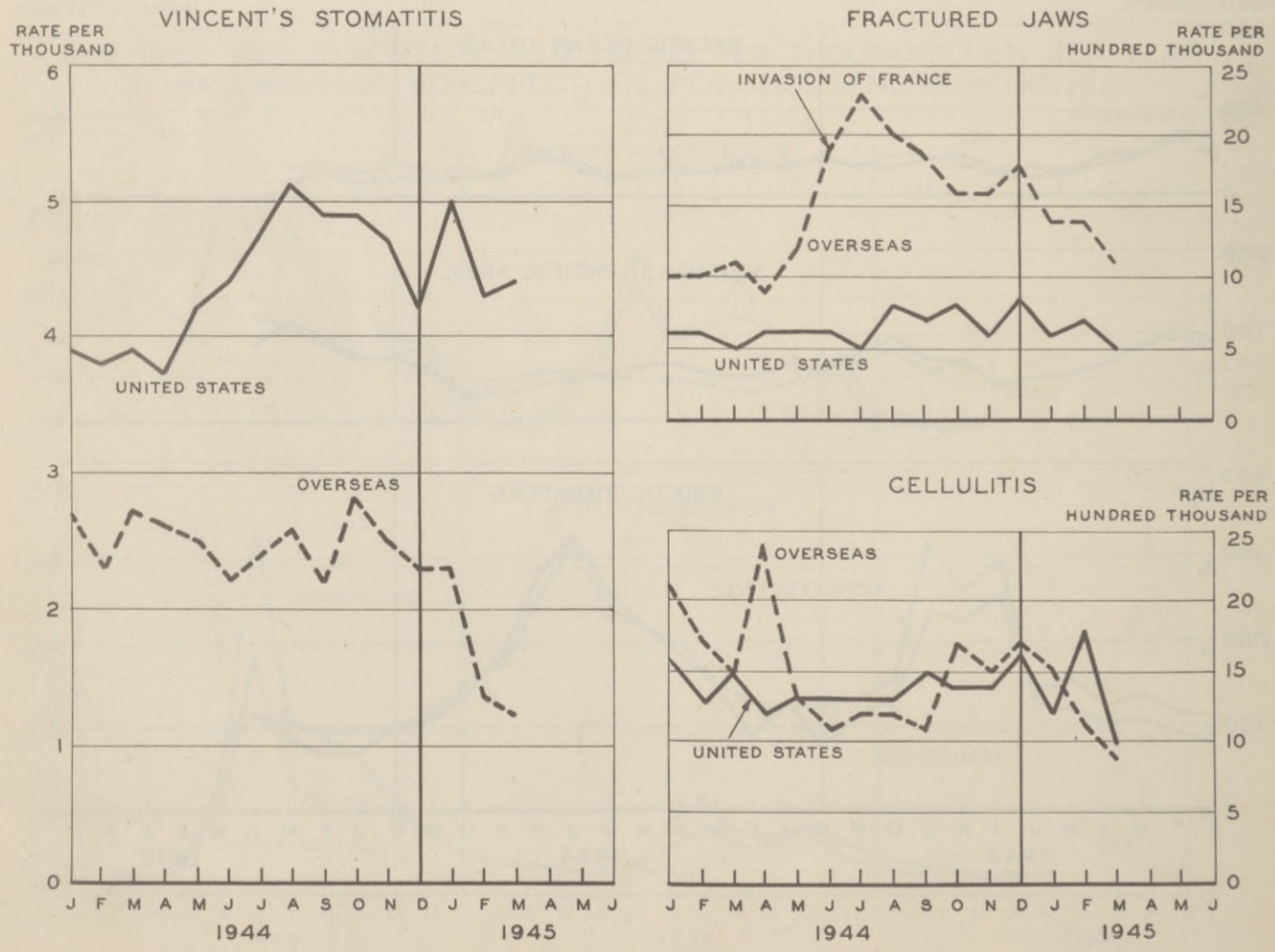
DENTAL INFECTION AND INJURY

Vincent's Stomatitis, or trench mouth, has presented no serious problem during this war, either overseas or in the United States. Except in the European Theater the rates in overseas theaters have been consistently lower than in the Z/I. Following a sharp rise in March and April of 1943, the overseas rate fluctuated about an average of only 2.5 per thousand per month until February and March of this year, when it fell to around 1.5. The overseas incidence is usually higher in areas where troops are in relatively close contact with the civilian population. The rate of admission in the United States has generally run higher, in some months even reaching a level two or three times that for overseas. In this war there is no evident relationship between combat and the frequency of Vincent's Stomatitis.

In contrast, the rate for fractured jaws does reflect combat activity to a marked degree. The perpendicular rise in jaw fractures overseas during June and July 1944 vividly portrays the invasion of the Continent. During the early part of that year, the Mediterranean Theater had high rates ranging from 15 to 23 per 100,000, while in the remaining theaters rates were well below 10. The Mediterranean rate fell rapidly after November 1944, while the European Theater maintained rates of 15 to 26 throughout the latter half of that year. The rate for the Southwest Pacific Area has fluctuated widely but has never exceeded 18. The United States level has ranged narrowly between the low rates of five and eight per 100,000

Cellulitis, a result of dental infection, has been slightly more frequent among overseas troops during 1943 and 1944 than among troops in the Z/I. After its rise to a peak of 24 per 100,000 per month in April 1944, the overseas rate declined to approximately that for the United States. The high rates in January and April 1944 resulted from increases in the European Theater during the pre-invasion months when large numbers of U. S. troops arrived in England. In April, the European rate had risen to a figure as high as 40. There is no apparent relationship between the rate for cellulitis and combat activity.

DENTAL INFECTION AND INJURY PER 1,000 OR 100,000 MEN PER MONTH



HEALTH BRIEFS

Medical Units for Wound Ballistics Studies

In previous reports in HEALTH (cf. issues of April and May) it has been shown that certain problems require observational data obtainable only by skilled medical wound ballistic teams. Small units of this type did limited but valuable work on Eighth Air Force casualties, work which led to the development of a T/O which has been offered in modified form to the Pacific theaters. One illustration of the value of such studies among combat air crews is contained in a report of the Engineering Division Headquarters, Air Technical Service Command, making the following recommendations:

"Recommendations:

1. That the Armament Laboratory, Engineering Division, Air Technical Service Command, re-examine the basis for installing anti-flak armor only on the under surface of aircraft and consider means of concentrating the weight of armor intended to protect personnel more closely around the vicinity of individual crew positions.

2. That the Ordnance Department undertake the construction of body armor which meets the anatomical requirements for protection more closely than the present flak suit.

3. That the Ordnance Department develop a neck protector for optional use with the present flak suit.

4. That indoctrination of combat crews by personal equipment officers in the use of body armor stress the importance of wearing the armor conventionally wherever possible."

Influenza

A slight increase in the admission rate for common respiratory disease and influenza occurred among troops in the United States during May. The most marked rises were noted in the First, Third, Fifth, and Seventh Service Commands. Localized outbreaks of mild respiratory illnesses occurred at a number of posts scattered rather widely through the country. Studies conducted among PW's at Camp Edwards, Massachusetts, and Camp Atterbury, Indiana, and of American troops at Lowry and Buckley Fields, Colorado, and Ft. Lewis, Washington, showed the presence of infections caused by influenza virus Type B. It is not known how much of the entire increase in respiratory disease rates arose from influenza. Outbreaks of a disease suspected of being mild influenza have also been reported among troops in Alaska, Hawaii, the Island of Jamaica, and Brazil.

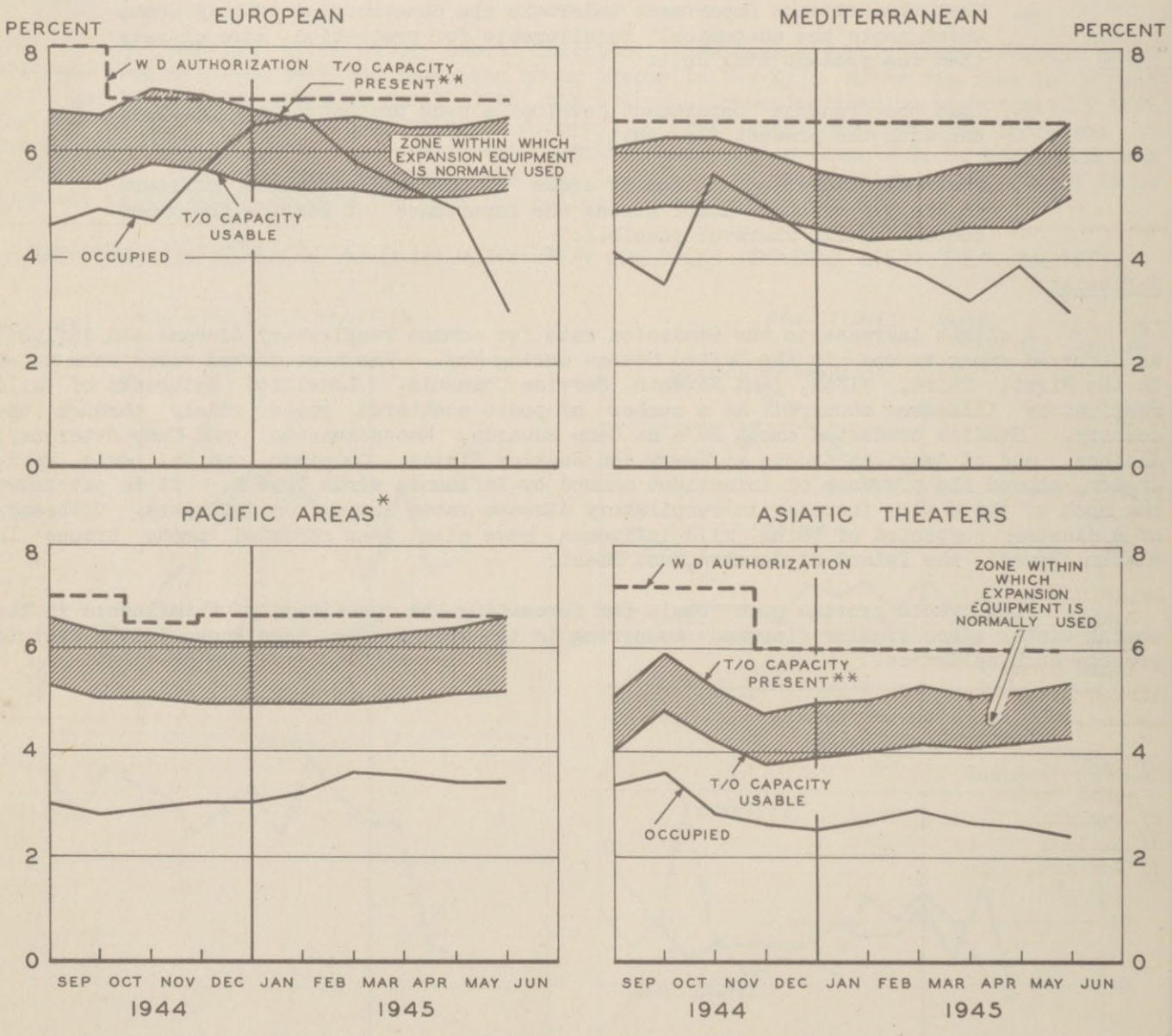
These facts provide some basis for forcasting the possibility of influenza in the coming winter since similar flurries occurring in the spring have been known in the past to presage such epidemics.

HOSPITALIZATION OVERSEAS

At the end of May 343,975 fixed T/O bed units and 85,975 nonfixed T/O bed units were present in the overseas theaters, providing fixed and mobile hospitalization facilities equivalent to 8.1 percent of the troop strength overseas. This percentage is slightly higher than those of 7.9 and 7.8 which applied at the end of April and March respectively. The recent changes in the availability and occupancy of fixed beds in the more active theaters are detailed in the charts below. In none of the areas as a whole is the situation characterized by crowding, although the fact that some of the units available to a theater may be staging, under construction, and the like tends to reduce effective capacity below that shown in the charts. (See table on page 32.) This is especially true in the Southwest Pacific where operating facilities are now crowded because of an increased patient census and a continued high percentage of units out of operation. In the European Theater very satisfactory progress has been made in reducing the hospital population by accelerated evacuation to the Z/I.

FIXED HOSPITALIZATION OVERSEAS THEATERS

BEDS AS PERCENT OF STRENGTH



* Southwest Pacific and Pacific Ocean Areas. Pacific Ocean Areas count for 27 April is incomplete.
** Exceeds T/O capacity of units set up by capacity of units staging, etc.

HOSPITALIZATION OVERSEAS (Continued)

The decline in the troop strength of the Mediterranean Theater during May, with no corresponding reduction in the number of fixed bed units available, increased the percentage of fixed T/O capacity to strength from 5.8 on 30 April to 6.6 at the end of May. Fixed bed occupancy in the European Theater moved from 4.9 percent of strength at the end of April to 3.0 at the end of May, when about 90,400 patients were in fixed hospitals. By 22 June the fixed hospital population had fallen to 68,300, but no strength estimate is available for converting this number to a percentage of strength.

The tables on the following pages summarize the bed situation overseas in both fixed and nonfixed hospitals at the end of May, the latest date for which reasonably complete data are available. Data concerning the number of beds set up and the type of patients in hospital are now available for most theaters as a result of revisions in reporting. All data shown apply to 1 June 1945, the counts of beds present being taken from the Troop List for Operations and Supply and all other hospital data from theater telegraphic reports. The bed occupancy figures for the Asiatic theaters include Chinese patients, and the strength of the India-Burma Theater includes 75,000 Chinese, as does the strength given for all forces overseas.

As a result of the decrease in troop strength overseas during May the computed authorization for fixed T/O beds decreased by about one percent, although the number of beds present overseas increased by two percent. The effects of the redeployment of units to the Pacific will not be visible until the end of July.

PATIENTS REMAINING IN NUMBERED FIXED AND NONFIXED HOSPITALS
Overseas Theaters, 1 June 1945

Theater	Total Patients Remaining	Percent Remaining in		Percent Who Were		
		Fixed Units	Nonfixed Units	Army Patients	PW's	Others c/
ALL THEATERS	199,768	81.4	18.6	d/	d/	d/
American a/	2,578	100.0	-	91.6	-	8.4
European	111,225	81.3	18.7	76.1	16.2	7.7
Mediterranean	15,488	86.8	13.2	69.5	24.7	5.8
Pacific Areas						
Total	59,860	79.4	20.6	d/	d/	d/
Pacific Ocean Areas	15,772	90.7	9.3	d/	d/	d/
Southwest Pacific	44,088	75.4	24.6	94.9	0.4	4.7
Asiatic Theaters						
Total	9,565	78.8	21.2	67.7	0.1	32.2
China	1,569	98.3	1.7	61.1	-	38.9
India-Burma	7,996	74.9	25.1	69.0	0.1	30.9
Africa-Middle East b/	1,052	100.0	-	84.6	-	15.4

a/ Including Alaskan Department and excluding Northwest Service Command and Eastern and Central Canada.
b/ Including Persian Gulf Command.
c/ Allies, neutrals, partisans, civilians.
d/ Not available.

HOSPITALIZATION OVERSEAS (Continued)

FIXED BEDS AVAILABLE AND OCCUPIED

Number of Beds, 1 June 1945

Theater	W. D. Authorization	T/O Present		Operating		Occupied d/
		Number c/	Percent of Authorization	Number d/	Percent of T/O Present	
ALL THEATERS	357,182	343,975	96.3	213,309	62.0	162,534
American a/	4,153	4,900	118.0	5,105	104.2	2,578
European						
Total	210,385	200,350	95.2	131,700	65.7	90,392
United Kingdom	-	96,450	-	46,100	47.8	23,278
Continent	-	103,900	-	85,600	82.4	67,114
Mediterranean	29,165	29,000	99.4	26,850	92.6	13,442
Pacific Areas						
Total	91,552	90,850	99.2	59,379	65.4	47,534
Pacific Ocean Areas	32,298	34,350	106.4	22,679	66.0	14,304
Southwest Pacific						
Total	59,254	56,500	95.4	36,700	65.0	33,230
Australia	-	1,800	-	-	-	-
New Guinea	-	17,650	-	-	-	-
Philippines	-	30,900	-	-	-	-
Asiatic Theater						
Total	18,775	16,825	89.6	15,075	89.6	7,536
China	3,164	2,125	67.2	1,675	78.8	1,543
India-Burma	15,611	14,700	94.2	13,400	91.2	5,993
Africa-Middle East b/	3,152	2,050	65.0	2,050	100.0	1,052

Beds Available as Percent of Strength and Percentage Occupied

Theater	Strength (Thousands) e/	W. D. Authorization	T/O Present		Beds Occupied as		
			Total c/	Usable f/	Percent of Strength	Percent of T/O Present	Percent of T/O Operating
ALL THEATERS	5,336	6.7	6.4	5.2	3.0	47.3	76.2
American a/	138	3.0	3.5	2.8	1.9	52.6	50.5
European							
Total	3,006	7.0	6.7	5.3	3.0	45.1	68.6
United Kingdom	-	-	-	-	-	24.1	50.5
Continent	-	-	-	-	-	64.6	78.4
Mediterranean	442	6.6	6.6	5.2	3.0	46.4	50.1
Pacific Areas							
Total	1,384	6.6	6.6	5.2	3.4	52.3	80.1
Pacific Ocean Areas	538	6.0	6.4	5.1	2.7	41.6	63.1
Southwest Pacific	846	7.0	6.7	5.3	3.9	58.8	90.5
Asiatic Theaters							
Total	313	6.0	5.4	4.3	2.4	44.8	50.0
China	53	6.0	4.0	3.2	2.9	72.6	92.1
India-Burma	260	6.0	5.6	4.5	2.3	40.8	44.7
Africa-Middle East b/	53	6.0	3.9	3.1	2.0	51.3	51.3

a/ Includes Alaskan Department and excludes the Northwest Service Command and Eastern Central Canada.
b/ Includes Persian Gulf Command.
c/ T.L.O.S. dated 1 June 1945.
d/ Reported by theaters telegraphically.
e/ Geographic strength by theater. Strengths for India-Burma, Asiatic theaters, and all theaters include 75,000 Chinese.
f/ Eighty percent of total T/O present.

HOSPITALIZATION OVERSEAS (Continued)

The need for hospitalizing prisoners, members of other U. S. armed forces, civilians, partisans, and Allied military personnel constitutes a drain on the available hospital beds in many overseas theaters, even where special hospitals have been established to care for some of these patients. The hospital program for prisoners of war in the European Theater, originally based upon the provision of the equivalent of 16,250 T/O-type beds at the end of April, was further expanded during May. The current program undertakes to furnish 33,250 beds. The prisoner-of-war installations, which will be staffed by PW personnel, will include three units comparable to the 2,000-bed general hospital, twenty-one units patterned on the 1,000-bed general hospital, five units equivalent to the 750-bed station hospital, and five units of the 500-bed station hospital type. On 1 June, there were in operation fifteen of these units with an aggregate capacity equivalent to 13,500 T/O beds and with 16,500 PW patients. However, 11,400 additional PW patients were in Army fixed hospitals and an additional 6,650 in Army nonfixed hospitals on that date. Additional facilities are to be activated in occupied Germany to absorb some of the prisoners of war hospitalized in existing German installations under the stay-put policy. By 22 June, the number of prisoners in Army hospitals had declined to about 8,700, of whom 55 percent were in fixed hospitals.

Through the end of May, 317 Medical Department officers and 1,178 enlisted men had been withdrawn from both operating and nonoperating communications zone units to provide professional and administrative supervision for the medical care of about 479,000 prisoners of war, RAMPS, and displaced persons hospitalized in Germany.

Hospitalization in support of the U. S. Army of Occupation in Germany, utlimately to consist of about 400,000 men, is currently planned at four percent of strength in fixed hospitals. In addition one percent of strength is to be provided in mobile units so as to ensure adequate support for relatively isolated troop units. Mobile Army units not subject to early redeployment will be available for hospital coverage, and are to be used to ensure a flexible program during the readjustment period. The tentative date for the availability of the hospital units for the occupation forces has been set at 31 August. At this time there should be available seven 1,000-bed general hospitals, ten 750-bed station hospitals, one 150-bed station hospital, and ten field hospitals.

NONFIXED BEDS AVAILABLE AND OCCUPIED
Overseas Theaters, 1 June 1945

Theater	T/O Present		Total Operating		Total Occupied			
	Number b/	Percent of Strength	Number c/	Percent of T/O Present	Number c/	Percent of T/O Present	Percent of T/O Operating	Percent of Strength
ALL THEATERS a/	85,975	1.6	d/	d/	37,234	43.3	d/	0.7
European e/	58,200	1.9	32,450	55.8	20,833	35.8	64.2	0.7
Mediterranean	8,800	2.0	8,400	95.5	2,046	23.2	24.4	0.5
Pacific Areas								
Total	14,000	1.0	d/	d/	12,326	88.0	d/	0.9
Pacific Ocean Areas	3,250	0.6	d/	d/	1,468	45.2	d/	0.3
Southwest Pacific f/	10,750	1.3	8,050	74.9	10,858	101.2	134.9	1.3
Asiatic Theaters								
Total	4,975	1.6	2,675	53.8	2,029	40.8	75.9	0.6
China	1,325	2.5	325	24.5	26	2.0	8.0	0.0
India-Burma	3,650	1.4	2,350	64.4	2,003	54.9	85.2	0.8

a/ Includes American and Africa-Middle East theaters which have no mobile beds.
b/ T.L.O.S. dated 1 June 1945.
c/ Reported by theaters telegraphically.
d/ Not available.
e/ All beds on Continent.
f/ Australia, 25 beds available; New Guinea and Islands, 950 beds available; Philippines, 9,775 beds available.

HOSPITALIZATION OVERSEAS (Continued)

During May the number of T/O nonfixed beds overseas decreased by 750 beds to 85,975 and the number occupied increased by fourteen percent to 32,688. On 1 June occupancy of mobile facilities in the Southwest Pacific had reached 1.3 percent of the theater strength; this is equal to 101 percent of all T/O nonfixed beds present and 135 percent of T/O nonfixed beds operating and has resulted from combat on Luzon and Mindanao.

The table below shows the scheduled shipment of fixed T/O beds to the Pacific areas from the now inactive European and Mediterranean Theaters, according to the War Department directives based upon the schedules in the Redeployment Forecast for 30 June. The capacity of units to be shipped directly to the Pacific is shown separately from that of units to be sent there via the United States. In the U. S. the latter units are to be reconstituted and trained for the Pacific. The beds are shown according to the month of shipment from the theater where they are now located. During June all units scheduled for indirect redeployment from the European Theater arrived in the United States, and it is anticipated that the War Department schedules can be rigidly maintained. Allowing for a four-month lag between departure from one of the inactive theaters and arrival in the Pacific areas, about 53,000 fixed beds are scheduled to arrive in the Pacific by the end of September.

T/O CAPACITY OF FIXED UNITS SCHEDULED FOR SHIPMENT
FROM INACTIVE THEATERS TO THE PACIFIC AREAS
30 June 1945

Theater of Origin	Month of Shipment from Theater, 1945					Total Shipments
	May	June	July	August	September	
Direct Shipments to Pacific Theaters a/						
European	750	-	18,950	15,000	11,000	45,700
Mediterranean	-	1,000	1,300	3,500	1,500	7,300
TOTAL DIRECT	750	1,000	20,250	18,500	12,500	53,000
Indirect Shipments b/						
European	-	10,500	10,500	10,000	5,000	36,000
Mediterranean	-	1,000	500	-	-	1,500
TOTAL INDIRECT	-	11,500	11,000	10,000	5,000	37,500
Total Shipments						
TOTAL SHIPMENTS EACH MONTH	750	12,500	31,250	28,500	17,500	90,500

a/ Pacific Ocean Areas, and Southwest Pacific Area.
b/ These units were scheduled to spend approximately four months in the United States after which they will be shipped to the Pacific.

HOSPITALIZATION OVERSEAS (Continued)

Within the limits of the accuracy of the theater strength projections for June, July, and September as given in the Troop List for Operations and Supply dated 1 June 1945, the "Theater Audit" of numbers of beds to be available indicates that theater requisitions for beds will be met and authorizations amply covered through September in all major commands except the Africa-Middle East and the Asiatic theaters. In these areas fixed T/O beds required and provided will total 3.0 and 4.6 percent of strength respectively during September in contrast to authorizations of six percent of strength, according to present projections. The September strengths for the Asiatic theaters include 75,000 Chinese.

The lack of sufficient nonfixed T/O units, particularly the 400-bed evacuation hospital, has been felt in the Pacific for some time. In previous amphibious operations their absence has made it necessary to employ field hospitals (and even station and general hospitals) to perform their function. As of 31 May, nonfixed units in the Pacific areas had a T/O capacity of 14,000 beds. Of these, 4,400 were in eleven 400-bed evacuation hospitals, and 2,250 were in 750-bed units. At the end of June, 24 of the 400-bed evacuation hospitals were scheduled for arrival in the Pacific areas. Units of this type present and scheduled for the Pacific areas will make possible normal evacuation support for each division to be deployed. The table below compares the number and type of T/O nonfixed units present in the Pacific areas on 31 May 1945 with the number scheduled to be there by 30 November.

ACTUAL AND SCHEDULED NONFIXED T/O BED CAPACITY IN THE PACIFIC AREAS

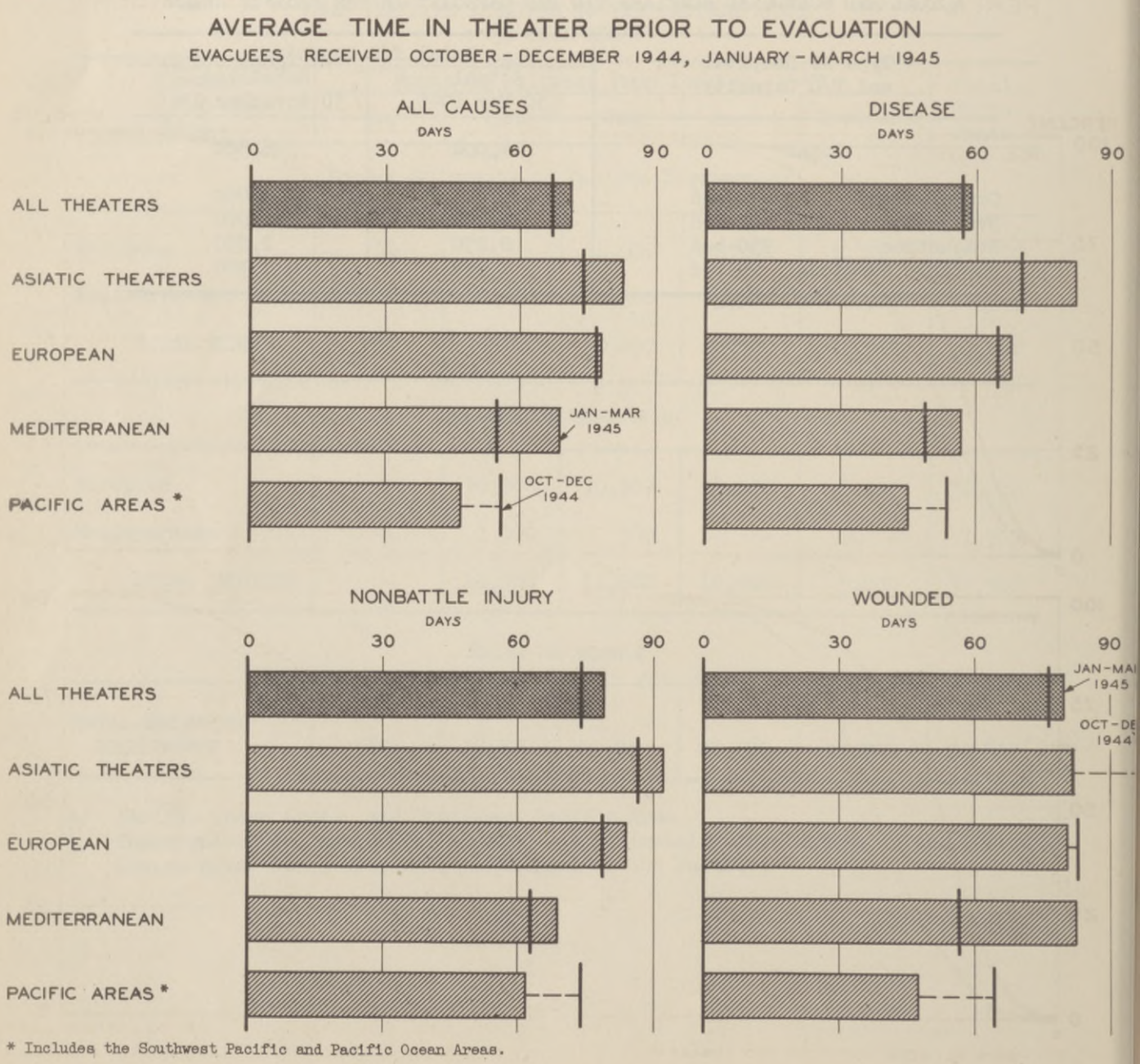
Type of Hospital and T/O Capacity	Total T/O Capacity	
	Actual 30 May 1945	Scheduled 30 November 1945
Total	14,000	26,600
Convalescent 3,000-bed	6,000	9,000
Evacuation 400-bed	4,400	14,000
Evacuation 750-bed	2,250	2,250
Portable Surgical 25-bed	1,350	1,350

HOSPITALIZATION

LENGTH OF HOSPITALIZATION PRIOR TO EVACUATION

Because of its possible effects on the efficient utilization of hospital facilities overseas a continuing survey of the speed with which evacuees are embarked by the overseas theaters is significant. (See HEALTH for March 1945.) The charts below compare the major overseas theaters with respect to the average number of hospital days between admission and evacuation of disease, nonbattle injury, and wounded patients received in the United States during the last quarter of 1944 and the first quarter of 1945. Whereas in the last quarter of 1944 the average duration of hospitalization prior to embarkation was shortest for the Mediterranean Theater, in the first quarter of 1945 the Pacific area reported the shortest average stay. For the Mediterranean Theater, the average length of time spent in hospital by embarkees prior to evacuation was substantially longer in the first quarter of 1945 than in the previous quarter. Disease, injury, and wounded evacuees received in the Z/I during the first quarter of 1945 respectively had spent about 16, 10, and 46 percent more time in the Mediterranean Theater than had those received late in 1944. On the other hand, time in hospital prior to evacuation decreased markedly in the Pacific areas, probably in response to increased combat activity in these areas. Hospital days overseas declined by 17 percent for disease patients, 16 percent for nonbattle injury patients, and 26 percent for wounded.

The charts on the following page compare the evacuees in the last quarter of 1944 with those in the first quarter of 1945, with respect to the proportions of each group with



* Includes the Southwest Pacific and Pacific Ocean Areas.

LENGTH OF HOSPITALIZATION PRIOR TO EVACUATION (Continued)

less than a given number of days in hospital prior to embarkation. It is believed that a relatively sizable proportion of patients who are ultimately evacuated are retained in certain overseas theaters for too long a period, needlessly tying up beds. The following table details the proportions of evacuees received in the Z/I from January through March 1945 who spent more than 120 days overseas prior to embarkation.

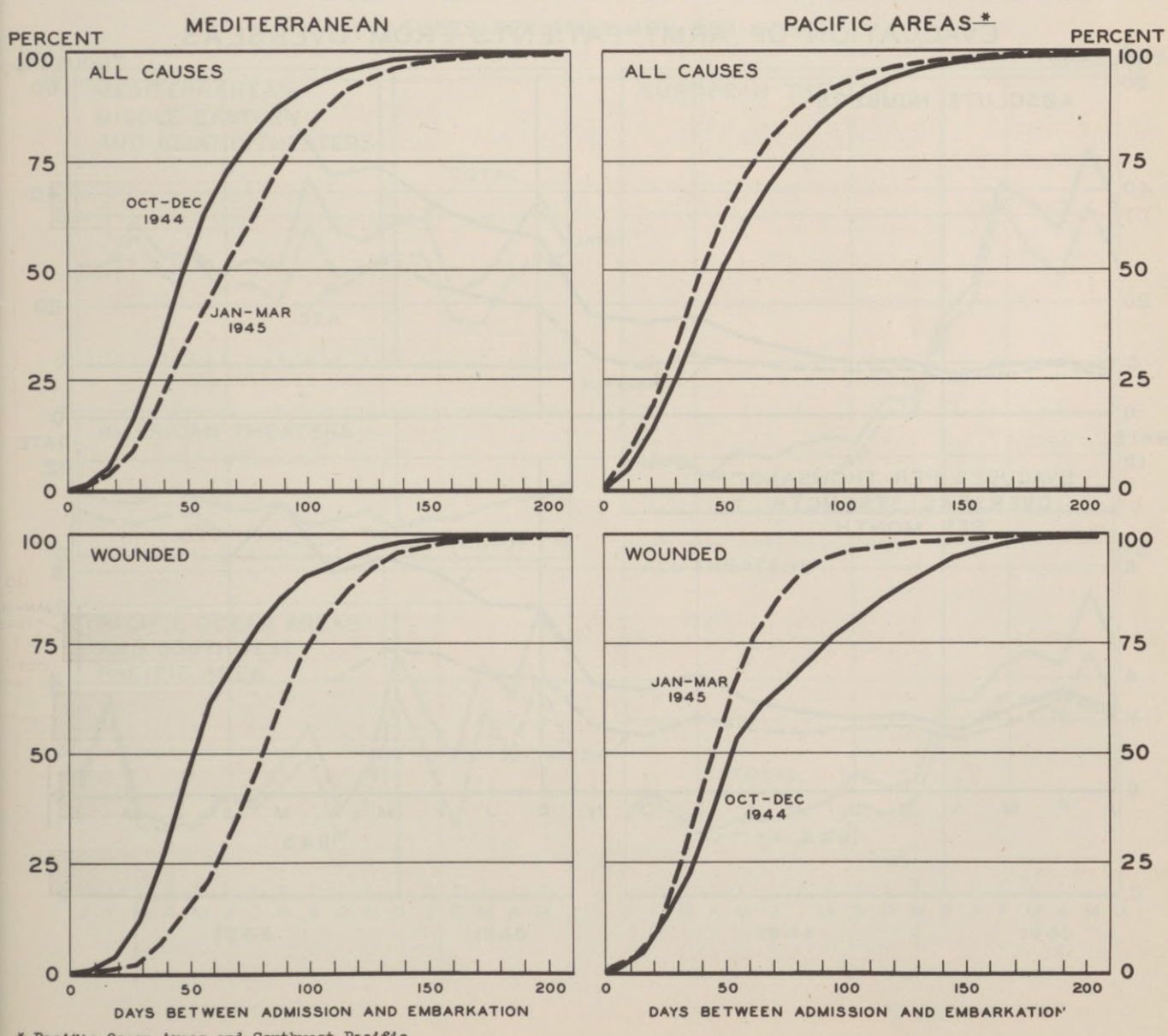
PERCENTAGE OF EVACUEES WHO WERE EMBARKED AFTER 120 DAYS OF TREATMENT
Patients Received In The United States From January to March 1945

Theater of Origin	Percent Embarked After 120 Days		
	Disease	Nonbattle Injury	Wounded
European	13	19	15
Mediterranean	6	8	12
Pacific Areas a/	4	8	2

a/ Pacific Ocean Areas and Southwest Pacific.

PERCENT OF EVACUEES SPENDING LESS THAN GIVEN NUMBER OF DAYS OVERSEAS

PATIENTS RECEIVED OCTOBER-DECEMBER 1944 AND JANUARY-MARCH 1945

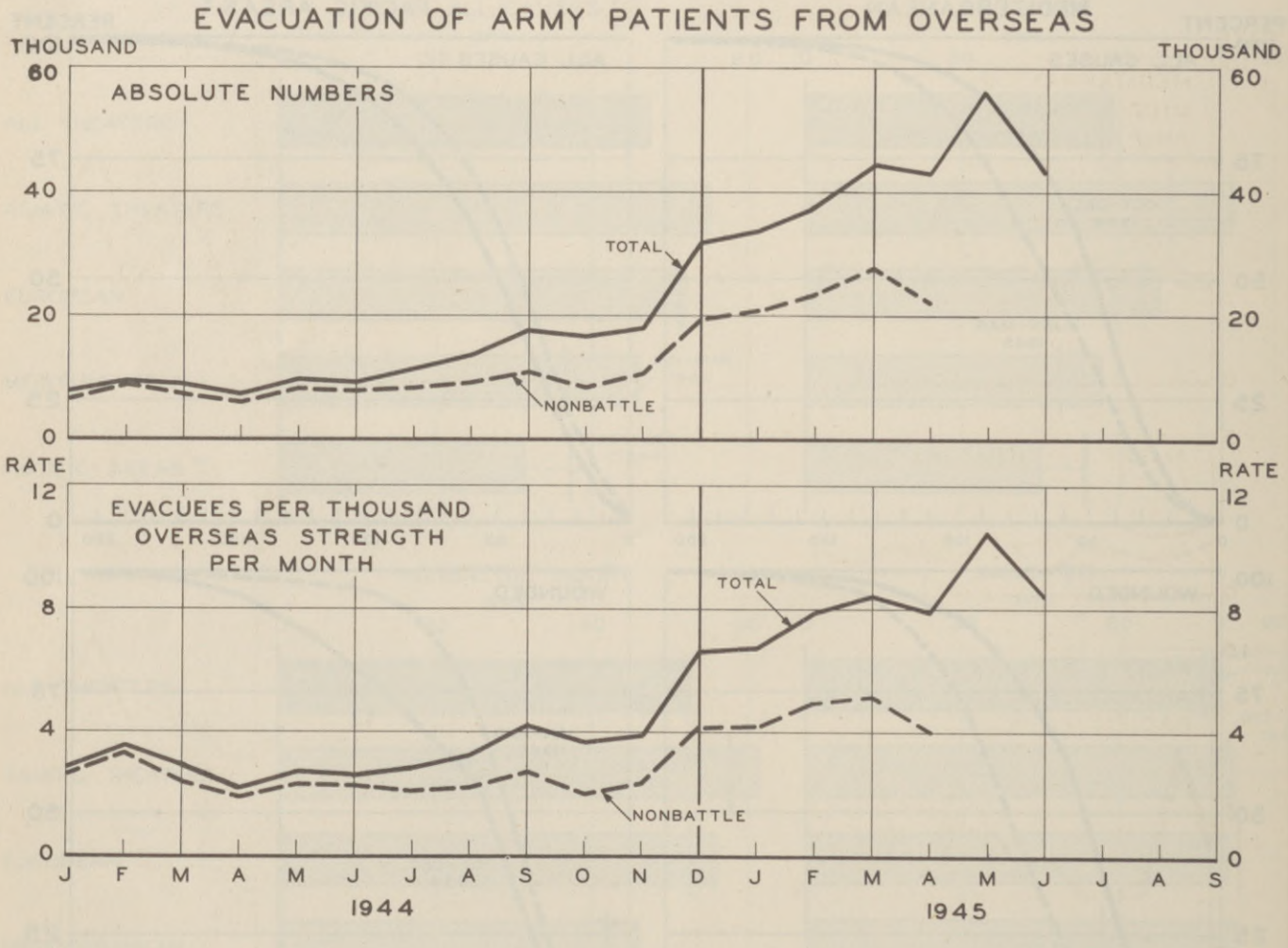


* Pacific Ocean Areas and Southwest Pacific

TREND OF EVACUATION FROM OVERSEAS

During June 44,000 Army patients were returned to the Z/I from overseas, a 12,500 reduction from the May peak of 56,500. This was almost entirely attributable to the decline in water lift, as air lift of Army patients declined by less than 1,000. Reduction in evacuation by water occurred in most theaters. The largest reductions occurred in the volume evacuated from the European Theater, where the water lift fell from 32,500 to 25,000, and from the Southwest Pacific Area, where it declined from 9,000 to about 4,500.

Projections for the next three months as well as data on the hospital population in the European Theater testify to the great success which has attended the policy of returning patients to the Z/I at maximum speed. The objective having been achieved, effective 1 August, the European and Mediterranean Theaters are directed to increase their evacuation policies from 60 to 90 days. For the most part, as shown in HEALTH for May, the great lift from the European Theater was made possible by the use of troop transports, notwithstanding the yeoman service performed by hospital ships and air transports. The accelerated program of evacuation in recent months will make it unnecessary to use troop transports for evacuating patients from Europe after July. For May, June, and July, when shipping facilities grew tighter, a more efficient utilization of ship capacity was achieved by the prior modification of about 20 ships so as to carry more patients than life-boat capacity, previously the limiting factor. The conversion of these ships, and their almost exclusive use for patients, greatly reduced the loss in troop-carrying capacity normally expected from the evacuation of such large numbers of patients. The changes which were made in these ships will not lessen their subsequent troop-carrying capacity.

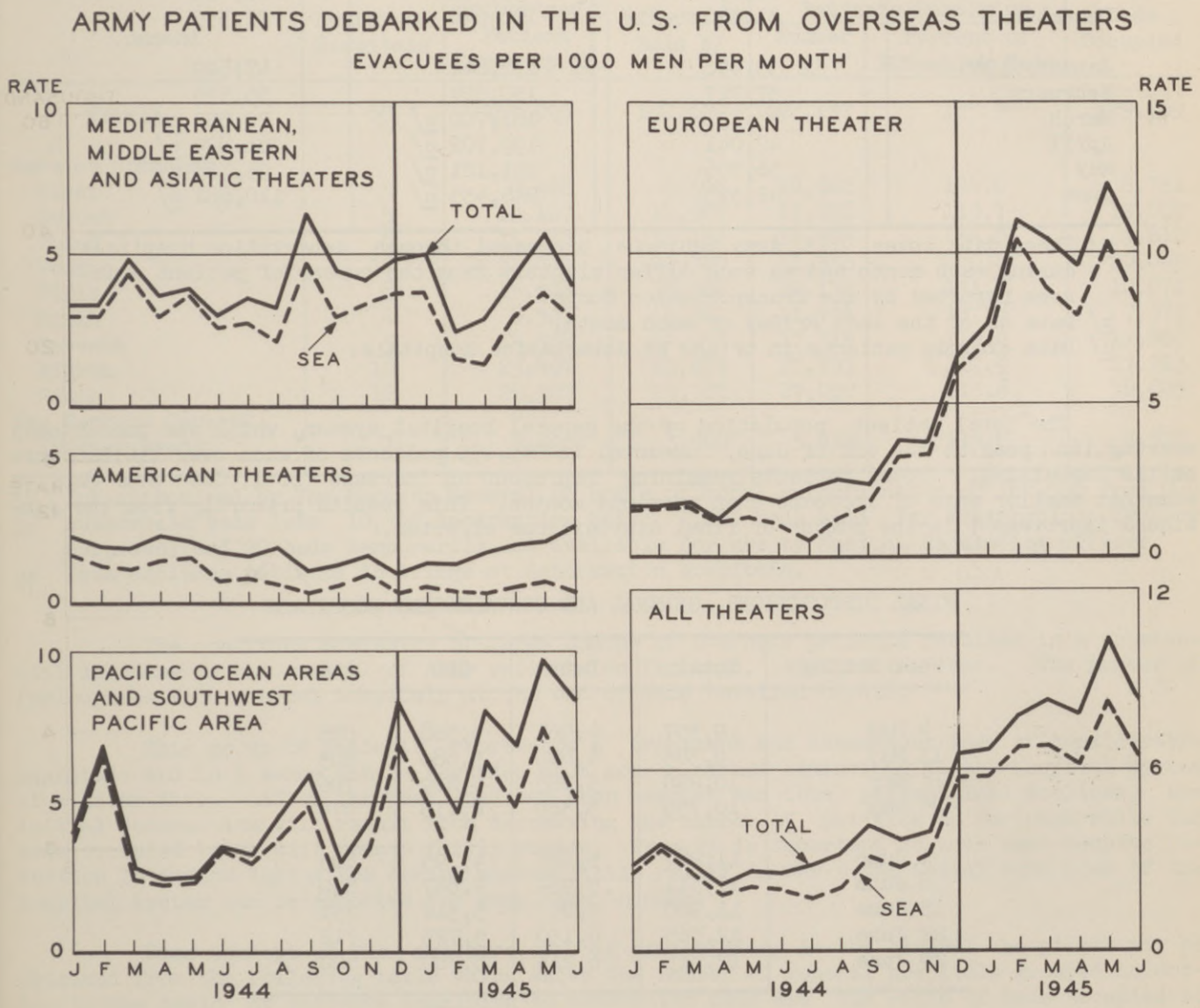


TREND OF EVACUATION FROM OVERSEAS (Continued)

Further reductions in the volume of evacuation to the Z/I may be anticipated until the effect of future operations is felt. What the volume will be from the Pacific after that time will, of course, depend upon many factors. Current estimates place the probable peak loads from there at 20,000 to 30,000 evacuees per month, depending upon the casualty rates expected.

The charts on the foregoing page record the trend of evacuation from all theaters in both absolute and relative form. The solid line shows all patients, while the dashed line shows only those evacuated for nonbattle causes. Nonbattle evacuees decreased from 5.1 per thousand per month in March to 4.0 in April, the lowest rate experienced since December of last year. The proportion of battle patients among all evacuees continued upward through April.

The June total of 44,000 consists of approximately 30,000 from the European Theater 11,000 from the two Pacific theaters, and 3,000 from all others. The sharp decline in lift from the Southwest Pacific Area was partially offset by an increase in evacuation from the Pacific Ocean Areas. A substantial decline also took place in the number evacuated from the Mediterranean Theater. The charts below give the evacuation experiences in rate form from January 1944 to date, the solid line representing all evacuees and the dashed line showing the portion evacuated by water.



HOSPITALIZATION IN THE ZONE OF INTERIOR

Patient Trend

Overseas patients admitted into the general hospital system during the month of June totalled 42,393, a decrease of approximately 15,000 patients from the peak of 57,000 patients received during May. However, June was the fourth consecutive month that overseas admissions have exceeded 40,000. Current forecasts indicate that July admissions of overseas patients into Zone of Interior hospitals will exceed 35,000.

U. S. ARMY PATIENT EVACUEES PROCESSED THROUGH DEBARKATION HOSPITALS
TOTAL PATIENTS REMAINING AND BATTLE CASUALTIES REMAINING IN
THE GENERAL AND CONVALESCENT HOSPITALS
July 1944-June 1945

Month	Overseas Evacuees Processed a/	Patients Remaining b/	
		All Patients	Battle Casualties
July 1944	10,566	61,954	8,926
August	13,970	69,367	12,061
September	16,630	79,315	17,138
October	17,437	87,282	24,158
November	17,852	95,068	28,765
December	31,350	108,640	37,335
January 1945	33,456	132,842	47,649
February	37,727	150,624	55,535
March	45,131	181,700 c/	70,555 c/
April	42,041	199,702 c/	81,809 c/
May	56,706	221,121 c/	93,308 c/
June	42,393	245,435 c/	110,682 c/

a/ These data cover U.S. Army patients processed through debarkation hospitals during each month and as such differ slightly from the number of patient evacuees reported by the Transportation Corps.
b/ Data as of the last Friday of each month.
c/ Data exclude patients in triage at debarkation hospitals.

The total patient population of the general hospital system, which was undoubtedly nearing its peak at the end of June, amounted to 245,435 patients of whom over 110,000 were battle casualties. Total patients remaining represent an increase of 17,000 over May, a somewhat smaller rate of increase than previous months. This results primarily from the continued improvement in the number of final dispositions effected.

FINAL DISPOSITIONS, GENERAL AND CONVALESCENT HOSPITALS

Week Ending	Total	Duty	CDD	Other
4 May	9,357	4,961	3,568	828
11 May	9,303	4,820	3,680	803
18 May	10,220	5,285	4,229	706
25 May	10,759	5,369	4,416	974
1 June	11,287	5,687	4,795	805
8 June	11,511	5,934	4,687	890
15 June	11,920	5,857	5,312	751
22 June	12,565	6,130	5,723	712
29 June	12,813	6,213	5,780	820

HOSPITALIZATION IN THE ZONE OF INTERIOR (Continued)

Total number of patients (Zone of Interior and overseas) finally disposed of from the general hospital system during June was 48,809, an increase of 7,240 over the comparable figure for May. Whether any further increase in dispositions can be effected is questionable. It is probable that the number of dispositions now being effected in the general hospital system is beginning to approach the maximum number which it is administratively feasible to accomplish with existing personnel.

General Hospitals Proper

Little change occurred in the authorized patient capacity of general hospitals during June. However, to provide the Medical Regulating Officer with some leeway in assigning patients during the period of peak occupancy, arrangements were made to use certain emergency capacity if required.

During June, the use of Glennan General Hospital as a general hospital for German prisoners of war was discontinued and the hospital converted for the treatment of United States Army personnel. At the end of June, all prisoner of war patients had been transferred to Camp Forrest and a total of 1,286 Army patients had been built up at Glennan.

PATIENTS REMAINING IN GENERAL HOSPITALS PROPER
End of June 1945

Command	Number of Hospitals	Authorized Patient Capacity a/	Effective Beds b/	Patients Remaining		Beds Occupied
				Number c/	Percent of Effective Beds	
Total	65	163,995	152,610	192,157	125.9	129,739
Service Commands						
First	3	9,428	8,528	10,622	124.6	6,751
Second	5	18,107	14,907	17,851	119.7	13,669
Third	5	11,133	11,133	14,923	134.0	9,812
Fourth	12	31,474	29,349	41,336	140.8	29,045
Fifth	8	15,300	15,300	20,171	131.8	12,871
Sixth	4	8,561	8,561	11,794	137.8	7,975
Seventh	5	14,568	14,548	17,315	119.0	11,006
Eighth	10	23,497	23,497	27,701	117.9	17,213
Ninth	12	28,927	23,787	27,030	113.6	18,825
The Surgeon General (Walter Reed)	1	3,000	3,000	3,414	113.8	2,572

a/ Sub-authorized by The Surgeon General on basis of total authorization of 169,500 from G-4.
b/ Authorized beds less 10,365 debarkation beds; 1,000 beds held for debarkation back-up purposes; and 20 beds temporarily not available for use by Medical Regulating Officer.
c/ Data excludes patients in triage at debarkation hospitals.

The continued admission of large number of overseas patients resulted in a substantial increase in the number of Army patients on furlough, sick leave, etc. The number of furloughees from general hospitals at the end of June totalled 62,418.

This group of patients represents a treatment and assessment load of considerable magnitude and in a sense can be regarded as a source of new admissions to the hospital system at a later date. After the peak load has been reached and total patient load declines, the initial contraction will result from decreasing the number of patients on furlough while the beds occupied total will remain fairly static. Thus it is important to note that despite reduction in inflow during the coming months little relief in the total actual work load of the hospital system can be expected for some time to come.

Some concept of the pressure of work now existing in the general hospitals may be obtained from the following table which shows the number of general hospitals grouped according to the ratio of patients remaining to authorized beds and the ratio of beds occupied to effective beds at the end of June:

HOSPITALIZATION IN THE ZONE OF INTERIOR (Continued)

ANALYSIS OF PATIENT LOAD AND OCCUPANCY IN GENERAL HOSPITAL
End of June 1945

Number of Patients Remaining per 100 Authorized Beds	Number of Hospitals	Number of Beds Occupied per 100 Effective Beds a/	Number of Hospitals
Total	65		65
Less than 100	3	Less than 100	35
100 - 110	5	100 - 105	4
111 - 120	17	106 - 110	7
121 - 130	13	111 - 115	4
131 - 140	9	116 - 120	6
141 - 150	7	121 - 125	2
151 - Over	4		
Not counted b/	7	Not counted b/	7

a/ Effective beds are authorized beds less 15 percent for dispersion.
b/ Debarkation POW hospitals and mental hospitals.

In over three fourths of the general hospitals patients remaining exceed 110 percent of authorized beds; over half of the hospitals have patients remaining in excess of 120 percent of their authorizations. Although hospitals are considered to be full when all the effective beds are occupied, there are 23 hospitals with an occupancy ratio in excess of this accepted norm at the end of June.

Convalescent Hospitals

Operating capacities of convalescent hospitals totalled 49,378 at the end of June, which accounted for the full operating capacities of all the hospitals except Mitchell (Camp Lockett, California). Madigan Convalescent Hospital (Fort Lewis, Washington) reached full

OPERATING CAPACITIES AND PATIENTS REMAINING IN CONVALESCENT HOSPITALS
May and June 1945 a/

Hospital	Operating Capacity		Patients Remaining		Beds Occupied June	Percent of Operating Capacity June	
	June	May	June	May		Patients Remaining	Beds Occupied
Total	49,378	48,451	53,278	49,756	36,941	107.9	74.8
Edwards	6,000	6,000	5,132	5,644	3,609	85.5	60.2
Upton	3,500	3,500	4,452	3,387	2,985	127.2	85.3
Pickett	5,000	5,000	5,645	5,154	4,423	112.9	88.5
Story	1,800	1,800	1,852	2,225	1,469	102.9	81.6
Butner	5,500	5,500	6,446	6,396	5,145	117.2	93.5
Welch	3,500	3,500	3,829	2,735	2,357	109.4	67.3
Wakeman	6,000	6,000	5,425	4,681	3,249	90.4	54.2
Percy Jones	6,000	6,000	5,659	5,697	3,795	94.3	63.3
Carson	4,500	4,500	6,241	7,282	5,129	138.7	114.0
Brooke	5,000	5,000	5,875	4,601	3,851	117.5	77.0
Mitchell b/	878	851	1,293	1,463	745	147.3	84.9
Madigan	1,500	600	1,328	386	83	88.5	5.5
Old Farms	200	200	101	105	101	50.5	50.5

a/ End of month.
b/ Because of construction difficulties, 152 convalescent patients are temporarily at Fort Ord and 87 patients at Camp Haan.

HOSPITALIZATION IN THE ZONE OF INTERIOR (Continued)

operating capacity in June. However, this represents capacity for beneficial occupancy only as no barrack spaces had been completely converted at Madigan by the end of June.

Patients remaining in convalescent hospitals increased 3,500 during June and totalled 53,278 at the end of the month. Of this number, 16,337 were on leave or furlough, an increase of 2,344 over the corresponding figure for the end of May.

Final dispositions from convalescent hospitals increased substantially during June; from 3,344 during the week ending 25 May to 4,306 during the last week of June. Of the total final dispositions during June only 37.4 percent were returned to duty, almost all of the remainder being discharged from the service. The proportion of patients returned to duty from convalescent hospitals has shown a constant downward trend since March 1945 when average for the month was 43.2. During the last week of June, the proportion of patients returned to duty was only 34.7 percent of the total.

FINAL DISPOSITIONS FROM CONVALESCENT HOSPITALS
March through June 1945

Month	Total	Returned to Duty	
		Number	Percent of Total
March	4,348	1,877	43.2
April	5,483	2,347	42.8
May	11,434	4,738	41.4
June	19,324	7,225	37.4

The growing proportion of patients being discharged by CDD from the convalescent hospitals reflects the increasing number of the seriously sick and wounded patients whose hospitalization is now reaching completion. Recent clarification by The Surgeon General of the medical aspects of current discharge policy has emphasized that patients who fail to adjust physically or psychologically to their disability and are, therefore, unable to perform an effective day's work for the Army, should be discharged on CDD.

Station and Regional Hospitals

Authorization for beds in station and regional hospitals increased 4,285 during June reflecting rising troop strength in the Z/I and the recognition that further increases must be expected during the coming months. Patients remaining, however, decreased from 47,714 in May to 46,085 at the end of June, a normal seasonal decline. Notwithstanding this decrease the ratio of patients remaining to effective beds reveals generally high utilization of available beds.

With increasing numbers of troops in the country scheduled for early redeployment to the Pacific, the control of admissions to station and regional hospitals will be a serious problem. It is expected that some redeployed personnel will attempt to escape service in the Pacific through medical channels. A plan based on experience in overseas theaters has been evolved to control this. Essentially, it provides for improving the quality of dispensary screening to insure that only patients actually requiring hospitalization are sent to hospitals. It has been found that unnecessary hospital referrals and hospitalization encourage patients to magnify their illnesses. A thorough screening of patients prior to actual hospitalization and provision for adequate dispensary care will reduce hospital admissions considerably.

Realizing the importance of effective medical care at the dispensary level The Surgeon General has requested frequent rotation of Medical Corps Officers between the dispensaries and hospitals to provide adequate relief from this arduous duty.

HOSPITALIZATION IN THE ZONE OF INTERIOR (Continued)

BEDS AUTHORIZED AND PATIENTS REMAINING IN STATION AND REGIONAL HOSPITALS
End of June 1945

Command	Authorized Beds a/	Effective Beds b/	Patients Remaining		Beds Occupied c/
			Number c/	Percent of Effective Beds	
Army Service Forces - Total	73,358	52,367	46,085	88.0	45,064
Service Commands - Total	59,828	47,223	42,803	90.6	41,817
Station Hospitals	28,347	22,038	19,325	87.7	19,164
First	81	65	40	61.5	40
Second	1,485	1,188	873	73.5	861
Third	2,275	1,820	1,499	82.4	1,474
Fourth	5,885	4,708	4,537	96.4	4,491
Fifth	550	440	302	68.6	299
Sixth	1,235	988	814	82.4	807
Seventh	1,925	1,540	1,201	78.0	1,195
Eighth	7,539	6,031	6,453	107.0	6,422
Ninth	7,092	5,034	3,490	69.3	3,459
MDW	280	224	116	51.8	116
Regional Hospitals	31,481	25,185	23,478	93.2	22,653
First	562	450	484	107.6	439
Second	1,250	1,000	968	96.8	861
Third	3,100	2,480	2,431	98.0	2,329
Fourth	10,450	8,360	7,251	86.7	7,060
Fifth	1,800	1,440	1,348	93.6	1,332
Sixth	750	600	609	101.5	584
Seventh	3,500	2,800	2,690	96.1	2,643
Eighth	5,100	4,080	4,241	103.9	4,068
Ninth	3,676	2,941	2,846	96.8	2,748
MDW	1,293	1,034	610	59.0	589
Chief of Transportation - Total	13,530	5,144	3,282	63.8	3,247

a/ Authorized by Commanding Generals of Service Commands or by Chief of Transportation.
b/ Authorized beds less an allowance of 20 percent for dispersion and 7,900 debarkation beds in Transportation Corps hospitals and Camp Haan Station Hospital.
c/ Data exclude patients in triage at debarkation hospitals.

Personnel

June data reflect the first effects of the redeployment period upon the Zone of Interior hospital structure. With the return of units from the European Theater of Operations, personnel requirements in station and regional hospitals increased substantially. The number of operating personnel remained unchanged except for an increase of about 400 nurses. With the exception of nurses, personnel requirements and availabilities in the station-regional hospital system were closer in balance at the end of June than they have been for many months past.

Although the increase in the number of operating personnel in general and convalescent hospitals during June was larger than the increase in requirements, there still remains a substantial shortage in all categories of personnel other than nurses. Based on the stringent formula of one nurse per 15 hospital beds, there exists a statistical over-assignment of approximately 900 nurses in the general hospitals, and another 600 in the station-regional hospitals. Most of these nurses are earmarked for assignment to the Pacific.

HOSPITALIZATION IN THE ZONE OF INTERIOR (Continued)

SUMMARY ASF HOSPITALIZATION IN THE ZONE OF INTERIOR a/
End of June 1945

Type of Hospital	Patient Capacity		Patients Remaining		Beds Occupied	Personnel Shortages		
	Authorized	Effective b/	Number c/	Percent of Effective Beds		MC	ANC d/	Total
Total	273,823	249,211	288,238	115.7	208,497	323	-1,506	3,847
Station & Regional	59,828	47,223	42,803	90.6	41,817	-13	- 587	- 9
General	163,995	152,610	192,157	125.9	129,739	185	- 906	3,513
Convalescent	50,000	49,378	53,278	107.9	36,941	151	- 13	343

a/ Excludes station hospitals under the Chief of Transportation.
b/ Defined in preceding tables.
c/ Data exclude patients in triage at debarkation hospitals.
d/ Civilian nurses included. Overages are denoted with a minus sign (-) in all columns.

Approximately one third of the Medical Corps Officers and correspondingly large numbers of other Medical Department personnel in the Zone of Interior have had no overseas experience and are physically able to accept overseas assignments. These personnel will be assigned to the Pacific as fast, and maybe faster, than replacements arriving from the European Theater of Operations. As a result, the next few months will see a large turnover in Medical Department personnel in the Zone of Interior with possible temporary unbalance between requirements and availabilities.

Summary

Bed authorizations and patients remaining by type of patient care and type of hospital, as summarized from reports WD AGO Forms 8-189 and 8-190 for the month of June are as follows:

BEDS AUTHORIZED AND PATIENTS REMAINING IN ASF HOSPITALS
BY TYPE OF CARE AND TYPE OF HOSPITAL
End of June 1945 a/

Type of Patient	Beds Authorized	Patients Remaining				
		Total	General	Convalescent	Regional	Station b/
Total	268,466	291,520	192,157	53,278	23,478	22,607
General-Convalescent Care	180,760	218,925	166,163	52,762	-	-
Evacuees		205,207	154,324	50,641	-	-
Z/I		13,718	11,839	2,121	-	-
Regional-Station Care	72,873	54,666	15,044	486	21,482	17,654
Regional	11,781	9,533	3,205	-	6,328	-
Station	61,092	45,133	11,839	486	15,154	17,654
Non-Army	14,833	17,929	10,950	30	1,996	4,953
POW	10,457	13,733	8,688	13	1,140	3,892
Civilians	2,944	2,986	1,397	16	665	908
Veterans Administration	970	680	526	-	134	20
Other	462	530	339	1	57	133

a/ Excludes debarkation beds and patients.
b/ Includes hospitals under the Chief of Transportation.

HOSPITALIZATION

HOSPITALIZATION IN THE ZONE OF INTERIOR (continued)

During June the following trends in Zone of Interior hospitalization may be noted:

a. Overseas admissions in excess of 40,000 monthly continue.

b. The majority of general hospitals have patient loads considerably in excess of authorized capacity which will continue to tax their available means for some time.

c. Continued improvement in disposition trends in both general and convalescent hospitals. As expected the proportion of patients returned to duty from convalescent hospitals is decreasing.

d. Station and regional bed authorizations are up over last month, but occupancies following a seasonal trend are down.

e. Personnel substantially in balance with much turnover to be anticipated incident to redeployment.

MORTALITY IN THE ARMY

During the first 40 months of the war there were 230,000 battle and nonbattle deaths among Army personnel. Of these, 176,000 or about 77 percent, died from battle causes, five percent from disease, and 18 percent from nonbattle injuries. Forty-five percent of the nonbattle injury deaths have been caused by aircraft accidents. During the war period deaths from all causes have averaged 11 per 1,000 men per year. These mortality figures exclude approximately 8,400 men who were missing and have subsequently been declared dead.

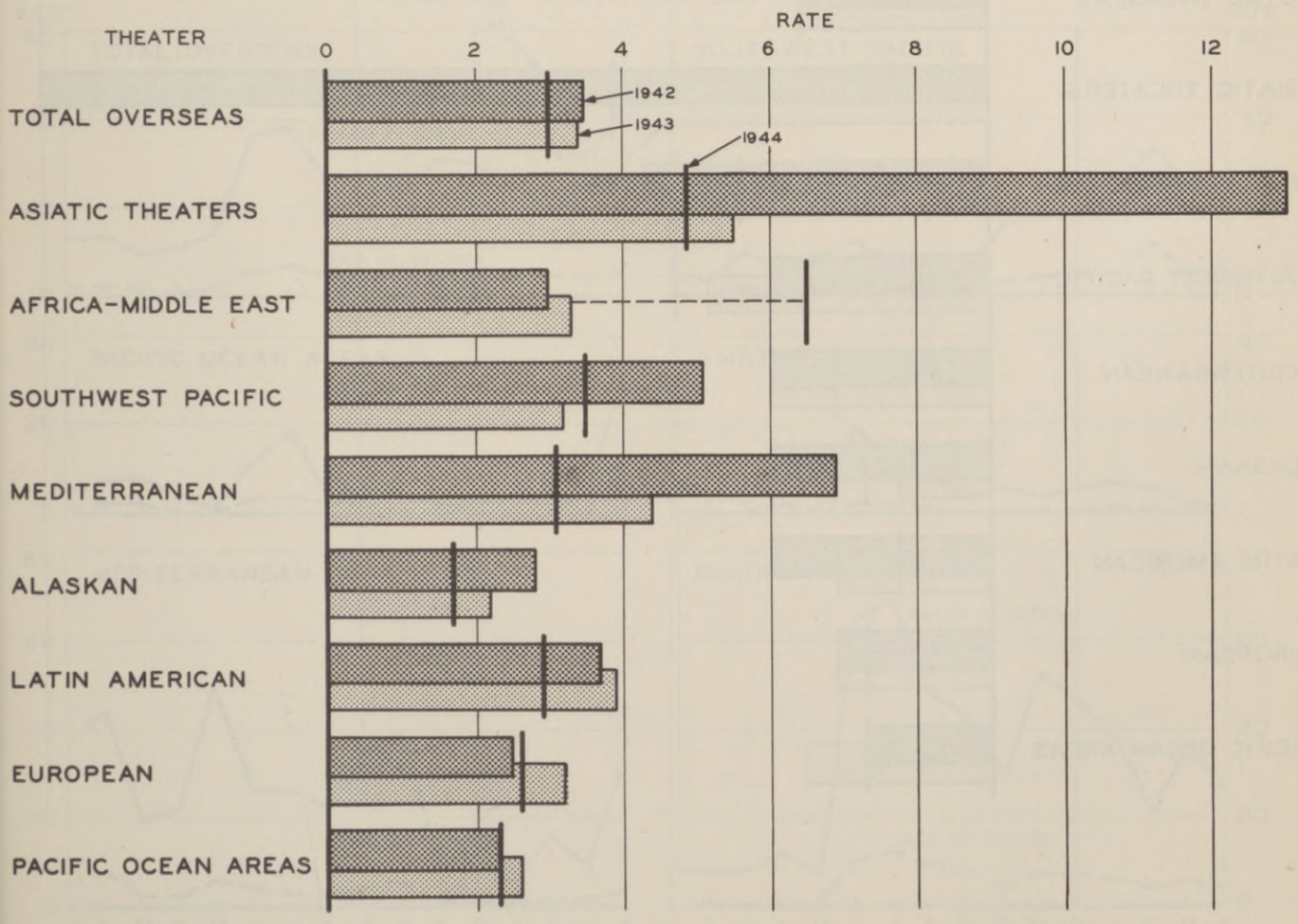
The following table gives the preliminary annual death rates per thousand men for the Army in the United States and overseas since the beginning of the war. Based upon the aggregate experience of the war through April 1945, the chance of dying after being hit in

TOTAL ARMY, DEATHS PER THOUSAND MEN PER YEAR
January 1942 - April 1945

Year	All Causes	Battle Deaths	Nonbattle Deaths			
			Total	Disease	Aircraft Accidents	Other
TOTAL	11.1	8.5	2.6	0.6	0.9	1.1
1942	3.4	1.0	2.4	0.6	0.8	1.0
1943	5.2	2.5	2.7	0.7	1.0	1.0
1944	16.0	13.5	2.5	0.5	0.9	1.1
1945						
Jan-Apr	21.3	18.5	2.8	0.6	0.8	1.5

MORTALITY FROM NONBATTLE INJURY, OVERSEAS THEATERS 1942-1944

RATES PER THOUSAND MEN PER YEAR



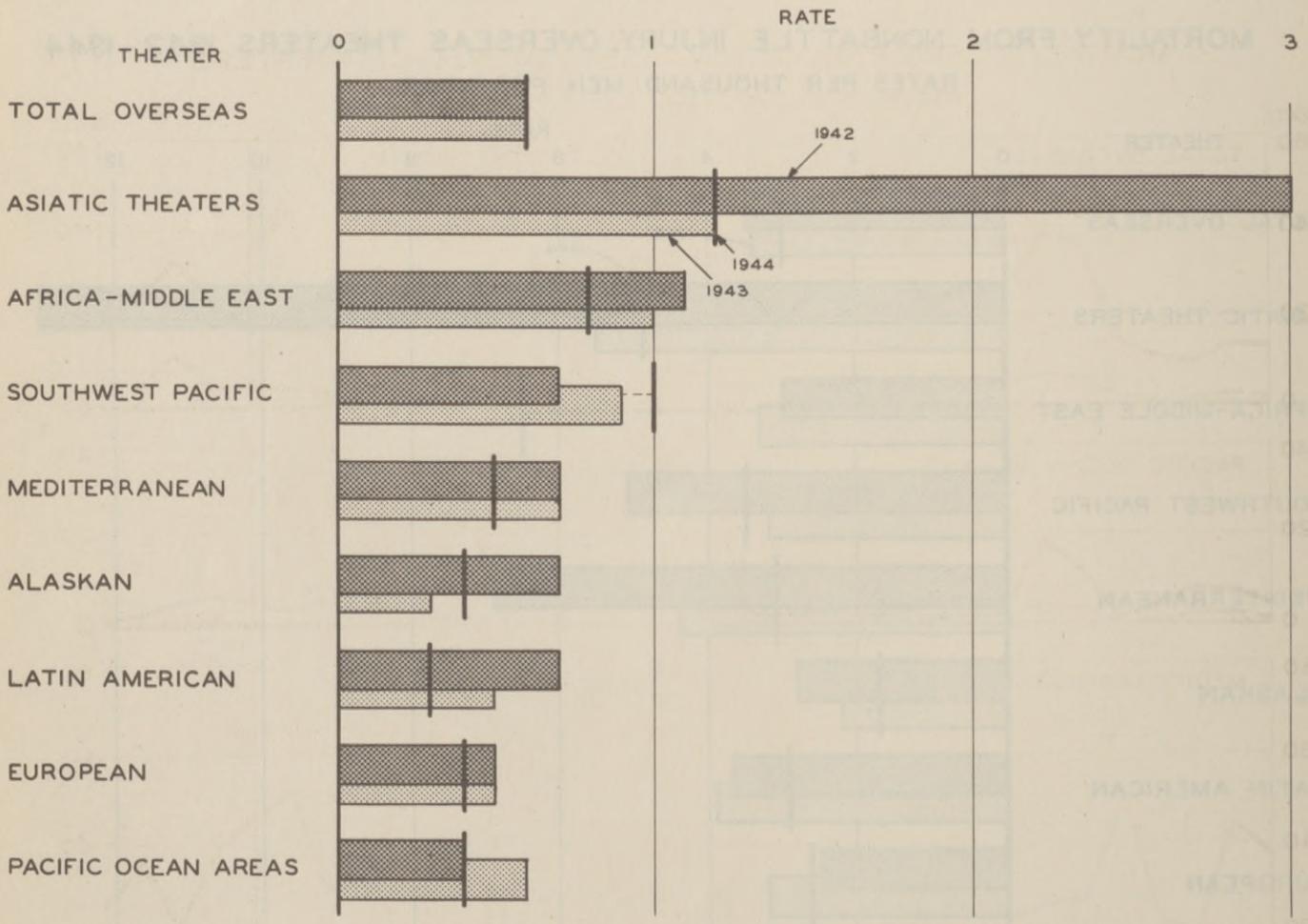
MORTALITY OF THE ARMY (Continued)

battle is slightly more than one in four, of dying after admission as wounded about one in 25, and of dying after being accidentally injured about one in 43, and of dying of some diseases after being admitted to hospital or quarters only about one in 1,100. These chances would be higher were they based upon the more serious cases which are admitted to hospital.

During the first three years of the war the disease death rate for troops overseas remained constant at about 0.6 deaths per thousand men per year. On the other hand, nonbattle injury fatalities overseas have decreased slightly from an average of 3.5 per thousand men per year in 1942 to 3.4 in 1943, and 3.0 in 1944. The charts below and on the previous page compare the various overseas theaters with respect to their disease and nonbattle injury death rates during 1942, 1943, and 1944. The panels have been drawn with different scales. The nonbattle data are preliminary for 1944. The disease death rate in the Southwest Pacific has been increasing steadily and for 1944 it was 1.0 per thousand men per year, about 1.7 times the average for all theaters. Preliminary data for the first four months of 1945 indicate that the rate for this theater has remained at that level. However, for each of the three years the Asiatic theaters reported the highest death rate from disease.

The proportion of men hit who are killed outright, or who subsequently die of their wounds, has varied considerably around the overseas average of 20.2 percent killed and 3.3 percent dying. The table on the next page shows these percentages for the various theaters for the period from 1 January 1944 through 30 April 1945. The higher fatality among wounded in the Pacific is characteristic and checks with independently obtained medical tabulations.

MORTALITY FROM DISEASE, OVERSEAS THEATERS, 1942-1944
RATES PER THOUSAND MEN PER YEAR



MORTALITY IN THE ARMY (Continued)

PROPORTION OF MEN HIT WHO ARE KILLED OR DIE AND FATALITY AMONG WOUNDED MEN
Overseas Theaters - January 1944 through April 1945

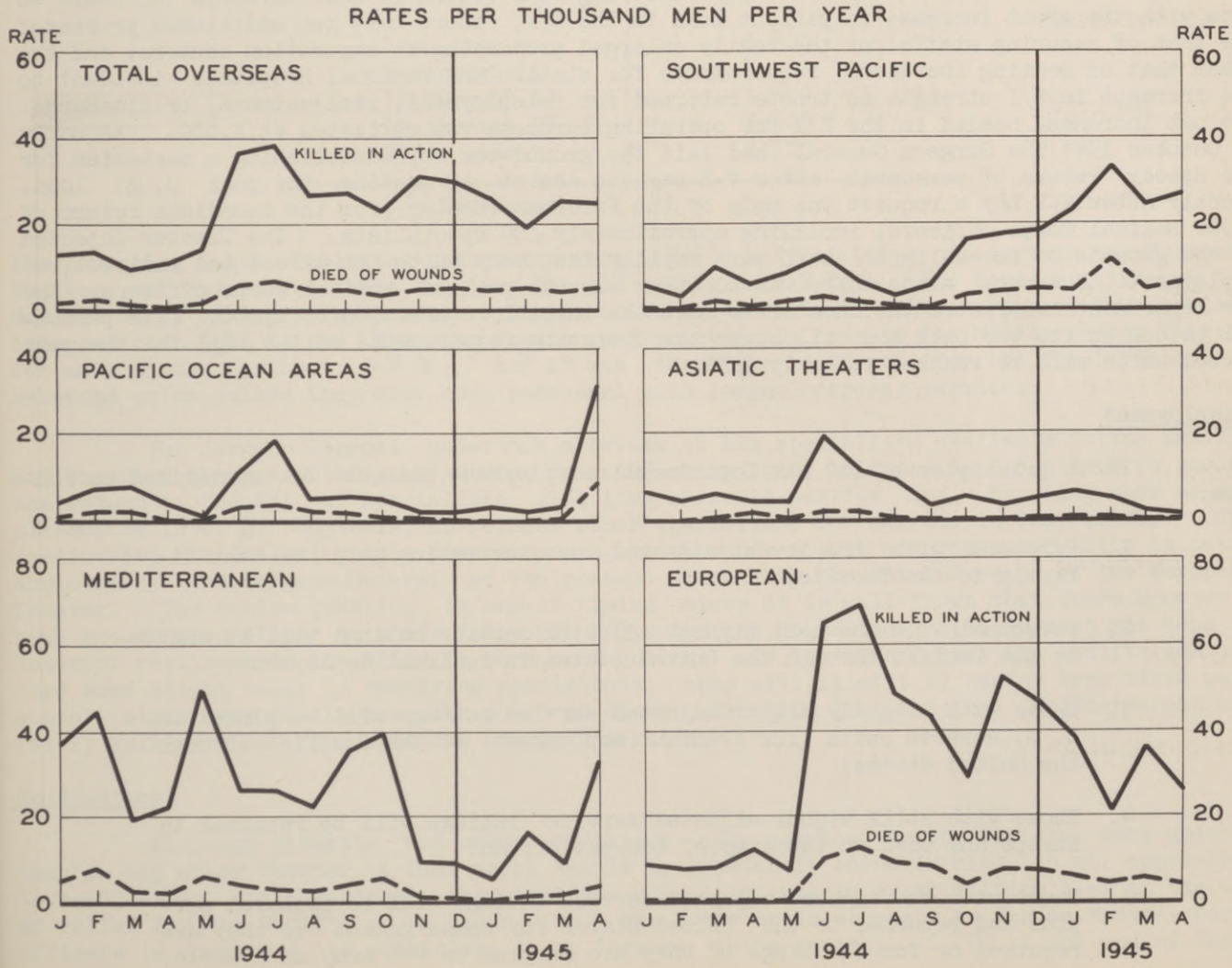
Theater	Percent of Men Hit Who a/			Died of Wounds as Percent of Wounded
	Were Killed	Died of Wounds	Total	
TOTAL OVERSEAS	20.2	3.3	23.5	4.1
European	19.7	3.2	22.8	3.9
Mediterranean	21.5	2.8	24.3	3.6
Southwest Pacific	22.1	5.0	27.1	6.5
Pacific Ocean Area b/	17.5	4.0	21.6	4.9
Asiatic Theaters c/	37.0	3.5	40.5	5.6

a/ Men hit equal killed plus died plus living wounded.
b/ Including 21st Bomber Command.
c/ Including 20th Bomber Command.

The panels below detail the trend of the death rates for battle causes in the overseas theaters from the beginning of 1944. The peaks shown in the curves are directly related to particular campaigns. For example, the peak in the killed in action rate for the Pacific Ocean Areas in the middle of 1944 is the result of the battle on Saipan and Guam, while the peak in April 1945 is attributable to the campaign on Okinawa.

MORTALITY FROM BATTLE CAUSES, OVERSEAS THEATERS

RATES PER THOUSAND MEN PER YEAR



REDEPLOYMENT, READJUSTMENT, AND DISCHARGE OF MEDICAL CORPS OFFICERS

The cessation of hostilities in Europe and related developments precipitated a series of major problems requiring policy decisions seriously affecting the ability of The Surgeon General to:

1. Secure adequate personnel to handle the Z/I peak medical load;

2. Establish the most equitable policy relative to the redeployment of medical personnel to the Pacific;

3. Facilitate the return from the Pacific, for discharge or reassignment, personnel with high adjusted service ratings and long overseas service; and

4. Establish an equitable system for discharging Medical Corps officers.

Z/I Peak Load

Profiting from the experience of World War I, careful plans were made after Yalta to insure the return of patients from European hospitals before the shipping situation became so tight that they would be left stranded in Europe. This was done not only to avoid the serious public criticism which would ensue if patients were left behind, but it was also essential in order to clear many of the European hospitals as quickly as possible to enable them to meet their redeployment dates for the Pacific. The extent to which the policy of removing patients to the Z/I has been carried out is discussed on pages 39 and 40. For example, fixed beds occupied in the European Theater numbered 191,000 and by 22 June there were only 68,000. On the other hand, patients remaining in the general hospital system of the Z/I increased during the same period from 133,000 to 236,000.

In addition to the necessity of securing the return of Medical Corps officers to cope with the great increase in patient load in the Z/I, there were two additional problems: one that of securing staffs for the vastly enlarged processing at separation centers; and the other that of meeting increased requirements for station and regional hospitals incident to the increase in Z/I strength as troops returned for redeployment, readjustment, or discharge. The net increment needed in the Z/I for operating purposes was estimated at 1,000. As early as October 1944 The Surgeon General had laid the groundwork by establishing a mechanism for the speedy return of personnel after V-E Day to assist in meeting the peak U. S. load. Shortly after V-E Day a request was made of the European Theater for the immediate return of 1,000 Medical Corps officers, including approximately 100 specialists. The Theater objected on the grounds of necessity to staff very rapidly the many units for direct and indirect redeployment. However, since there was no other surplus pool of Medical Corps officers, the War Department instructed the Theater to meet the initial requisition of 1,000. This personnel is now on its way back and will cover the operating requirements of the Z/I for the peak period which will be reached in early fall.

Redeployment

Basic principles of the War Department redeployment plan can be summarized as follows:

1. Personnel with the lowest adjusted service rating will be sent directly to the Pacific;

2. Personnel with the next highest adjusted service ratings will be sent to the Pacific through the United States in indirect deployment;

3. Those with slightly higher adjusted service ratings will be placed in U. S. Reserve Units for eventual deployment to the Pacific through the United States;

4. Those with still higher adjusted service ratings will be retained in Europe and used in the Army of Occupation; and

5. Those with the highest adjusted service ratings will be declared surplus and returned to the United States for reassignment if they are required or for discharge if they are surplus to the Army as a whole.

REDEPLOYMENT, READJUSTMENT, AND DISCHARGE OF MEDICAL CORPS OFFICERS (Continued)

The War Department redeployment plan made no mention of the fact that the Medical Department, at least as far as Medical Corps officers, Nurses, and Medical Administrative Corps officers are concerned, is in a noticeably different position from other arms and services. This is because there exists in the U. S. a sizable pool of personnel available for overseas service but who had not yet served overseas because of the need to staff the very large medical establishments in the Z/I. Adherence to the general War Department plan for redeployment would have resulted in the anomalous situation of personnel with considerable overseas service being redeployed to the Pacific either directly or through the United States while there would have been retained in the United States a large number of available personnel without overseas service. The Surgeon General therefore requested the approval of the War Department General Staff to shift personnel out of units being redeployed through the United States and, within the limits of available personnel, to replace such personnel with individuals without overseas service. This approval was obtained, and the mechanism is now being set up to effectuate the shifting. An analysis of the available group in the Z/I indicates that there will be a sufficient number to permit the removal of all personnel from the indirectly deployed units who have had more than 12 months overseas service as of V-E Day and still leave available sufficient officers to meet all other needs of the Pacific.

Although on V-E Day there was a sufficient number of personnel in the European and Mediterranean Theaters whose short overseas service qualified them for units being directly deployed to the Pacific, there was an insufficient number of specialists among this group to permit balanced units to be sent to the Pacific.

MEDICAL CORPS OFFICERS PRESENT IN
THE EUROPEAN AND MEDITERRANEAN THEATERS ON V-E DAY

Months Overseas a/	Number
TOTAL	18,600
Less than 6	3,800
6 through 11	4,400
12 through 17	4,500
18 through 23	2,600
24 or over	3,300

a/ Estimated.

The foregoing table indicates that there were 12,700 Medical Corps officers in the European Theater who had served there for less than 18 months on V-E Day. The total requirement for Medical Corps officers in directly deployed units was only 2,900. However, very few specialists had been sent to the European Theater and practically none to the Mediterranean Theater for many months prior to V-E Day, and it was therefore difficult for the Theaters to send balanced units unless they drew upon personnel with longer overseas service.

The Surgeon General undertook a review of the specialists available in the Pacific and explored the possibility of sending only AGF units fully balanced in the effort to secure the return to the Z/I of specialists with long overseas service and, by using them as replacements in U. S. hospitals, to release other specialists for service in the Pacific. The feasibility of following this procedure in the case of August and September units is being explored by The Surgeon General at the present time with the Chief Surgeon of the European Theater. The entire question is one of timing since it is well-known that there have never been enough specialists to staff fully all T/O units and at the same time to meet the Zone of Interior requirements according to personnel guides. To the extent that the Pacific can afford some slight delay in receiving specialists, they will benefit by having less tired personnel since many of the men who would go direct from the European and Mediterranean are fairly well worn out from extended overseas service.

Readjustment

Although climatic and other conditions make service in the Pacific more arduous than in any other theater, a fact which should be constantly borne in mind in all approaches to readjustment and discharge, the strategic situation places great difficulties in the way of relief for the Pacific. To begin with, the build-up in strength as far as Medical Corps officers is concerned is scheduled to go forward quite rapidly: 6,700 at the end of June;

REDEPLOYMENT, READJUSTMENT, AND DISCHARGE OF MEDICAL CORPS OFFICERS (Continued)

10,000 at the end of September; 12,600 at the end of December; and 14,000 at the end of March 1946.

Medical overhead in the Pacific has been inadequate for a long time because of the higher priorities with which the European and Mediterranean Theaters were favored. Shortly after V-E Day, The Surgeon General sought to remedy this situation by recommending an increase in Pacific overhead of 211 Medical Corps officers, an action which is now under way. A reconciliation of Medical Corps strength in the Pacific with requirements indicates current shortages of approximately 300 in addition to the above. The foregoing requirements must be met as quickly as possible. In addition there are approximately 1,500 Medical Corps officers in the Pacific with two or more years of overseas service. Approximately one-third of these will have critical scores which will warrant their separation from the service, but they cannot be discharged until replacements are provided. The only possibility is for the Z/I to absorb the leave and travel time involved which represents a sizable additional requirement even after readjustment is carried out over a period of many months. But there is no possibility of the Z/I absorbing it unless the only available surplus of Medical Corps officers now in existence in the European and Mediterranean Theaters is returned to the Z/I for reassignment.

Discharge

Attention has been called to the very rapid decline in the patient census in the European and Mediterranean Theaters in recent months. The cessation of hostilities further reduced requirements for Medical Corps officers in these Theaters by freeing the hospital staffs in the army area as well as attached medical personnel. Immediately after V-E Day, of course, many of these staffs were pre-occupied in medical processing of the troops being prepared for direct or indirect deployment. There was the further problem of assisting in the emergency medical care required by the large number of displaced persons and, to a lesser degree, supervising the medical care of prisoners of war. However, these new requirements, especially after the processing of American troops was completed, were far short of those existing while hostilities were under way. Probably the most important "hidden" requirement was connected with the shuffling and reshuffling of units being prepared for direct and indirect redeployment. However, most of this process will of necessity be completed by September. After allowing for the return to the Z/I of the 1,000 Medical Corps officers requested to meet the peak load, there will be a surplus of Medical Corps officers in the European and Mediterranean Theaters amounting to 3,300 in September, 2,100 in December, and 900 in March.

The key to intelligent readjustment for the Pacific and the establishment of an equitable system of discharge hinges almost solely on the prompt return of the afore-mentioned surplus to the Z/I. No intelligent use can be made of the surplus as long as it remains in the European Theater because no final discharges can occur there, and no sensible exchange can be made with the Pacific from there. To a very large degree the problem of the efficient utilization of Medical Corps officers has become solely a problem of shipping.

It has long been recognized that with the termination of hostilities in Europe there would be a multitude of pressures working toward the discharge of Medical Corps officers and other Medical Department personnel. However, the rate of this discharge must be tempered by two major factors:

1. The peak Z/I load which will occur during the fall and early winter of 1945; and

2. The additional temporary requirement to support readjustment in the Pacific, involving the discharge of high-score individuals and the return for reassignment of lower score men with long service in the Pacific.

One factor which will contribute to easing the situation is the new availability of approximately 2,000 interns and residents who will be ready for assignment in the fall of 1945. This group will permit the discharge of an equivalent number of high-score personnel.

The problem of criteria to govern discharges of Medical Corps officers is complicated by the shortage of certain specialists already mentioned. A careful review of availabilities and requirements for specialists indicated the necessity of establishing a higher critical score for specialists such as cardiologists, gastroenterologists, anesthetists,

REDEPLOYMENT, READJUSTMENT, AND DISCHARGE OF MEDICAL CORPS OFFICERS (Continued)

neurosurgeons, and others than was true for the large groups of general duty personnel, i.e. general surgery and men qualified in internal medicine. There are approximately 1,000 officers, other than Regular Army and Veterans' personnel, who are over 50 years of age. Plans have been made to include this group among the early dischargees.

Although detailed consideration was given to the feasibility of using civilian requirements as a guide in the discharge of Medical Corps officers, the weight of the evidence clearly indicated that this factor could not be introduced objectively. It was therefore decided that a discharge policy by selected groups would probably, in the long run, accomplish substantially the same as could have been obtained if it had been possible to use this factor explicitly.

Conclusions

The foregoing can be summarized as follows:

1. The increased medical load in the Z/I will be met by the return of 1,000 Medical Corps officers out of the European surplus (actually out of the U. S. Reserve Units);

2. The Surgeon General is reviewing with the Chief Surgeon, European Theater, the feasibility of making certain adjustments in the directly deployed units for use in the Communications Zone to ensure that the Pacific does not receive specialists who have been worn out by prolonged overseas service. It is recognized that the units to be deployed in the army area must, because of operational requirements, go with balanced staffs;

3. It will be feasible to remove from units being indirectly deployed to the Pacific all Medical Corps officers who have served overseas for 12 months or more and to replace them with Medical Corps personnel from the Z/I who have not yet been overseas;

4. Provision is being made to regulate discharges at a rate which will not interfere with making available to the Pacific adequate numbers of personnel to meet its full requirements and also to permit the Pacific to participate fully in readjustment;

5. Because of the specialist shortage, two critical levels have been established, one for the scarce and the other for the non-scarce categories;

6. Provision has likewise been made to permit the early discharge of the 1,000 officers 50 years of age and over;

7. No special provision has been made in discharge regulations to reflect community needs explicitly although it is believed that the mere reduction in the strength of the Medical Corps will substantially meet these needs; and

8. Under present shipping schedules it is estimated that approximately 3,500 Medical Corps officers can be discharged before the end of 1945. If these schedules are revised, it may be possible to bring the number up to 7,000. The key to readjustment and discharge is held by shipping which controls the return of the surplus from the European and Mediterranean Theaters to the Z/I from where readjustment and discharge must emanate.

STATISTICAL TABLES

The tables below and on the following pages present admission rates for selected causes in the overseas theaters. The rates include cases admitted to hospital or confined to quarters for a day or more, and have been derived from MD Forms 86ab (now AGO Form 8-122), both regular and telegraphic, submitted to The Surgeon General from each overseas theater or lesser command. Only the major overseas areas are shown separately, but the total overseas rates are based upon a complete consolidation. Except for wounded, the rates for each month are based upon the experience of four or five weeks depending upon the number of Fridays in a month. For wounded in action the rates pertain to calendar-month periods and are derived from The Adjutant General's report, Battle Casualties of the Army, which tabulates hospital admissions only. The rates are based upon all casualties incurred, including those of the Air Force. In addition, all casualties are tabulated according to the theater of assignment of the men involved. However, there has been a problem associated with the tabulation of casualties of the XXIV Corps, a Pacific Ocean Areas unit attached to the Southwest Pacific for the Leyte Campaign. Some of the casualties sustained by this unit are tabulated with those of the Pacific Ocean Areas, the remainder with those of the Southwest Pacific. Therefore the separate casualty rates for these two theaters, for the period from October 1944 to February 1945, may not be altogether sound. Rates which are computed from incomplete reports are so noted, and those derived from the weekly telegraphic 86ab reports are distinguished from the regular monthly report.

The malaria rates are for diagnosed malaria only, and include both primary attacks and recurrences insofar as these are reported as malaria, a variable amount, differing from theater to theater, being reported as fever of undetermined origin. The rates for the Army in the continental United States reflect only infections acquired in the United States. The venereal disease rates represent the data of the 86ab report rather than the Monthly Venereal Disease Statistical Report, which generally yields somewhat lower rates. Cases contracted prior to service have been excluded, although cases diagnosed among transient personnel are included. The total venereal disease rates shown for the Caribbean Defense Command in the 31 May issue of HEALTH include cases contracted prior to service, and have been replaced with those for new cases only. The transfer of strength from the Mediterranean to the European Theater is believed to have caused some error in the reports from the former area for October and November, one which takes the form of too little strength for the admissions reported. Tentative neuropsychiatric admission rates are presented for 1944. Not systematically reported on the 86ab until late in 1943, these rates may not be as firm as those for communicable diseases. With respect to the table on fever of undetermined origin, many of the admissions initially reported as such are later given specific diagnoses, often malaria. Since the system of reporting does not make it possible to subtract such cases from the undiagnosed category, a certain amount of dual reporting exists.

WOUNDED IN ACTION, AS REPORTED TO THE ADJUTANT GENERAL
Hospital Admissions per Thousand Men per Year

Month and Year	Overseas Commands								
	Total a/ Overseas	North American	Latin American	ETO b/	MTO	POA	SWPA	CBI	ME and PGC
1943 Average	23	6	0	7	62	18	9	4	4
1944 Jan-Jun	45	0	0	44	108	23	24	14	9
Jul	143	-	-	269	95	40	24	24	12
Aug	101	-	-	189	73	20	10	9	-
Sep	113	-	-	174	166	45	5	3	1
Oct	96	0	-	118	170	35	62	3	-
Nov	133	0	-	234	36	25	52	5	0
Dec	118	-	-	189	30	31	54	8	-
1944 Average	87	0	0	139	104	28	31	11	6
1945 Jan	126	-	-	202	14	8	72	12	-
Feb	105	-	-	134	59	2	147	13	0
Mar	105	-	-	156	34	6	89	2	0
Apr	109	-	-	113	147	162	108	2	-

a/ Including casualties among men en route.
b/ Excluding Iceland.
Dash is used to denote no admissions, zero to denote a rate of less than 0.5.

STATISTICAL TABLES (Continued)

ADMISSIONS TO HOSPITAL AND QUARTERS
Rates Per Thousand Men Per Year

Month and Year	United States	Overseas Commands								
		Total	Alaska	Caribbean	ETO a/	MTO	POA	SWPA	Asiatic	ME and PGC
ALL DISEASE										
1942 Average	664	676	667	823	693	452	519	821	1,048	1,330
1943 Average	739	889	624	670	837	943	971	1,046	991	1,107
1944 Jan-Jun	619	695	566	528	578	812	600	902	967	949
Jul-Dec	495	623	351	536	440	880	513 b/	804	1,152	842
Average	563	654	478	531	492	846	561 b/	840	1,077	896
1945 Jan	603	660	337	529	605	878	429 b/	799	728	658
Feb	626	655	363	587	577	790	539 b/	905	652	554
Mar	592	(631)	384	546	(561)b/	714	399 b/	973	647	631b/
Apr	543	(623)	411	553	(518)b/	657	(382)b/	1,058	710	573
May	541	(632)	658	515	(534)b/	600	(387)b/	(1,113)	(685)	(587)
Jun	514b/									
Jan-Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										
NONBATTLE INJURY										
1942 Average	91	123	152	107	109	96	104	176	80	158
1943 Average	80	136	182	105	100	149	131	171	84	140
1944 Jan-Jun	69	114	145	75	85	145	118	151	95	107
Jul-Dec	66	112	100	61	105	131	102 b/	132	97	92
Average	67	113	127	68	97	138	111 b/	139	96	99
1945 Jan	55	142	102	60	174	103	95 b/	104	105	69
Feb	50	106	94	67	114	88	86 b/	103	99	73
Mar	49	(100)	109	61	(101)b/	89	80 b/	128	105	69b/
Apr	48	(110)	100	65	(116)b/	98	(70)b/	115	104	64
May	49	(102)	84	57	(105)b/	97	(87)b/	(122)	(77)	(59)
Jun	53b/									
Jan-Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										

a/ Excluding Iceland.
b/ Based on Incomplete Reports.
( ) Telegraphic Reports.

STATISTICAL TABLES (Continued)

ADMISSIONS TO HOSPITAL AND QUARTERS
Rates Per Thousand Men Per Year

Month and Year	United States	Overseas Commands								
		Total	Alaska	Caribbean	ETO a/	MTO	POA	SWPA	Asiatic	ME and PGC
ALL VENERAL DISEASE										
1942 Average	39	32	7	74	38	36	12	32	64	80
1943 Average	26	34	3	56	43	56	5	15	52	68
1944 Jan-Jun	30	37	3	33	26	96	6	9	53	60
Jul-Dec	37	45	7	33	40	125	4 b/	6	50	62
Average	33	42	5	33	35	111	5 b/	7	51	60
1945 Jan	47	46	6	29	48	124	5 b/	5	54	80
Feb	43	42	8	29	45	105	4 b/	8	57	75
Mar	43		10	26		94	5 b/	40	51	74 b/
Apr	43		8	27		85		84	43	84
May	43		8	25		94				
Jun	43									
Jan-Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										
DIAGNOSED MALARIA										
1942 Average	0.6	33	0	99	0	11	12	52	165	127
1943 Average	0.2	96	0	37	3	54	208	245	181	123
1944 Jan-Jun	0.1	43	-	16	10	61	67	75	113	66
Jul-Dec	0.2	34	-	12	8	63	13 b/	41	216	52
Average	0.2	38	-	14	9	62	43 b/	53	174	59
1945 Jan	0.1	14	0	7	5	19	8 b/	27	74	11
Feb	0.2	15	-	7	5	16	6 b/	43	49	9
Mar	0.1		-	7		21	5 b/	62	28	10 b/
Apr	0.2		-	9		28		75	29	11
May	0.1		0	11		31				
Jun	0.1									
Jan-Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										

a/ Excluding Iceland.
b/ Based on incomplete reports.
Dash is used to denote no admissions, zero to denote a rate of less than 0.5.

STATISTICAL TABLES (Continued)

ADMISSIONS TO HOSPITAL AND QUARTERS
Rates Per Thousand Men Per Year

Month and Year	United States	Overseas Commands								
		Total	Alaska	Caribbean	ETO a/	MTO	POA	SWPA	Asiatic	ME and PGC
COMMON RESPIRATORY AND INFLUENZA										
1942 Average	243	159	244	113	287	151	89	146	150	197
1943 Average	247	181	222	99	409	142	86	108	159	201
1944 Jan-Jun	198	174	245	84	225	185	97	90	177	254
Jul-Dec	85	100	105	77	92	138	70 b/	78	176	182
Average	147	132	188	81	142	162	85 b/	83	176	219
1945 Jan	167	147	106	67	166	190	72 b/	95	135	180
Feb	192	145	135	71	157	182	60 b/	128	135	149
Mar	167		115	65		152	65 b/	125	130	164 b/
Apr	122		143	70		106		131		127
May	124		417			79				
Jun	101									
Jan-Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										
DIARRHEA AND DYSENTERY										
1942 Average	8	28	5	19	17	33	34	57	120	185
1943 Average	12	66	8	16	12	132	43	70	146	170
1944 Jan-Jun	9	35	3	13	11	41	28	58	182	101
Jul-Dec	10	40	3	12	14	67	28 b/	54	180	129
Average	9	38	3	13	13	54	28 b/	55	181	115
1945 Jan	8	30	1	11	17	20	18 b/	76	69	56
Feb	8	36	2	14	20	21	27 b/	99	68	31
Mar	6		2	21		19	16 b/	119	83	45 b/
Apr	6		3	14		18		90	116	81
May	6		2	14		22				
Jun	7									
Jan-Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										

a/ Excluding Iceland.
b/ Based on Incomplete Reports.

STATISTICAL TABLES (Continued)

ADMISSIONS TO HOSPITAL AND QUARTERS
Rates Per Thousand Men Per Year

Month and Year	United States	Overseas Commands								
		Total	Alaska	Caribbean	ETO a/	MTO	POA	SWPA	Asiatic	ME and PGC
FEVER OF UNDETERMINED ORIGIN										
1943 Average	c/	52	0	64	1	75	19	166	71	21
1944 Jan-Jun	c/	35	1	37	1	57	26	102	69	16
Jul-Dec	c/	40	0	31	3	85	13b/	80	174	37
Average	c/	38	1	34	2	71	20b/	88	131	27
1945 Jan	c/	24	0	20	4	39	5b/	70	87	12
Feb	c/	27	-	10	4	43	9b/	95	60	24
Mar	c/		0	10		41	4b/	117	56	31b/
Apr	c/		-	9		43		104	59 -	33
May			0	10		38				
Jun										
Jan-Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										
NEUROLOGICAL AND PSYCHIATRIC DISORDERS										
1944 Jan-Jun	29	29	11	21	24	37	26	48	23	27
Jul	32	59	10	16	84	52	27b/	58	16	31
Aug	36	50	12	18	76	28	25b/	48	17	21
Sep	46	41	13	25	40	50	32b/	53	16	19
Oct	48	56	13	23	65	82	32b/	39	21	21
Nov	47	60	13	27	85	47	28b/	41	23	16
Dec	47	56	12	22	72	39	29b/	53	20	26
Jul-Dec	45	53	12	22	69	50	29b/	49	19	22
Average	36	43	12	21	52	43	27b/	48	20	25
1945 Jan	50	44	14	25	51	32	36b/	43	19	20
Feb	49	39	9	27	36	31	25b/	70	20	15
Mar	50		13	29		31	32b/	74	22	20b/
Apr	45		13	26		41		60	24	11
May	49		9	20		13				
June										
Jan-Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										

a/ Excluding Iceland. b/ Based on incomplete reports. c/ Not available.
Dash is used to denote no admissions, zero to denote a rate of less than 0.5.