CHAPTER XVII

THE RUSH OF SICK THROUGH MUDROS HARBOUR: DEVELOPMENT OF LEMNOS

THE rush of sick after August, finding all the hospitals in the Mediterranean already glutted and the shipping overtaxed, caused an immediate crisis at Lemnos. In spite of the existence of a fleet of over thirty hospital ships, on which the naval medical officer now in charge relied rather than on converted transports, the crisis was only met by the continued use of giant liners. In their attempts to co-operate in the work of distributing the casualties, the military medical authorities were still hampered by lack of small craft. In the stress of these circumstances the plan for intercepting the lightly wounded at Lemnos practically went by the board. In spite of these difficulties, however, and of great hardships due mainly to the lack of engineering development at Lemnos, the hospitals on that island played an important part, though not that originally intended for them, towards meeting the medical needs of the campaign. The great problem of convalescence was, during this stage, further advanced. In autumn the apparently excessive flow of casualties to England led to more vigorous efforts to develop sufficient accommodation for casualties and convalescents in the Mediterranean theatre. The deficiencies of the existing system of sea transport of casualties appear to have been on the military side rather than on the naval, but the naval medical officer was recalled and control reverted to the army.

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Preceding conditions

Between August 7th and September 8th a total of 52,213 sick and wounded had passed over the lines of communication. The problem of digesting this huge intake of casualties on the top of an already congested hospital system, by absorption in "return to duty," and by evacuation to home bases, was a very large one and—it can hardly be questioned—had been underrated by the War Office.

As reported to the Principal Hospital Transport Officer, the total number of hospital beds in the Mediterranean on September 8th was: in Egypt 26,000, largely on an "expansion" basis; in Malta 13,700; in Mudros 6,450, with convalescent dépôts for 2,000. But it must be remembered that the beds in Egypt and Malta had also to receive the sick, at this time numerous, from the 50,000 troops in Egypt.[1] The average stay in hospital[2] was 52 days for wounded; for cases of enteric 70; for dysentery 46; the average for all sickness being 29 days. Broadly stated, the passage of the casualties from some big battle through the hospital and convalescent system of a medical base occupied some two or three months.[3] The wounded, even apart from sick, had exceeded expectations by 10,000. The number was, in fact, almost exactly Surgeon-General Birrell's rejected estimate of 30,000. The system of disposal by return to duty and invaliding was still working imperfectly.

Such was the state of repletion in which the expeditionary bases were called upon to absorb a stream of sick of quite unforeseen dimensions. The nature, number, and distribution of casualties during August, September, and October are shown in the following tables.[4]

The Problem

MONTHLY EVACUATIONS: NATURE.

	Sick.	Wounded.	Total.
August	12,968	30,585	43,553
September	22,209	3,639	25,848
October	21,991	2,620	24,611
Total	57,168	36,844	94,012

[1] Largely consisting of Australian reinforcements.

[2] The figures are from the record of Australian casualties, but they are not likely to differ materially from those of the British troops.

[3] This can, for example, in connection with the casualties for the Landing, be traced in the Australian hospitals and auxiliaries in Egypt—where, as has been seen, the result of an endeavour to shorten the period of medical convalescence by premature discharge to base details was unfortunate—and in the movement of Australian casualties through the British hospital system in England after August. The calculation for hospital beds required in a campaign is determined, generally speaking, by two factors—daily admissions, and average days in hospital, the latter naturally depending on a number of conditions such as nature of casualty, invaliding and convalescent facilities, etc.

[4] Based on reports from the P.H.T.O.

MONTHLY EVACUATION FROM MUDROS: NUMBER AND DISTRIBUTION.

		Egypt.	Malta.	Gibraltar.	England.	Total.
August	..	23,538	8,486	..	11,529	43,553
September	..	9,991	11,059	..	4,798	25,848
October	..	10,973	8,859	924	3,855	24,611
Total	..	44,502	28,404	924	20,182	94,012

Thus, out of a total of some 50,000 casualties evacuated through Mudros Harbour during September and October, no less than 44,000 were sick; their disposal was the real problem. Half-a-dozen hospital ships could have dealt with all the wounded. This huge flow prevented the attainment of equilibrium and created a situation which remained unstable till towards the close of the campaign: the margin of accommodation was perilously small; large numbers of cases were evacuated to England who should have remained; sea-transport was overtaxed; and, through the strain thrown on the organisation, there was a repetition of the defects in the treatment of sick and wounded of the first stage of the campaign.

The task of transporting and distributing these huge numbers was, perhaps, the greatest medical problem of the campaign, and a description in some detail is necessary to a proper appreciation of the latter. First, as to the transport available. The naval P.H.T.O., who was now responsible, restricted the use of "black" ships to a minimum, very few being taken over after August. Unsuitable hospital ships were also weeded out, and other ships fitted up in Egypt and England. Close and regular supervision over the work carried out in these was maintained by consultant surgeons. In September, the officers, nurses, and medical orderlies who were left from the reserve sent out in August for staffing "black" ships were transferred from the dépôt ship to West Mudros. The chief reserve of British medical and nursing personnel was retained in Alexandria under the control of the P.D.M.S., and formed part of the "expansion" personnel of the hospitals there.

The ships available

At this juncture there came under consideration the disposal of the two hospital ships which were being fitted out

by Australia. The New Zealand Government, in accordance with the general policy adopted by that Dominion, had for a time placed both its ships at the disposal of the War Office, to be used "to the best advantage of the Empire"; and the New Zealand hospital ship *Maheno* for a time formed part of the fleet under the P.H.T.O. at the Dardanelles and in three trips carried 2,000 cases—British and Dominion indiscriminately. It was proposed by the War Office that the Australian hospital ships should be similarly employed. The Australian hospital ship *Karoola* made one trip with British and Australian invalids from Egypt to England. But the acting D.G.M.S., Australia, on his arrival in Egypt decided that Australian hospital ships were specifically for Australians, and advised his Government that, since "it was not possible to separate wounded at the front," and since "the Imperial hospital ships are much more roomy and airy and carry nearly double the number," the Australian hospital ships should be employed solely in invaliding to Australia. This policy was strongly favoured by the Egyptian Command. In view of the tremendous problem involved in Australia's 8,000 miles of lines of communication, the decision would appear to be justified.[5]

Hospital ships for Australian use

The task that faced the P.H.T.O. was now twofold—distribution of sick and wounded from the front to the expeditionary bases, and invaliding to England of men discharged from the hospitals in Lemnos, Egypt, and Malta. At a conference on September 12th between the naval and military authorities at Lemnos, "normal" casualties from Gallipoli were estimated at 800 per day,[6] of which the intermediate base was expected to take 200 (of whom, under the policy of retention for only twenty-one days, about 5 per cent left Lemnos daily for other bases). Six hundred were left for disposal otherwise, and, to dispose of these, it was estimated that the accommodation in the East must be supplemented by evacuation direct from Lemnos to England of no less than 7,000 per month, in addition to

Fleet of Hospital ships insufficient

[5] It was soon found necessary by the New Zealand Government similarly to restrict the operations of the *Maheno*.

[6] This number had soon to be increased to 1,000.

invalidings from Egypt and Malta. Of this number the *Aquitania* could take 4,000 monthly. Of the twenty-eight hospital ships now available, thirteen would be required for clearing Egypt and Malta, leaving fifteen to maintain the "ferry service" from Gallipoli to Egypt and Malta, with one "white" ship constantly stationed at each of the three beaches. To clear the remaining 3,000 from Lemnos, the Admiralty was asked for the 30,000-ton *Mauretania* as a hospital ship to supplement the *Aquitania*. This was at first refused, as being unnecessary. But the medical situation at the Dardanelles did not clear up, and the P.H.T.O. continued to press his "white ship" policy.[7] By September 26th, out of thirty-four hospital ships available, "sixteen" (so the Inspector-General of Communications cabled to the War Office) "with the help of occasional transports and the monthly visit of the *Aquitania* barely suffice to clear sick and wounded from the beaches and Mudros." Egypt had only 3,880 beds vacant, Malta 2,157. On October 1st less than 4,000 beds were available in the Levant: on the 4th the War Office was informed that Mudros and Egypt were full, while Malta had only 525. At the same time the P.H.T.O. reported the situation to Admiral de Robeck as "serious." "I feel more anxious than at any time since my arrival, not excepting even that ghastly August week." On the 7th he reported the hospitals at Mudros, Alexandria, Malta, and Gibraltar "full,"

All hospitals become full

[7] The following is an extract from a memorandum, dated 2 September, 1915, from the Principal Hospital Transport Officer to the Medical Director-General at the Admiralty.—

"Ships allocated as Ambulance Carriers.

"On my requisition the Superintending Transport Officer here allocates them when and as he can. It is a hand-to-mouth business at best.

"Here is a typical situation. A hospital ship comes in full, and must return empty to the beaches, there being no White Ship available to replace her. The shore hospitals here are oftener than not full up, and cannot receive cases.

"I go to Senior Transport Officer and beg for a Black Ship to go to Alexandria or Malta. When he has one nearing clearance of troops and stores, he assigns her, probably for the trip only. I then requisition hands to clear her from Senior Naval Officer, and personnel and medical and surgical equipment from D.D.M.S., L. of C. The latter's resources are strictly limited, but he does his best in a modified way for the short Mediterranean voyage.

"More Hospital Ships fully equipped and fitted is the only way in which effective help can be given from Home. I foresee trouble if Alexandria, Malta, and Gibraltar get filled up and have to send some of these black ships home in the state in which they sometimes have to be despatched from here."

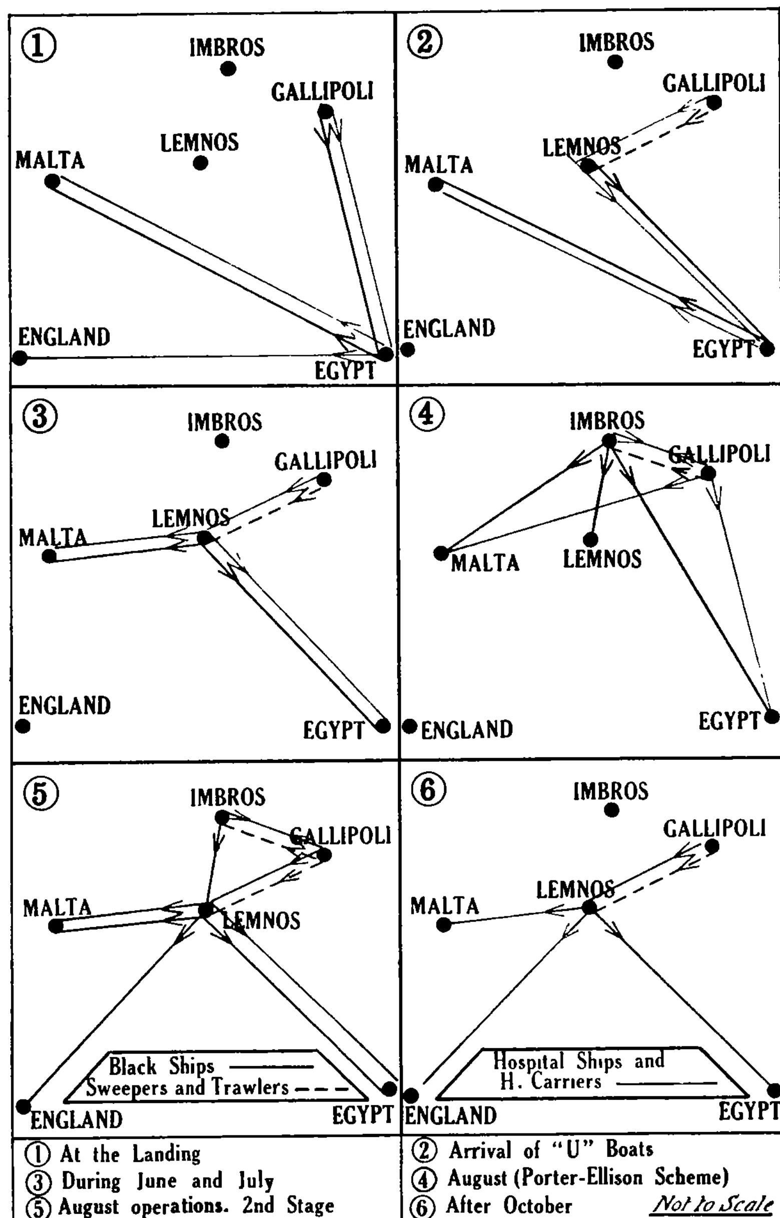

DIAGRAM ILLUSTRATING DEVELOPMENTS IN THE PROBLEM OF SEA-TRANSPORT OF SICK AND WOUNDED DURING THE GALLIPOLI CAMPAIGN

the blockage being attributed to insufficiency of hospital ships and lack of suitable "black" ships. In forty-four of the latter, he stated, there were carried "between August 7th and October 4th 32,341 sick and wounded," and these "had to be so conveyed to save them from lying in the open."

The gravity of the situation was now recognised, and the Admiralty agreed that the *Mauretania* and six other great liners should be fitted at once as "hospital carriers." The 47,000-ton *Britannic,* building at Belfast, was taken over for use as a hospital ship for "some 4,000 invalids"; medical launches were to be obtained. The immediate tension was relieved by the arrival on October 17th of the *Aquitania,* now as a hospital carrier, whereby on the 20th 3,855 cases, of all degrees of severity, were cleared from Lemnos to England. As no heavy fighting was in progress the position at the Dardanelles was thus cleared without breakdown.

Three giant liners sent

The two Australian hospital ships (*Karoola* and *Kanowna*) were now in action, and during October they cleared 1,000 Australian invalids from Egypt to Australia. Lemnos was able to accommodate some 8,000 cases, and both there and in Egypt more effective systems of invaliding and return to duty were being developed. The congestion of August was becoming resolved. On October 31st the *Mauretania* arrived as a hospital carrier ("white") and cleared 2,102 cases. including 829 invalids sent from Egypt.

Under the new system of control by a naval medical officer (the P.H.T.O.), Mudros replaced Egypt as the centre both for the local distribution of all casualties from Gallipoli and also for all invaliding from the Mediterranean to England;[8] at the same time, under the combined administrations of the Principal Director of Medical Services, the D.M.S., M.E.F., and the D.D.M.S , Lines of Communication, endeavour was made to develop Lemnos as an effective intermediate medical base. Henceforth it became definitely the centre of medical activities

Lemnos now the centre

[8] It was decided by the War Office, on representations made by the Egyptian command, that the authority of the P.H.T O. should not include invaliding from Egypt to Australia. This function remained in the hands of the D.M.S. for the Force in Egypt.

in the Levant. The situation and atmosphere thus induced give a special character to the final phase of the campaign.[9]

From August onwards the development of the island for (*a*) hospital treatment, (*b*) concentration and distribution of reinforcements and of sick and wounded returning from hospital, (*c*) a dépôt of supplies, was at last pushed on with vigour and purpose. The camp at East Mudros (chiefly composed of the three stationary hospitals, convalescent dépôts, and training camp of the IX British Corps) was continued under a commandant and an assistant-director of medical services. At East Mudros were also situated several hospitals of the French force.[10] "West Mudros" became a large and important military and hospital centre. For these hospitals and for the other departments of the base extensive constructional works were needed. Wharves and ultimately stores on shore were built, a good road was made, mechanical and horse transport was assembled and organised, and eventually a light railway was constructed. Water was reticulated in the hospital area, the supply from overseas and from local wells being supplemented by large condensers. The hospital huts sent from England were erected by the Egyptian Labour Corps. But these were requirements that should have preceded, and not followed, the establishment of a first class hospital centre. On a fine site at Sarpi, partly isolated by an inlet but readily accessible to the hospitals, a relief camp for the Anzac Corps was formed in September, and there the worn formations from the Peninsula recuperated under conditions which, at first very rough, afterwards greatly improved. The huge British and French encampments overlooking both sides of the spacious harbour, with its vast array of transports, store-ships, hospital ships, and ships of war—totalling seldom

Constructional development

[9] In both of these developments the Australian force and its medical service had a particular interest, inasmuch as more than 12,000 sick and wounded of the A.I.F. were sent to England and some 40,000 to Egypt and Malta, and because the development of Lemnos was largely by Australian medical units.

[10] The French shore-hospitals at Mudros were under the control of their naval medical director. The position of this officer appears to have been exactly similar, in respect of military evacuation on sea, to that occupied by the P.H.T.O. Administration of the French hospitals on Lemnos was, however, also under the French director's control in respect of disposal of cases—whether to be "embarked overseas" or "returned to duty." The P.H.T.O., in a report to the Admiralty remarked as "noteworthy" the fact that this officer knew the numbers of the force upon which the sick list was based, and was able to calculate accordingly, while he himself did not.

Diagram No. 6

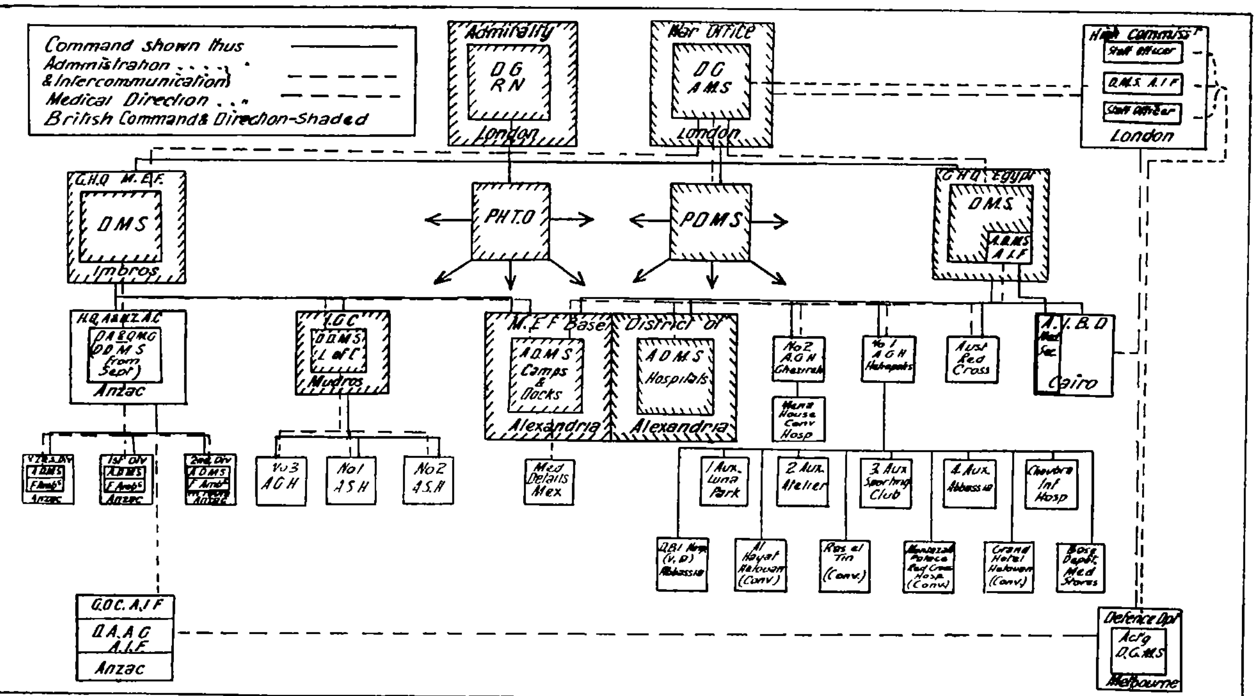

Table illustrating command, administration, and medical direction of the Australian Army Medical Corps in the East at the beginning of August, 1915

less than 150 vessels, commonly over 200, and with a daily average of over fifty arrivals and departures—offered a remarkable spectacle of immense activity. Nevertheless, as was noted during his visit by the acting D.G.M.S., Australia (Colonel Fetherston), even by the middle of October little had been done to render the harbour more easy to work. For the transhipment and distribution of men and materiel of war there were particularly required a deep-water pier and storehouses on shore. With these, naval and military co-operation would have been, as it was elsewhere, comparatively simple. It seems likely that the verdict of the future will confirm the contention of the engineers at the time, that in the Dardanelles Campaign their work, like that of other services concerned in maintenance, received inadequate consideration.[11]

While the material machinery was thus insufficiently elaborate, the administrative machine was in certain respects over-complicated. After a conference at Lemnos, during a visit paid to the Dardanelles by the P.D.M.S. at the end of August, the Inspector-General of Communications sent to G.H.Q., M.E.F., a memorandum in which he drew attention to "the complexity of the present chain of responsibility as regards the difficult problem of the evacuation of wounded." In the P.D.M.S., the P.H.T.O., the D.M.S., M.E.F., and the D.D.M.S., L. of C., he had

Administrative machine: a "superfluity of advisers"

> a superfluity of expert advisers, the relations of whom to each other are exceptionally ill-defined;

and he asked that, "for the efficiency of the service," the responsibility for "such very important work" as the evacuation of wounded should again be made a military matter, or at least should be defined.[12] He also recommended that the D.M.S., M.E.F., should be normally stationed there,

[11] *See* evidence given at the Dardanelles Commission.

[12] Had it been recognised earlier in the campaign that the evacuation of wounded and other medical responsibilities were indeed "very important," these circumstances —and more serious troubles—might have been in some measure avoided. Two features of the situation stand out prominently as militating against successful medical administration at Gallipoli, namely, the extent to which the subordination of the medical service was pressed and its responsibilities minimised by G.H.Q., and the difficulty of naval and military co-operation. Any system of administration wherein responsibilities which are properly primary are grouped as secondary contains in itself factors that make for confusion. In the British Army, and in the Australian Imperial Force, the consequences of an essentially unsound situation were escaped only by tacitly abrogating in war this wholly secondary and subordinate position which could be enforced with impunity in time of peace.

to be summoned by G.H.Q. to Imbros as required. This move, however, was not made till the formation of the "Dardanelles Army" and the transfer of G.H.Q., M.E.F., to Lemnos, which occurred in the last fortnight of occupation. A recommendation by G.H.Q. that the P.D.M.S. should both act as D.M.S., M.E.F., under General Hamilton and also direct medical affairs at the bases under the War Office, also lapsed. Till the close of the campaign the P.D.M.S. maintained a purely personal headquarters at Alexandria but he exercised an important influence, directing the work of specialists and to a great extent controlling the demand for, and distribution of, medical personnel.

General Birrell recalled

In the office of D.M.S., M.E.F., however, a change now occurred. Its original holder, Surgeon-General Birrell, had proved unable to rise superior to his departmental position, had accepted—with a curious absence of protest—responsibility for medical deficiencies which were inevitable under the conditions imposed by the general staff, and had failed to co-operate effectively with the navy. On September 17th he was recalled, and was replaced by Surgeon-General Bedford. An elderly man, in poor health, and without experience of modern warfare, Surgeon-General Birrell, though of sound judgment on military matters "and a thorough gentleman," was lacking in the energy, forcefulness, and originality essential to such an enterprise. His administration from his office (which he seldom left) was inspired by little exact knowledge of the circumstances either at the front or on the lines of communication. He does not appear to have been taken into the confidence of the general staff.

The new machinery at work—co-operation difficult

The administrative situation at Lemnos during the next three months involved two experiments of peculiar interest. First, military evacuation on sea was placed under the Admiralty, and, second, a medical officer (the P.H.T.O.) was given independent administrative and executive authority for its direction. From the yacht *Liberty*, the P.H.T.O., with an effective staff, directed the movement of all casualties from beach to bases, working in conjunction with, but without dependence on, the Inspector-General of

Communications and his D.D.M.S. on the military side and with the supervising transport officer on the naval side. The division of responsibility originally agreed upon, however, could not be fully carried out, co-operation being hampered by the immobility of the D.D.M.S. for the Lines of Communication, who had no launch, and by shortage of small craft for transfer of personnel, stores, and casualties. This immobility was a "serious cause of embarrassment," as was reported by the I.G.C. and also—urged with the feeble and ineffective iteration of a subordinate and slighted department—by the medical officers concerned. At the "Dardanelles Commission" General Birrell stated that the D.D.M.S., L. of C., "had to trust to reports and signals," and could neither see for himself, nor send an officer to see, that ships were properly filled. The British Red Cross Society, having obtained launches both locally and also, in June, by special application to the Admiralty,[13] "lent them, when not occupied in Red Cross work", to the D.D.M.S. It was not till late in November that effective supervision of the distribution of cases by the D.D.M.S. was made possible by the arrival of two launches for the medical service. They were the gift of the Scottish Red Cross Society and were partly maintained by it. There can be few more extraordinary instances of the handicapping of the official medical service by its acquiescence (as at the Crimea) in the lack of necessary facilities for humane ministration, while those facilities were available to the "amateur" organisation, which, though resourceful and socially powerful, was irresponsible and properly subsidiary.

Many of the difficulties at Lemnos were also manifestly brought about by imperfect accord between the administrative departments of the navy and those of the army; the total result was that much of the responsibility proper to the D.D.M.S., Lines of Communication—such as the local distribution of sick and wounded—fell on the Principal Hospital Transport Officer.[14]

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[13] The British Red Cross Society had two launches at work in July. By October, 5 motor-boats, a steam-yacht of 500 tons, a steam-tug, and a steam-barge were in use.

[14] An episode early in November is illuminating as to the methods of the administration in the *Aragon*. The D.D.M.S., L. of C., was informed by the P.H.T.O. that, in a hospital ship which had arrived from the roadstead and had been

The system of clearance from the beaches to the roadsteads was greatly improved after August. Self-propelled "hospital" barges—floored, and painted white with red cross on their sides—distributed cases to the hospital ships, which now lay almost constantly in the roadsteads, and to the service of sweepers which were used for "light" cases. All casualties went to Mudros Harbour, whence they were distributed either overseas by hospital ships or "black" ships or else by barges (or direct from the sweepers) to the stationary and general hospitals on shore.

Better transport from beaches

On the other hand an ordered and regular classification of casualties was never carried out at the Dardanelles, and this resulted in the unsuitable distribution of patients to hospital ships and carriers[15] which was a prime cause of the continuance of complaints regarding voyage conditions.

Defective classification continues

The practical difficulty of selecting cases for disposal as "light" or "serious" must, however, be recognised. The significance of the terms "fit" and "unfit" differs greatly according to circumstances; at this time the views of the front and the base on this point diverged widely. Military exigencies combined with the medical difficulties of diagnosis and prognosis to militate against exact procedure. Moreover, even a more exact classification would not entirely have solved the problem. As the P.D.M.S. records, the "first class hospitals" at Lemnos did not provide sufficient serious cases of a suitable nature to "feed" such hospital ships as the *Aquitania* and *Mauretania*. Many light cases were necessarily sent away; under such conditions Lemnos could not provide an appreciable check on their evacuation.[16]

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inspected by his hospital transport officer, most of the cases were, in the opinion of the S.M.O., so slight that a large proportion could be returned to duty, and that the vessel would be held up pending his instructions. The D.D.M.S., L. of C., replied that a verbal report in similar terms had been received by him from the S.M.O., and that he had "asked him to submit a report to this office in writing"; in the meantime the ship should proceed to the base with its cases.

[15] For example, the concentration of dysentery cases in vessels with bad latrine accommodation, to which special reference was made by the Medical Advisory Committee.

[16] At least the records of the P.H.T.O show that during August, September, and October more casualties left Mudros Harbour for Egypt, Malta, and England than reached it from Gallipoli.

Nevertheless, partly in response to pressure from formations on the Peninsula and shortage of effectives, but more because the circumstances at the intermediate base permitted of such development—the disposal of convalescents, and in particular the question of the return of recovered men to duty, was taken seriously in hand. The lines followed were the same as those recently put in force in Alexandria, Cairo, and Malta.[17] They embodied experience in Europe during the first year of the war. By the end of 1915 it was being realised in Great Britain, as in all the belligerent nations, that the war must be a long one, and the conservation of man-power a vital problem. Return to duty, like the examination of recruits, was being organised with an exactitude and comprehensiveness in keeping with other developments of a war in which the army was the nation itself. Under this system soldiers discharged from hospital at Lemnos and the M.E.F. bases were to be classified "A," "B," or "C," that is to say, "fit," "fit for service on the lines of communication only," and "invalids for home" respectively. The "A" class at once "automatically became reinforcements"; those classed as "B" were to go to "the convalescent camp at Mudros" and be examined once a week by a standing medical board until final classification as "A" or permanent "B"; the "C" class were to be sent to England, Australia, or New Zealand, as the case might be.

"Return to duty" organisation at Lemnos

A further stage, and that a cardinal one, in the matter of the return of the convalescent to duty was reached in the principle laid down by the War Office and embodied in M.E.F. general routine order of September 8th, whereby "A" class convalescents

Convalescent camps and base depots

> automatically become reinforcements, and will be sent to rejoin a Base Dépôt at the Intermediate Base. They will be shown in Base Dépôt returns as "unfit," until such time as the O.C. the Base Dépôt considers that they are actually fit to join their units in the Field.

This recognition of the necessity of further preparation after "convalescence" was the germ of the great command-dépôt system—one of the most significant developments of this war.

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[17] That is, they were those laid down in the M.E.F. order of July 25 and in subsequent amendments of it (*see pp. 227 and 408*).

In September, in pursuance of the policy of promoting rapid return to duty by concentrating convalescents at Lemnos, "advanced divisional base dépôts" were established, including one for the Anzac Corps. These received reinforcements arriving in drafts from overseas and distributed them to their units and formations on Gallipoli and on Lemnos. They did the same with "B" class men returned from the hospitals in other bases for convalescence at Lemnos. They also received recovered cases discharged from the local hospitals. The systematic re-boarding of the "B" class, and some re-training of the "A" class, were carried out at the convalescent and base dépôts, and though the number of convalescents sent to recover in the more "salubrious climate of Lemnos" was not large—chiefly because Lemnos was grossly insalubrious—some effect was thus given to the policy laid down. Though all the hospitals on the island served in some degree the dual purpose adopted for the intermediate base, from September onwards the policy of diverting to Lemnos light cases for local treatment was specially met by the stationary hospitals at East Mudros. This filter, however, often gave way under pressure. Thus from No. 1 Australian Stationary Hospital 500 were sent in a single day to fill up the hospital ship *Aquitania*. Only the convalescent dépôts on Lemnos and the clearing station on Imbros corresponded to the light-treatment centres asked for from the front. The purpose of the convalescent dépôts also was rather for recuperation after discharge from hospital than for the treating of selected light casualties coming direct from the front.

In Lemnos, as in Egypt, there was ample local employment for men unfit for the field. "B" class men, both those from the local hospitals and those sent from Alexandria base, were used for the "expansion" of the hospitals.[18] The question of so using Australians of the "B" class at Lemnos was mooted, but on the advice of the D.D.M.S., A. & N.Z. Army Corps (Colonel Howse), was negatived by the

[18] Practically all the expansion of No. 2 A.S.H. in August was by means of British "B" class infantry, who worked under the nursing sisters and the trained medical orderlies.

G.O.C., A.I.F. (General Birdwood), on grounds already mentioned—that their high rate of pay rendered it uneconomical.

It remains to describe the hospital accommodation and treatment on the island, in which Australian units played a most important part. By the end of September the medical units on Lemnos consisted of the following. At East Mudros were two British and No. 1 Australian Stationary Hospitals, working without female nursing staff, but each "expanded" to a normal of 1,000 beds, receiving chiefly slight cases from sweepers. With these hospitals was a convalescent dépôt. At West Mudros, on "Turk's Head" promontory high above the harbour, an imposing tented and hutted hospital centre had been built up. Here No. 3 Australian General Hospital, No. 2 Australian Stationary Hospital, and two Canadian stationary hospitals and one British, became effectively established, working with female nursing staff. After the crude beginnings which have been described they were for the most part gradually organised, housed, and equipped to carry out the treatment proper to general hospitals. The convalescent dépôt at West Mudros accommodated from 1,200 to 2,000. The establishing of bacteriological laboratories and systematic oversight by the numerous consultants, surgical and medical, had helped to raise the standard of diagnosis and treatment. From the middle of September the West Mudros hospitals ceased to receive any considerable number of wounded, and were looked upon largely as a reserve against emergency; they treated the cases of sickness —chiefly typhoid and dysentery—not only from the Peninsula but, to an increasing extent, from the local reinforcement dépôts and relief camps. In October the Director-General of Army Medical Services at the War Office suggested that the surgeons of No. 3 Australian General Hospital should be sent to Egypt. The senior surgical staff was disbanded, the senior surgeon returning to France as a "Consultant Surgeon, B.E.F."

Hospital accommodation on Lemnos

By October, with the discovery that mitigation of the fighting was to bring no relief to the congested hospitals of

Egypt and Malta, those on Lemnos became chiefly feeders to a regular service of huge liners, of draft so great that they could not enter Alexandria or Malta harbours but cleared from Mudros Harbour direct to England.[19]

Floodgate remains open

At the end of October beds on the island were estimated at 9,000, including some 2,000 in convalescent dépôts. Such numbers could, however, be treated only in emergencies. Large stocks of medical equipment and stores were now available. From September onwards No. 3 Australian General Hospital held an average of 1,000 cases, for the most part enteric and serious cases of dysentery, which after three weeks' treatment were cleared to England or Egypt. No. 2 Australian Stationary Hospital, occupying sixty large marquee-tents, had been reinforced, and its staff included twenty-five nursing sisters, making some 130 Australian nurses now on the island.[20]

Hospitals in October

By the end of October all the "first class hospitals" at Lemnos were treating sick and a few wounded under conditions approaching those of Egypt and Malta. The acting D.G.M.S. for Australia found the Australian hospitals "in very good lined hospital marquees, the patients comfortable, good beds and bedding. Were it not for the food and general unsanitary surroundings, they could not have been more comfortable."

The quality of the bread and other rations gradually improved, as did also the supply of medical comforts. The difficulties of invalid diet were greatly eased by increased Red Cross supplies.[21] As tentage, equipment, and food improved,

[19] During 1915, 78,431 sick and wounded were sent to England from the Mediterranean theatres of war and garrisons (the total from all theatres being 352,677), of these 12,138 were Australians.

[20] On October 17 in No. 3 A.G.H. there were 1,217 in hospital, and "for reasons of tentage and lack of equipment" it was impossible to admit more in this or the other hospitals "till the arrival of the H.S. *Aquitania* should relieve beds."

[21] On July 5 the "A D.M.S, Australian Force" in Egypt suggested a Red Cross store at Anzac. General Birdwood considered this impossible, but recommended a store at Mudros. On August 2nd the O.C., No. 1 A.S.H., was asked to act as representative at Mudros for the Australian Red Cross, and shortly afterwards a quantity of material arrived By the end of September the Australian Red Cross commissioners had sent "four large consignments to Mudros in care of the B.R.C.S. there for use in Australian Hospitals in Lemnos and the

it was possible to provide in the general hospital some of the comforts and amenities looked for in such units. A nurse records of this time that

things were now working more smoothly throughout, and we were able to devote a little time to the outside of our tents and to our wards; and competition set in as to whose should be the nicest.

A medical officer also notes:

From October the weather became cooler and the fly plague abated. Beautiful warm days and cool nights with most gorgeous sunsets and sunrises. The staff, reduced through sickness, was kept fully engaged; but as all had settled down to the life, things went very smoothly. The rest camps at Sarpi were established and the hospitals became great rallying places.

Specialisation

As time went on the functions of the various hospitals on the island had been delimited; No. 3 Australian General Hospital for example, now fully equipped, took all typhoids occurring at West Mudros. This unit also continued to carry out the important pathological work described elsewhere. Owing to the paucity of surgical cases its splendid X-Ray department (controlled by the leading radiologist in Australia) was comparatively unemployed. The ophthalmic and dental departments were fully occupied, their importance under military conditions—hitherto imperfectly appreciated—being made manifest. Middle ear disease was very prevalent. The problem of visual standards and the replacement of spectacles was at this time acute, and useful suggestions were made to the ophthalmic specialist to the Mediterranean Expeditionary Force. This officer, finding "a most efficient ophthalmic department" at No. 3 General Hospital, which was equipped with a Haab magnet, obtained the consent of the P.D.M.S. to an order that all cases of ocular injury should be put ashore at Lemnos and treated there.

Peninsula" In October an Australian Red Cross commissioner visited Lemnos, where he opened a "dépôt." Two large storage huts were erected on the island. Of the Red Cross stores sent up, No. 3 A.G H. between 10th and 26th October received.—

Tinned rabbits	1,032 lb.
Tinned fruits	2,000 ,,
Dried fruits	1,000 ,,
Biscuits	3,150 ,,
Dried milk	150 ,,

In November an Australian Red Cross representative was stationed at Lemnos "to attend to the distribution of our goods at Mudros and Anzac." A representative was also stationed at Malta.

Dental work at Lemnos

The dental department of No. 3 General Hospital was even more in demand. A "dental unit" had been formed in London from personnel on the staff, and two complete dental outfits purchased with Red Cross funds. A second "unit" arrived from Australia, and on September 1st dental work was commenced in a good hut. The two Australian dental units were well equipped and organised, but the demands were infinitely more than could be met by their utmost combined efforts, though supported by a British and two Canadian dentists. British troops and many officers and personnel from the navy were treated. At the end of September there arrived the brigades relieved from Anzac, with from twenty to thirty per cent requiring "urgent dental attention." The D.D.M.S., Anzac Corps, reported that the Lemnos dentists were now "absolutely unable to cope with the work," and asked that "urgent representation might immediately be made to reinforce their numbers." Large numbers of cases of pyorrhœa were treated. Shortage of dental supplies, in spite of special instructions given by the Commander-in-Chief himself as early as June, was a serious drawback.[22] In all, 6,283 cases were attended, including 3,500 stoppings; 514 dentures were made or repaired.

Lemnos hampered by local sickness

The activities of the intermediate base and the work of the hospitals were seriously hampered by a local epidemic ot intestinal infections, little less general than on the Peninsula.[23] In the eleventh-hour rush to prepare West Mudros for the August operations sanitary provision had gone by the board. Later, the opportunity offered by the virgin site at West Mudros had not been accepted with scientific insight and exploited with administrative energy. Sanitary methods were stereotyped and were imperfectly enforced. There had been much fouling of unoccupied ground, and anti-fly measures were not taken seriously. As elsewhere in this campaign, sanitary efforts were paralysed—or at least paresed —by an absence of real conviction that sanitary measures

[22] Dental work, except at the base, was almost unknown in the British Army at this time, nor were dental supplies held by dépôts of medical stores.

[23] The acting D.G.M.S., Australia, inspecting in October, reported to the Defence Department that "on account of the danger of contracting disease in hospital . . . the island is not suited for surgical work."

were "worth while"—an attitude chiefly due to lack of exact knowledge. The sanitary system of a large general hospital is properly an engineering responsibility; the hospital itself has only to carry out the details of the method laid down, and to control its own internal hygiene. But at Lemnos, the medical units were self-contained in regard to sanitation, and the situation, at least at No. 3 Australian General Hospital, had not been met by vigorous initiative.

The arrival of the Medical Advisory Committee and the Entomological Commission galvanised this *laissez faire* into somewhat more robust effort. After exhaustive investigation of the water-supply the Advisory Committee incriminated the fly;[24] the Entomological Commission showed exactly how it could be kept in check. Considerable improvements were made, and fly-proof latrines became general, but, though two sanitary sections did their best, sanitary discipline was never enforced at Lemnos with the relentless determination due to an enemy with such grave potentialities. For the most part the ration, and food in general, on Lemnos differed little from those on the Peninsula. Fresh meat was no more frequent; bread was at first of poor quality; vegetables and fruit were scarce; but there was some opportunity for local purchase denied to Gallipoli. From October onwards the supplies greatly improved.

Hospital staffs affected

The hospital staffs themselves were much reduced by this sickness. Up to November 15th almost sixty per cent of the male staff in No. 3 Australian General Hospital had been treated in hospital and many invalided. Out of thirty-six medical officers only three escaped; eleven were sent sick to England. Sickness was so much less in the female than in the male service that a committee of the hospital staff, appointed to investigate the cause of the excessive sick rate among its members, made special inquiry into the reasons for this disproportion, which it found to be due to the much greater care taken by the women in the details of domestic cleanliness and hygiene. The experience of other medical units at West Mudros as regards sickness

[24] Outbreaks of "dysenteric diarrhœa" occurred in the warships in the harbour, which were self-contained in food and water and free from dust but drew (as the Committee noted) a large fly-population from the shore.

was practically identical with that of No. 3 General Hospital. At No. 1 Canadian Stationary Hospital the matron and two orderlies died of dysentery.[25] In all the Australian hospitals the heavy wastage brought about a need for reinforcements much above the normal two and a half per cent, and a difference of opinion between Egypt and the M.E.F. on the question of responsibility for reinforcing these units led to an administrative deadlock on the matter.[26]

Preparations for winter

Summer requirements, particularly for sanitation, had scarcely been met before winter problems became pressing. The Canadian sisters were well housed in huts, and the kitchen and special departments of No. 3 Australian General Hospital were also hutted; otherwise all hospitals were in tents, and the outlook for a Lemnos winter was serious. Upon the acting D.G.M.S., Australia, making representations, a hutted site for No. 3 General Hospital was promised, as well as better conditions for its nursing staff, those in existence being of such a nature that he made the further employment of Australian nurses on Lemnos conditional on their improvement. At the beginning of November, as part of the preparations for the expected winter isolation of the force on Gallipoli, No. 1 Australian Stationary Hospital was sent to Anzac. From its arrival early in March this unit had played an important part in the medical work on the Island.

The last Gallipoli reliefs

On November 19th, nearly seven months after it had landed on Gallipoli, the 3rd Australian Infantry Brigade, and, soon after, the light horse, having been relieved by the 1st and 2nd Australian Brigades and the New Zealand Brigade—whose "rest" had lasted two months—came to Sarpi camp. The regimental medical officer of one battalion estimated that, including recent reinforcements, from thirty to forty per cent of the men were unfit for efficient work.

[25] Of the sickness at No. 3 A.G.H., 50 per cent was gastro-intestinal infection, including 15 per cent enteric; 10 per cent jaundice, 15 per cent influenza. Two cases of beriberi occurred, one in the person of the commanding officer, who by special precautions as to diet escaped the vortex of intestinal infection, only to be broken, with narrow escape of his life, on the hard rocks of vitamin deficiency. The other case of beriberi was in a nursing sister. Minor manifestations of food defects were not uncommon.

[26] *See pp. 405-6.*

58. NORTH BEACH, ANZAC, LOOKING TOWARDS SUVLA

The tents in the foreground are those of No. 2 Australian Stationary Hospital, and in the distance those of the 16th British Casualty Clearing Station. The distant ridge is Kizlar Dagh, near Suvla. A hospital barge may be seen at Walker's Pier

Taken by Pte H. T. Lowe, 1st Aust Rly Supply Detachment
Aust War Memorial Collection No. A1867

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59. THE 4TH FIELD AMBULANCE REST STATION AT LITTLE TABLE TOP IN THE NEW ANZAC AREA, OCTOBER 1915

Taken by Sgt. H. I. Woods. Aust. War Memorial Collection No. C670

60. COLONEL N. R. HOWSE (*left*) AND SIR VICTOR HORSLEY (*centre*) AT ANZAC ON 15TH OCTOBER, 1915

Lent by Lieut.-Colonel P. Fiaschi. Aust. War Memorial Collection No. H13960

61. MEDICAL OFFICERS ASSEMBLED FOR THE INITIAL MEETING OF THE "ANZAC MEDICAL SOCIETY" AT NORTH BEACH, 15TH OCTOBER, 1915

Sir Victor Horsley lectured on gunshot wounds of the skull

Lent by Lieut.-Colonel B. Quick, A.A.M.C. Aust. War Memorial Collection No. C1003

The same proportion were able "to carry on if not pressed," and from twenty to thirty per cent "in good health." The conditions on the island were by this time favourable to recuperation; food was sufficiently varied; canteen stores were available. A fine reception tent established at Sarpi by the Y.M.C.A. provided recreation. As on the Peninsula, disease was now at a minimum. The heat, flies, and dust of summer had passed; gastro-intestinal infections had almost disappeared. The epidemic of jaundice alone was active, and the disease was very prevalent on Lemnos.[27]

Lemnos problems change

By this time evacuation from the Peninsula had fallen to three per cent per week. The problem of "return to duty" had disappeared, and ample accommodation was available for all casualties. Hospital ships were for the moment equal to all demands, including those of Salonica. Vessels for the requirements of the winter scheme were being prepared by the Admiralty. A reserve of beds had been built up on Lemnos, where the "Babtie Dardanelles Hutted Hospital" was coming slowly into being. On November 30th No. 27 British General Hospital arrived and occupied a hutted site prepared for it beforehand, but the promise to hut No. 3 Australian General Hospital had not yet been fulfilled, and the nursing staff was still housed in unlined bell tents and was without even warm uniform. Winter gales had begun, cold was severe, and the break up of the season imminent.

Summary—a medical compromise

Summarised, the development of Lemnos as an intermediate medical base well illustrates the element of antagonism inherent in the two fundamental responsibilities of the medical service—humane alleviation on the one hand and the promotion of victory on the other. The policy initiated by G.H.Q., M.E.F., in July, of developing the island for the treatment of "10-12,000 light cases" to prevent wastage was in response to a purely military need, while that favoured

[27] The occurrence of a few cases of mild diphtheria in Sarpi camp was met by preventive measures of a peculiarly unimaginative kind. Without other action, a strict quarantine was imposed by the A.D.M.S., Intermediate Base, West Mudros, and was enforced by a cordon of armed guards, the brigade after its seven months on Gallipoli being, in the words of a regimental medical officer, "left to stew in its own juice." Permission was refused even for attendance of men at the aural and dental clinics at the hospital.

by Surgeon-General Babtie, namely, of establishing fully equipped hospitals within the actual area of operations, was devised to serve the needs of the gravely wounded and seriously sick. The development of the intermediate base was in fact a compromise. The P.D.M.S. promoted an ambitious scheme for a "Dardanelles hutted hospital" system at West Mudros. Meanwhile an endeavour was made to meet demands from the front by providing for the treatment in less highly organised units, of "light" cases brought by the service of sweepers, and by an organised system of convalescence and return to duty. Much was achieved on both counts, but full success in neither. The comparative failure of the hospitals on Lemnos during the supreme crisis in August to fulfil the object of humane alleviation has been indicated in a previous chapter. At the same time Surgeon-General Birrell complained that, "except the British" (No. 18 Stationary and the "Lowland Convalescent Dépôt"), the hospitals at West Mudros were "hardly what was wanted there," as they were "more on the lines of general hospitals, while big expansion for slight cases alone was what was aimed at."

Its partial success

The importance of Lemnos as a medical centre, which had been steadily growing, reached its zenith in connection with concluding scenes of the campaign. Much had been left undone that might have been done. There had been delay and much confused and ineffective administration. But to the intermediate base must be credited a large number of serious cases well treated near to the front, and the fact that an important reserve of beds had been built up and was available for a great emergency. The safety-valve outlet from the East by the use of the large liners had been made possible. A large local incidence of sickness had been provided for. In the laboratories problems had been investigated at the proper place —near the front where they had arisen.

And while the intermediate base had failed to sift out any very great proportion of light cases from among those evacuated, it had prevented wastage, though in a manner which illuminates the handicaps under which this unfortunate campaign was carried through. In the first relief of the

Australian formations between September 11th and 17th some 5,500 men in all—remains of three brigades—had gone to Sarpi relief camp. On the 22nd General Headquarters pointed out to Anzac Corps that its proper allotment of relief was for 3,000 only, and desired to know "on what date you propose to withdraw the men now resting at Mudros. Your men are occupying practically all the accommodation that I.G.C. has now available for resting purposes." The reply from General Birdwood was that it must depend entirely on the recovery made: that the corps had expected much greater facilities for giving relief to its units, and was able and desired to make full use of such.

Instead of two weeks, it was two months before these "resting" troops were fit to return: Sarpi "rest camp" became, in fact, a convalescent dépôt—"relief" a substitute for evacuation.[28] It is hardly possible to exaggerate the evil effects of failure to give adequate relief to the formations on Gallipoli. Its influence as a factor in the physical and mental condition of the troops had been very great and was certainly imperfectly appreciated by the higher command. But the failure is also in a large measure attributable to the miserliness in the supply of men (as of munitions) that characterised the conduct of the campaign.

Impossibility of separating colonial patients

During the occupation of Lemnos Australian hospitals provided almost half the total accommodation, admitting British and Dominion troops without distinction. Thus, of 3,906 cases admitted to No. 3 Australian General Hospital up to October 15th, 30 per cent were Australian, 13 per cent New Zealand, 57 per cent British and Indian.[29] The circumstances were indeed such as to illustrate the futility of pressing the policy of "Australians to Australian hospitals," even if otherwise it were held desirable. Reporting to his government, the acting D.G.M.S. for Australia commented on the fact that "even in this small place it is impossible to discriminate."

[28] It is scarcely, therefore, a matter of surprise that in the last phase of the campaign few of the cases evacuated from the original formations were found fit to return within 21 days The term "light," or "slight" case, always relative and determined by circumstances was in this campaign beyond ordinarily vague.

[29] The total deaths were 77, or 1.97 per cent.

Towards the end of the period dealt with in this chapter the necessity for a sweeping change of policy became, for several reasons, evident.

Sweeping change—all local resources to be developed

Between August 7th and November 11th 96,943 sick and wounded had arrived in Mudros Harbour from the beaches. During the same period—including cases from the Peninsula passed through the Lemnos hospitals, and sick from Lemnos itself—100,258 sick and wounded had left the harbour, 44,731 for Egypt, 32,319 for Malta, 924 for Gibraltar, and 22,284 direct to England. The crisis which had necessitated the transport of so many sick by giant liners to England had caused the War Office to become fully alive to the situation at the Dardanelles, and to the extent to which clearance to England had now replaced the development of the local resources in the Near East. The Director-General of Army Medical Services found it necessary to draw the attention of the P.D.M.S. to the large number of light cases arriving in England, and that of the D.M.S., M.E.F., to the importance of his responsibilities in connection with return of recovered convalescents to duty, as well as the need for uncompromising efforts to check the flood of disease. Arrangements were pushed on for making the Eastern theatre of war more self-contained. It being now autumn in Egypt, and the climate ideal for convalescence, the War Office agreed to the request of the Australian Government—made on the advice of the Australian consultant physician in England, Lieutenant-Colonel H. C. Maudsley—that during the winter months men temporarily unfit from the Australian Imperial Force should not be sent to convalesce in England but should be retained in the East. Associated with this decision, a general policy of expansion for convalescence in Egypt and the Mediterranean was adopted. At the invitation of the Italian Government a special commission made arrangements for British convalescent hospitals in Sicily; the resources of Upper Egypt were exploited. At the beginning of November the P.D.M.S. reported to the War Office that convalescent accommodation for 17,000 was being developed. To meet the requirements of the wide theatre of war in the East, a

minimum of 12,000 vacant beds in Egypt and Malta was urged on November 15th by the D.M.S., M.E.F., and the Inspector-General of Communications, only 2,000 being at the time available. It was further urged that hospital ships for 6,000 should be kept constantly in Mudros Harbour—a provision which would involve a scheme of no less than sixty hospital ships, including the *Aquitania, Mauretania,* and *Britannic,* for the various operations in the Levant. The P.H.T.O. had previously suggested fifty-four as necessary for winter requirements.

Sixty Hospital ships suggested

With the diminishing sick-rate in November the problem of sea-transport gradually cleared, in spite of winter difficulties on shipboard and heavy evacuations from Salonica. The huge intake of sick had been as difficult to digest as had been that of the 30,000 wounded during August. But by the end of November equilibrium was reached and a reserve of beds was available in the East—just in time for the menacing possibilities associated with the evacuation of the Peninsula, and for a grave and unexpected emergency, the nature of which will appear later. Clearance to England, since it monopolised a vessel for a month, was the most difficult matter. As autumn came—when the patients could not be placed on deck—over-crowding occurred, and complaints gave the War Office an opportunity for again pressing a reversion to the arrangement whereby the army controlled the lines of evacuation on sea as well as on land. Though the Vice-Admiral supported the Principal Hospital Transport Officer, the consent of the Admiralty to his recall was ultimately obtained.

P.H.T.O. recalled—his good measure of success

The naval and military questions raised by the appointment of this officer are of great importance and interest[30] but are outside the scope of this work. It may be observed, however, that the advantages secured for combined operations by naval medical responsibility for sea lines of evacuation

[30] The experiment of naval control of the sea-routes of military evacuation worked to the satisfaction of those most intimately concerned. The other experiment to which reference has been made—that of direct administration by a medical officer—proved, at least in the opinion of the navy, not unsuccessful. The essence of the problem lay in a clear differentiation between evacuation of casualties and movement of troops: it could only be solved by the use of special medical transport as a routine for serious cases and of "returning empties" as supplementary or for emergency only, and for light cases. This was the policy endorsed by the Admiralty and, so far as circumstances permitted, resolutely carried out by the P.H.T.O.

should not be discounted merely because of complaints regarding evacuation to England at this time, since these were chiefly concerned with deficiencies in staff or equipment and with defective distribution of casualties, all of which were military responsibilities. The defects which ostensibly brought about the reversion to military control were in fact inherent in the failure to foresee the holocaust of disease and to prevent it or provide for it by local hospital development; just as in April and May the much more serious defects—which had brought about the appointment of the Principal Hospital Transport Officer—and those in August, were due chiefly to the failure to foresee and prepare for the number of casualties. It should also be noted that, during this period, the circumstances of sea-transport of sick and wounded in the Mediterranean, though not ideal, were far better than during the first stage of the campaign. The acting D.G.M.S. for Australia was, in view of the past, prepared to be critical; but from personal observation and inquiry he reported in October to his government that in the hospital ships—in which, after September, the vast proportion of sick and wounded were carried—while little was attempted in the way of surgery, all patients were "well cared for on the voyage." There has hardly been a due appreciation of the stupendous difficulty of the maritime medical problem; of the magnitude of the achievement of the British Navy, handicapped as it was, beyond all that was "fair" even in war, by the iniquitous submarine policy by which a merchant vessel, and even a hospital ship might be "spurlos versenkt"; or of the diversity of the demands which were met, on the whole successfully, by the naval and military administrative and medical services in co-operation. On the other hand, the defects have been made sufficiently, perhaps unduly, prominent through the Dardanelles Commission.