

THE PROBLEM OF SICK WASTAGE IN WAR.

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THE avoidance of sick wastage in war is a major problem, for the numbers involved throughout the history of military medicine show a marked preponderance over the numbers of wounded.

THESIS.

The solution of the problem of sick wastage depends primarily upon the determination of causes and the ability to avoid them. This depends largely upon the well-ordered contact of two sources of information: that derived from sources near to the time and *locus* of causation, and that derived from the study of sickness under hospital conditions.

(1) *Relation to Military Conditions.*

As far as the causes themselves arise from military conditions which cannot (in whole or in part) be avoided, so far is the capacity to remove the causes limited in execution.

And from this it follows that only with knowledge of relevant military conditions can the problem reach a profitable measure of solution.

(2) *Two Methods of Approach to the Problem.*

There are two methods of approach to the problem. And one is the approach of prophylaxis as derived from the twofold knowledge consisting of prevalent causes common to past wars of the one part, and of the general and special methods of their avoidance of the other part.

The second is by the examination of the incidence of morbid states as they arise and by attempts to estimate the relative importance of possible existing factors in their causation.

The methods of prophylaxis are general and special. The general include such methods of hygiene as the protection of food and water from contamination, suitable rations and dress, provision of bathing and clean clothing, the instruction of officers in the care of their men, and the elimination of the unfit.

The special include the known means of immunization against infection.

Both these methods are in use. They are based upon past military experience. They may be added to in the light of special needs arising out of experience of the present war.

In attempting to estimate the relative importance of possible factors in the causation of sick wastage, it is first necessary to be aware of the time and *locus* of the incidence.

For this purpose some form of classification of sickness in terms of causation must be provided.

Now in war the multiplication of paper is to be avoided like the plague (that is always unless an almost certain good justifies the risk), and the further forward are the duties of a medical officer, the less justified is his involvement in *paperasserie*.

It becomes then a postulant that a plan to investigate the causation of sick wastage is effective in inverse proportion to the amount of "paper work" thrown upon the first stage in the registration of sick casualties, namely, the unit medical officer.

For an effective classification applicable at once to the opportunities and limitations of the unit medical officer on the one hand and to the refinements of the specialist on the other, two qualities are necessary. One is that the broad simple categories devised as applicable to information furnished by the unit medical officer shall be true categories of causation.

And the other is that these broad categories shall be capable of useful sub-categorization with the aid of specialist knowledge after the first general view has divided the field of study into particular sectors.

Now the factors of causation are many, and the making of categories is only useful if the categories bear a useful relation to causation in terms of the means of their abatement.

The primary categories, then, should be few, simple, and capable of direction to time and *locus*, and should be eliminative of those categories of causation which are outside the essential medical and epidemiological problems upon which specialist advice can be usefully sought.

And for this purpose the following *schema* is proposed.

Schema.

The Unit Medical Officer.—The Unit Medical Officer (the first stage in the registration of sick casualties) is asked to bear in mind five categories, to make out his nominal roll of sick sent to a Field Ambulance in duplicate in his A.B.153, to retain the duplicate in this book and, after the diagnosis in each case, to enter the appropriate capital letter according to the following plan :—

O for "*old*"—those cases in which the cause was presumably present when the soldier was enlisted, e.g. hernia, hydrocele, varix, old injuries, deformities, defective teeth, sight, hearing.

R. for "*recent*"—all cases of sickness (except those in categories S, T, and V) which have presumably occurred during service in the field. This category will include not only such as tend to become prevalent on active service (such as diarrhoea, cerebrospinal meningitis, nephritis, trench-foot, epidemic jaundice, the enteric group, rheumatism, pyrexias of known or unknown origin), but also all the infectious and other diseases common to civil and military life not included in the other categories.

S for "*skins*."—This group is responsible for a high sick wastage in war. It is important for two reasons. First, because extensive and obstinate secondary infections commonly develop either in the form of a furunculosis following pruritic states (such as scabies or pediculosis), or of an extensive impetiginization of seborrhœa, or dermatitis or of allergic, toxic, or mycotic primary lesions. And, secondly, because observation of the incidence of sick wastage under "S" may show a topical and temporal pallelism with an undetermined "P.U.O." which may reveal the pathogeny of the latter (as in the trench fever of the last war).

T for "*trauma*," is the group of recent accidental injuries. Its importance is mainly negative or eliminative, thus rendering the study of the other groups more informative. This group calls for vigilance in the detection of self-inflicted wounds. And it may arouse investigation leading to the protection of soldiers from some particular common accident.

V for "*venereal*."—This group must be considered separately. The mechanical factor in causation is a "constant." The source of infection is commonly at a distance from the *locus* of its apparent incidence, and standing orders for the tracing and segregation of sources of infection on the one hand, and of therapeutic and disciplinary measures of disposal on the other hand, are a familiar part of active service routine.

Two other points are relevant to causation. One is that "V.D." may be intentionally employed as a substitute for "S.I.W."

The other is that the prevalence of infection in particular base areas may point to boredom or other causes of impaired *morale* in certain reinforcement camps, and this may call for better administration as well as for the provision of adequate counter-attractions for the soldier's leisure.

The Stages of Information.

The Unit Medical Officer.—Now it is submitted that in the first place this system of categories is sufficiently simple to be applicable to the unit medical officer at all times except when his unit is actively engaged. The number of categories is but that of the fingers of one hand. The groups are readily comprehended and easily remembered. The designating letter is the initial of the explanatory word. These letters cannot be confused with the only other letters with which he has to deal, namely "attend A, B, C: D for detained: H for hospital." The letter "P" is omitted but it may be employed, if need be, should a prevalent "pyrexia" appear in the "R" group and call for special investigation and returns. Letters Q and U are avoided as liable to confusion with O and V.

If doubt occurs as to which category should embrace certain cases, the

question should be asked, "What is the probable cause and where and when did it arise?" Thus, although tabes and tuberculosis may be said to have a pre-enlistment origin, in so far as any evidence was presumably lacking on enlistment, they should be grouped under R. Or again, should an "I.A.T." be grouped under R, S, or T? If it be an infection of a recent accidental wound, then under T; if a secondary infection of a primary skin lesion, then under S (such as impetiginized seborrhœa, or furunculosis complicating scabies); if apparently of neither (such as erysipelas, carbuncle or whitlow), then under R.

The Field Ambulance Stage.

On arrival at the field ambulance, the entries from the accompanying sick nominal rolls will be transferred to the "A & D Book," and the additional labour for a clerk to enter the appropriate capital letter after the diagnosis is negligible. The entries having been made, the nominal rolls received with the unit sick for the day, will be fastened together and sent next day to the A.D.M.S. of the division, docketed "Sick sent to — F. Amb. Date."

Divisional Headquarters State.

As the result of these actions, about 25 to 30 daily sick rolls will reach the A.D.M.S. A clerk would be employed about two hours a day in adding up the figures under O, R, S, T, V, and entering this under columns headed "Unit : O : R : S : T : V : total." This last will be made out in duplicate, one copy for retention the other for D.D.M.S. Corps. This may be known as the *Divisional Daily Sick Summary* and will represent the sick wastage of the previous day.

The retained copy fastened to the sheaf of sick rolls will be laid before the D.A.D.M.S., who will scrutinize items wherever a high number under O, R, S, T, or V attracts attention. This scrutiny will occupy from half an hour to an hour according to the importance of the information, and the D.A.D.M.S. will produce any necessary graphs or diagrams and bring anything of importance to the attention of the A.D.M.S.

The latter will then be in a position to order his D.A.D.M.S. to make any necessary visits to units with a view to eliciting pertinent information and to furnishing himself with the necessary material for replying to enquiries from higher authority.

Corps Headquarters Stage.

The *Divisional Daily Sick Summary* (together with daily sick rolls from units of Corps troops) will be received by the D.D.M.S. The *Corps Daily Sick Summary* will be made out two days in arrear, incorporating the *Corps Troops Daily Sick Summary* with the *Divisional Summary* of the second day prior. At this stage of time and *locus*, there is less urgency for detailed investigation than exists in *Divisional* areas. *Corps* sick summaries could be compiled and rendered as weekly summaries to Army Headquarters one week in arrear.

Army Headquarters Stage.

At this stage the total numbers furnished by sick-wastage returns, the total "population" from which these figures are derived, and the number and diversity of military conditions and topographical variants represented by divisional areas, constitute bases for useful comparisons.

At this stage (Army Headquarters) moreover, there is available another source of information: that derived from "treatment centres" in the Army area; the C.C.S.s, and the small advanced general hospitals, enriched and interpreted with the aid of the consulting physicians and surgeons, bacteriologists and other specialists attached to the Army.

Thus two systems of information bearing upon the problems of sick wastage each converge in the Army area, *but each has a separate point of convergence.*

The next step is to make contact between these two separate points of convergence.

Army Headquarters the Locus of Approach Between Two Separate Systems for the Study of Sick Wastage.

Reference to that masterly epitome of sick wastage in the last war, "A Note on Sick Wastage," by Colonel A. B. Soltau, C.M.G., C.B.E., T.D. (JOURNAL OF THE ROYAL ARMY MEDICAL CORPS, Vol. xxv, pp. 152-159) reveals the valuable deductions made from an analysis of sick admissions for one year to certain C.C.S.s in France and the system of categories employed by Colonel Soltau in his investigation of the problem.

Why then adopt an apparently totally different set of categories as suggested in this argument?

The answer to this question involves four primary factors and may be answered as follows:—

(a) *Retrospect and Prospect.*—The categories of Colonel Soltau are in the light of knowledge arrived at in large measure in retrospect.

(b) *Special Conditions.*—The information is derived from "hospitals" in which the factor of lapse of time and special opportunities afford means for observation, diagnosis, and study, not available in forward areas.

(c) *Time Factor.*—Whilst the information is invaluable in the study of this problem, the lapse of time involved in its collection leaves a serious gap from a military point of view in measures for the abatement of causes and the rapid checking of sick wastage at its origin.

(d) *Dislocation in Time and Locus.*—The investigation of causes (if this were the only method available) leaves so long an interval between the time and locus of causation on the one hand, and the investigation on the other, that the original conditions will have entirely changed and can no longer be checked.

The Appointment of a Co-ordinator.

It is submitted that a co-ordinating medical officer would exercise an important function in attacking the problems of sick wastage.

Functions.—Whilst attached to G.H.Q. (e.g. as A.D.M.S. (sick wastage) G.H.Q.) his *locus* of function would be mainly Army Headquarters which he would visit in turn or as special problems arose for investigation.

He would, when advisable, visit Corps and Divisional Headquarters where particular problems of sick wastage were localized and, in divisional areas, make himself acquainted with forward conditions whenever visits thereto appeared desirable.

His essential function should be so to acquaint himself with the forward conditions associated with the causes of sick wastage as to be able to answer questions at the various conferences called from time to time by Ds.M.S. of Armies, at which consulting physicians and surgeons and other specialists are present to give their advice, and to make the experiences of one or another Army available to all. Further, in the light of his information gleaned over a wider area, he would be of service to conferences of D.Ds.M.S. and A.Ds.M.S. (who have many problems to consider beside those of sick wastage), as such conferences might be convened from time to time by the Ds.M.S. of Armies.