

The high standard of cleanliness maintained throughout the year in the camps, and the absence of flies, have been great factors in the prevention of dirt diseases such as enteric fevers, diarrhoea, and dysentery, and credit must be given to the Medical and Sanitary Staff for their efforts in this direction, and for the support given them by the Camp Commandants and their officers.

In this direction the work of the Dental Officers must be noted, as by cleaning up the men's mouths and ensuring the healthiness of their gums and teeth they have undoubtedly raised the general standard of health of the troops.

During the summer months the Tauherenikau Camp was utilized as a graduated-training camp for insufficiently developed men to join the Expeditionary Force, more than 50 per cent. of those so trained having since been added to the Reinforcements; whilst the Heretaunga Camp at Trentham was used to segregate the new Reinforcements, and this procedure will be continued during the winter months.

Experience has now proved that abundance of fresh air, plenty of space to live in and consequent avoidance of overcrowding, ample hospital accommodation and facilities for isolation, with good drainage and avoidance of damp, are essentials to secure healthy camps.

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Director-General of Medical Services.

REPORT OF ASSISTANT DIRECTOR OF MEDICAL SERVICES (SANITARY).

REPORT ON SANITATION OF THE MILITARY CAMPS FOR 1917.

Memorandum for the Director-General of Medical Services.

I HAVE the honour to submit the following report on the sanitary condition of the military camps in New Zealand during the year 1917. It is satisfactory to be able to point to a very marked reduction in the sickness-rate, in the numbers of infectious diseases reported, and in the general death-rate during the year as compared to previous years. The chief factor in this reduction has been the elimination of widespread epidemics of measles and influenza. That the death-rate should be reduced by the elimination of these simple diseases is due to the fact that the majority of the deaths in 1915-16 were caused by meningococcal infections—cerebral or pulmonary—arising as sequelæ of either measles or influenza, more particularly measles. The close relationship between catarrhal diseases and meningococcal infections demonstrated in previous years made it obvious that our chief efforts should be towards combating the spread of catarrhal epidemics, whether measles, influenza, or allied naso-pharyngeal infections, and there is little doubt that the satisfactory statistical records for 1917 are a result of the efforts made along these lines. The measures adopted were briefly as follows:—

- (1.) Segregation of recruits in camps apart from other units and under conditions offering the largest amount of open air and the least degree of crowding possible to troops undergoing military training.
- (2.) The routine examination—clinical and bacterial—of all recruits entering camps, of civilians employed in the camps, of all cases reporting sick with catarrhal conditions of the throat, and of all cases of any kind entering the hospital wards.
- (3.) The isolation of all "suspects," which means cases shown by these examinations to be carriers of catarrhal-producing organisms, whether meningococcal or otherwise. The term "carrier" has been applied to any person whose throat-swabbing showed any abnormal bacterial content.
- (4.) The free use of the recently introduced steam-inhalation method of treatment for all these "suspects" or "carriers." Indeed, this treatment was sometimes extended to larger bodies of men without troubling as to the bacterial contents of their pharynges, if for some reason they might be regarded as "suspect." In order to protect the troops living in the necessarily crowded conditions on the transports a final bacterial examination has been made of all troops prior to embarkation.
- (5.) The usual methods of disinfection of the huts, canteens, and other places and their contents following the detection of any case of infection.

Details as to how these measures were carried out will be found in the annual reports of Principal Medical Officers of the two chief camps, which I append. The work thus devolving on the medical staffs has been very heavy, but it has been most systematically and thoroughly carried out, and the results seem to justify the outlay of energy. Another point to be recognized is that all this isolating and parading for examination has of necessity interfered with the hours of training; but, after all, it does not greatly profit an army if after he is fully trained the soldier dies of some preventable disease.

The amount of bacteriological work entailed has been enormous, and Major Hurley at the central laboratory is to be congratulated on so systematizing the work that he has with a comparatively small staff been able to cope with the huge increase in his duties. It is no small feat to be able to examine and report on over two thousand swabbings within three days. The bacteriological laboratories at Trentham and Featherston have greatly relieved the strain on the central laboratory, and have done excellent work in spite of the somewhat primitive conditions under which they labour.