

the proportion is reversed, 8 cases occurring in this camp as against 3 in Trentham. The next succeeding Reinforcement—the 21st—affords an interesting comparison, for it mobilized at Trentham, and here 9 cases occurred, with only 3 at Featherston. That the only Reinforcement which mobilized at Featherston should also be the only one to show the highest proportion of infection in that camp well illustrates the contention in the report of the Sanitary Committee of the Public Health Department, that it was the new recruits who suffered, and that the prevalence at Trentham was consequent on this being the mobilization camp, and not a result of any insanitary conditions.

DISTRIBUTION BY COMPANIES.

An examination of the cases classified according to the company from which they came shows that rarely was there any marked prevalence in one company, and frequently with the transference of the unit from one camp to another the infection would at once disappear from a company in which several cases had been reported. In only two instances did more than 4 cases occur in one company, even if we group the pneumonic type of infection with the meningococcal. In these two companies the distribution was as follows:—

C Company, 18th Reinforcements: In this company—from which 6 cases came—the dates of infection show two distinct groups. The first three were of the pneumonic type and followed measles, the patients entering hospital with this disease on the 14th, 16th, and 18th July. It is evident here that one did not infect the other with measles, and from the rapidity with which pneumonic symptoms followed it is unlikely they received the meningococcal infection in the wards. Two of them came from the Nelson District and lived in the same hut. The second group followed three weeks later. These were of the meningococcal type. They all came from the Canterbury District, but lived in separate huts. There was no evidence connecting the one group with the other, and the most noticeable feature is the grouping according to the district from which the patients came.

E Company, 19th Reinforcements: The other company yielded 7 cases; all but one being of the meningococcal type. Five occurred between the 3rd and 15th August, and suggest a sequence of infection. All 7 were from the Auckland Province, and 4 from one small district near Te Aroha. Yet only 2 came from the same hut; and, as men from the Auckland District were showing infection at this time in four other units, the conclusion seems to be that the transmission was taking place not so much by contact in huts or companies as through the association together of men coming from the same area. This association must have taken place outside their official duties, and will be referred to later.

Another case requiring comment is one in which four men in one company were affected. Three came from one hut, and all were from the same district—Taranaki. As will be shown later, a man from the same district but in another Reinforcement was affected about the same time; so that this group of cases, like the others, affords little evidence that the infection was spread through contact resulting from association as a military unit.

In 7 other cases 3 men of one company were affected. In some of these there was evidence of association outside the camp, in others there was a possibility of contact in the hut.

It is evident, however, that the disease did not spread much in any of the companies; and while contact in the huts may, and social companionship certainly did, play a part, in no case is there evidence that association during military duty resulted in transmission of infection.

DISTRIBUTION BY HUTS.

At Trentham there was one hut in which 3 cases of meningococcal infection (2 meningitis, 1 pneumonia) occurred, and seven huts in which were 2 cases. In Featherston no instance is recorded of more than one case in a hut.

As regards tents, 4 cases were reported from Canvas Camp, Heretaunga; 3 from men in tents at Papawai; 2 from tents at Tauherenikau; and 6 from Canvas Camp, Featherston. There is no evidence then that men in tents were more immune from infection than men in huts, nor is there much evidence of spread in huts.

Of the 8 cases at Trentham in which two or more persons in one hut suffered from infection, in three instances the dates of infection are so far apart that there is little probability of any cross-infection. In the case of the hut in which 3 cases arose, the interval between the first case (pneumonia following measles) and the second (meningitis) was three weeks, and between the second and the third nine days, so that there is much uncertainty as to whether the contact in the hut had any effect. In one case 2 men entered hospital with meningitic infection within twenty-four hours of each other, so that the infection was obviously not transmitted from one to the other, but contracted probably simultaneously elsewhere. In only 3 of the 8 cases do the dates of development of the illness make it likely that the infection was transmitted from one to the other in the hut, and in each case there is evidence, equally strong, of association outside the camp with other men who developed symptoms of infection about the same time.

It is apparent from the above facts that the huts had very little influence in spreading the disease, and that the contacts in the huts rarely if ever developed symptoms of infection.

INFLUENCE OF STAY IN CAMP.

The report of the Public Health Committee showed a general improvement in the health of the troops who had been over two months in the camps as compared with the more recent arrivals. It was also found that the majority of the meningococcal infections arose during the first six weeks of camp life. The subsequent observations fully bear this out. Among 43 cases occurring since the beginning of September the infection arose within the first six weeks in 33 cases and within the first month in 21 cases.