H.—19_B.

was doubtful, since meningococcal infection was very prevalent among civilians in 1918, especially in Wellington Province.

7

Mortality.—Among the 55 cases in 1918 there were 17 deaths, giving a case mortality of 31 per cent. This compares favourably with previous years, in which the mortality has been 61 per cent. The following table gives the case mortality in the two camps and in previous years:—

	Year.		Trentham.						
			Case Mortality.	. Cases.	Deaths.	Case Mortality.	Cases.	Deaths.	Total Mortality.
1916			Per Cent. 60:0	35	21	Per Cent. 62·5	24	15	Per Cent.
1917 1918	• •		33·3 63·6	3 11	1 7	70·0 22·7	10 44	7 10	61 31

It will be seen that the mortality at Featherston for the year was only 22.7 per cent., which is the lowest recorded. This satisfactory result must be attributed in great measure to the methods of treatment adopted at that camp, as recorded in the report of Captain Crawshaw. The use of intravenous and intrathecal serum injections appears to have been successful, even in very acute cases. Among the 36 military cases treated at Featherston the death-rate was only 22.2 per cent. The death-rate of 22.7 per cent. given in the foregoing table includes cases occurring outside the camp and therefore treated elsewhere.

Influence of Age in Incidence and Mortality.—In the following table is shown the distribution of cases of cerebro-spinal meningitis and deaths according to age-groups:—

	Under 20.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 and over.	Total.
	Chidel 20.	20, 21, 22, 23, 24.	20 10 29.	30 00 34.			
Cases	1	15, 5, 2, 1, 0	9	13	6	3	55
Deaths Case mortality (per cent.)		5 17·4	• •	6 46·1	4 66·6	$\frac{2}{66\cdot 2}$	17 30·9

It will be seen that 24 of the 55 cases were men under 25 years of age, a proportion of 43 per cent. Five of those 24 died, a case mortality of 20.8 per cent.

Of the 31 cases of 25 years and over 14 died, a case mortality of 38.7 per cent. This differs somewhat from previous years, in which the younger men did not escape so lightly. This seems to have been the result of the influenza epidemic affecting the more mature men more severely.

Variation in Incidence and Mortality due to Influenza.—Of the total of 55 cases, 25 occurred as a sequel to the severe influenza epidemic of November. Of these cases 9 died, a case mortality of 36 per cent. Of the 30 cases prior to this epidemic 8 died, a case mortality of 27 per cent. Thus the severity of the influenza infection was reflected on the severity of the meningococcal complication. The age-incidence among the 25 post-influenzal cases differs somewhat from the general age-incidence, as 9 were under 25 years—that is, 36 per cent. Of the 30 cases occurring prior to the epidemic 15 were under 25 years—that is, 50 per cent. The proportion of men under 25 years who were affected by influenza during the epidemic was 42 per cent., so that the meningococcal complication did not affect the men under 25 years in the ratio which might have been expected, considering the known greater susceptibility of the young to cerebro-spinal fever.

The mortality, too, shows a marked reduction among the younger men who suffered from post-epidemic meningitis, for of the 9 cases below 25 years only 1 died—that is, 11 per cent.—whereas of the 16 cases of 25 years and over 9 died, a case death-rate of 56 per cent.

This variation as to relationship of age to incidence and mortality of cerebro-spinal fever is not confined to the cases following the severe epidemic, for of the 8 post-influenzal cases which occurred earlier in the primary influenzal wave only 2 were under 24 years, and the 2 fatal cases were in men of 32 and 45 years of age.

Distribution.—The unit from which the men came has had little influence in the distribution of cases this year. In only one unit (D Company, 46th Reinforcements, at Featherston) were there 3 cases, even during the secondary wave of influenza.

Influence of Occupation.—Forty per cent. of the patients were employed in civil life in outdoor work up country. This is a lower proportion than in former years, in which about 75 per cent were either farmers or occupied in similar work. This is due to the inclusion of post-epidemic influenza cases, among whom only 36 per cent. were from outdoor employments. The incidence of the influenza epidemic was so widespread as to affect all persons alike. Possibly also the proportion of men from the towns was higher in the later Second Division drafts.

Influence of Locality.—As in former years, the district from which the men came exercises an influence in the spread of cerebro-spinal fever. During 1918 Wellington Province was the one most affected, although in previous years the men from this district largely escaped. Eighteer