

It will thus be seen that August and September showed abnormal death-rates for pneumonia in Auckland in 1918. From the evidence of many medical men in practice in and about Auckland it is now known that many of these excess deaths from pneumonia were the result of complications following influenza of the clinical type so familiar subsequently in November. Catarrhal diseases other than pneumonia also show an increase in September, thus influenza rose from an average death-rate of 0·45 to 1·06, and broncho-pneumonia from 1·23 to 3·17. Table IX shows also that among Natives the deaths from catarrhal diseases rose abnormally during September in the Auckland District, since twenty-four occurred there out of a total for the Dominion of twenty-nine.

The conclusion, then, must be drawn that the primary wave of influenza became specially virulent in Auckland during the month of September.

Secondary Wave.

From the Chart A we learn that fifty-nine deaths attributed to Influenza occurred in October, whereas only thirty-eight deaths were registered in the preceding nine months of 1918; and in Table XI we see that three of the cases occurred in the first week in October—in itself a high proportion—and from then rose steadily week by week till the fifth week, after which the increase was so sudden during the sixth, seventh, and eighth weeks to warrant the term “explosive” being applied to the outbreak. In Table II we see that in the military camps, although there were 1,116 cases of influenza, only two deaths occurred during the month, and till the last week or so the epidemic tended to die down. But the recrudescence at the end of October is very significant, since it was connected with the return of men from Auckland, where they had been on leave. Thus at Awapuni Camp the increase followed the arrival on the 28th October of a man from Auckland who subsequently developed influenza of the pneumonic type. Similarly, at Featherston the epidemic received a fillip about the 26th October with the arrival of a C1 draft from Auckland, among whom after a short time the typical pneumonic cases began to arise. At Trentham the definite secondary wave did not begin till the 3rd November, and here its beginning followed the arrival of a draft from the already infected Awapuni Camp. At Trentham the earliest case of pneumonic influenza occurred on the 16th October in a man who arrived from Auckland on the 9th October, but the case was not followed by any marked spread of infection. As the larger camps received their secondary-wave infection from Auckland the history of influenza among the men in the Auckland camps is of special interest, and here we find that both at Narrow Neck Camp among the Native soldiers and in the garrison troops at the North Head Forts there was an explosive outburst, beginning on the 5th October, very short and sharp, but not followed by fatal results. At Narrow Neck in four days 226 cases were reported, thirteen of whom showed pneumonic symptoms; and among the small garrison at the forts thirty-three cases, eighteen of which were severe, occurred in the first week of October. Then followed a lull of about two weeks with few cases, but on the 24th October they began to increase slowly for the first four days, but rapidly on the 28th October and the following days the wave reaching its crest in the first three days of November. It then waned rapidly, and died out on the 18th November, but by then seventeen Native and five European soldiers had died. These camps at Auckland furnish the earliest record of the secondary wave of infection, and the two outbursts coming in quick succession form a very remarkable history, suggesting that throughout October influenza of unusual virulence was abroad in the district. This is confirmed by the District Health Officer, Auckland, Dr. Hughes, who found on inquiring among medical practitioners round Auckland that many cases of influenza of the same type as characterized the November outbreak had been under their care. He thus obtained records of five cases of pneumonic influenza in August, five in September, and eleven in the first twelve days of October, in which period also he traced eighteen cases of influenza of the hæmorrhagic type. A number of these were in the neighbourhood of Narrow Neck Camp. That an epidemic of influenza of virulent type was present in Auckland early in October we learn also from the newspaper reports of that period. Thus in the *New Zealand Herald* of the 9th and 10th October special articles appeared describing the epidemic as of widespread proportions, and as being more virulent than previously, and generally emphasizing the serious position of affairs. It is interesting to note that this occurred prior to arrival of the R.M.S. “Niagara,” which is popularly supposed to have brought the new type of infection.

The Registrar-General's returns show that of the fifty-nine deaths from influenza in the Dominion during October thirty-four occurred in the Auckland Province, and that in the last three days of the month fourteen deaths occurred there, as against two in the rest of the Dominion. Taking the above facts into consideration, and the history of the increasing virulence of the primary wave during September in Auckland, we may conclude that this increase of virulence continued in this district through the earlier parts of October with steadily advancing power, and that in some manner the infection was so reinforced as to produce an explosive effect in Auckland in the last few days of the month. The epidemic spread with great rapidity after the 26th October, and by the 5th November had reached alarming proportions. The crowding due to the news of the Armistice on the 8th November produced in Auckland City a marked increase in cases, and the crest was reached about the 12th November. The highest number of deaths in one day throughout the province was registered on the 12th November, which we may take, then, as representing the crest of the wave; but the epidemic, though it declined rapidly in Auckland and suburbs in November, still produced outbreaks in various parts of the province till about the 14th December, after which matters became normal.

We have already traced the spread of the secondary wave from Auckland to the military camps, and may now follow it to other parts of the Dominion.

In the Wellington Province the registration of deaths shows an increase on the 1st November and a maximum on the 21st November, returning to normal about the 20th December. The incidence of the wave in the city was over by the 6th December. Prior to the 1st November the deaths in Wellington City from catarrhal complaints had not shown much increase over former years, though cerebro-spinal fever was abnormal.