

“ Within the next few days the Dunedin Public Hospital quickly filled with cases. On 17th December the peak was reached, in which day 9 cases occurred. After this, in so far as Dunedin is concerned, the number fell almost as rapidly. By the 17th January the numbers dropped to about 2 per week. Throughout the remainder of Otago and Southland, the incidence of cases was much less rapid and the effects of the disease were less serious.

“ Medical practitioners co-operated admirably and were advised to notify as positive and send to hospital all cases presenting definite meningeal symptoms or paralysis, but to isolate in private dwellings and observe closely the lighter cases presenting systemic symptoms only. On or about the 17th December, some 15 Dunedin practitioners were each seeing on an average some 5 or 6 cases daily, but notifying and hospitalizing the serious cases only. Even so, at one time, the resources of the Dunedin Public Hospital were severely taxed.

“ From Dunedin the infection spread south in the direction of the Main South route to Milton, arriving there on 4th January. From there it spread farther south to Balclutha on the 7th and to the districts surrounding. This seems to be the limit of the southern spread from the Dunedin focus. Another direction of spread from Dunedin was up into the Maniototo District, arriving at Middlemarch on 15th January, passing on to Hyde, and then to Ranfurly which was first affected on 26th January.

“ In Central Otago foci were probably set up at Alexandra and Cromwell by the arrival of 2 children from Dunedin who contracted poliomyelitis. From Alexandra it spread to Earnsclough, and from Cromwell to Bannockburn and north through Luggate to Hawea. Besides Dunedin and suburbs another early focus was that at Waikaka, a village on the Otago-Southland boundary. There is now a definite record of a systemic case occurring there on 17th November, a younger sister also having been in bed for a few days previously with fever, vomiting, and headache. On the 27th a second case at Waikaka presented suspicious symptoms. Both these children had attended the same school, though not in the same class. The first child had returned to school on the 23rd November as she had not been seen by a doctor and had not been diagnosed as poliomyelitis. The second case, therefore, developed four days after the first one returned to school. About the same time 6 other children attending the same school were unwell with fever, vomiting, pains in the limbs, and listlessness. These, however, cleared up in a few days.

“ From Waikaka the infection spread north-west to Wendon, Riversdale, Lumsden, and Lowther, from which places positive cases were notified.

“ Oamaru and district were infected early from South Canterbury, where at the Waihi School, Winchester, attended by an Oamaru boy who contracted the disease, there was an early wave of pyrexia, but it is also likely that spread there occurred from Dunedin, although the same trail cannot be traced as in the other lines of spread.

“ Infection arose at Orepuki and Waihoaka in western Southland relatively late—*i.e.*, on 16th January. These places are not in direct communication with Waikaka. It is from here possibly that the infection spread to Invercargill and its surrounding districts, appearing there a few weeks later. Then Invercargill experienced a sharp epidemic, which quickly subsided.

“ Gore, affected later, may have derived infection from either Waikaka or Invercargill. A great deal of traffic passes between Invercargill and Gore. Having regard to the date of appearance in Gore, it is more likely to have come from Invercargill. By 23rd March the date of the first case in Gore, the focus at Waikaka had died out, whereas this was only ten days after the height of infection in Invercargill.”

The closure of all schools, the restriction imposed on children under sixteen years of age travelling from Dunedin, the voluntary action of picture-theatre proprietors in excluding children from theatres, the discouragement of picnics and other functions at which children were likely to be present, and the publicity given to the epidemic were no doubt important factors in reducing the number of cases and delaying the spread of the epidemic. By the end of January the epidemic was declining, and early in February the restrictions on children travelling from Dunedin and attending theatres were lifted. The epidemic showed no sign of increasing, and it was decided to open schools on 1st March except in those localities where cases were still occurring. Except for the southern portion of the South Island, only sporadic cases had been experienced throughout New Zealand up to that time.

At the end of February and the beginning of March the second phase commenced, but for a few weeks this was practically confined to the southern portion of the South Island, the cases shown in Table 6 as occurring in Canterbury being chiefly in the southern portion of that district. In the latter half of March the epidemic spread to districts in the North, and by the beginning of April was widespread throughout the Dominion.

It would appear that the precautions taken had a definite effect on the course of the epidemic.

Table 7 shows the notifications of paralytic cases week by week. A comparison of Tables 6 and 7 shows that in some districts none but paralytic cases were reported, whilst in others the percentage of paralytic cases notified was fairly high.

Tables 8 and 9 show by race, sex, and age-groups the distribution of cases, by months and by Health Districts respectively, paralytic and aparalytic cases being shown separately.