

REPORTS OF DIVISIONAL DIRECTORS**DIVISION OF PUBLIC HYGIENE****INFECTIOUS DISEASES**

Diphtheria.—During 1946 there were 1,683 cases of diphtheria (Europeans, 1,577; Maoris, 106), and since 1931 a yearly total of cases exceeding 1,000 has occurred on only one other occasion.

The distribution of the disease has been remarkable, in that the districts most seriously affected have been in the North Island, while the South Island, as in previous years, has largely escaped. The seven most northerly health districts, with a total population of approximately 914,282, had 1,451 cases, or an incidence of 15·87 per 10,000 population. The South Island, excluding Nelson-Marlborough, with a population of approximately 503,590, had 48 cases, or an incidence of 0·95 per 10,000 population. Central Wellington and Nelson-Marlborough Health Districts, with a combined population of 277,401 and 178 cases, occupied an intermediate position both geographically and with reference to their diphtheria incidence rate of 6·42 per 10,000.

Diphtheria among Maoris.—The notified cases of diphtheria among Maoris numbered 106, representing a rate of 10·6 per 10,000, compared with the rate of 15·87 per 10,000 for the Europeans in those parts of the Dominion in which the majority of Maoris live.

It was previously thought that the Maori was relatively immune to diphtheria, but if this was ever so he would seem to be losing this immunity. In 1932, when 802 cases were notified among Europeans, there were only 3 Maori cases, and the respective rates were 5·51 for Europeans and 0·42 for Maoris. From 1932 onwards the incidence of diphtheria among Maoris has increased steadily, although during most of this period the diphtheria rate amongst Europeans was practically constant. The Maori rate has increased from 0·42 in 1932 to 1·81 in 1936, 3·22 in 1938, 4·37 in 1942, 8·10 in 1945, and 10·6 in 1946. So definite has this trend been that in the Wellington - Hawke's Bay District, in which the Maori population numbers 12,440, the diphtheria incidence in 1946 was actually higher among the Maoris than among the Europeans. It is evident that at the present time the Maori is as susceptible to diphtheria as the European.

The History of Diphtheria in New Zealand.—Prior to 1901 the only authentic record of the incidence of diphtheria is to be found in the returns of deaths from diphtheria and croup. The death-rate in 1872 was 5·45 per 10,000 population, and increased to 8·47 per 10,000 in 1874. In that year the deaths numbered 270 out of a total population of 297,654, and despite a steady growth in population the number of deaths has since only once exceeded this figure. After 1874 the diphtheria death-rate dropped fairly steadily, with interruptions in the decline in 1882, 1888, and 1892. In 1892 the death-rate was 4·38 per 10,000 and the total number of deaths was 281—the largest in New Zealand's history. Thereafter diphtheria mortality dropped steadily to reach the low rate of 0·47 per 10,000 in 1904.

Diphtheria antitoxin was first used in New Zealand in the treatment of diphtheria in March, 1895, and thereafter its use became general. Probably its introduction coincided with a natural regression in the severity and incidence of the disease.