

Since the systematic use of the inhalation chamber on troopships there has been a lessened incidence of severe infection. As an example of this the transport "Ruahine" may be quoted, which sailed on the 30th September with troops from Trentham Camp, where influenza was very prevalent. The whole of the troops were treated before embarkation, and daily for three days thereafter, and though a slight outbreak occurred on board it was checked quickly, and the troops arrived in London on the 5th December in good health. Considering the crowded conditions of life inseparable from a troopship this must be regarded as satisfactory.

On the other hand it must be admitted that the systematic use of the inhalation chambers failed in some measure to prevent the spread of influenza, even of the first-wave type in the camps, as, for example, the Trentham epidemic of September. The absence of serious complications in this epidemic—complications which we know were prevalent in the civil population at the time—may reasonably be considered to be in part due to this preventive measure. It totally failed, however, to check the spread of the second virulent wave, though we cannot, of course, say whether the severity was not modified thereby. There is some reason for thinking that such modification may have occurred from the fact that among those Headquarters department offices in which inhalation chambers had been installed at the beginning of July, and after September had been in constant use, very few serious cases of the pneumonic type were reported among the staff. It is obvious that, in a disease in which the invasion is so rapid as influenza of the later type, any measure for disinfecting the nose and throat must be applied very frequently. It seems certain that the organism can establish itself in under twelve hours, so that to be really effective the inhalation would require to be repeated shortly after any exposure to infection. The system adopted in many establishments of treatment before beginning work and again at the end of the day, it is reasonable to hope, should have some degree of success.

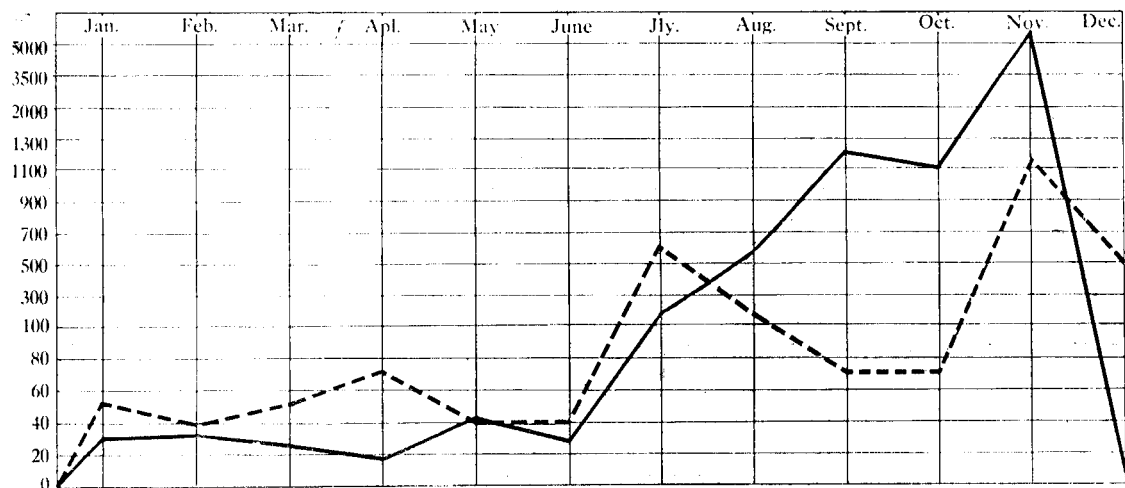
As illustrating the value of the inhalation chamber in modifying even the severe type of influenza I may quote from the report of Colonel Leahy, Principal Medical Officer, Trentham Camp. With such an epidemic as he had to combat, with a staff greatly depleted, only a limited investigation was possible. Eighty-six cases were observed; 53 had received spray treatment daily for three successive days. Of these, 12 developed a severe attack—that is, 22 per cent. Nineteen received only one or two treatments; of these, 8 became serious, or 42 per cent. Fourteen cases had received no treatment; of these, 7 became serious—that is, 50 per cent. The Principal Medical Officer, Featherston, also records a distinct lessening in pneumonia after the use of the inhalation chamber was made a daily matter. With evidence such as this we cannot afford to ignore the inhalation chamber as one of the measures to be adopted during an epidemic.

SPREAD OF THE INFLUENZA EPIDEMIC GENERALLY AND IN NEW ZEALAND.

It is apparent that influenza appeared in the New Zealand camps in two distinct waves differing greatly in severity, the first beginning in July and the second at the end of October, and that this latter was a very sudden and intense infection. It is also apparent that, while we have no evidence as to the origin of the first wave, the second wave was traceable to Auckland.

That this was so also in civil life is learnt from the reports of the District Health Officers, which show that the severe type showed itself in epidemic form in the main centres as follows: Auckland, 26th to 28th October; Wellington, 1st to 3rd November; Christchurch, 5th to 6th November; Dunedin, 12th to 14th November.

On the subjoined chart a broken line shows the deaths from influenza in London. Here also we see the two curves, the first with its crest in July, a month or so before the New Zealand primary wave. This interval between the London and New Zealand wave, one can understand,



Influenza infection in New Zealand camps—continuous line; ratio of deaths from influenza in London—broken line. (NOTE.—The spacing below 100 is modified to show the minor variations. The curves only show the relations between the various waves, and are not intended to represent actual figures.)

indicates the delay while infection was being carried to the Antipodes. When we turn to the second wave we find it is equally an explosive one of great intensity, but there is the remarkable fact that the two waves in London and New Zealand coincide as to date. This is even more