

Influenza Pandemic

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In April 2009 a novel influenza A(H1N1) virus came to the world's attention when it caused outbreaks in humans in Mexico and the USA. Within two weeks, New Zealand's public health authorities were being challenged. The return of a group of school children to Auckland on April 25th from Mexico with symptoms of influenza triggered the activation of New Zealand's Influenza Pandemic Action Plan.

On the 29th April, the World Health Organization (WHO) raised the pandemic threat to Phase 5 followed on the 30th April, by New Zealand declaring influenza a notifiable and quarantinable disease. The WHO was initially reluctant to declare a pandemic, largely based on the perceived mildness of the disease, however, with the obvious widespread community spread in Southern Hemisphere countries entering their traditional influenza seasons, the WHO declared a Pandemic (Phase 6) on 11th June. New Zealand has responded to this threat with perhaps one of the country's largest public health responses ever attempted

Containment strategies limited the spread of influenza for 6.5 weeks, New Zealand being one of few countries to successfully achieve this, until sustained community transmission became obvious in early June and the country moved to the management phase on 19 June. Activity peaked the week of 5-11 July. The epidemiological analysis of notified case data captured in EpiServ, national sentinel general practice (GP) surveillance, non-sentinel surveillance, hospital admission and other data has allowed description of the evolving pandemic. Like many other southern hemisphere countries with temperate climates, New Zealand entered the 2009 winter influenza season with co-circulation of pandemic A (H1N1) and seasonal influenza strains, however, the pandemic strain rapidly replaced seasonal influenza strains, becoming the predominant strain. There were 3265 notified cases, 1,009 hospitalisations and 38 deaths to December 2009. The greatest burden of disease occurred in under one year olds, the 15-29 age group among Pacific Island peoples and Maori.

What distinguished this pandemic from previous outbreaks of influenza was the occurrence of a high infection rate (~33%) but lower proportion of people needing medical assistance. Severe outcomes occurred in a small percentage of the population, with a low case fatality ratio, however the paradox was that hospitals managed but ICUs were stressed. The use of expanded surveillance and diagnostic testing lead to better intel availability during the containment phase for contact tracing and use of antivirals for treatment and prophylaxis. Overall a coordinated national response was achieved, however how would we have coped with a 1918-like pandemic?