Covid-19 and Beyond

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An outbreak of an acute respiratory infection was first reported from Wuhan, Hubei Province in China in late 2019. The WHO declared a Public Health Emergency of International Concern on 30th January and the Pandemic was declared on 11th March. Since then, close to 50 million cases have been reported worldwide with 1.2 million attributable deaths.

The first case was reported in New Zealand on 28th February. The case had returned from Iran and had been unwell during her time there. She presented with lower respiratory tract signs and symptoms and SARS-CoV-2 RNA was detected in upper and lower respiratory tract specimens. Since then there have been just under 2000 confirmed (82%) or probable cases in New Zealand.

The cause of COVID-19 infection is the SARS-CoV-2 virus. Coronaviruses are a large family of RNA viruses that have a broad host range. Four coronaviruses cause a common cold-like syndrome in humans and a further two, SARS and MERS, cause lower respiratory tract infections. Bats may be a zoonotic reservoir for SARS-CoV-2.

Transmission is predominantly via direct and indirect contact with infectious respiratory droplets; termed contact and droplet transmission. The incubation period is 2-14 days with a median of 5.5 days and cases are infectious two days before onset of symptoms. Closed confined spaces with poor ventilation, crowding and close conversation/contact are recognised as high risk for transmission. In these settings inhalation of small particles may also occur; airborne transmission.

Transmission to healthcare workers is well reported. The hierarchy of infection prevention and control measures include source control (removal or mitigation of the source of the infection), engineering and environmental controls, administrative controls (policies and procedures) and the personal protection by hand hygiene and the wearing of personal protective equipment. Adherence to these measures will reduce the risk of exposure. Additional measures may be required in specific situations.

Public health measures, including vaccination, will be the mainstays for controlling the pandemic.