

Impact of the COVID-19 nonpharmaceutical interventions on influenza and other respiratory viral infections in New Zealand

Huang et al

Supplementary Information

NPIsImpactOnFlu Consortium: A full list of members and their affiliations

Shirley Laurence⁷, Alicia Stanley⁸, Shona Chamberlin⁷, Reniza Ongcoy⁷, Kirstin Davey⁷, Emilina Jasmat⁷, Maree Dickson⁷, Annette Western⁷, Olive Lai⁷, Sheila Fowlie⁷, Faaso Aupa'au⁷, Louise Robertson⁷, Emma Collis⁷, Amanda Retter⁷, Maricar Maminta⁷, Paula Massey⁷, Monica Jung⁷, Renee Clark⁷, Ashleigh Howan⁷, Renee Clark⁷, Bianca Underwood⁷, Roxanne Buchanan⁸, Pamela Muponisi⁸, Marisa van Arragon⁸, Medhawani Rao⁸, Wendy Sullivan⁸, Ellen Waymouth⁸, Mapui Tangi⁸, Emma Appleton⁸, Leigh Smith⁸, Debbie Aley⁸, Bhamita Chand⁸, Kathryn Haven⁸, Stephnie Long⁸, Julianne Brewer⁸, Catherine McClymont⁸, Claire Sherring⁸, Miriam Rea⁸, Shelley Barlow⁸, Judith Tresidder⁸, Judith Barry⁸, Karen Bailey⁸, Liz Walker⁸, Tracey Bushell⁸, Kamala Dullabh⁸, Lynell Hanley⁹, Claire Tarring⁵ and Chor Ee Tan⁵, Jennifer Fahey¹⁰, Namrata Prasad¹, Jill Sherwood¹, Erasmus Smit¹

¹Institute of Environmental Science and Research, Wellington, New Zealand

⁵Capital Coast District Health Board, Wellington, New Zealand

⁶Ministry of Health, Wellington, New Zealand

⁷Counties Manukau District Health Board, Auckland, New Zealand

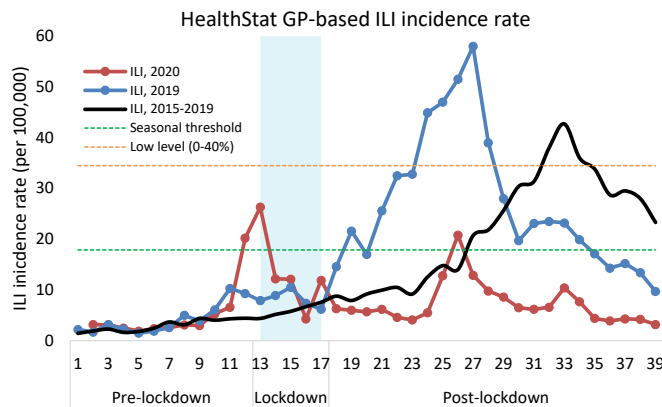
⁸Auckland District Health Board, Auckland, New Zealand

⁹Waikato District Health Board, Hamilton, New Zealand

¹⁰Canterbury District Health Board, Christchurch, New Zealand

Supplementary Figures

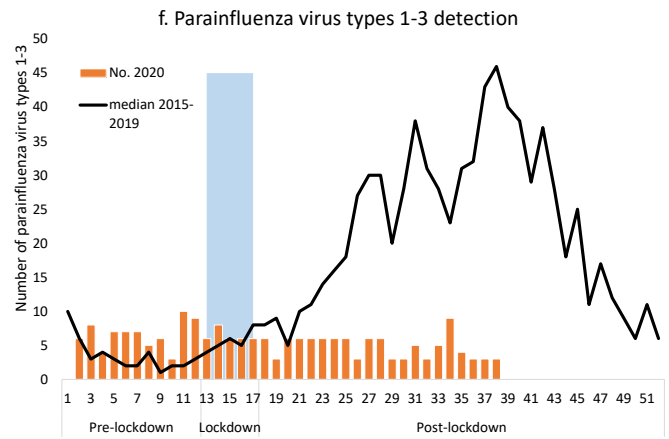
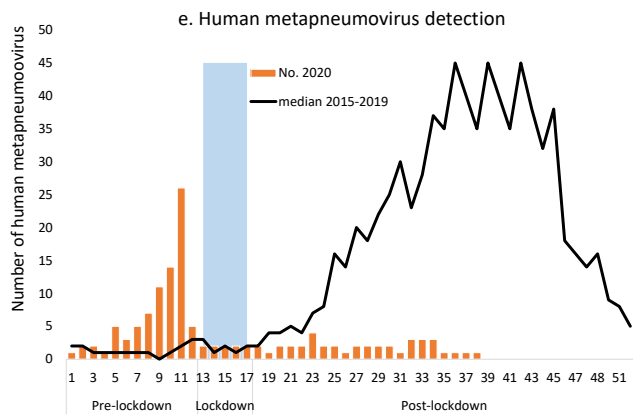
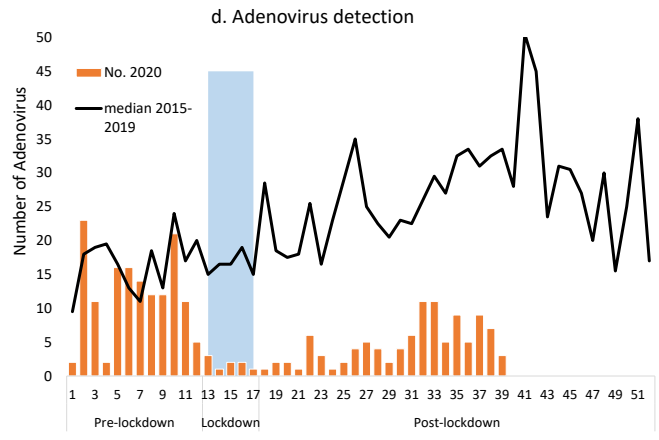
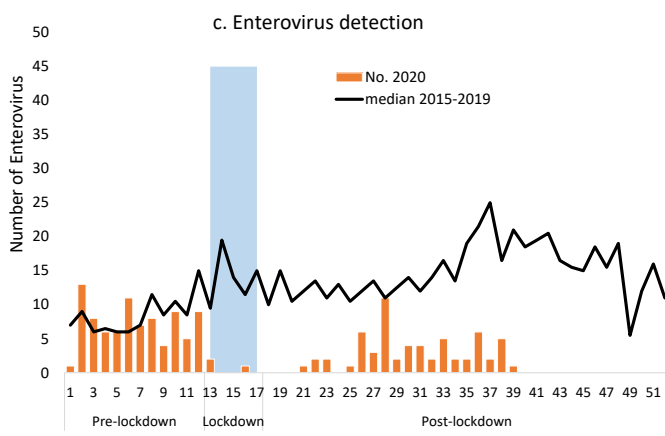
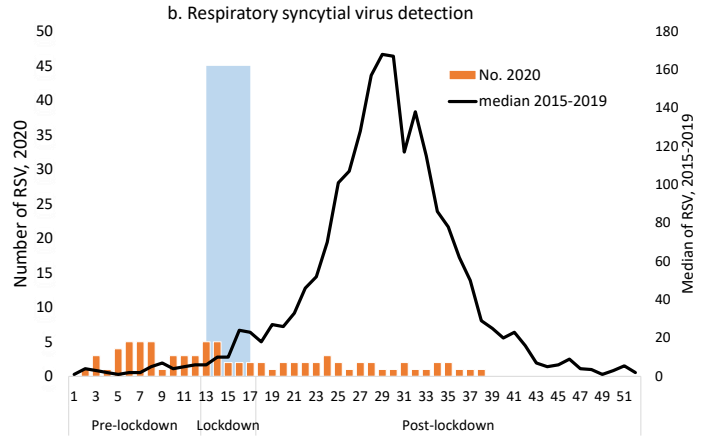
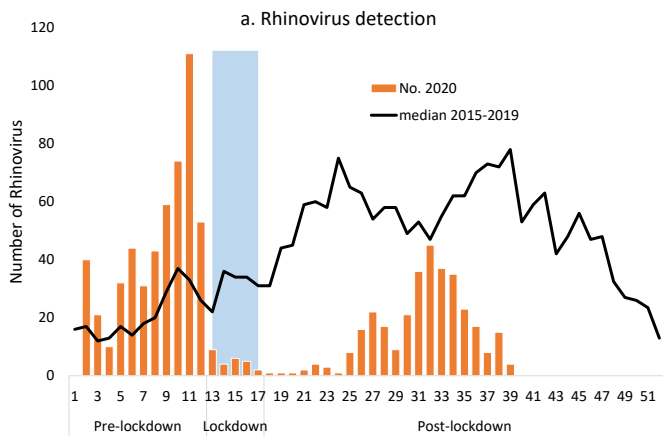
Supplementary Figure 1. Temporal distribution of influenza-like illness (ILI) from HealthStat general practice based surveillance in 2020 compared with the reference period of 2015-2019



HealthStat general practice (GP) based ILI surveillance is based on a nationally representative random sample of approximately 100 general practices that code for ILI. The case definition used for ILI by HealthStat is “*acute upper respiratory tract infection, with abrupt onset of 2 or more symptoms from chills, fever, headache and myalgia*”. This surveillance system monitors the number of people who consult GPs with an ILI. HealthStat is based on automated extracts from practice management computer systems. CBG Health Research Ltd provides this data to ESR on a weekly basis. HealthStat ILI surveillance does not include virological surveillance.

Supplementary Figure 1 showed that ILI incidence rates from HealthStat GP-based surveillance during May-September in 2020 were below the seasonal threshold (except week 26) compared to the reference period. This finding is consistent with national sentinel GP-based ILI surveillance and SHIVERS-II&III ILI/ARI surveillance as shown in Figure 1. Similar to the national sentinel GP-based ILI surveillance, some ILI patients from HealthStat may have been diverted to visit COVID-19 specific testing centres, resulting in lower than usual ILI reporting. However, HealthStat recorded higher ILI incidence rates than national sentinel GP-based ILI surveillance. As HealthStat does not have a virologic testing component, it may result in a similar level of GP participation compared to previous years. On the other hand, national sentinel GP-based ILI surveillance requires swabbing from an ILI patient. This may result in less GP participation (18-57% of the usual participation rate over the winter period in 2020) for this surveillance in the COVID-19 pandemic situation.

Supplementary Figure 2. Temporal distribution of non-influenza respiratory viral infections in 2020 compared with the reference period of 2015-2019



Supplementary Figure 3. Temporal distribution of rhinovirus infections among SHIVERS-II&III ARI cases and hospitalised SARI cases in 2020

