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# Upgrade of NZ's COVID-19 Alert Levels Needed to Help Regain NZ's Elimination Status

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**In this blog we comment on the current COVID-19 situation globally and in NZ. We focus on potential revisions to NZ's Alert Level system that involve improved use of mass masking, targeted internal travel restrictions, and gathering/event limits. These interventions could all help accelerate rapid progress back to elimination status for NZ while minimising disruption of economic activity and education.**

## *The global situation*

It is clear that the COVID-19 pandemic virus is highly infectious and is causing major health and economic damage in most countries around the world. Nevertheless, a number of jurisdictions appear to have eliminated community transmission of the virus (eg, China, Taiwan, Fiji and 5 Australian States/Territories – including the island of Tasmania). Other jurisdictions appear to be getting recent outbreaks under control and might also be progressing towards elimination status eg, Hong Kong, Japan, South Korea and Iceland (see the Worldometer site showing graphs of declining new daily cases). As such, these jurisdictions can provide encouragement that a country like NZ can successfully work to regain its former elimination status [1], while waiting for a vaccine or therapeutics to become available.

A key goal is for NZ to regain elimination status without resorting to a highly disruptive Level 4 lockdown. Experience from the above jurisdictions indicates that this goal can be achieved using appropriately targeted control measures at lower Alert Levels, eg, with population-level adoption of masks.


*Image by Luke Pilkinton-Ching, University of Otago Wellington.*

## *The current NZ situation*

At the political level there remains a strong focus on the elimination strategy by the NZ Government, with agreement by the main opposition party (National) for this approach. There are also ongoing high levels of public support for the elimination strategy based on a recent poll.

There appears to be ongoing progress with controlling the outbreak in Auckland and very effective use of genetic epidemiology to characterise chains of transmission [2]. There has also been successful adoption of mass masking on public transport around the country, including positive initiatives around masking at primary school and secondary school levels.

On the downside however, a number of experts have been concerned that restrictions on Auckland have been lifted too quickly. These include a group of Māori health experts from Te Rōpū Whakakaupapa Urutā, and various academic researchers.

NZ is also still not making fast progress with digital technologies to boost manual contact tracing (eg, see these recent comments criticising the progress with the CovidCard by a key developer, the entrepreneur Sam Morgan). There is also still inadequate use of mass masking and the country still has a fairly crude Alert Level system that lacks nuance. The rest of this blog focuses on possible modifications to this system that may accelerate progress to getting back to NZ's elimination status.

## Potential Alert Level revisions

The current NZ Alert Level system has been a very valuable communication tool throughout the pandemic. Nevertheless, it needs further refinements as we suggest below. It should be reviewed and revised regularly based on ongoing reviews of the international evidence around pandemic virus transmission in different settings, including evidence from modelling studies. New knowledge that could substantially improve pandemic control includes:

- A clearer understanding of the difference in risk between indoor and outdoor settings. Future event size limits could allow larger gatherings outdoors but maintain tighter restrictions on indoor gatherings, particularly in closed, poorly-ventilated spaces [3].
- Better understanding of transmission in children and young people to guide age-specific control measures eg, mask requirements or physical distancing in schools. Emerging evidence is challenging initial assumptions that children contribute little to cases or transmission; and over 30% of cases in the current Auckland outbreak are aged 0 to 19 years (as of 2 September).
- Growing evidence about the effectiveness of mass masking as a low-cost, effective intervention to reduce COVID-19 transmission [4, 5].

**Table: Our recommendations for a revised Alert Level system (below Level 3) that makes better use of mass masking, travel restrictions and gathering/event size limits (some of which are partly in the current system)**

| Alert Level | Mandated mask use (updating our previous work [6]) | Internal travel restrictions | Gathering/event size limits* |
|---|---|---|---|
| **Level 2.5** | Masks required in all indoor public settings (eg, workplaces, secondary schools, shops, social settings). Exempted are primary schools** (voluntary mask use) and home settings. | No travel permitted outside any designated outbreak region (excepting medical emergencies). | All social gatherings limited to 10 people (including funerals and tangihanga). |

| Alert Level | Mandated mask use (updating our previous work [6]) | Internal travel restrictions | Gathering/event size limits* |
|---|---|---|---|
| **Level 2** | Masks required in all: public transport (including school buses), health care settings, and aged residential care facilities. | No travel from any designated outbreak region to the other major island within NZ (ie, North or South Island) | All social gatherings limited to 20 people (or 50 for funerals and tangihanga). |
| **Level 1.5** | As above. | No restrictions | All social gatherings limited to 50 people (or 100 for funerals and tangihanga). |
| **Level 1*** ** | No requirements (but potentially for aged care facilities in winter months to protect from other viruses). | No restrictions | No restrictions (but for events over 100 people then contact details of attendees need to be collected, if a CovidCard type system is not in place)# |

* There is an urgent need for a review to determine more appropriate differentiation between indoor and outdoor limits on gathering/event sizes. There is also a need for more targeted restrictions on high risk settings that have been associated with outbreaks internationally eg, bars, nightclubs, gyms and churches (ie, places where viral transmission seems to be accelerated by people talking loudly or singing, or by breathing heavily (gyms)).

** WHO recommends that mask mandates apply to adults and children aged 12 years and over, with primary school aged children encouraged, but not required, to wear masks.

*** We suggest Level 1 is defined as no evidence of community transmission in NZ for at least 28 days (in the context of a well-designed surveillance and testing programme).

# Eg, people register online for the event or there are digital systems used that allow rapid transfer of a mobile phone number or email address at the event entrance.

Ideally there would be detailed modelling work to inform the optimal decisions (from health, welfare and economic perspectives) around our suggested revised Alert Levels. There would also be community consultation, potentially assisted by surveys and citizen juries. Unfortunately, there is not time for these processes while there is the urgency associated with an outbreak in Auckland and so we urge the Government to consider acting immediately on revising the Alert Level system. Then when all NZ is back to Level 1, there should be detailed research to optimise the Alert Level system further in case a future border control failure occurs before an effective vaccine arrives.

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