

Strategic COVID-19 Public Health Advisory Group

10 June 2021

Hon Dr Ayesha Verrall
Associate Minister of Health (Public Health)
Parliament Buildings
Wellington

Dear Minister

Future of the Elimination Strategy

1. Our group has been asked to address the question: *“Is an elimination strategy still viable as international travel resumes and/or are we going to need to accept a higher level of risk and more incidence of COVID in the community?”*
2. We are pleased to deal with this issue, because it is fundamental to decisions about when and how to re-open New Zealand’s borders. In order to make wise choices over the coming months, we must know where we want to be in a year or two’s time. Otherwise hasty decisions could close off options for ever.

Progress of the COVID-19 pandemic

3. The global pandemic is far from over. Attention is often focused on countries such as the United Kingdom and the USA, which have suffered a devastating toll but are now benefiting from relatively high vaccination coverage. Yet new waves of COVID-19 are appearing in many parts of the world, and the tragic situation in India over recent months is likely to be mirrored in other low or middle income countries in the future.
4. The rapid development of highly effective vaccines was a brilliant scientific achievement. Sadly this achievement has not been matched by success in scaling up production and providing adequate supplies of vaccines to the places where they are most needed. The Director-General of the World Health Organization, referring in January to the inequitable distribution of vaccines, said that “the world is on the brink of a catastrophic moral failure”. In addition to the profound ethical issue, unchecked replication of the SARS-CoV-2 virus in many countries is sparking the emergence of new variants that threaten us all. Some of these variants are significantly more transmissible, leading to the rapid growth of outbreaks, while others have been shown to be less responsive to particular vaccines. Natural selection will favour variants of the virus that can escape vaccine-induced immunity.
5. No-one knows what the outcome of this pandemic will be, in say 3–5 years’ time. The most optimistic scenario is that COVID-19 will have become a far less serious

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public health problem – either because the virus has evolved to be less damaging, or because vaccines (with or without adjustment) remain effective against all variants, including those that may yet appear, and are administered consistently to people throughout the world. A much more pessimistic scenario is that variants will have emerged that are more transmissible, more lethal, and resistant to vaccines. It is not at all unlikely that we will be playing a “cat and mouse game”, in which vaccines are continually modified (“tweaked”) for rich countries to deal with new variants after they arise. Judging by recent experience, people in low income countries may have delayed access to the latest vaccines. At this stage of the pandemic, New Zealand needs to have a strategy that can accommodate both the optimistic and pessimistic scenarios, as well as a more likely path somewhere in between.

The elimination strategy

6. In a recent *Lancet* commentary, Ollivier-Barton and colleagues compared five OECD countries that aimed for elimination of SARS-CoV-2 with 32 others that opted for mitigation, defined as “action increased in a stepwise, targeted way to reduce cases so as not to overwhelm health-care systems”. These authors described elimination as “**maximum action to control SARS-CoV-2 and stop community transmission as quickly as possible**”. They concluded that elimination created the best outcomes for health, the economy, and civil liberties.
7. New Zealand was one of the five OECD countries included in that analysis. Having observed the effectiveness of elimination in China, and facing the prospect of an overwhelmed hospital system here, New Zealand made an early decision to adopt an elimination strategy. This involved border restrictions, managed isolation and quarantine, a relatively short but rigorous lockdown, and public health measures including expanded testing and contact tracing – along with promotion of behaviour such as staying at home when sick, washing hands frequently and observing cough hygiene.
8. There is no doubt that this strategy has served us well. The health consequences can be illustrated by comparing New Zealand with Scotland, which also has just over five million people. New Zealand has had a total of 26 deaths during the pandemic, while Scotland has experienced over 10,000 deaths so far. Apart from the deaths, a great many more Scots have experienced serious illness, which has become chronic in a proportion of cases. Although some sectors of our economy, such as international tourism, have been badly affected, the New Zealand economy has recovered more quickly and more strongly than experts predicted. Moreover, our social and community life has flourished, in comparison with countries where repeated lockdowns and restrictions on gatherings (even of families) have made the past 15 months a time of frustration and grief.
9. Although the term “elimination” is well established in epidemiology, it is unfortunately used in different senses even by specialists, and is frequently misinterpreted as meaning “eradication”. None of the countries that have

pursued an elimination strategy has experienced “Zero COVID” for a prolonged period. Even with border restrictions and quarantine, incursions of the virus occur from time to time; these can lead to clusters of infected people in the community, and occasionally to large outbreaks. Several of the countries that have been most successful, such as Taiwan, Vietnam, and Australia, are dealing with such outbreaks at present.

10. The description of elimination quoted in paragraph 6 was an action-oriented definition, which acknowledged that some community transmission of the virus will occur, although steps will be taken to stamp it out. So elimination does not necessarily mean zero transmission or incidence. In April 2020, the Director-General of Health (Dr Ashley Bloomfield) stated: “***The elimination approach focuses on zero-tolerance towards new cases, rather than a goal of no new cases***”. In approaching the present question, our group is happy to follow this interpretation, which treats elimination as a ***process***, rather than as a permanent ***outcome***. We will return to the naming of this strategy later in this report.

Reviewing our approach

11. There are two reasons why it is timely to review the case for holding to an elimination strategy. One is the advent of safe vaccines that have been shown to have high efficacy (in clinical trials) and effectiveness (in national programmes). The other is that there are calls to start re-opening our borders to travellers other than citizens and residents, and to allow more quarantine-free entry.
12. Quarantine-free entry is likely to be restricted, at least initially, to travellers from approved countries and to individuals who pass a pre-flight test (as at present) and possibly a further rapid test on arrival. Despite the most rigorous precautions, however, it is inevitable that people carrying the virus will enter New Zealand on a regular basis.
13. By the end of 2021, we hope that a high proportion of adult New Zealanders (aged 16 and over) will have been immunised with the Pfizer-BioNTech vaccine. This should mean that, during an outbreak of COVID-19, fewer people will become infected, and even those who are infected will be less likely to require hospital treatment or to die. Nevertheless, there is now emerging evidence that this vaccine may generate a weaker immune response against certain new variants of SARS-CoV-2, even though it appears to be superior to several other vaccines in this respect. It is not inconceivable that, by the end of the year, there could be an established variant that is significantly resistant to the vaccine.
14. Modelling studies suggest that likely levels of vaccination coverage, both in New Zealand and overseas countries, will not be sufficient to cross the herd immunity threshold – by which we mean the point at which an infection will stop spreading through a population simply because a sufficient proportion of people are immune. But high vaccine-induced immunity should certainly make it easier to stamp out outbreaks of COVID-19, using the public health and social measures that have been so important over the last year. A successful vaccination programme

will make the elimination strategy more feasible, in any situation where the virus keeps entering the country. Our ability to stamp out COVID-19 quickly will partly depend on the level of vaccination coverage that is achieved, including in particular regions and population groups.

15. In response to the question we have been assigned, the group concludes that an elimination strategy, as defined above, should still be viable as international travel resumes. Allowing more quarantine-free travel will increase the risk that SARS-CoV-2 enters the community, and even with high vaccination levels there will be some clusters of infection and occasional large outbreaks. These can be stamped out by public health and social measures such as testing, together with rapid tracing and isolation of contacts, as well as physical distancing and mask-wearing where appropriate. Obviously an aim would be to minimise the need for raising alert levels, with the economic and social costs these impose. Nevertheless, some localised elevations of alert levels may be unavoidable after borders are re-opened.

Advantages of an elimination strategy

16. The advisory group considers that an elimination strategy is not only viable, but also the best option at this stage of the pandemic. There are several reasons for this conclusion.
17. Stamping out clusters of COVID-19 as they arise will mean that our health system is not overwhelmed by large numbers of patients requiring health care. In some countries, disruptions to health care may have caused even more deaths than the virus itself. The New Zealand health system is still poorly resourced to deal with any large outbreak of a disease such as COVID-19. As we entered the pandemic, the provision of intensive care beds (per capita) in New Zealand was less than one-third of the average among 22 OECD countries. New Zealand was in 21st place, followed only by Mexico. Although there will have been some expansion of facilities over the last year, this is likely to be modest in comparison with the countries that have been grappling with many thousands of desperately ill patients.
18. International travel is still severely restricted in many parts of the world. For example, the UK still requires travellers from most European countries (which have been placed on an “amber list”) to have tests before and (twice) after travel, and to quarantine for 10 days. About 50 countries are on a “red list”, and only British and Irish nationals are allowed to enter the UK – with stricter requirements – from these places. Yet countries such as the UK have no prospect of stamping out community transmission: their goal is merely to liberate citizens from continual lockdowns and to protect their health services from being overwhelmed. Even when the vaccination roll-out is complete in these places, it is likely that SARS-CoV-2 will continue to be a recurrent seasonal infection with serious consequences. Two eminent scientists (Chris Murray and Peter Piot) have recently predicted that winter surges may become the norm in the USA. This may require “both health

system change and profound cultural adjustment for the life of high-risk individuals in the winter months”.

19. By contrast, New Zealand has the opportunity to continue to enjoy a lifestyle that is relatively unaffected by the ravages of COVID-19. Along with Australia and a few other countries, we should not need to be practising pronounced physical distancing, wearing masks in most indoor places, or separating the elderly and other high risk individuals (such as those with diabetes or obesity) from family and friends during winter months. This will be advantageous for our community life and economy, and it will make New Zealand a highly attractive place to visit or to settle in. In the wake of the pandemic, the Economist Intelligence Unit has just ranked Auckland as first, and Wellington as fourth, in their list of the world’s most liveable cities.
20. Some people assume that, because SARS-CoV-2 is likely to persist as an endemic infection in most countries, the same thing will inevitably happen here. This is not necessarily the case. The term “endemic” refers to: “The constant occurrence of a disease, disorder, or noxious infectious agent in a geographic area or population group; it may also refer to the chronic high prevalence of a disease in such an area or group.” There are other infectious diseases that are endemic in some countries, but not in all. For example, measles is endemic in many parts of the world, but has been eliminated in countries such as New Zealand by vaccination programmes. A WHO definition for the elimination of measles in a country allows for the importation of cases, as long as there is not continuing endemic transmission of a measles virus strain for more than 12 months. So far there is no internationally agreed definition for the elimination of SARS-CoV-2.
21. An important advantage of maintaining our New Zealand-type elimination strategy is that it keeps our options open. If this policy were to be abandoned now, so that endemic infection became established, it would probably never be possible to reverse the change. On the other hand, if it became clear over the next few years that the costs of elimination outweighed the benefits, it would be a simple matter to follow the example of other countries.
22. Being a small nation, New Zealand often adopts the strategies of larger and better resourced countries, in public health as well as other spheres. In April 2020, we forged an independent path that has proved to be highly beneficial for the health of the people, community life, and the overall economy. The advisory group considers that it is too soon to revert to copying the strategies of countries that have not eliminated COVID-19. A more ambitious approach is warranted.

The case for a new name

23. Reference has already been made (in paragraphs 9 and 10) to the fact that the term “elimination” is confusing and ambiguous for many people. Australia eventually adopted an approach very similar to ours, but there it is called “aggressive suppression”. The recent report from the Independent Panel for Pandemic Preparedness and Response (co-chaired by the Rt Hon Helen Clark) used

a similar term, “aggressive containment”, to describe the approach adopted in New Zealand and five Asian countries that were analysed.

24. The advisory group recommends that the Government, after appropriate consultation, should choose a new name in Te Reo Māori, to reflect the unique approach of Aotearoa New Zealand to this pandemic virus. Such a name could provide clarity in identifying our strategy for dealing with outbreaks originating from international travellers, in order to prevent the establishment of endemic disease.

Conclusion

25. In our current view, the elimination strategy is still viable and, indeed, optimal as international travel resumes. It does not mean “Zero COVID”, but it does mean stamping out clusters of COVID-19 as they occur. The strategy should be reviewed regularly. Continuation of a successful elimination policy will require decisions about processing travellers and strengthening public health measures within the country. Such considerations are implicit in some of the other questions our group has been asked to address.

Yours sincerely

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