From: ^EXT: Rob Fyfe Sent: Friday, 3 July 2020 9:03 AM Mike Bush [DPMC] To:

Conversation Paper

RE-ENGAGING NEW ZEALAND WITH THE WORL

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KOI TU: THE CENTRE FOR INFORMED FUTURES In any complex and prolonged crisis, a transparent and adaptive strategy is needed. This has never been more obvious than in the COVID-19 pandemic. Just after COVID hit our shores, initial discussions centred on adopting a "flattening the curve" strategy. This involved accepting there would be some influx of disease, but by using behavioural and hygiene measures, viral transmission would be slowed and our hospital system would not be overloaded, as was being seen in northern hemisphere countries.

But soon after cases started appearing, a clear shift in strategy was made – sometimes expressed as "keep it out, stamp it out". In epidemiological terms, elimination of the virus became the goal. For New Zealand, adopting that strategy was scientifically plausible, as we had a low number of infections and could use our island geography. But it required huge effort and sacrifice by all New Zealanders – the burden of which will continue to echo for many years. With the border closed, it would then be a case of effective testing, contact tracing, and isolation to eliminate the virus. Through very good messaging, particularly helped by the 'bubble' metaphor and relying on the country's inherent social cohesiveness, the lockdown was a spectacular success. But in that success there are also challenges.

It is now clear the messaging around the state of contact tracing, personal protective equipment (PPE) and the management of isolation were not always accurate and that there were deficiencies in the system. Trust is essential for a government in handling any crisis, especially when civil cooperation is required over a long time, and this is not helped by obfuscation. Indeed, in recent times that trust has been weakened by revelations of quarantine and tracing failings, and reassurances proving to be less certain than first claimed, with much remedial action required. Nevertheless, we've achieved our goal of being almost certainly free of community spread.

The public has shown remarkable forbearance and support for the sacrifices of lockdown. But people's anger at process breakdowns was to be anticipated, given the early phase of the pandemic, during which most of us enjoined in a collective and cohesive blitz mentality, had passed. This is entirely as we would expect our emotions to evolve as we transition through a prolonged crisis.

To many epidemiologists, elimination means the reduction to zero of an infection in a defined geographical area. But as epidemiologist Sir David Skegg noted in his advice to the Epidemic Response Committee before lockdown was imposed, many others in the epidemiological community pragmatically define elimination as the reduction of case-transmission to a predetermined very low level. These distinctions may appear subtle, but they become critical in our collective thinking about the path ahead. The former creates an expectation of keeping the virus out absolutely and indefinitely and that even one case coming in could be seen as a failure. The latter accepts that cases will occur and that processes need to be in place to ensure community spread is not established. Given the nature of the virus, the former definition is impossible to sustain unless we are prepared to continue aggressive and foolproof testing and quarantine at the border for a long time.

As smugglers have known for centuries, border controls are never foolproof. We do better than most because of our geography and a long experience in biosecurity, but human failures will occur, and at some time a case will break through. Universal quarantine for arrivals, aggressive testing, and contact tracing remain our main protection.

Further, defining a strategy for locking down is relatively easy (although requiring much sacrifice), one for reopening to the world is harder. Much depends on what is happening in other countries. From the moment of going into lockdown, work was needed on defining a strategy and the processes that would be required to move past total quarantine. Any such strategic analysis must be transparent and preferably developed through a collaborative process, because whatever is done will change the risk landscape significantly. Many stakeholders continue to be at the mercy of such decisions, and those stakeholders are not just businesses, they are indirectly every New Zealander.

Therefore, we need to be thinking about defining our longer-term strategy. Is New Zealand prepared to hold itself in its state of near-total isolation for the indefinite future? Even opening the Trans-Tasman bubble looks further away than it did a month ago with resurgent community spread in at least one Australian state. The hoped-for early links with Singapore have similarly evaporated. Are there Pacific countries that we could now open up to with green lanes? Some other countries are starting to create green lanes, but they have not adopted the elimination strategy. The latter places higher expectations on the system.

While we pin our hopes on a vaccine, it could be much further away than the hype suggests. Can we afford to wait out another year, two years, or even more in almost total physical isolation? And at what cost? This is not just affecting tourism and export education, but also the many ways in which New Zealand projects and leverages its place in the world.

On arrival, everyone is quarantined for 14 days on arrival, then tested around days 3 and 12. However, even that has not been foolproof, requiring tougher actions to make it more robust. Then there is the problem of volume management. With more flights resuming, more Kiwis are returning home. Among them are those who were trapped overseas by the virus, but now others who have been away much longer are choosing to come home because of our relative safety. As more flights open up, the flow could become a flood. How will we manage? Will returning New Zealanders need to reserve a place in quarantine before arrival? And who among them should bear the cost of quarantine or part of it?

What solutions should we consider over the longer term? For example, could we develop a regime of approved tests – both antigen and RNA-based – before departure? This could be combined with rapid testing on arrival, then a shorter quarantine for those from low-risk countries. Could we develop better protocols for managed self-isolation for low-risk entrants? Could we allow long-term tourists, business travellers, and tertiary students in on such a basis? Could universities quarantine offshore students wishing to return? Volume management and cost must be the primary reasons for not doing so now. Do we need to balance that against the priority of non-resident New Zealanders wanting to come home? These are difficult, value-laden ethical and legal questions, but they need to be asked. To what extent is the political cycle affecting necessary discussion and decisions?

Ultimately, these questions have been and will remain about risk management and communication. At what point will New Zealand accept less than absolute elimination? Such a goal is likely unrealistic over a long term. Even if a highly protective vaccination is developed, it may not provide absolute protection and coverage will not be absolute, so cases will always occur. Actuarial calculations might allow protocols to be established that could mean shorter quarantine or even self-isolation for some. Of course, any such loosening without protections increases the risk of the virus appearing in the community, but there are possible ways through that. What about mandatory tests every day or second day and a shorter quarantine for people from low-risk countries who want to enter?

Any change from current practices would require highly effective, high-speed contact tracing supported by quarantine of first- and second-degree contacts and would need to be carefully piloted. What incentives are needed so that people cooperate as the pandemic drags on over the next year or more? How can we maintain or introduce hygiene practices that economies like Taiwan have used effectively throughout the outbreak?

The costs of failing to develop an effective automatic tracking system may come to haunt us. Any simpler border system will meet public expectations and public-health needs only if track, trace and isolation are rapid and effective. The costs of the COVID-card-type methodology are small compared with the costs of continued complete lockdown. If we required such a tracing system for all incoming passengers and provided a large number of New Zealanders had adopted it, then we would have more alternatives, at least for low-risk entrants. Singapore introduced a similar card this week. There are other systems that could be used. The Google/Apple joint development using a cellphone's embedded Bluetooth technology has progressed to overcome many of the earlier objections and is being introduced in some countries. However, some limitations remain, including technical challenges associated with repurposing phones as proximity devices, giving sufficient visibility over the performance of the system to public health officials. Any such system relies on voluntary compliance.

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The ethical arguments against such technologies have perhaps been overstated in their generalisation. Yes, there are apps that might provide private information to third parties or governments, but Google, Uber, and many others already have access to that information on almost everyone with a smartphone. The Bluetooth systems proposed do not automatically provide information to anyone. The Government could quickly establish an independent oversight mechanism to approve download of the data. Failure to even start discussions towards seeking societal approval for use of these technologies further reduces our options.

While we may have limited options, we do need a transparent process towards developing a reconnection strategy. Do we continue as we are now indefinitely, relying on strict quarantine and a giant moat? Even with current controls, the number of cases at the border will likely grow as more New Zealanders drift home. Do we need to start exploring alternative strategies that might at the appropriate time allow increased border flow, thus allowing more of New Zealand to flourish? And when would that be? What would be the criteria? The internet and video conferencing can take us only so far. We will need face-to-face contact if we are to maintain and grow the flow of goods and services into New Zealand.

This country needs its global connectivity. We have gained significant advantage through our stringent lockdown and early elimination of the virus allowing the domestic economy to reactivate. But we will rapidly progress to a position of relative disadvantage if our trading competitors are able to engage with our customers and suppliers in ways that are not possible for us. The alternative would be to remain in a state of effective national isolation, which could even last into 2022 or beyond. That may be our best option now, but that won't always be the case, and we need at least to explore alternatives.

Of course, we want to keep the virus out. The elimination strategy has worked, but at some point we'll need to reconsider the balance of objectives. The pandemic continues to evolve. The decisions needed will be best removed from the politically charged environment of an election season and therefore it would be premature to reach conclusions. In any event there is still too much viral uncertainty.

But we do need to start a process that is evidence-based, using a breadth of transparent inputs to explore the options. Taking the knowledge of the pandemic's evolving behaviour into account, we must prioritise exploring the ways in which we can more completely re-engage with the world.

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Dr Andrew Chen provided advice on contact tracing.

From: ^EXT: Rob Fyfe Sent: Sunday, 16 August 2020 1:29 PM To: Kelvin ashley.bloomfield@health.govt.nz; Mike Bush [DPMC] Cc: Subject: Testing

Hi Kelvin,

ester and a set of the official information of the officia Just wanted to acknowledge the outstanding result on the testing through-put ... it's a massive advance when I look