2 July 2021

Dr Ashley Bloomfield
Director-General of Health and Chief Executive
Ministry of Health
PO Box 5013
Wellington 6140

Dear Dr Ashley Bloomfield,

COVID-19 OIA 2021/08: Risk Management (continued)

We are writing in response to the above OIA (dated 29 March 2021), which was rejected on 30 April 2021 by MOH, on the basis that the questions 'required significant research'.

The Institute believes all of the questions are useful, but also acknowledge (as stated in the original March letter) that the letter is long and detailed. We have since reviewed each question and have concluded that a number of questions require very little research on MOH's behalf.

To this end we resubmit the original OIA (attached), with strikethrough over the more open questions (i.e. the questions that may require significant research). This leaves the questions we believe should be easy for MOH to answer, as they simply require a yes or no, or a small amount of research.

If you require any points of clarification, please do not hesitate to contact me.

Yours sincerely,

Wendy McGuinness

Chief Executive

~~29 March 2021~~ 2 July 2021

Dr Ashley Bloomfield
Director-General of Health and Chief Executive
Ministry of Health
PO Box 5013
Wellington 6140

Dear Dr Ashley Bloomfield,

OIA 2021/08: Risk Management (continued)

Thank you to you and your team for answering the McGuinness Institute's OIA requests last year. We appreciate the Ministry of Health was and still is under considerable pressure given the current pandemic.

Below we have listed a number of additional questions. The purpose is three-fold: (i) to increase our understanding of New Zealand's preparedness for this and future pandemics; (ii) to chronicle the events and thinking as they occur, creating a comprehensive timeline for an independent inquiry (such as a Royal Commission); and (iii) to prevent New Zealand accidentally creating an epidemic or pandemic in humans via animals. These questions are based on the need for New Zealand to be vigilant and learn lessons, and they are not intended to detract from the overall success of New Zealand's elimination strategy to date. This work sits under our ongoing project called *PandemicNZ* (see here).

Ursula von der Leyen's recent comment that the EU could not afford to sit still, even once COVID-19 has been overcome, resonated: 'It's an era of pandemics we are entering. If you look at what has been happening over the past few years, I mean from HIV to Ebola to MERS to SARS, these were all epidemics which could be contained, but we should not think it is all over when we've overcome Covid-19. The risk is still there.' We are at an important stage in the evolution of the current pandemic, and it seems timely to explore both where we are now and what the future might hold.

Thank you in advance for responding to the following questions.

1: NATIONAL RESERVE SUPPLY

As you may be aware, the McGuinness Institute (the Institute) believes the composition of the national reserve supply (NRS) should be made public every month during a pandemic. (We note that last year it was made public only twice, once in January and once in August).

It was useful to understand, via the Newsroom article of 23 March 2021,[1] the reasons why the MOH consider the composition of the NRS should not be made available to the public. We appreciate the necessity to weigh the costs and benefits of releasing information to the public, however, in our view, both reasons outlined in the abovementioned article are flawed.

Reason one: The first argument was that if large stocks of PPE did exist, New Zealand health professionals might demand excess stock from the NRS. This implies two things: health professionals are hoarders and MOH staff are weak (in that they might provide stock to health professionals even when it is inappropriate to do so). In contrast, the Institute considers real benefits exist for both parties if PPE information is made publicly available: health professionals are likely to be more careful if items are in short supply and less stressed if items are abundant, and MOH staff are likely to feel more confident in their decision making if both parties have the same data to support their decisions.

[1] See https://www.newsroom.co.nz/ppe-failure-do-we-have-enough (23 Mar 2021)

However, we consider an additional public benefit exists in terms of improving wider public trust and increasing public understanding of the challenges that lie ahead. For example, if we have low stocks of PPE, we need to be more cautious at the border and respond fast to outbreaks. Making such information available helps socialise the risks and garner support from the team of five million to get behind higher alert levels and tighter border controls.

Reason two: The second argument was that international suppliers might take into consideration New Zealand's stock levels in comparison with those of other countries, and in doing so, move New Zealand further down the queue (implying transparency is not in New Zealand's interests). In contrast, the Institute considers the reverse is true; transparency delivers better outcomes for New Zealanders. For example a supplier that delays supplying one country in order to meet the urgent needs of another, is exactly the type of supplier New Zealand should pursue – otherwise large countries might easily prevent small countries from getting essential stock. New Zealand is a small country and we need ethical suppliers who understand the risks of being small and help us if we urgently need stock. We believe the World Health Organisation should ask all member countries to publish audited PPE stock levels during a pandemic in order to help suppliers distribute stock fairly. New Zealand could lead by example.

Most importantly, if the MOH is worried about international global supply chains (and we would argue they should be), New Zealand must work harder to develop our own in-house production facilities.

Given the above discussion, please see our questions below:

1. What was the composition of the NRS (i) as at 28 January 2021 (so that we can compare it with the 28 January 2020 NRS) and (ii) as at 31 March 2021 (so that we can assess stock levels at the end of this next quarter)?

2. When can we expect the composition of the NRS to be next updated (the last time was 26 August 2020) and how regularly does the MOH plan to update the composition going forward?

3. Can you confirm if the NRS will include the COVID-19 vaccines, or will vaccine stocks be reported separately? (Note: Previous vaccines have been listed in the NRS.) If yes, will the next composition provide the name, volumes, and number of doses for each type of COVID-19 vaccine 'in stock in New Zealand' (e.g. Pfizer)?

4. What standard/s are being used by MOH to determine whether PPE is of a certain standard? In particular, what 'standard' is being used to determine decisions on the manufacture and purchase of P2/N95 masks? Note: We also believe the Australian Department of Health website, found here, maybe a useful example of how New Zealand might better present this type of information.

~~5. In New Zealand, there is very little current information on the goals, purpose, content, management processes and accountability of the NRS (over 15 months ago).[2] Note that the National Medical Stockpile (the Australian equivalent to the NRS) provide this type of information and their stockpile includes drugs. Their website states: 'The stockpile also includes a limited supply of highly specialised drugs that may be difficult to get through normal channels in an emergency' (see the link here). This leads to four related questions:~~
   a. Where does the MOH set out the current goals, purpose, content, management processes (including verification, setting minimum stock levels and the types of actions that will be undertaken when stocks are low) and accountability (i.e. who is responsible when things go wrong and what actions are taken) of the NRS? If this information is not publicly available, can the MOH please provide?
   b. Who in New Zealand is responsible for selecting and stocking highly specialised drugs for use during a pandemic?

[2] See https://www.health.govt.nz/our-work/emergency-management/national-reserve-supplies (28 Jan 2020)

c. Who in New Zealand is responsible for selecting and stocking highly specialised drugs and treatments for treating burns after a volcanic eruption? Note: It was concerning so many burns patients were sent to Australia for better care.
d. Given New Zealand's recent volcanic history, particularly the Whakaari/White Island disaster, has a burns unit review been undertaken to assess and build New Zealand's capability to care for burn patients (e.g., if a volcano erupted in Auckland or Taupō)?[3]

Mask wearing and building capability in the healthcare system

We consider the dominant narrative in New Zealand is that once we are broadly vaccinated (the MOH has indicated this will be sometime in 2021), the border will be opened and life can go back to normal. However, we believe specific outbreaks, such as an outbreak of the South African variant, are a possibility. For example, the Pfizer vaccine may prove to be less effective against the South African variant.[4] Furthermore, there exists the possibility of new variants emerging before the global population is fully vaccinated (a number of experts consider this may take many years). This suggests New Zealand will still need to consider masking up and social distancing for a while yet, in which case, public policy should, in our view, prioritise (i) mask production, (ii) social distancing and track-and-tracing tools and (iii) building capability in the healthcare system.

Based on our understanding of government funding, the healthcare system has not been geared up to deal with large numbers of COVID-19 patients; we have instead relied on a strategy of tight border control. The government money to date seems to have largely been invested in the elimination strategy and supporting the economy (e.g. the wage subsidy) rather than building up the capability of the healthcare system and supporting New Zealand-made mask manufacture.

The Newsroom article (discussed above) stated that New Zealand currently holds 3,200,000 P2/N95 masks in stock (this includes NRS and DHBs). The MOH representative also noted that MOH are planning to increase this figure to 30 million P2/N95 masks shortly. This means New Zealand currently holds only 10% of the ideal stock of P2/N95 masks.

6. What is the average cost of a P2/N95 mask purchased by MOH in 'the year 2020' and 'the year 2021'?

7. Has the MOH purchased P2/N95 masks from a New Zealand company~~? If not, why not?~~

8. ~~Has the~~ Is MOH ~~considered~~ supporting one or more New Zealand companies to develop in-house production capability of P2/N95 masks? Please explain.

9. Can you advise what month and year the MOH expect to reach the 30 million N95/P2 masks mentioned in the Newsroom article (discussed above)? Is this product being purchased from overseas suppliers or New Zealand suppliers? Please explain. For each order, can you provide the cost of each mask?

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[3] For example: 'Middlemore Hospital emergency department clinical head Dr Vanessa Thornton said the first 48 hours after the eruption were very busy. The National Burn Service is based in the hospital, and staff raced to get prepared to care for victims by organising staff and equipment. She said the need for hospital-level burns care outstripped the capacity available in New Zealand and 19 people ended up flying home overseas for treatment.' See https://www.rnz.co.nz/news/national/432331/whakaari-white-island-response-the-burns-that-kept-on-burning (7 Dec 2020)

[4] See https://www.reuters.com/article/us-health-coronavirus-vaccines-variants-idUSKBN2AH2VG (18 Feb 2021). Also of note is a comment in an Israeli paper about an Israeli study (Israel's vaccine campaign relies mostly on the Pfizer vaccine): 'The entrance of vaccine-resistant variants has been a top concern for Israeli officials and spurred the government to tightly limit international travel for much of the pandemic, including a months-long shutdown of Ben Gurion Airport, even to most Israeli citizens.' See https://www.timesofisrael.com/pfizer-vaccine-less-effective-against-south-african-variant-israeli-study-finds/ (22 Mar 2021)

10. ~~Can you provide the projected number of P2/N95 masks the MOH hopes to hold in the NRS stockpile on the following dates: 31 March 2021, 30 June 2021, 31 September 2021 and 31 December 2021?~~

11. Has the MOH considered supporting one or more New Zealand companies to develop in-house production capability of surgical masks? Please explain.

12. Also in this article the MOH refer to 'eight weeks supply of essential PPE'. Given this,
    a) Can you provide a comprehensive list of what MOH call 'essential PPE'?
    b) Can you advise whether 'an eight week supply' refers to pre-pandemic demand (e.g. March 2019), high-level pandemic demand (e.g. March 2020) or low-level pandemic demand (e.g. March 2021)?
    c) Can you advise if a minimum and maximum number of essential PPE and other items per person has been contemplated? If yes, please explain and provide. Note: We believe a better measure than the eight-week supply (mentioned in the Newsroom article) would be for the MOH to put in place a minimum and maximum number of items per citizen to be held in the NRS.

13. ~~Can you provide information on the total additional government funds allocated to hospitals to build capability to manage COVID-19 patients over the last 12 months – from 31 March 2020 to 31 March 2021 (this is in addition to the normal status quo)? Can you also advise what additional funding and support is proposed in the next 12 months (from 1 April 2021 to 31 March 2022)?~~

14. ~~What actions/initiatives has the MOH undertaken to learn lessons from other ministries of health (or their equivalents) around the world? Note: Many countries have now pivoted their health systems to cater for COVID-19 and more broadly for pandemics going forward. New Zealand has not been forced to adapt in the same way, and that may turn out to be a problem.~~

PPE stock held by district health boards

As you may be aware, last year we completed an OIA on PPE and other equipment from district health boards. The result of that work can be found in our draft working paper 2021/01 – *An analysis of the responses to 'Open Letter to District Health Boards – 25 March 2020'* here. We have circulated the draft working paper to all of the DHBs, as we wanted to give them an opportunity to confirm that we had interpreted their data correctly. The results of this research are contained in the draft working paper and raised a number of issues. Given this research, can you provide more up-to-date information on the following:

15. Has any additional work been undertaken to develop a set of unique, comparable and consistent product codes for PPE across DHBs? Please explain.

16. In response to the Newsroom article of 23 March 2021,[5] the MOH representative explains that the change to 'centralising PPE supply and distribution away from the DHBs in August [2020] was a significant change to the previous system'. Please explain. ~~provide a copy of correspondence from the MOH to all DHBs setting out the new [August 2020] system~~.

17. Has the table on p. 1 of the 2013 *National Health Emergency Plan: National Reserve Supplies Management and Usage Policies, 3rd edition* been updated since 2013, and if yes, can you direct us to the relevant document and/or new table?

Treatment equipment and medicine

There are likely to be number of ongoing challenges regarding the effectiveness of existing vaccines against current and emerging variants.[6] In our view, this suggests New Zealand should refocus on the

[5] See https://www.newsroom.co.nz/ppe-failure-do-we-have-enough (23 Mar 2021)
[6] See for instance the New York Times article 'AstraZeneca's Covid-19 Vaccine is Not Effective at Stopping Variant': https://www.nytimes.com/2021/02/07/world/south-africa-astrazeneca-vaccine.html (7 Feb 2021)

care, tools and medicines available to treat patients ill with COVID-19, especially when we open up our borders. Given this, can MOH answer the following questions:

18. How many medical ventilators are currently available in (i) public hospitals and (ii) private hospitals? Are we waiting for the delivery of any outstanding orders? If yes, please explain the number and type?

~~19.~~ Has New Zealand set up any ECMO (extracorporeal membrane oxygenation) centres? ~~ECMO is a complex therapy which helps to support patients with severe heart and/or lung failure, which can sometimes result from COVID-19.[7] If yes, please advise how many centres there are, where they are located and how many machines are available. If not, can you advise if New Zealand is planning to set up any of these centres, and if so, what are the time frames, sizes and possible locations for such centres? If New Zealand is not planning to set up an ECMO centre, has there been any consideration of doing so? If yes, on what basis was it decided not to proceed (e.g. cost, not needed etc)?~~

20. Has the MOH considered real-time public reporting of the genome sequences of those who have returned positive COVID-19 tests? ~~This could be reported in terms of (i) types of mutations and/or (ii) types of variants. We believe this would be a good idea given this information is already collected and in our view would be of benefit to researchers globally. New Zealand is, as we understand it, quite unique globally, in terms of undertaking genome testing of all COVID-19 cases. This means we will be equally unique in terms of testing our responses in a post-vaccine world~~.

2: VACCINES

Inventory management system for COVID-19 vaccines

Logistics is key to managing a pandemic and the management of vaccines is one additional product that requires an effective and timely inventory management system. If the answer to question 3 (above) is 'no' (that COVID-19 vaccines are not envisaged to be included in the NRS), can you answer questions 21 to 23 in detail. If the answer to question 3 is yes, please go to question 24:

21. Will the stock of vaccines be made public on a regular basis (e.g. monthly)? If yes, please explain what will be made public (and what will not) and when it will be made public.

22. If yes, will the public records include vaccine stock ordered (i.e. ordered but not yet arrived in the country), type ordered, amount ordered and expected delivery date?

~~23. Attached at the end of this letter is our understanding of the current stock of COVID-19 vaccines as at 18 March 2021 (see Table 1). This has been prepared by one of our team and illustrates our understanding of the current stock situation. Can you advise if Table 1 is correct? If not, please complete (including the dark grey columns)?~~

~~24. Can you include in Table 1 the cost per course of the COVID-19 vaccines imported into New Zealand (the first dark grey column)? Note: This means if a second dose is required, we are interested in the cost of both doses (which together make a course).~~

Vaccine transparency

We understand some form of certificate or passport will be made available to the public, and that the National Immunisation Register (NIR) is being replaced by the National Immunisation Solution (NIS). These questions aim to clarify how the system will work in practice.

~~25. What month in 2021 can New Zealanders generally expect to be vaccinated (i.e. all those that want to be vaccinated are vaccinated)?~~

[7] See https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(20)30581-6/fulltext (8 Jan 2021)

26. The MOH website states that individuals will have digital access, but how will that be made available? ~~Please explain. For example, will those inoculated be given a vaccination passport with a number? And who will have access to this information (e.g. an employer)?~~ Who is responsible for providing digital access to vaccination passports – the NIS? ~~Could you provide more detail on how this might work in practice?~~

27. Will hard-copy vaccination certificates (or passports) also be provided to those who are vaccinated?

28. With the establishment of the NIS, can you advise:

    a) When will the NIS be in operation?
    b) What are their terms of reference?
    c) Who will they report to?
    d) How will they be funded and by how much ($) in the 2021 and 2022 financial years?
    e) What information will be provided to the public in terms of regular reporting on vaccination uptake? For example, summary data grouped:
        - by job type or special groups (e.g. medical staff, border staff, aged-care residents, patients with medical conditions)
        - by age
        - by ethnicity
        - by location, and
        - by type of vaccination.

29. We have read articles on the benefits of vaccinating people who have or have had Long COVID. Is this something the MOH is considering as part of its vaccination strategy?

Vaccine effectiveness

New and emerging variants may lead to MOH having to manage a future where specific variants may require local lockdowns. This means MOH will need to keep (i) high stocks of PPE (especially masks), (ii) have effective protocols in place to identify and prevent outbreaks of particular variants, and (iii) to be ready to provide vaccine 'top-ups' for the team of 5 million. For example, there are now concerns over the effectiveness of the Pfizer vaccine when faced with the South African variant.[8]

30. What organisation is responsible in New Zealand for reviewing the effectiveness of vaccinations against emerging global variants?

31. Who is looking at ways to 'top-up' New Zealanders if a new variant evolves that is not effective against the vaccines New Zealand has currently purchased?

~~32. For New Zealanders who have already been vaccinated (using vaccines New Zealand has not purchased), are their long-term needs (e.g. top-ups) also being considered by the organisation mentioned in Question 30?~~

Vaccine strategy

We have a number of concerns about the number, strategic approach and content of the vaccine strategies in the public domain. We consider a framework needs to be published which shows how all the vaccine strategies work together and whether hierarchies between strategies exist in practice. We are aware of the Cabinet paper (20 May 2020) titled the 'COVID-19 Vaccine Strategy'.

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[8] See https://bgr.com/2021/03/09/covid-vaccine-south-africa-mutation-pfizer-moderna-study/ (9 Mar 2021) and https://www.nature.com/articles/s41586-021-03398-2_reference.pdf?utm_medium=affiliate&utm_source=commission_junction&utm_campaign=3_nsn6445_deeplink_PID100021860&utm_content=deeplink (8 Mar 2021)

This led to the establishment of the COVID-19 Vaccine Strategy Taskforce on 26 May 2020 (see under Recommendation 10). Membership initially consisted of the Ministry of Business, Innovation and Employment, the Ministry of Foreign Affairs and Trade, and the Ministry of Health (along with its regulatory agency Medsafe and PHARMAC). We understand Treasury and the Department of the Prime Minister and Cabinet have since become members. From this, at least four strategies have been produced and placed on the respective websites:

- MOH COVID-19 vaccine strategy[9] (website only, updated 17 Mar 2021)
- MBIE COVID-19 vaccine strategy[10] (website only, updated 22 Dec 2020)
- MFAT COVID-19 vaccine strategy[11] (website only, content minimal, no date provided)
- PHARMAC COVID-19 vaccine strategy[12] (website only, 17 Dec 2020)

A: Concerns over unnecessary confusion

Based on current information, we believe that the vaccination strategy proposed by government, which prioritises staff working at the border, could create unnecessary confusion.

~~33. Are we missing any key reports, strategies or publications from the list of four above? If yes, please provide a detailed list.~~

~~34. Is there an overarching strategy – one that takes precedence? If yes, please name. If no, is the MOH or equivalent planning to publish an overarching strategy?~~

35. Is there any website or webpage for the COVID-19 Vaccine Strategy Taskforce? ~~If no, is there any consideration that this might be a good place to bring together all key information? Is there an alternative place that brings all this material together? If yes, please explain.~~

36. Who are the current members of the COVID-19 Vaccine Strategy Taskforce?

B: Concerns over the strategic options (approaches)

We do not have all the information, but we do question the current approach.

Our understanding is that asymptomatic carriers, even if vaccinated, may still be able to shed/transmit the virus, meaning future outbreaks may be more complex and less able to be contained. Given this, we believe it may have been in the country's best interests to keep border staff diligent and acting as though they might catch the virus. In our view, they are not as well trained as nursing and other healthcare staff, who have been trained to be vigilant for the sake of both their and their patients' health and safety. We therefore believe the border membrane should have remained 'thin', which means alert and responsive, so that outbreaks can be tracked and traced quickly. We record this alternative approach as it may be a useful consideration when the country is faced with a more severe pandemic.

We believe a more effective strategy, would have been to vaccinate medical staff first (rather than border staff) as they are more likely to come in contact with symptomatic patients. Importantly, when COVID-19 patients require hospital treatment, they are more likely to shed and spread the disease to healthcare professionals. For example, in New Zealand, approximately 10% of confirmed cases have been nurses, doctors and other related staff.[13]

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9 See https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-vaccines/covid-19-vaccine-strategy-and-planning (2 Mar 2021)

10 See https://www.mbie.govt.nz/science-and-technology/science-and-innovation/international-opportunities/covid-19-vaccine-strategy (22 Dec 2020)

11 See https://www.mfat.govt.nz/en/peace-rights-and-security/covid-19-response-and-recovery/new-zealands-covid-19-vaccine-strategy (N.K.)

12 See https://pharmac.govt.nz/news-and-resources/covid19/covid-19-vaccines/

13 See *Survey Insights: An analysis of the 2020 NZNO PPE Survey* (May, 2020), https://www.mcguinnessinstitute.org/publications/surveys/

We have reviewed the most recent MOH COVID-19 vaccination strategy (updated 17 March 2021) and the MBIE vaccine strategy in terms of a discussion on strategic options and found them lacking any detailed discussion on the reasons for the current approach. This leads to the following three questions:

37. Is there a document that sets out the options and decision-making framework used by MOH (or equivalent) to develop a vaccination strategy (in addition to the four strategy documents listed above)? If not, can you explain what is available, who was consulted and who made the decision based on what information.

38. Please provide a copy of any analysis/report/paper that MOH (or others) have undertaken on the vaccination strategies adopted by other countries (e.g. who is vaccinated first versus who is vaccinated last)?

39. We would also appreciate (i) a list of all information gaps/assumptions the MOH has relied upon when proposing the current vaccination strategy and (ii) a list of any research the MOH is still seeking that might alter the MOH's current vaccination strategy (e.g. what is MOH watching/following in terms of current research).

Post-vaccination strategy

40. Is MOH preparing post-vaccination strategy? Will this mean the borders will be opened to all? Will pre-testing and/or a vaccination passport be required? If yes, will different vaccines be treated differently? In particular, has a post-vaccination border policy been written (and if yes, can we receive a copy)? If not, is a policy under development? Note: We accept that there will be a lot of new and emerging information that will determine the actual outcome, but we are interested to understand what the MOH expectations are, based on current information.

41. Is the opening up of the border dependent on a certain uptake of the vaccine to create some form of herd immunity, and if yes, what percentage will trigger the border to open?

42. How is the MOH planning to manage those that (i) are not happy to be vaccinated, (ii) have health issues and are at risk from being vaccinated or (iii) are under 16 years of age?[14] Note: We appreciate these are difficult issues but believe they should be considered and engaged with early, before the government finds itself under pressure to open the borders without considering the needs of these unique groups.

3: MOH PLANS AND REVIEWS

We are aware that the OAG is undertaking two reviews of the government's pandemic response and the government has set up a special advisory group (led by Brian Roche) to look at the government's response to the whole system of contact tracing and testing in order to learn lessons. However, we consider there are some other areas (in terms of MOH documents) that need to be reviewed and updated. With this background in mind, and the need to ensure the response is well documented for future pandemics and ideally a Royal Commission, we ask the following questions:

43. The Institute has published, and continues to update, a timeline of New Zealand's response to COVID-19; see here. Does the MOH have a timeline? If yes, can you provide a copy so we can compare it with, and ideally update any missing gaps in our timeline? If no, if any of your staff have a moment to review our timeline and advise of areas that are incomplete or incorrect, that would be appreciated. Our concern is that without a comprehensive record of New Zealand's response, lessons

[14] See Pfizer begins Covid vaccine trial on infants and young kids: https://www.cnbc.com/2021/03/25/covid-vaccine-pfizer-begins-trial-on-infants-and-young-kids.html (25 Mar 2021) and https://www.tvnz.co.nz/one-news/new-zealand/kiwi-kids-wont-able-get-pfizer-covid-19-vaccine-but-expert-says-its-right-call (11 Feb 2021)

~~will be lost. We see COVID-19 still as a moderate pandemic. Therefore, we must be vigilant and learn lessons now in order to prepare for the possibility of a severe pandemic in the future.~~

~~44. We appreciate the MOH is constantly undergoing a process of review and, where appropriate, updating key documents. To help researchers in the future follow this process, the Institute has also created a page on our website that contains two tables: (i) MOH Pandemic Publications and (ii) Independent Reviews on the Government's Response to COVID-19. There is no urgency but we would appreciate it if one of your staff could check that the tables are complete and comprehensive. See our website here).~~

45. Is the 2013 *National Health Emergency Plan: National Reserve Supplies Management and Usage Policies, 3rd edition* still operational? Are there any plans to review and update this policy document? If yes, please explain.

46. Is the 2017 *New Zealand Influenza Pandemic Plan: A framework for action* still operational? Has a specific plan been put in place instead (e.g. a New Zealand SARS Pandemic Plan)? Is the MOH considering, or working on, a new plan for pandemics generally?[15] ~~Please note, we asked this question in our OIA 2020/01; however, the initial request was rejected as the MOH had insufficient resources (under s 18f) – see your earlier response on our website (in our OIA table here). We hope that this is no longer the case and that the MOH now has the necessary resources to complete this request.~~

47. Is ~~there any news on whether~~ a comprehensive independent review ~~will be~~ going to be undertaken of the government's pandemic response? Note: We are still hopeful an independent review will be undertaken (e.g. a Royal Commission).

~~48. Given the major infrastructure investment occurring with the build of the new Dunedin Hospital,[16] can you advise what future lens has been taken into consideration to ensure the final hospital will be designed to meet global risks (such as pandemics and climate change) and New Zealand's unique risks (such as earthquakes and volcanoes). For example, will it be designed to care for patients affected by earthquakes, pandemics, fires, volcanos, heat waves, major storms and other emergencies? Can you provide a report or document that explains how low-probability, high-magnitude events have been taken into account? Note: We are delighted to see a new hospital being built, but we want assurance that the MOH are building hospitals today that will meet the risks we know we will face in the future. The Christchurch earthquakes, the terrorist attacks, COVID-19 and Whakaari/White Island are a wake-up calls, in that all are low-probability high-magnitude events.~~

~~49. Does a long-term plan for hospital investment across the country exist? If yes, please provide a copy and, if no, please explain what is available.~~

4: FUTURE PANDEMICS

Given that COVID-19 is the sixth pandemic since 1918, what action has the MOH undertaken since January 2020 to help prepare New Zealand for the next pandemic? See, for example, this article that quotes the UN biodiversity panel and states: 'Warning that there are up to 850,000 viruses which, like the novel coronavirus, exist in animals and may be able to infect people, the panel known as Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) said pandemics represented an "existential threat" to humanity.'

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15 The Institute is not alone is asking this question, see for example https://www.nzherald.co.nz/nz/coronavirus-covid-19-why-nz-needs-a-new-pandemic-plan/DEZVCAF4WD2UXB5BIKRVX7WBII/ (10 Mar 2021)

16 See https://www.newdunedinhospital.nz

50. What work is being done by the MOH to review possible new viruses that might cause a pandemic globally or in New Zealand? Can you advise who in government is responsible and accountable for assessing and reporting on potential risks of a new pandemic? What organisation/s is the MOH working with to manage and prevent future pandemics globally (e.g. in addition to WHO)?

AgResearch's genetic modification experiments (ERMA 200223)

The Institute has raised concerns about a New Zealand-made pandemic. We believe every country should review the risk of creating a pandemic in their own backyard and explore ways to minimise this risk. To this end, the Institute has raised the issue with the Minister for the Environment Hon David Parker, as well as the EPA and AgResearch, around the possibility of AgResearch's GM experiments (decided under ERMA 200223) potentially creating an epidemic or pandemic in New Zealand.

These concerns are outlined in a number of OIAs in late 2020 and early 2021; see the table here. Diseases passing from farmed animals to humans has happened in the past.[17] Further evidence to support the Institute's concern is illustrated in a recent article that quotes a Belgian pandemic expert, Marc Van Ranst, who 'reported [in 2005] that OC43 probably jumped from cattle and triggered a pandemic in the late 19th century dubbed the Russian flu' (see *New Scientist*, 23 January 2021, p. 13).

Given the responses to our OIAs, we remain concerned that New Zealand is unfortunately undertaking risky experiments that are not well administered[18] and that could lead to an epidemic or pandemic – in livestock or humans.

The Institute attended the hearing on the resulting ERMA decision 200223 and we believe the decision makers would be very concerned about the sloppy implementation of controls and overall poor governance by AgResearch.

Given this, the Institute supports a reassessment of the experiments by the EPA under s 68 of the Hazardous Substances and New Organisms Act 1996. To enable us to confirm the MOH is aware of the issues these experiments raise, can you confirm:

~~51.~~ Have MOH staff been briefed on these experiments and the risks they involve? ~~If yes, by whom? If no, we would appreciate the opportunity to meet with you or your team to discuss.~~

~~52. Has the MOH team read the MPI verification services audit reports[19] over the last three years?~~

~~53. Does the MOH have an official view in terms of what New Zealand's risk appetite should be for such experiments, particularly given the current pandemic and the recent concerns by experts over the risk of another pandemic spilling over from animals? If yes, please explain.~~

For your information, we intend to raise this issue directly with the Minister of Health Chris Hipkins and ask the EPA to reassess ERMA 200223 based on new information and poor governance by AgResearch.

If you have any questions or points of clarification, please do not hesitate to contact me.

We appreciate this is a long and detailed OIA, but we believe this approach was more appropriate and easier to digest than a number of smaller OIAs. Given its length, we expect an extension may be necessary.

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17 See Covid and farm animals: nine pandemics that changed the world: https://www.theguardian.com/environment/ng-interactive/2020/sep/15/covid-farm-animals-and-pandemics-diseases-that-changed-the-world (15 Sep 2020)

18 See for example MPI verification services audit reports in the annual report found here: https://www.epa.govt.nz/assets/Uploads/Documents/New-Organisms/Reports/GM-Field-trials/2020-AgResearch-cattle-sheep-and-goats-annual-report.pdf (2020 Annual report; Jun 2020)

19 See footnote 18.

Thank you for your help.

Best wishes,

Wendy McGuinness
Chief Executive

PS: Please be aware that all the Institute's OIAs and their responses are placed on the OIA Table on the McGuinness Institute website here (personal names are retracted).

Table 1: Current stock of COVID-19 vaccines (as at 18 March 2021)

Vaccination Type	Date Ordered	Expected Delivery Date	Cost per course	Doses Ordered	Doses Required	Total Courses in the country (IN) (a)	Total Courses Administered (OUT) (b)	Net Courses Available (NET) (a)-(b)	Citations
Pfizer*	12 Oct 2020	15 February 2021		1,500,000	Two doses	750,000			(Ardern and Hipkins, 2021a) Ardern, J., and Hipkins, C. (2021, 15 February) First batch of COVID-19 vaccines arrives in NZ [press release] Retrieved 9 March 2021 from https://www.beehive.govt.nz/release/first-batch-covid-19-vaccine-arrives-nz
Pfizer*	8 Mar 2021	During second half of 2021		8,500,000	Two doses	4,250,000			(Ardern and Hipkins, 2021b) Ardern, J., and Hipkins, C. (2021, 8 March) Government purchases enough Pfizer vaccines for whole country [press release] Retrieved 9 March 2021 from https://www.beehive.govt.nz/release/govt-purchases-enough-pfizer-vaccines-whole-country
Janssen Pharmaceutica#	19 Nov 2020	2,000,000 from July 2021 and up to 3,000,000 in 2022		Up to 5,000,000	Single dose	5,000,000			(Woods, 2020) Woods, M. (2020) Agreement advanced to purchase up to 5 million COVID-19 vaccines [Press release]. Retrieved 10 February 2021 from https://www.beehive.govt.nz/release/agreement-advanced-purchase-5-million-covid-19-vaccines
AstraZeneca #	17 Dec 2020	249,600 doses to be delivered by July 2021		7,600,000	Two doses	3,800,000			(Ardern, 2020) Ardern, J. (2020) Two new vaccines secured, enough

									for every New Zealander [Press release]. Retrieved 10 February 2021 from https://www.beehive.govt.nz/release/two-new-vaccines-secured-enough-every-new-zealander (Cooke, 2021) Cooke, H. (2021, 4 February) COVAX facility to send 249,600 AstraZeneca vaccines to New Zealand by July. *Stuff*. Retrieved 10 February 2021 from https://www.stuff.co.nz/national/politics/300221580/covid19-covax-facility-to-send-249600-astrazeneca-vaccines-to-new-zealand-by-july
Novavax##	17 Dec 2020	Not found		10,720,000	Two doses	5,360,000			(Ardern, 2020) Ardern, J. (2020) Two new vaccines secured, enough for every New Zealander [Press release]. Retrieved 10 February 2021 from https://www.beehive.govt.nz/release/two-new-vaccines-secured-enough-every-new-zealander

Key:
* Approved by Medsafe
# Awaiting approval by Medsafe
Not yet applied for