

# Briefing

## Response to the Allen + Clarke PCR Testing Backlog Rapid Review

<b>Date due to MO:</b>	27 May 2022	<b>Action required by:</b>	N/A
<b>Security level:</b>	IN CONFIDENCE	<b>Health Report number:</b>	20220941
<b>To:</b>	Hon Dr Ayesha Verrall, Associate Minister of Health		
<b>Copy to:</b>	Hon Chris Hipkins, COVID-19 Response Minister		

### Contact for telephone discussion

Name	Position	Telephone
<b>Dr Ashley Bloomfield</b>	Director-General of Health	s 9(2)(a)
<b>Chrystal O'Connor</b>	Group Manager, Testing & Supply	

### Minister's office to complete:

- |   |                                    |  |
|---|------------------------------------|--|
| <input type="checkbox"/> Approved             | <input type="checkbox"/> Decline   | <input type="checkbox"/> Noted               |
| <input type="checkbox"/> Needs change         | <input type="checkbox"/> Seen      | <input type="checkbox"/> Overtaken by events |
| <input type="checkbox"/> See Minister's Notes | <input type="checkbox"/> Withdrawn |  |

Comment:

# Response to the Allen + Clarke PCR Testing Backlog Rapid Review

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**Security level:** IN CONFIDENCE      **Date:** 26 May 2022

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**To:** Hon Dr Ayesha Verrall, Associate Minister of Health

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## Purpose of report

1. The purpose of this briefing is to provide you with the Ministry of Health's (the Ministry) response to the recommendations of the Allen + Clark *COVID-19 PCR Testing Backlog* (the review), to outline what actions and measures have been implemented in response and outline the progress the Ministry has made against the review's recommendations to date.
2. The **Appendix 1** table explores the full range of the review's recommendations, the Ministry's response to each recommendation, a progress report of how each recommendation is being implemented and the timeframes for delivery. **Appendix 2** provides a summary of the review.

## Summary

3. As the polymerase chain reaction (PCR) backlog begun to build throughout February and March 2022, the Ministry undertook a number of practical measures to mitigate this prior to the decision to move to Phase 3 of the Omicron response. This included rolling out the availability of rapid antigen tests (RATs) in numerous groups, sending tests to Australia for processing, and improving communication around who needed to be tested.
4. The review makes nine recommendations that are focused on strategic planning, resourcing, contracting, governance arrangements and operational processes. The Ministry agrees with the recommendations made by Allen + Clarke.
5. The Ministry continues to implement the recommendations of the review and we propose to update you on our progress every two weeks. A final update will be provided to you when all the actions from the recommendations have been completed. This is expected for the week of 11 July.

## Recommendations

We recommend you:

- a) **Note** that the Director-General of Health commissioned Allen + Clark to conduct a rapid review of the February 2022 PCR backlog, and the final review was received on 5 May 2022. **Noted**
- b) **Note** that the Ministry has considered and agrees with all nine recommendations of the review. **Noted**
- c) **Note** that this briefing provides the Ministry's response to the recommendations and outlines the actions and measures that have since been implemented. **Noted**
- d) **Note** that you will receive an update on the implementation progress of the review's recommendations every two weeks, with a final update provided to you in the week of 11 July. **Noted**
- e) **Note** that in the week of 6 June, the Allen + Clark review, a table (Appendix1) summarising the Ministry's response to it and four OIAs relating to the PCR backlog issue will be released to the Ministry's website. The OIAs include the release of internal communications and information on how many PCR tests were sent to Australia. **Noted**



Dr Ashley Bloomfield  
**Director-General of Health**  
Date: 27 May 2022



Hon Dr Ayesha Verrall  
**Associate Minister of Health**  
Date: 30/5/22

# Response to the Allen + Clarke PCR Testing Backlog Rapid Review

## Background

6. Allen + Clarke was commissioned by the Ministry in March 2022 to undertake an independent rapid review of the circumstances leading to the backlog of PCR testing and the misinterpretation of the apparent gap between the system's forecast capacity and its actual ability to respond to the Omicron surge. A summary of the review is provided as **Appendix 2**.
7. The review makes nine recommendations that are focused on strategic planning, resourcing, contracting, governance arrangements and operational processes. The Ministry agrees with the recommendations made by Allen + Clarke.
8. On 18 May, you met with me to discuss the review. This briefing provides you with further detail on the findings of the review and the Ministry's response to the recommendations.
9. In the week of 6 June, three OIAs will be released on the Ministry website relating to the PCR backlog issue. The OIAs will include the release of internal communications and information on how many PCR tests were sent to Australia.
10. With your approval, the Ministry proposes to release the Allen + Clark review concurrently on the Ministry's website.

## The PCR backlog

11. In November 2021, the Ministry set a goal for a national baseline PCR testing capacity of 60,000 samples per day, and preparations were made by laboratories and the Ministry to work towards this.
12. The first community transmission of Omicron occurred on 18 January 2022, and by the end of the month Omicron was the dominant variant in New Zealand.
13. From 14 February, the seven-day rolling average of testing rose sharply reaching 36,000 test per day in less than a week. Over the same period, the seven-day average positivity rates doubled from three percent to six percent and continued to rise from there, reaching 18 percent by the end of the month. Laboratories were no longer able to pool samples due to the high positivity rates, stretched staffing levels and could not rely on sharing workload with other regions as the outbreak had spread, placing demand on all laboratories and regions across the country.
14. As a result, turnaround times increased steadily with the number of tests outstanding by more than 48 hours reaching 82,000 on 27 February. By 1 March, a backlog of 32,000 samples older than five days had built up across New Zealand and laboratories advised that these samples would likely be discarded due to their diminishing clinical viability.

*What was immediately done to resolve to the backlog?*

15. As the PCR backlog began to build, the Ministry undertook a number of practical measures to mitigate this prior to the decision to move to Phase 3 of the Omicron response. This included:
  - a. increasing the supply of RATs nationwide for border worker testing, Community Testing Centres and General Practitioners
  - b. shifting testing mechanisms for people who had been at locations of interest or were contacts from PCR to RATs
  - c. sending approximately 9,000 samples to Australia for processing
  - d. improving communication around who needed to be tested, to reduce the number of non-essential tests that laboratories had to process
  - e. expanding overflow testing to laboratories outside the laboratory network.
16. The ongoing efforts and the Ministers decision to shift to Phase 3 of the Omicron Response Plan on 24 February resulted in laboratories being able to clear the PCR backlog by the middle of March.
17. Following this, the Ministry commissioned Allen + Clarke to conduct a rapid review, analysing the circumstances leading to the PCR backlog. The review identified:
  - a. areas for improvement, and
  - b. gaps in forecast capacity and actual capacity to respond to the Omicron outbreak.

## **Outcome of the Allen + Clarke review**

18. The Ministry received Allen + Clarke's final review and recommendations on 5 May. The review made nine recommendations for the Ministry to consider:
  1. review the resourcing model of the COVID-19 Testing and Supply Group
  2. develop a clear Testing Plan
  3. address the transition of COVID-19 into a business-as-usual testing regime
  4. determine the standing level of PCR testing infrastructure requirements
  5. review the approach to contracting laboratory services
  6. consider greater interoperability of information technology platforms
  7. consider how the Ministry and Health NZ can achieve more integrated ways of operating with laboratories when planning ongoing testing requirements
  8. ensure there are clear governance arrangements in place between the Ministry/Health NZ and laboratories
  9. consider options to strengthen the Chief Testing Advisor position.

## **The Updated Testing Plan**

19. In response to the emergence of Omicron in the community and the issues raised from the PCR backlog, the Ministry begun updating the Testing Plan.

20. In April, Cabinet invited you to report back on an Updated Testing Plan for the period between May and December 2022. You took the Updated Testing Plan, as part of a suite of papers to Cabinet on 9 May [CAB-22-MIN-0161 *Updated COVID-19 Testing and Surveillance Plans and the Future of Contact Tracing and Case Investigation*].
21. The Updated Testing Plan was informed by 'most likely' modelling from COVID-19 Modelling Aotearoa and recent experiences in overseas jurisdictions.
22. The indicative testing numbers modelled within the Updated Testing Plan are being used to establish baseline and surge laboratory capacity to support the Ministry's procurement of laboratory infrastructure from July to December. Work is also underway to prepare for new variant scenarios and winter testing preparedness, to ensure that there is sufficient testing (RAT and PCR) capacity available.
23. While updating the Testing Plan was initiated prior to receiving the Allen + Clark review, this has achieved the review's second recommendation: develop a clear Testing Plan that determines the role of PCR testing and other modalities going forward, as well as providing clarity about the roles and expectations of the laboratories.
24. An implementation framework that delivers the objectives of the Testing Plan is also underway and will be completed by the end of June. To date, the following actions required to implement the Testing Plan have been completed:
  - a. a review of RAT supply to ensure adequate stock is available for the winter period (current plus forward orders). There are approximately 38 million RATs in stock with another 38 million due to arrive by the end of June.
  - b. a review of PCR requirements against the three scenarios for winter testing provided by COVID-19 Modelling Aotearoa. This has informed testing capacity requirements for contracting with laboratories.
  - c. Interim Clinical and Operational Reinfection guidance was approved on 5 May.

### **Progress since the Allen + Clarke review (end of April to present)**

25. In addition to updating the Testing Plan, the Ministry has made progress towards implementing all of the review's recommendations.

#### *The project team*

26. The Ministry has engaged external consultants from Accenture to form a project team, working closely with staff from across the Testing and Supply Group. The project team will undertake the design of a new service delivery model for PCR testing capacity to respond to the recommendations. This work is intended to deliver an improved Operating Model and approach to the commissioning and contracting of laboratory services. It will also address the information technology issues identified in the review.
27. This is in response to recommendations #1 to #7.

#### *Resourcing*

28. The Group Manager of Testing and Supply is meeting fortnightly with the Group Manager of Science, Surveillance and Insights and the Chief Testing Advisor to ensure work priorities are aligned and subject matter expertise is utilised appropriately. The

capacity and capability gaps across the Testing and Supply Group have been identified and resourcing requirements will be addressed.

29. This is in response to recommendations #1 and #9.

#### *Commissioning and procurement model*

30. The Updated Testing Plan and a new Commissioning Model will enable the Ministry to engage with the DHB and laboratory sector around contractual arrangements, to enable them to make informed decisions about the level of PCR infrastructure needed to plan for the medium term, particularly as we enter the first winter with fewer border restrictions. The new Commissioning Model will also support the Ministry's planning for ongoing COVID-19 testing requirements and other related testing requirements.
31. A procurement plan has been developed for the procurement of laboratory services through to the end of the year. This will include new Service Level Agreements that will be in place by 1 July, when the current arrangements end. The Service Level Agreements will provide the Ministry with appropriate contractual levers to manage the supply of testing services. A stakeholder engagement plan is being developed to support the introduction of the new commissioning model and contractual arrangements. A supplier briefing to outline the new processes will be held in early June.
32. The Ministry is undertaking modelling to determine baseline and surge capacity requirements taking into account the Updated Testing Plan assumptions, new modelling from COVID-19 Modelling Aotearoa, the developing winter planning and scenarios for variants of concern. This is expected to be completed by 27 May and will feed into the commissioning of laboratory testing services for the July to December period.
33. Officials will be able to discuss this further with you and provide an update on the progress towards implementing the Testing Plan at your regular officials meeting on 2 June.
34. This is in response to recommendations #2, #3, #4 and #5.

#### *Stakeholder engagement*

35. Stakeholder engagement to inform the new procurement process is an ongoing activity. A stakeholder communications plan will be developed to ensure the laboratory network, DHBs and their Testing Leads are kept up to date with any proposed changes to the contractual and governance arrangements for the provision of laboratory testing. A stakeholder mapping exercise will be completed by 27 May to inform the stakeholder communications plan.
36. The Ministry provided the Laboratory network and DHB Testing Leads with an overview of the Updated Testing Plan and Surveillance Strategy on 4 May. On 19 May, the Laboratory network and DHB Testing Leads were updated on the process for procuring laboratory testing capacity, effective from 1 July.
37. This is in response to recommendations #4 and #7.

#### *Greater interoperability of information technology platforms*

38. The Ministry will undertake a gap assessment of current and future end-to-end IT interoperability requirements from test order to reporting of results. This will analyse the

current IT state region by region including: orders/collections, testing (NAAT and WGS within and between labs) and reporting.

39. Once the gap assessment is completed, consistent standards and reporting requirements for testing services will be incorporated into all service level agreement contracts.
40. The Ministry will also catalogue all data sources and methods of collection to map end to end data and information flows.
41. This is in response to recommendation #6.

#### *Governance arrangements*

42. The Ministry will review the governance arrangements with Health NZ and the laboratory sector. The Transition team for Health NZ has been notified of this recommendation and formal governance arrangements will need to be considered as part of the change management process as functions transition to Health NZ. Outcomes from the procurement process from 1 July will feed into this work.
43. This is in response to recommendation #8.

#### **Next Steps**

44. The Ministry will continue to implement the recommendations discussed in Appendix 1.
45. The Ministry will update you on the progress towards the review's recommendations every two weeks, with a final update to be provided to you in the week of 11 July.

**ENDS.**

## Appendix 1: Table of recommendations, the Ministry's responses, and progress updates

Review Recommendations	Ministry Response	Progress update as of 25 May 2022
<p>1. Review the resourcing model of the COVID-19 Testing and Supply Group to address any capacity deficits and enable the Group to manage current workload and transition away from operation surge settings.</p>	<p>The Ministry will work to strengthen capability and capacity within the Testing Team to ensure the right mix of skills is obtained to support the implementation of the Updated Testing Plan.</p>	<ul style="list-style-type: none"> <li>• An interim resource profile for the Testing and Supply Group has been developed in light of the Updated Testing Plan. Capacity and capability gaps have been identified.</li> <li>• A new Group Manager started on 2 May and is working to assess resourcing across the Group with a view to finalising short- and medium-term resourcing needs by <b>10 June 2022</b>.</li> </ul>
<p>2. Develop a clear Testing Plan that determines the role of PCR testing and other modalities going forward, as well as providing clarity about the roles and expectations of the laboratories.</p>	<p>The Ministry has updated the Testing and COVID-19 Surveillance Plans based on 'most likely' COVID-19 scenarios for consideration by Cabinet. The updates were informed by modelling from COVID-19 Modelling Aotearoa and recent experiences in overseas jurisdictions.</p> <p>The Testing team will develop service implementation plan(s) ensuring the testing requirements for the Updated Testing Plan are met. This will include testing service requirements and specifications for both collection and testing providers.</p>	<ul style="list-style-type: none"> <li>• <b>COMPLETED</b> (the Updated Testing Plan went to Cabinet on <b>9 May 2022</b>).</li> <li>• The Testing and Supply team is using the Updated Testing Plan to develop an implementation framework that delivers the objectives of the Testing Plan. Implementation actions have been identified that include;             <ul style="list-style-type: none"> <li>○ Review of RAT supply (current plus forward orders) <b>COMPLETED</b></li> <li>○ Review of PCR capacity requirements to support the Testing Plan <b>COMPLETED</b></li> <li>○ Update of clinical guidance <b>COMPLETED</b></li> <li>○ Development of key messages for the sector <b>COMPLETED</b></li> <li>○ Design service delivery model for laboratory testing capacity by <b>early June</b> (date TBC pending)</li> </ul> </li> </ul>

		<p>engagement with laboratory sector during May and confirmation of procurement timeframes)</p> <ul style="list-style-type: none"> <li>○ Development of Service Level Agreements by <b>mid June</b> (informed by design work above).</li> <li>○ Contracts in place by <b>1 July 2022</b> (pending confirmation of procurement timelines).</li> </ul>
<p>3. As part of the strategic planning (recommendation 2), address how COVID-19 testing transitions into a business-as-usual laboratory testing regime.</p>	<p>The Ministry agrees that a new operating model is required as we transition from the current state to a business-as-usual laboratory testing regime and is developing a new Operating Model and a new Commissioning Model. The development of the new Commissioning Model, in particular, will bring clarity to:</p> <ul style="list-style-type: none"> <li>• What we are commissioning and how different types of testing (ie non-COVID-19) can be integrated into the model.</li> <li>• Baseline and surge capacity requirements.</li> <li>• Stakeholder engagement.</li> </ul>	<ul style="list-style-type: none"> <li>• A project team has been established to design the service delivery model for PCR testing capacity by <b>22 June 2022</b> and this will inform the short-term commissioning arrangements for the laboratory sector.</li> <li>• As part of this work, we will be considering the future state service delivery model for laboratory testing which will take into account COVID-19 and related testing requirements to ensure procurement for public health value.</li> </ul>
<p>4. Determine the level of standing PCR testing infrastructure required for future variants or pathogens and where this infrastructure should be maintained as part of the strategic planning (refer to recommendations 2 and 3). In the absence of guidance from the Ministry, some laboratories have signalled they may need to reduce their PCR capacity, including mothballing equipment and reducing staff.</p>	<p>The Updated Testing Plan and new Commissioning Model will enable the Ministry to engage with the DHB and laboratory sector around contractual arrangements to enable them to make informed decisions about the level of PCR infrastructure needed to plan for in the medium term, particularly as we enter the first winter with fewer border restrictions.</p> <p>The assumptions from all COVID-19 service plans will inform service delivery requirements, the level of NAAT testing capacity and where it is needed.</p>	<ul style="list-style-type: none"> <li>• The Ministry is undertaking modelling to determine baseline and surge capacity requirements taking into account the Updated Testing Plan assumptions, new modelling from TPM, winter planning and scenarios for variants of concern by <b>27 May 2022</b>.</li> <li>• A procurement plan has been developed that shows the processes and approaches that will be utilised to make the identified changes to the contractual and governance arrangements for the provision of laboratory testing.</li> <li>• Stakeholder engagement to inform the new procurement process will be an ongoing activity. A stakeholder communications plan will be developed to ensure the laboratory network and DHBs and their</li> </ul>

		<p>Testing Leads are kept up to date with proposed changes and engaged throughout the process.</p> <ul style="list-style-type: none"> <li>• A stakeholder mapping exercise will be completed by <b>27 May 2022</b> to inform a stakeholder communications plan.</li> </ul>
<p>5. Review the approach to contracting laboratory services to facilitate greater transparency and national coordination in a pandemic. The health systems reforms and transition to new entities (Health NZ, Māori Health Authority, and the Public Health Agency), provides an opportunity to consider how laboratory testing can be better used for surveillance and public health outcomes as part of any review of laboratory services.</p>	<p>The Ministry (Testing and Supply Group) is working through a procurement process to procure COVID-19 testing services with laboratory providers for 1 July to 30 Dec 2022. This will involve:</p> <ul style="list-style-type: none"> <li>• Determining baseline and surge capacity requirements.</li> <li>• Revise the funding model.</li> <li>• Market analysis and stakeholder engagement in the process.</li> </ul> <p>The Ministry is also developing a new contracting model that will establish Service Level Agreements for contracting laboratory services with key performance and reporting metrics. The Service Level Agreements will cover pricing, minimum specified standards, capacity, consistent performance metrics and a monitoring framework.</p>	<ul style="list-style-type: none"> <li>• The Ministry will formally approach the market via an open Expression of Interest (EOI) in <b>early June</b>. Indicative timeframes will see the EOI close the week of <b>20 June</b>, negotiations commenced by <b>27 June</b> for new Service Level Agreements for the period 1 July – 31 December 2022.</li> <li>• Current pricing arrangements may be extended to enable an orderly transition to new contracts depending on completion of procurement milestones.</li> </ul>
<p>6. Consider greater interoperability of information technology platforms so that the data that is generated from laboratory testing can be better used for surveillance and public health outcomes as part of any review of laboratory services.</p>	<p>The Ministry will undertake a gap assessment of current and future end-to-end IT interoperability requirements from test order to reporting of results. This will analyse the current IT state region by region including: orders/collections, Testing (NAAT and WGS within and between labs) and reporting.</p> <p>Once the gap assessment is completed consistent standards and reporting requirements for testing services will be incorporated into all service level agreement contracts.</p>	<ul style="list-style-type: none"> <li>• Scoping for this work has been completed as part of the workshops to define the service delivery model and enablers (including reporting systems and data flow).</li> <li>• A gap assessment will be undertaken as part of the work to design the service delivery model for PCR to enable consistent standards and reporting requirements to be added to all service level agreements by the <b>end of June 2022</b>.</li> </ul>

	The Ministry will also catalogue all data sources and methods of collection to map end to end data and information flows.	
7. Consider how the Ministry and Health NZ can achieve more integrated ways of operating with laboratories when planning for managing the ongoing testing requirements of COVID-19, and in planning undertaken for future pandemic readiness.	<p>The Ministry agrees and will develop a new contracting model with laboratories that includes:</p> <ul style="list-style-type: none"> <li>• Service level agreements with clear performance metrics and reporting.</li> <li>• Defined communication pathways.</li> <li>• Clear roles and responsibilities.</li> </ul> <p>The Ministry agrees with the need to improve transparency of decision making and have timely input from laboratory stakeholders in relation to service design for the Testing response.</p>	<ul style="list-style-type: none"> <li>• As part of the work to design the service delivery model for PCR we will be developing a new contracting model by the <b>end of June 2022</b>.</li> </ul>
8. Ensure there are clear, formal governance arrangements in place between the Ministry and/or Health NZ and laboratories that enable sufficient centralised planning and management of testing in Aotearoa New Zealand's pandemic approach.	The Ministry will review the governance arrangements with Health NZ and the laboratory sector. The Ministry intends taking a sector stewardship approach to the new governance arrangements, treating the laboratory network as a system. Clear terms of reference, roles and responsibilities and accountabilities will be established for the sector reference groups the Ministry engages with.	<ul style="list-style-type: none"> <li>• The Transition team for Health NZ has been notified of this recommendation and formal governance arrangements will need to be considered as part of the change management process as functions transition to Health NZ.</li> <li>• Outcomes from the procurement process from 1 July 2022 will feed into this work.</li> </ul>
9. Consider options to strengthen the Chief Testing Adviser position and shape the role so that the Ministry and/or Health NZ is able to better leverage their subject matter expertise and insights across testing planning, modelling and reporting.	The Ministry will review how work priorities are identified for the Chief Testing Adviser to maximise subject matter expertise across the Science, Surveillance and Insights and Testing and Supply work programme.	<ul style="list-style-type: none"> <li>• The Group Managers of Science, Surveillance and Insights, Testing and Supply and the Chief Testing Advisor meet bi-weekly to ensure work priorities are aligned and subject matter expertise is utilised appropriately.</li> </ul>

## **Appendix 2: Summary of the Allen + Clark *Rapid Review of the COVID-19 PCR Testing Backlog***

### **The rapid review**

46. The Ministry commissioned Allen + Clarke to undertake an independent rapid review of the COVID-19 PCR testing backlog. The review was undertaken between 8 – 25 March 2022.
47. The review analysed the circumstances leading to the backlog, to identify:
  - a. areas for improvement, and
  - b. gaps in forecast capacity and actual capacity to respond to the Omicron outbreak.
48. The review was informed by stakeholder interviews, comprising of staff from the Ministry, laboratories, laboratory networks and primary care. In addition, over 700 documents were reviewed.

### **Contributing factors to the PCR backlog**

49. The review identified three causal factors and a series of other factors that while not causal, either contributed to the backlog occurring or resulted in missed opportunities to mitigate the backlog.

#### **Causal Factors**

50. The review notes three core factors that led to the backlog:
  - a. insufficient capacity and capability to develop forward looking testing plans aligned with the border pandemic management strategies
  - b. inadequate highlighting, monitoring, notification and/or escalation of potential or actual risks and consequences in formal reporting, including that provided to the Director-General and Ministers
  - c. inability to feed information from laboratories and other external sources into Ministry communication channels in ways that contextualised the information and conveys its significance for PCR testing capacity.

#### **Non-causal Factors**

51. The review also outlines three non-casual factors that contributed to the backlog but did not cause it:
  - a. a lack of contractual levers to enable the Ministry to manage COVID-19 testing centrally and maximise the benefit from the laboratory network
  - b. a laboratory network with commercial incentives that did not always lead to the early flagging of emerging issues
  - c. a reactive and arms-length approach to working with laboratories to encourage collaboration in the absence of contractual levers.

## Areas for improvement

52. The review identified three areas that should be addressed to avoid similar circumstances emerging in the future – laboratory capacity, operational management (planning and reporting), and organisational design.

### Laboratory Capacity

53. There was inconsistency in the definition of capacity that was reported to decision makers. The Ministry and the Network used the terminology of “baseline capacity” interchangeably for single test capacity and pooled test capacity when reporting to decision makers. The variability in the definition, and usage of the “baseline” terminology created confusion and a misconception of actual testing capacity across laboratories in New Zealand. Reporting only on pooled capacity left officials with limited ability to plan for when demand would exceed capacity.
54. In addition to this, reporting on testing capacity was always provided as a national figure. This figure provided the impression that demand surges could readily, and always, be addressed by free capacity in other laboratories. However, communication between IT systems and other logistical issues made this very challenging once the sample had been registered in the system as going to a particular laboratory. Reporting a figure for national capacity overestimated actual usable capacity as a result.

#### *Lessons*

55. Greater clarity in reporting the factors that affect capacity would have built a better picture of capacity and likely led to more active monitoring and signalling of risks to decision makers. Furthermore, it would have been more useful to identify capacity by region or within existing laboratory sub-networks (those that can share data) than at a national level.
56. There is a need to identify the baseline testing capacity that should be maintained for pandemic management and to ensure that accumulated knowledge is not lost.

### Operational Management (Planning and Reporting)

57. As test positivity rates were rapidly increasing in February, this indicator was not used to forecast capacity or the point at which pooling of samples would no longer be viable. Consequently, test positivity rates and modelling were not used in a meaningful way to inform decisions about the timing for shifting phases in the Omicron response.
58. While the positivity rate provides some indication on potential changes in testing demand, it appears that there were no real-time indicators available to assess demand. Instead, there was a reliance on the number of tests completed, as this was the only data readily available to the Ministry to support planning.
59. The Ministry prepares an extensive suite of testing and supply reporting to update on progress and share any key issues or risks. This reporting was not always delivered clearly, with significant contextual information, critical analysis, or recommendations to support decision makers.

#### *Lessons*

60. More rigorous risk assessment and impact analysis, including the impact of specified positivity rates on pooling capacity and the positivity rate at which pooling is no longer

available, would have supported signalling the risk posed by the increasing positivity rate and provided impetus to get the RAT roll-out ready.

61. Calibrating the Omicron response phases to positivity rates could have allowed the positivity rate to be used as a trigger to move to the next phase of the response.
62. Future modelling should forecast testing capacity (not just demand) and the points in time that the reduction or loss of sample pooling will be experienced. Insights from overseas jurisdictions should be incorporated into future testing modelling, planning, and reporting.
63. Assumptions should not be made that decision makers are able to correctly interpret the information and data provided to them if it lacks context, key messages, and clear action items.

### **Organisational Design**

64. The Laboratory Testing team within the Testing and Supply Group has been significantly under resourced. While the team had attempted ongoing business continuity planning, the nature of the of pandemic response has forced the team to remain operationally focused and responsive.
65. Within the Testing and Supply Group, there is also a Testing Operations team. While there is ongoing collaboration between the Testing Operations and Laboratory Testing teams, the organisational split creates a disconnect between the demand for testing and the delivery of testing. Combined with a lack of planning capacity and capability, this has resulted in a reactive approach to engaging with laboratories as issues arise.

### *Lessons*

66. Adequate planning capacity and capability in the Testing and Supply Group is needed to enable a strategic response (to support the operational response) to future outbreaks.