

Health Report

Rapid audit of contact tracing for COVID-19 in New Zealand by Dr Ayesha Verrall; close out report.

Date due to MO:	20/07/2020	Action required by:	N/A
Security level:	IN CONFIDENCE	Health Report number:	20201159
То:	Hon Chris Hipkins, Mini	5	

Contact for telephone discussion

Contact for telep	hone discussion	
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Action for Private Secretaries

Return the signed report to the Ministry of Health.

Date dispatched to MO:

Rapid audit of contact tracing for COVID-19 in New Zealand by Dr Ayesha Verrall; close out report.

Purpose of report

This report responds to your request for an update on progress implementing the recommendations of the Rapid Audit of Contact Tracing for COVID-19 in New Zealand by Dr Ayesha Verrall. Information is also provided on the context and process for contact tracing.

Summary

- The Government's overall public health strategy for responding to COVID-19 in Aotearoa New Zealand relies on four key pillars; border controls, robust case detection and surveillance, effective contact tracing, and strong community health measures.
- Case investigation and contact tracing are fundamental components in the response to any
 infectious disease to ensure effective disease control management and the core responsibility
 of the twelve Public Health Units.
- In April 2020 the Ministry commissioned and received an independent rapid audit of contact tracing for COVID-19 from Dr Ayesha Verrall.
- Dr Verrall's audit included eight recommendations to strengthen the contact tracing response to COVID-19 and the audit report was published on the Ministry's website on 20 April 2020.
- The Ministry has now implemented all recommendations from the audit report (see Appendix Two).
- This health report provides an overview of the actions taken to implement the recommendations and the work that will continue for the Ministry's National Investigation and Tracing Centre (NITC).
- From June 2020 the Ministry's contact tracing service was renamed as NITC, previously the National Close Contact Service (NCCS), to reflect their provision of surge capacity for case investigation.
- The audit recommendations covered the following themes:
 - o Capacity system capacity to support a high-quality response
 - o Performance and quality measurable and high-quality response
 - Coordination consistent and optimal response
 - Enabling use of technology to enhance the performance
- Key actions taken in response to the audit recommendations include:
 - o increasing Public Health Unit (PHU) capacity for contact tracing and case management from 50 to 289 cases per day with capacity expected to reach 350 by end of July 2020

- o establishing the NCCS in the Ministry to provide national leadership, coordination and surge capacity for up to 1,000 new cases a day
- o implementing a comprehensive IT solution (the National Contact Tracing Solution) across the system (eleven of the twelve PHUs are now on the solution, with the remaining PHU on track to onboard by the end of July 2020)
- o developing national protocols, policies, and training modules to ensure timely, consistent, and high-quality execution
- o developing and implementing a monitoring framework to track and report on progress.
- The Ministry's approach is underpinned by the National Contact Tracing Preparedness Plan (see Appendix Three). The plan provides a blueprint to deliver a nationally-led and coordinated contact tracing service and clarity on capacity, delegation, and responsibilities to ensure a highquality and timely response.
- The work to strengthen contact tracing will be further informed by a report from the Contact
 Tracing Assurance Committee, chaired by Sir Brian Roche. The Committee's report is expected
 shortly and the Ministry expects to brief you on the report and its findings before the end of
 July 2020.
- Stress tests of the system including capacity, protocols and delegation models are planned from August.

Recommendations

We recommend you:

- a) agree to the proactive release of this health report on the COVID-19 website Yes/No
- b) **note** that officials are available to provide further information on contact tracing including a demonstration of the National Contact Tracing Solution.

Sue Gordon

Deputy Chief Executive

COVID-19 Health System Response

Hon Chris Hipkins

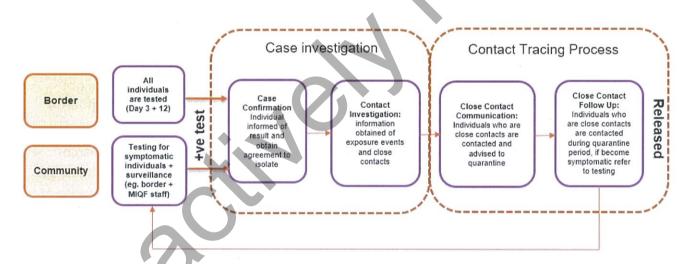
Minister of Health

Date: 24/7/2020

Rapid audit of contact tracing for COVID-19 in New Zealand by Dr Ayesha Verrall; close out report.

The importance of case investigation and contact tracing

- 1. Case investigation and contact tracing are fundamental components in the response to any notifiable infectious disease (eg, COVID-19 or measles).
- 2. The aim of case investigation and contact tracing is to prevent potential onward transmission, raise awareness about the disease and its symptoms and support early detection of suspected cases. When systematically applied, case investigation and contact tracing are effective public health tools for controlling infectious disease outbreaks
- 3. Figure 1 outlines the case investigation and contact tracing pathway for COVID-19 at the border and in the community.



*The Ministry will provide an additional report giving a comprehensive summary of the case investigation and contact tracing process, and an outline of the responsibilities of public health units and the National Investigation and Tracing Centre

- 4. Case investigation involves communication with a confirmed or probable Case while contact tracing involves communication with an identified Close Contact. Appendix One provides additional information on the case investigation and contact tracing processes.
- 5. The case interview is a vital component of case investigation. Interviewers require excellent interpersonal and interviewing skills, as well as empathy and cultural sensitivity to build and maintain trust. Interviewers need to receive the appropriate

- training, supervision and access to relevant support services for effective case investigation.
- 6. The PHU is responsible for determining the status, either Close or Casual Contact, of any person that has been exposed to an individual who has been identified as a confirmed or probable COVID-19 case.
- 7. The comprehensive case investigation and contact tracing process provided by an appropriately skilled person is not able to be replaced by technological interventions. A thorough review of case details and exposure events will always be a core component of effective contact tracing.
- 8. The National Contact Tracing Solution (NCTS) delivers a fit-for-purpose, secure endto-end Information Technology solution for COVID-19 case and close contact management.
- 9. The NCTS ensures the PHUs and NITC have a shared, consistent view of cases, close contacts and clusters of COVID-19 in real-time.
- 10. Tools, such as the NZ COVID Tracer App, have been developed to assist case investigation and contact tracing. The digital information source has the potential to support rapid contact tracing and limit the onward transmission of COVID-19.

The Ministry commissioned an independent audit of contact tracing

- 11. In April 2020 the Ministry commissioned Dr Ayesha Verrall to undertake a rapid audit of the COVID-19 contact tracing service. Dr Verrall is an infectious diseases specialist at Capital and Coast District Health Board and the University of Otago.
- 12. On 10 April 2020, Dr Ayesha Verrall provided the Ministry with the Rapid Audit of Contact Tracing for COVID-19 in New Zealand. The audit report included eight recommendations, that provided clear direction and targeted actions, to strengthen the contact tracing response to COVID-19 to deliver a gold standard service.
- 13. The National Close Contact Service (NCCS) had been previously stood up on 24 March 2020 and was in the preliminary stages of implementing policies and procedures at the time that the rapid audit was completed.
- 14. The Ministry supported the outcomes of the rapid audit and immediately acted upon Dr Verrall's recommendations.
- 15. Following Dr Verrall's follow-up visit to the Ministry on 30 April 2020, her letter dated 2 May to the Director-General of Health commended the work already underway to progress the recommendations.

The National Contact Tracing Service Action Plan sets out progress on Dr Verrall's recommendations

- 16. The audit report provided a roadmap of actions to ensure a highly effective contact tracing system is available to support New Zealand's COVID-19 response.
- 17. A detailed update of the actions undertaken, including progress made against each of the recommendations, is outlined in the National Contact Tracing Service Action Plan Update (the Action Plan). The Action Plan is attached as Appendix Two.

18. Investment has been important to the successful implementation of the audit recommendations and the establishment of the Ministry's National Investigation and Tracing Centre.

Contact Tracing Assurance Committee

19. In April 2020, the Contact Tracing Assurance Committee was established to provide advice to the Government on the contact tracing system. The Committee's report is expected shortly and the Ministry expects to brief you on the report and its findings in July 2020. This work, alongside work stemming from a review by Allen+Clark into contact tracing across three PHUs, provides further opportunities to strengthen overall case investigation and contact tracing.

Overview of key actions taken to address the recommendations

20. The recommendations can be summarised into the following four themes: capacity, performance and quality, coordination, and enabling (technology). Activity undertaken to ensure each recommendation has been met is outlined below and detailed in Appendix Two.

Recommendation 1: 'The Ministry of Health should expand the capacity of Public Health Units (PHUs) to isolate Covid-19 cases and trace their contacts three to four-fold for as long as Covid19 remains a public health threat. Some of this additional capacity should include contact tracing teams that can move from one PHU to another according to need.'

Recommendation 2: 'The Ministry of Health should develop a Covid-19 outbreak preparedness plan that includes how to rapidly scale case identification and contact tracing and regain control. The plan should specify the task-shifting arrangements between PHUs and NCCS and any additional resource required to deal with up to 1000 cases per day while maintaining high performance.'

Theme one: Capacity

Activities undertaken

- 21. The National Contact Tracing Preparedness Plan (the Preparedness Plan) was developed in response to recommendation one and recommendation two of the audit report. The Preparedness plan is attached as Appendix Three.
- 22. The Preparedness Plan was developed to outline the high-level approach to ensure response readiness to COVID-19 outbreaks across New Zealand and was agreed with all PHUs by 1 May 2020.
- 23. In February 2020, when the first COVID-19 cases were confirmed in Aotearoa New Zealand, PHUs had national case investigation and contact tracing capacity for approximately 50 cases per day.
- 24. The Preparedness Plan includes target levels of capacity. The national core capacity with PHUs is 350 new cases per day with a surge capacity to rapidly scale to manage up to 500 new cases per day. If the number of new cases per day exceeds 500, the NITC will complete case investigation and manage up to a total of 1,000 new cases per day.

- 25. A delegation protocol is in development with representatives from PHUs to set out the process for Case and Close Contact delegation across PHUs and the NITC. This will be finalised by mid-August. This protocol will optimise all available capacity across Aotearoa New Zealand to ensure a rapid response to any localised or national outbreaks.
- 26. The PHUs received a one-off funding allocation of \$15 million during 19/20 and are receiving further one-off funding of \$15 million during 20/21 to support strengthened contact tracing capacity.
- 27. The PHU capacity for contact tracing and case management has increased from 50 to 289 with capacity expected to reach 350 by end of July 2020.
- 28. The NITC provides Close Contact call capacity to support up to 1,000 cases per day, with ready capacity of 10,000 calls with scalable capacity of up to 20,000 calls per day in August 2020.

Theme two: Performance and quality

Recommendation 3: 'The Ministry of Health should develop a system that monitors the case-isolation and contact tracing process from end-to-end in the NCCS and PHUs. Recommended key performance indicators are listed in the appendix. Of these seventeen indicators, three are critical, three are urgent, ten are high priority and one is moderate priority. Ability to measure these indicators in real-time should be proven.'

Activities undertaken

- 29. The Ministry reviewed and developed the 17 indicators, which were subsequently reviewed by Dr Verrall who provided further comment (see action three of the Action Plan).
- 30. Four of the indicators measure quality assurance. The remaining 13 provisional COVID-19 performance indicators were developed as part of a data monitoring framework to support contact tracing performance monitoring. Nine of these indicators have been implemented and four are in progress. All critical indicators are able to be reported on.
- 31. Reporting standards to support the national monitoring framework based on the performance indicators were developed.
- 32. The monitoring framework will provide insight into the performance of the contact tracing service, stratified by both organisation performance and population reach to ensure contact tracing is reaching priority populations and achieving equitable health outcomes. This will provide the transparency and information required to further inform equitable service delivery.
- A dashboard for the indicators is being developed to enable the NITC, PHUs and other key stakeholders to monitor and compare performance, including the ability to refine by key criteria such as ethnicity, PHU and DHB. A beta version is being tested and refined based on user feedback (see Appendix Five).
- 34. One of the key indicator targets is to have 80 per cent of contacts identified and isolated within 48 hours of case notification. The NITC has effectively contact traced 1536 contacts since 16 June 2020, with 94 per cent contacted within 48 hours. In the week ending 11 July, 99 per cent were contacted within 48 hours.

Theme three: Coordination

Recommendation 4: 'The NCCS and its providers must ensure close contacts in home quarantine are contacted every day to monitor for adherence to isolation and to assess for the development of symptoms.'

Recommendation 5: 'The NCCS and Medical Officers of Health should collaborate to better define referral protocols and triage systems, especially with respect to more complex or high-risk contacts.'

Recommendation 6: 'The Ministry of Health should give PHUs access to the NCTS in order to retain visibility of contacts traced by the NCCS'

Activities undertaken

- 35. A contracted provider was commissioned to provide daily follow-up calls from 14 April 2020
- 36. The Preparedness Plan was agreed with all PHUs by 1 May 2020. The plan is underpinned by:
 - clinically safe practice
 - national protocols
 - timely, consistent and high-quality execution
 - optimal use of people available across the system (in particular with respect to cluster analysis, complex cases and high-risk contacts).
- 37. The Ministry and the PHUs are developing national protocols and standards to support a high-quality and clinically led contact tracing service. This is enabled through a collaborative approach with Medical Officers of Health, Service Managers, other PHU experts, and Ministry staff.
- 38. COVID-19 cluster investigation and control guidelines were published on 22 May 2020 to ensure clarity on nationally consistent processes and responsibilities for the Ministry and PHUs where a cluster of cases occurs.
- 39. All PHUs had read access to the National Contact Tracing Solution (NCTS) from 20 April 2020. Eleven of the twelve PHUs are now fully using the NCTS, including to input and update contact tracing information, and the last PHU is on track to join by the end of July.

Theme four: Enabling

Recommendation 7: 'The Ministry of Health should engage with PHUs to determine if the NCTS could be suitable, with modification, as a single national contact information system.'

Recommendation 8: 'The Ministry of Health should rapidly complete development of a smartphone app to assist contact tracing and pilot it in New Zealand. Evaluation of the app should include assessing the proportion of contacts identified by the app who develop covid-19, as well as other relevant parameters in the appendix.'

Activities undertaken

40. The IT platform originally engineered for the National Bowel Screening Programme was rapidly repurposed to the National Contact Tracing Solution (NCTS) and stood up on 6 April.

- 41. The Ministry continues to have comprehensive engagement with PHUs to determine how the NCTS can best support the PHUs' requirements for the end-to-end contact tracing process. Action ten of the Action Plan details the close consultation with PHUs to ensure that the NCTS was developed to meet the requirements of these key stakeholders.
- 42. The NCTS enables effective and efficient contact tracing through:
 - Swift delegation of case investigation and/or close contact management to other PHUs or the NITC through the secure NCTS. The NCTS enables PHUs to see what has occurred after their delegation so that there is a clear feedback loop.:
 - PHUs and the NITC workflow management for case and close contacts, using customisable dashboards and work queues.
 - NCTS integration with EpiSurv, the national notifiable disease surveillance database. The NCTS pulls COVID-19 case information from EpiSurv to provide a basis for case investigation. The NCTS is also integrated with:
 - the National Health Index (which enables the unique identification of each individual managed in the system)
 - the National Enrolment Service (to allow for contact details to be sourced from the patient's primary care enrolment)
 - Eclair, the test result database (so that test results can be displayed in the NCTS). The NCTS is also integrated with the NZ COVID Tracer App.
 - 43. The NCTS is being extended to include the border health requirements to enhance contact tracing and improve the end-to-end view of the health response to individuals.
 - 44. PHUs are interested in expanding the use of the NCTS for other communicable diseases (eg, measles). The Ministry is exploring how this could be achieved as this would harness the investment made and limit the need for separate contact tracing solutions at a local level.
 - 45. The NZ COVID Tracer App was released on 20 May 2020. The second release, enabling integration with NCTS, occurred on 10 June 2020. The use of Bluetooth to support contact tracing is still under consideration.
 - 46. The Ministry, in conjunction with other central government agencies, will continue to publicly promote the NZ COVID Tracer App to improve uptake and support the Minister's public messaging regarding the utilisation of this contact tracing tool.

Equity

- 47. Equity is a priority of Aotearoa New Zealand's health and disability system. At the time of the rapid audit, the Ministry was working to establish an equity plan so no equity-specific recommendations were provided.
- 48. The NITC will give effect to the principles of the Treaty of Waitangi/Te Tiriti o Waitangi ensuring that a "by Māori, for Māori" approach is incorporated into local and national processes.
- 49. As the national contact tracing response is predominantly delivered from PHUs who provide public health services, the requirement to incorporate an equitable service is

- built into their service specifications as part of the PHU agreements. There is an expectation that each of these organisations deliver contact tracing services in an equitable fashion, within the context of the community that they service.
- 50. The ongoing work of the NITC in implementing the Preparedness Plan is supported by the Ministry's Māori Health Directorate and the Pacific Health team to ensure alignment to national strategies and maximising relationships with local providers, iwi and other key partners.
- The Ministry is actively engaging with PHUs, on a fortnightly basis, to ensure there are appropriate links with their service delivery and local Māori and Pacific providers.
- 52. Some examples of the strategies used by PHUs are: recruitment of Māori and Pacific liaison roles within the PHU, establishment of Māori and Pacific case and contact management teams, and local networks to plan for and manage health and welfare needs of cases, close contacts and their whānau. Some PHUs are working with Māori and Pacific providers to determine whether staff from these providers can be trained in case investigation and/or close contact monitoring.

Next steps

- All PHUs are actively refining their capacity plan and strategies to ensure they are able to meet their required case management and contact tracing capacity by the end of July 2020. The expectation is that PHUs will have the core capacity to manage 350 new cases per day with a surge capacity to manage up to 500 new cases per day.
- 54. Stress tests of the system, including capacity, protocols and delegation models, are planned from August.
- 55. The Ministry will provide fortnightly updates on:
 - capacity uplift
 - NCTS developments
 - contact tracing key indicators
 - stress testing.

ENDS.

Appendix One – Detailed components of case investigation and contact tracing

a) Case investigation

	Component
	1) Preparation and planning
Preparation	Goal: to ensure that partnerships are in place with a wide range of community and NGO groups to support the rapid case investigation and contact tracing functions listed below. It is essential that these relationships are established prior to disease events occurring as speed of response is frequently a critical aspect of investigations. This may include but is not limited to: Māori, Pacific Island and other ethnic communities Aged Residential Care facilities Local DHBs: particularly, Infection Prevention and Control (IPC) and Occupational Health Local Ministry of Education contacts, Early Childhood Council, schools and early childhood facilities Primary Healthcare Organisations Welfare support agencies Interpreting services Isolation/quarantine facilities
	Correction facilities First contact
Case interview	Goal: develop trust and rapport with case, clarify role of the PHU and confirm they are aware of their disease status (positive, probable, under investigation). Always talk directly to case and not to family members, unless the case is under 16, or is unable to provide the information (e.g. too unwell, cognitive impairment) Ascertain if an interpreter is required Introduce the PHU employee Confirm that you talking to the correct person Inform the case of the reason for the call including what will be discussed and the role of the PHU Check whether the case is aware that they have tested positive for COVID-19 and if not inform them of their results and what this means Ask after their health (may be asymptomatic) Provide an opportunity for the case to ask questions Give brief overview of what will be discussed in the call: o contact and health record details basic information about the disease how they may have gotten sick/infected why it is important to trace contacts who else may have been exposed isolation advice and protective measures access to welfare support

Case details/first assessment Goal: obtain details of current illness/symptoms including onset, past medical history, demographic and contact information, and undertake a health risk assessment. Case interview Establish date/time of onset of first COVID-19 related symptoms. Document all symptoms and any change in symptoms or severity over course of illness Confirm name, address, contact information, ethnicity, occupation (identify if high risk occupation) and GP name and contact details Identify any chronic symptoms, comorbidities, medication, smoking, alcohol and drug use. Highlight conditions that impact risk assessment (e.g. immunosuppression, cardiac disease) and decision-making regarding release from isolation (history of smoking, asthma, hayfever, chronic cough) Perform risk assessment (consider high-risk referral to primary care). Identify red flag symptoms that indicate an urgent clinical review is required. Source identification Goal: identify case's potential source of infection with COVID-19 in the 14 days prior to Case interview onset of symptoms. Determine whether case has had contact with anyone with COVID-19 (either close or Obtain details of places visited, events attended, and people interacted with on each of the 14 days prior to symptom onset Obtain details of any travel (e.g. planes, trains, taxis buses, ferries) Exposure events and close contact identification Goal: to identify all close contacts, who may need to need to be isolated or quarantined. This includes recording details of all venues or situations where other people could have been infected (exposure events). Case interview Identify venues, premises and travel e.g. flight undertaken by case during their infectious period International flights: be clear about dates (departure vs. arrival) Systematically work through each of the exposure events to identify individual contacts at each event Gather enough information to determine the risk to those contacts (close contact or casual contact) Collect names, DOB (or an estimate of age) and contact details, for all close contacts exposed to case during their infectious period (i.e. 48 hours prior to symptom onset up until the case was isolated) 6) Isolation/quarantine requirements Case interview **Goal:** to ensure that the case understands the requirements for isolation/quarantine. Provide details of isolation/quarantine requirements and how decision will be made about when to release them · Check number of people in household and number of bedrooms (as an indicator of overcrowding and ability to do so at home)

Ascertain whether the case is able to isolate/quarantine safely in their current location

• Confirmation of intention to isolate/quarantine

7) Health and welfare needs

Goal: to determine if any additional health or welfare supports are required while in isolation/quarantine.

- Ascertain whether case has any welfare needs whilst in isolation/quarantine (e.g. food, income, social support, sick leave)
- Confirm that their welfare needs are able to be addressed and if not reassure that referrals will be made to the appropriate services
- Provide health advice caring for self, protecting others
 - o how to access support for physical and mental health
 - o call GP or Healthline for any health needs
 - o number to call for mental health support
 - o information about COVID-19 and red flag symptoms that require urgent clinical review and advise case to call ambulance if these occur.
- 8) Close out interview and explain next steps

Goal: to wrap up interview and ensure that the case has all questions answered and to advise on the next steps.

- Opportunity for questions
- Inform case of daily check-ins
- Who and when to call for help
- Check understanding regarding isolation/quarantine
- Outline the next steps in follow up our contact tracing, including efforts to maintain privacy whenever able, the potential need to recontact case etc.
- 9) Actions following initial interview
 - Discuss case with team leader or supervisor, if required dependent on staff member carrying out interview
 - Facilitate urgent clinical review if required (based on identification of current red flag symptoms)
 - Send a follow up email to patient summarising information covered in interview with links to information sources
 - Send letter to GP to:
 - o Inform them that their patient has been diagnosed with COVID-19
 - Advise of health risk assessment score
 - o Outline role of PHU (e.g. daily monitoring)
 - Recommend they consider clinical review in 7-10 days due to potential for clinical deterioration at that time
 - Complete any referrals needed to address additional health and welfare needs
 - Complete and sign all paper documents
 - Enter information into IT system(s) in a timely manner, including Episurv

Further investigation

10) Additional investigations following call

Goal: undertake additional investigations to identify close contacts that the case could not personally identify.

- Obtain any additional information that is required to detail exposure events and or close contacts
- Contact premises and venues to obtain lists of potential close contacts
- Obtaining lists of potential close contacts, including details of flights (to forward to NCCS for further investigation)
- Evaluate exposure events and identify any close contacts vs. casual contacts
- Refer in a timely manner as necessary to other investigators and or agencies if assistance is required with these investigations.

b) Contact tracing

		Component
and the second s	Contact tracing	 Confirm Close Contact identification and contact details Always talk directly to Close Contact, unless the Close Contact is under 16, or is unable to provide the information (e.g. too unwell, cognitive impairment) Ascertain if an interpreter is required Inform case of the reason for the call Confirm presence at exposure event as well as family members/dependents/friends Record personal details (gender, occupation, address, ethnicity, etc.) Ask after their health (symptom check) and do a severity risk assessment (medical conditions, pregnant, etc.) ensure that the case understands the requirements for isolation/quarantine (see case investigation section 6) determine if any additional health or welfare supports are required while in isolation/quarantine (see case investigation section 7) Provide information on what do to if they become unwell
		 Provide opportunity to ask questions (see case investigation section 8) Following a Close Contact call
	Follow up actions	 Case escalation as required Send a follow up email to Close Contact summarising information covered in call with links to information sources Complete any referrals needed to address health and welfare needs Complete and sign all paper documents Enter information into IT system in a timely manner

Appendix Two - National Contact Tracing Service Action Plan Update

Report date: 26/06/2020

Theme	Audit reference	Actions	Status	Commentary	Baseline Date	Forecast Complete	Actual Complete
Capacity Does the system have enough capacity to support a high-quality	Recommendation 1 Recommendation 2	The Ministry has requested updated guidance from its Technical Advisory Group (TAG) regarding peak case planning assumptions post alert level four.	/	 Advice sought and received from TAG. TAG prefer a scenario approach based upon alert level. NCCS has adopted a planning assumption of variable number of close contacts dependant on alert level and retained the 1000 cases per day. 	17/4/2020	17/4/2020	17/4/2020
response?		The Ministry is developing a COVID -19 outbreak preparedness plan in collaboration with the PHUs that will incorporate: The operating principles between PHUs and the NCCS The PHU's capacity plan s The NCCS capacity plan Uplift of central PHU based or portable resources The governance and reporting arrangements		 The Preparedness Plan is produced in draft and proposes an approach to all topics raised within the review. The next step is to discuss this document with PHUs for validation prior to finalisation. The discussion with PHUs is critical in achieving the intent of the plan however this is extending the completion date of this action. Plan has been presented to you and will form the basis for the design of the national coordinated service. Capacity The capacity elements of the plan are well advanced. PHUs have estimated their current capacity to manage case load of 185 cases per day following the \$15M uplift provided to date. The Cabinet Paper sought and gained approval for a further \$15M to support capacity building, quality improvement and IT changes. which is estimated to increase PHU Contact Tracing Capacity by up to 300 people across the PHU environment (not including NCCS). The mechanisms to distribute the additional funding are under discussion however this not a dependency for the 	24/4/2020	1/5/2020	1/5/2020
				 finalisation of the plan. The NCCS Capacity Plan is well advanced, including finalisation of contractual arrangements with providers to provide highly scalable NCCS capacity. See Action 07 for commentary. 			
Performance and Quality Is the response measurable and high quality?	Recommendation 3	A03 The Ministry is completing a clinical and technical review of the proposed indicators and confirm a monitoring framework for national contact tracing	/	 The Ministry reviewed the indicators proposed by the audit, and made amendments in accordance with internal clinical input, its experience in monitoring its population health portfolio and advice received from a PHU sub group. A set of draft indicators have been signed off by Dr Caroline McElnay. 	17/4/2020	22/4/2020	22/4/2020
				Next Steps The indicators will be used for initial reporting, with the expectation that these will evolve in the short to medium			

				term as more is learned about both the virus and the contact tracing process from a monitoring perspective. It will be supported by a monitoring framework that will be linked to policies and standards to provide a robust framework to measure and monitor a gold standard framework. • Dr Verrall has provided further advice, the Ministry is reviewing proposed changes to the indicators and progressing an implementation approach.	
		A04	 The Ministry will collate PHU and Ministry information to provide a national view of contact tracing performance. 	 All PHU data received as requested by COB 16/4/2020 and a second set on 21 April for the period 13-17 April. Data collated and socialised with Ministry stakeholders and draft reviewed by PHUs prior to finalisation. Next Steps Reporting will be provided twice weekly. 	17/4/202
		A05	 The Ministry will collate PHU and Ministry information to provide a regional view of contact tracing performance. 	 Data collated and socialised with Ministry stakeholders and PHUs. Next Steps Reporting will now be produced twice weekly providing a National View and an individual PHU view. 	20/4/202
	35	A06	The Ministry is enhancing the new national contact tracing information solution (NCTS) to deliver realtime reporting to monitor contact tracing performance and deploy, as a minimum to those PHUs that do not have digital capability to manage contact tracing.	Design work now well advanced to deliver reporting capability to support the monitoring framework. A "data aggregation" capability is being created to gather all data sources that support the end-to end contact tracing process to remove the manual effort in creating the monitoring reporting. This release was put into production on 18 May and allows operational reporting in real time of cases being managed by PHUs using the solution. The national performance indicator reporting will continue to collate outside the system until the automated data aggregation capability has been fully implemented. This will start its testing phase on Monday 15/06/2020 and is tracking to complete by 20/06/2020 Testing of the data aggregation capability has completed and now is now available.	26/06/20
Coordination Is the response nationally consistent and optimal?	Recommendation 4 Recommendation 5 Recommendation 6	A07	The Ministry is engaging with PHUs to prepare a COVID-19 preparedness plan to agree the optimal referral protocols and triage systems with respect to the delegation of work from PHUs to the NCCS. The underpinning drivers will be to ensure: o clinically safe practice o timely, consistent and high-quality execution	Preparedness Plan The Preparedness Plan is produced in draft and proposes an approach to all topics raised within the review including. The next step is to discuss and consult on this document with PHUs for validation prior to finalisation The plan was presented on Thursday 30 April to the PHU/MOH/DHB governance group and received their endorsement of the approach proposed. The plan has now been socialised with yourself and will form the blueprint on how the nationally coordinated service will be developed. The next step is to collaboratively work with the PHU	1/5/2020

						o the optimal use of the people available across the system (in particular with respect to cluster analysis, complex cases and high-risk contacts).	information has now been received from all PHUs, evaluation of this information will be a key focus for next week.	
			A08	The Ministry has commissioned 9(2)(j) to provide daily wellness calls to individuals who have been directed to home- quarantine, consistent with best practice.	Arrangements are in place for daily follow-up call. 14/4/2020 14/4/2020	14/4/2020		
		A09	The Ministry is in the process of providing PHUs with access to close contact status along the pathway processed by the National Contact Tracing Service.	A read access facility is available to all PHUs to view contact tracing status undertaken by the NCCS. 24/4/2020 20/4/2020	20/4/2020			
Enabled Is the response making the best use of technology to enhance its performance?	Recommendation 7 Recommendation 8	A10	The Ministry has gathered valuable insights from PHUs as to how to enhance the NCTS to better support the end to end execution of contact tracing. These requirements are now being developed and will support the PHU implementation plan.	 The Ministry team has gathered requirements on a schedule of enhancements to allow the NCTS better support the end-to-end contact process. The tranche of delivery to be ready by the 8th of May. Following further engagement with PHUs the scope of this release has been increased and was put into production on the 18th May. The Project will continue to work collaboratively with the Southern and Canterbury PHUs who have been piloting the system over the past month in the final details of this software release. Nelson Marlborough and Taranaki have started using the NCTS. Northland DHB is onboarding with the NCTS this week through UAT. Work is underway to engage with Quarantine and Border teams to roll out the NCTS solution following the 15th of May 	11/06 2020			
				release to support daily follow up process. Eight PHUs had onboarded with the NCTS at the end of May. Northland PHU went live on the system on Monday 8 June The remaining three PHUs, ARPHS, CPH and Regional Pubic Health do not have an onboarding commitment to NCTS at this point. A direct data feed to enable monitoring of performance and uploading or entering of close contacts is in place for these three PHUs. Toi te Ora, and Waikato PHU have gone live on Monday. Southern PHU went live today. S9(2)(0) has onboarded with the NCTS. Although the remaining three PHUs may not use the NCCS for case investigation, the NCTS will be providing a view of the national response through data links and reporting mechanisms. To support the investment made to date for COVID PHUs have indicated an interest in adapting the NCTS				

	for a wider suite of communicable diseases. Funding for this is requested through the 2nd wave of Budget'20 bids. This will harness the investment made and ensure a strong rational for national adoption of the NCTS (with some further enhancements) and limit the need for future investment in IT contact tracing solutions at a local level. • Current state of the three PHU's is: o ARPHS with the support of ADHB are progressing a decision paper on technology requirements for contact tracing. ARPHS staff have attended a demonstration of the NCTS and there was significant enthusiasm about the NCTS. ARPHS have (informally) informed us that, like C&PH they will use the NCTS as the COVID contact tracing tool. Transition to this approach will occur in about 4-6 weeks following the release of additional functionality around mid-July. Training of superusers will start next week. Full adoption of the system by ARPHS will require changes and improvements to the case investigation part of the NCTS. o RPH are continuing to review the system and have progressed some of their staff to training. The most likely scenario is that RPH will have a hybrid model and perform case investigation in their current system and use NCTS for contact tracing and follow up of close contacts. Key information of their case investigation information will be loaded into the NCTS. o C&PH are currently using a hybrid model as well and have this week adopted the delegation of close contacts into the NCTS. We are closing this action as the recommendation has been met. Work to progress full or partial transition of the remaining PHUs on the NCTS continues. We will report on progress weekly to the Public Health COVID-19 Governance Group and provide you with updates			
Once the NCTS has been adopted nationally to support contact tracing, the Ministry will collaboratively develop a proposal for a broader implementation of the solution that will reference other strategic initiatives such as the National Health Information Portal (NHIP)	The work required to support the second release of the smartphone application has been prioritised. This will impact the ability to start preparing this proposal. We are now forecasting this activity to be completed in June.	30/5/2020	10/6/2020 11/6/2020	11/06/2020

The Ministry has engaged a provider to develop a smartphone application to assist in contact tracing The first release of the application will allow users to register their contact details.	progressing this recommendation is now subject to this process, there is no further action available for the programme to complete. This recommendation is therefore now closed • The initial release has been delayed allowing the required security testing to be completed and issues remediated. • The system is built, and Data and Digital are working on a plan to release the app to the public and promote the use of the app over the coming week. • Note that the timeframes for this work have been changed to in line with a new release dates and are now reflected in A13.	20/4/2020 27/4/2020 Closed – refer to A13	Closed refer A13
• The Ministry has engaged a provider to develop a smartphone application to assist in contact tracing • The first release of the application will allow registration of the user and to record the locations they have visited using QR code • Release two for QR code scanning and sharing this data with Ministry as well and some additional functionality around notification	 The App was successfully launched on 20 May. The App launch has been discussed with PHUs and they have been provided with further information. The second release is targeted to be available in early June noting there is significant work to be completed to allow data originating from the smart phone application to be made available via the NCTS. This work has been prioritised (refer A11). The release was successfully deployed on 10 June The use of Bluetooth as a tool to support contact tracing remains under consideration however it is not expected this will not be deployed in the short term. With the successful deployment of the 2nd release we will close this recommendation. 	8/5/2020 20/05/2020 29/05/2020 11/06/2020	11/06/2020

Appendix Three – National Contact Tracing Preparedness Plan

Withheld under section 18(d) as the information will soon be publicly available on the Ministry of Health's website