MINISTRY OF HEALTH
MANATŪ HAUORA

Briefing

Case investigation and contact tracing assessment

Date due to MO:	6 November 2020	**Action required by:**	N/A
Security level:	IN CONFIDENCE	**Health Report number:**	20201891
To:	Hon Chris Hipkins, Minister for COVID-19 Response		

Contact for telephone discussion

Name	Position	Telephone
Sue Gordon	Deputy Chief Executive, COVID-19 Health System Response Directorate	s 9(2)(a) [redacted]
Astrid Koornneef	Group Manager, Contact Tracing, COVID-19 Health System Response Directorate	

Minister's office to complete:

☐ Approved ☐ Decline ☐ Noted

☐ Needs change ☐ Seen ☐ Overtaken by events

☐ See Minister's Notes ☐ Withdrawn

Comment:

MINISTRY OF HEALTH
MANATŪ HAUORA

Case investigation and contact tracing assessment

Purpose of report

This report provides a summary of the recent case investigation and contact tracing assessment as undertaken by Tim Anderson, Detective Superintendent New Zealand Police.

Context

- During September and early October 2020, Detective Superintendent Tim Anderson undertook an assessment of case investigation and contact tracing activities in response to the August Auckland outbreak.
- This assessment built on the rapid assurance exercise that Tim Anderson and Dr Ramon Pink (Medical Officer of Health at Community and Public Health in Canterbury) undertook on 9 September 2020. HR 20201671 provides a summary and context to this earlier report.
- The assessment involved the three Public Health Units (PHUs) involved in the August Auckland outbreak, as well as the Ministry's National Investigation and Tracing Centre (NITC). It included interviews with over 100 different staff within Auckland Regional Public Health Service (ARPHS), Toi Te Ora (Bay of Plenty), Regional Public Health (Wellington), and NITC including: clinicians, nurses, communications/public affairs, management and administrative staff.
- Key findings from the assessment are broken into two key themes: what is working well and opportunities for improvement.
- A copy of the assessment is attached as Appendix One for your consideration, and the Terms of Reference for this assurance exercise attached as Appendix Two.

Assessment findings

What is working well

1. The general observations by Tim Anderson were positive, emphasising the vast progress made in case investigation and the contact tracing system since early 2020.
2. The key themes of the feedback are:
    - the overall case investigation and contact tracing response, made up of the PHUs and NITC, are dedicated individuals and teams with excellent skills and expertise effectively contributing to the response
    - all people involved in the assessment demonstrated a clear commitment to providing a proactive and timely response with a continuous improvement mindset
    - the NITC has an important role in providing national leadership which is greatly valued and supportive of the PHUs
    - the National Contact Tracing Solution (NCTS) provides a useful tool to the case investigation and contact tracing processes and it is vital to the progress that has been made in the past months.

Opportunities for improvement

3. The assessment found that there are three key areas for improvement.

Human resourcing

4. Sustainability of the case investigation and contact tracing workforce is a key issue. This is directly influenced by staff wellbeing and retention along with workplace employment arrangements. The number of public health experts is limited.

Actions being taken by NITC:

- Development of a national response model for case investigation and contact tracing, drawing on the skills, expertise and capacity from across all PHUs. The NITC is leading this, including working with each PHU to increase local capacity and the refinement of a delegation framework to enable seamless transfer of work from PHU to PHU and/or PHU to NITC.
- Coordinating a national workforce with specialist public health skills that can be activated to support local outbreaks either virtually or through a 'Flying Squad".
- Building the Ministry's case investigation capacity to support PHUs if required. The NITC are actively engaging with the Public Service Commission in the recruitment of a workforce.

Technology

5. The NCTS is a key enabler to support the national contact tracing system. PHUs need to continue to use the NCTS to maintain required level of competency. This will increase the efficacy of the overall contact tracing system. The development of a mapping (geospatial) tool would assist in providing a timely and effective national response.

Actions being taken by NITC:

- The NITC continue to work with PHUs to support training through scenario exercises and training of super users.
- Work with PHUs on enhancement of the NCTS required to support the operational environment.
- Mapping (geospatial) tool is being further explored.

Equity

6. Ensuring that PHUs and contracted providers have the appropriate workforce with the necessary cultural diversity and capability is vital to ensuring equitable health outcomes for those affected by COVID-19.

Actions being taken by NITC:

- Engaging with the Ministry's Pacific Health team and the Māori Health directorate, as well as PHUs to ensure case investigation and contact tracing deliver on obligations to Te Tiriti o Waitangi.
- Refining referral pathways to link with Māori and Pacific providers to assist with finding cases and close contacts. These providers are best placed to address wider health and welfare needs to support people to self-isolate as and when required.

Next steps

7. Officials can provide further information about this topic at your request.

Recommendations

We recommend you:

a) **Agree** to the proactive release of the case investigation and contact tracing assessment report on the Ministry of Health website **Yes / No**

Sue Gordon
Deputy Chief Executive
COVID-19 Directorate
Date:

Hon Chris Hipkins
Minister for COVID-19 Response
Date: 14/12/2020

ENDS.

Appendix One - Case investigation and contact tracing assessment by Tim Anderson, Detective Superintendent

Case investigation and contact tracing assessment

16 October 2020

Astrid Koornneef
Group Manager
National Investigation and Tracing Centre (NITC)
COVID-19 Directorate
Manatū Hauora – Ministry of Health

The purpose of this report is to provide an assessment in regard to the contact tracing and case investigation (CT & CI) process as it applies to tackling outbreaks of the COVID-19 virus.

This report is to provide a report-back to Sue Gordon, Deputy Chief Executive COVID-19 Health System Response on key findings.

Background

The purpose of case investigation and contact tracing is to prevent potential onward transmission, raise awareness about COVID-19 disease and its symptoms, and support early detection of suspected cases. Contact tracing is highly time dependent as fast isolation/quarantine for cases and close contacts leads to a reduction in infection rates and better public health outcomes. Because of this, it has been timely to evaluate the case investigation and contact tracing process to explore what can be learned from this experience to possibly inform future investigations and outbreak responses.

In September 2020, New Zealand Police (Police) offered to support the Ministry of Health (MoH) to assess its contact tracing approach. The scope of this assessment is contained within the Terms of Reference dated 2 September 2020 (refer appendix one)

The Terms of Reference agreed that the purpose of the assessment was to identify any possible gaps or limitations within the current approach (including resourcing or intelligence requirements) and determine any opportunities for Police to support enhancements through our operational activities. It included considering the impact of any possible COVID-19 resurgence as part of this assessment.

Assessment methodology

During this assessment I heard from over 100 different clinicians, nurses, communications / public affairs, management and administrative staff across the Auckland Regional Public Health Unit (ARPHS), Regional Public Health (Wellington) and Toi Te Ora (Bay of Plenty) public health units (PHU). I have also spoken to a number of the NITC COVID-19 managers and leads in Wellington. I observed the Incident Management Teams (IMTs) at ARPHS and Toi Te Ora; as well as observing the different national coordination meetings across the PHUs, chaired by MoH leads in Wellington. In addition, focus groups were held with Senior Medical Officers, management and other PHU staff.

I have also shared my key findings with other New Zealand Police officers who have been involved in the COVID-19 Police operation with the Ministry of Health. Superintendent Barry Taylor has stated that *"I find your initial feedback very accurate*

and fair and concurs with my observations of the Health team and their approach during my 6 week stint as Controller/Response Manager for their response".

Executive Summary

Overall I have observed that Health (MoH and PHUs) have made enormous progress since January / February 2020. It's important to start by highlighting this point as every facet in the fight against COVID-19 by Health has improved exponentially. This includes developing the National Contact Tracing Solution (NCTS), when no national software solution existed at the start of 2020.

The CT & CI process used by Health is very sound and works extremely well. This is evidenced by the effective management of the sub cluster in Mt Roskill, Auckland and the more recent cluster relating to a family who tested positive and were found to have travelled around the Bay of Plenty region (Taupo and Rotorua). During these outbreaks I had the benefit of sitting in the IMTs in Auckland and Tauranga to observe the work by the relevant experts.

Another key finding is that all of the MoH and PHU teams and individuals I spoke to are very committed, passionate, dedicated and professional in their duties in tackling COVID-19 outbreaks.

Assessment findings

The key findings of this assessment are broken into themes; what is working well and opportunities for improvement.

What is working well

1. The positive mind-set and can-do attitude is evident across the PHUs and MOH:
    i. The people and teams working for PHU and MOH are extremely professional and dedicated. Everyone knows their business, display incredible expertise and understand exactly why their work is important and how their role contributes to the bigger picture. They are incredibly positive and determined to make a difference. During my interviews I did not encounter any negativity whatsoever which I found remarkable. I found that their positive mind-set appears to be a force multiplier.
    ii. The PHU's and the team at the NITC clearly display excellent teamwork, collegiality, and urgency and are all very passionate about their work in combatting COVID-19. The shared workload and team work is palpable across all workgroups. Even when under a high degree of pressure, the teams display a large amount of grace towards one another. They are dedicated to preventing harm to the public and their high level of proficiency and competence is obvious.
    iii. By their own admission many of the PHU and other staff have stated that one of their key challenges has been that they have had to step up immediately into an operational setting to manage the COVID-19 virus when they have primarily come from a policy type background. The fact that these same people have managed this type of rapid transition in a time of high stress is impressive and illustrates their ability to understand what has been, and is, required to deploy to and manage the COVID-19 demands.

2. It is apparent that all PHU staff are focused on the wellbeing of those positive cases, close contacts and their wider whānau. The personal wellbeing of positive cases is actively managed and the PHUs work closely with other agencies and NGOs to address any equity concerns and the welfare of those people they are dealing with. PHU staff are also sensitive and cognisant of the cultural considerations relative to each different culture and ethnicity.

3. The CT & CI process is very sound, fit for purpose and is performed with urgency. The IMT and sub cluster management teams carefully manage all of the necessary risks and current issues as you would expect. The whole area of CT & CI is a complex one given the different competing, social, economic and relationship demands that sit inside a whānau or family unit. The potential for online-bullying or "outing" on social media is a barrier to self-identification of close contacts. Other barriers to the identification of close contacts include those people who are fearful of losing their

employment or being sent to the managed facilities should they test positive. I make mention of these barriers as the style and tone of the contact tracing team is such that they are able to remove or mitigate these barriers due to their cultural sensitivity, empathy, compassion and great communication skills. The contact tracing teams are alive to the fact that a 'hard' enforcement-based approach only drives certain individuals and communities underground, thereby defeating the whole purpose. The PHUs have the ability to conduct quality and compassionate CT & CI, over the phone, which is a credit to the people undertaking this work. This approach is sensible and is also supported by Dr Colin Tukuitonga.[1]

4. Each of the PHUs have actively sought staffing reserves and other recently retired experts who can be available to bolster their local contact tracing teams if they are required to scale up their response to managing another COVID-19 outbreak.

5. The NCTS, the national IT solution, is recognised as a very useful tool for reporting and front-end management of contact tracing. As with any new software tool, the MoH technical support team are well aware that there are a number of functional advancements and fixes that can be modified to allow for better operational functionality, and they are working hard on these enhancements NCTS daily.

6. The leadership, management and team within the Ministry's NITC are highly skilled and working incredibly hard behind the scenes to support the national coordination of the COVID-19 response. This includes all of the necessary contingency planning, forecasting and identifying all of the appropriate risks that are required to be managed. This central support at MoH works very well and is appreciated by the PHUs. Positive feedback was provided by a senior clinician in one of the PHUs; specifically in relation to the national coordinated meeting hosted by the Group Manager of the NITC during one of the clusters that was being actively managed across different PHU regions. The Triage and Finders Service and Operations within the NITC provides excellent assistance nationally, as do the external providers who are contracted to deliver the close contact communications. The online COVID-19 training that was developed for national use is extremely well received by the public health officers within the PHUs and is considered a very valuable resource.

7. The national coordination by MoH to support ARPHS with relieving staff has worked well. The sharing of management and clinical staff from other PHUs has allowed ARPHS staff to take leave and refresh themselves following the recent clusters. It also allows others to learn and understand how to manage clusters in a busy region and also offer their own advice/expertise on how things can be done differently if required. In addition, the NITC has started contingency planning in regards to a 'ready workforce' of experts that may be required for any summer outbreaks nationally.

8. It is timely to acknowledge just how far Health (MoH & PHUs) have progressed over the last 10 months, tackling what has been a wicked problem. Their dedication to continuous improvement is evident in the actions and changes that have been made over a relatively short period of time. One year ago the PHUs (primarily ARPHS and RPH) were dealing with the measles outbreak. Whilst ARPHS had their own software solution, the other PHUs had to manage the measles outbreak manually using whiteboards and excel spreadsheets. National coordination was limited due to the PHU governance structure. In addition, staffing deployed against the measles outbreak was minimal; again based upon the historical lack of demand for such expertise. Now in October 2020, the transformation made across the MoH & PHU's within 12 months is impressive. The MoH and PHUs have been successful due to their agility, flexibility and adeptness at making large scale changes when required. They also clearly understand why the changes are necessary, thereby enabling successful change management. Examples of the urgency and responsiveness to change can be illustrated by the fact that all of Dr Verrall's recommendations (audit dated 10 April 2020) were actioned and implemented by July 2020. In addition, recommendations following a rapid assessment of ARPHS were made immediately in September

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[1] Alongside other roles, Dr Tukuitonga is the Associate Dean Pacific at the University of Auckland Faculty of Medical and Health Sciences.

2020. This degree of urgency is a credit to the MoH and the PHUs. Lastly, it should also be noted that the PHUs have also come a long way in terms of supporting each other and sharing their workload. This is a new approach as historically the PHU's have been regionally based, reporting to the relevant DHBs, with little or no sharing of workloads and very minimal national oversight or coordination. The NITC has provided the necessary oversight and coordination which has greatly enhanced the communication and cooperation to progress the sharing of Intelligence and workload across the PHUs.

Opportunities for improvement

9. The turnover of staff within the COVID-19 operational teams (primarily within PHUs) may require further attention based upon the following considerations:
    i. Short term secondments of 4 weeks are often not conducive to creating the best knowledge base, expertise, team work and ownership.
    ii. There can be a difficulty with secondments (even secondments for one year) when staff do not want to give up their day-job for a fixed term contract due to job security considerations.
    iii. Mind-set; everyone has a day job or competing priorities and some managers understandably want their staff back in their day jobs as soon as possible. Therefore, current KRA/KPI or performance measures (which include the obvious importance of COVID-19 work) may require more consideration.

10. During the visits to the PHUs it was apparent that some of the staff were understandably fatigued. Some staff have now taken some well-deserved leave in order to refresh themselves and take a break from work to ensure their wellbeing is maintained. Given the fight against COVID-19 will be an enduring, and possibly an infinite one, there is an opportunity for staff wellbeing to be actively managed to ensure the current experts are not lost due to burnout or other stress-related illnesses. There is an opportunity to consistently focus on ensuring leave is not accumulated and other work related pressures are mitigated as much as possible.

11. It was acknowledged that there is a lack of diversity in some PHU teams, notably Māori and Pacific practitioners. Further consideration is required as to how to attract more diversity into the PHUs to cater for and better reflect the communities they serve.

12. Some of the PHUs in the regions are not using NCTS. These staff all need to use the NCTS.

13. Traditionally, the PHUs have worked Monday -Friday, 8.30am – 5.00pm. As the hours of work have now changed, the workplace employment arrangements need to be refreshed to reflect the actual hours of work. For example, some staff now work outside of the day shifts Monday – Sunday. Whilst the goodwill from staff is apparent, the employment conditions will need to catch up to reflect the reality of the hours of work required to meet the demands of managing COVID-19 operationally. There needs to be a degree of sustainability in the CT & I model and currently some PHUs are not structurally (HR wise) set up to reflect the reality of working conditions. ie. Under AL 1 or 2 the PHU doesn't not go back to BAU (Monday – Friday)

14. Whilst improvements are being made to the NCTS regularly, a mapping (geospatial) tool is being developed which would pay dividends for local decision makers and clinicians managing regional clusters and will also assist decision makers at the NITC to observe the demand picture when PHU staff are required to be mobilised nationally to support other PHUs.
    i. For example, a real-time mapping tool would help the NITC Intelligence team to map the outbreaks and provide a type of early warning system for immediate deployment. This would allow a more proactive, preventative model rather than responding to a reactive model as we saw with the measles outbreak in Auckland (and to a lesser degree in other regions).

15. There is an opportunity to create a National deployment/Operations centre at MoH where decision makers can be better informed and briefed in the case of a large-scale virus outbreak. This Operations centre could be utilised regardless of whether it was the measles outbreak or another COVID-19 type virus.

16. There may be an opportunity in the long term for MoH experts to travel to Australia in order to benchmark the New Zealand approach and standards in relation to CT & CI.

17. The staffing levels within the PHUs and those COVID-19 roles in support in the NITC need to be revised based upon the demand picture. Currently MoH have a limited amount of people with expert public health skills. Traditionally the level of investment in people with public health skills has reflected the level of national demand for people who have these skills. The demand picture, not just for New Zealand but internationally, is now obviously very different. There is currently a bid before Treasury in regard to increased staffing resource in the fight against COVID-19. I note that many of the FTE positions seconded into the CT & CI work stream have been seconded from other important and worthy day jobs. There may also be an opportunity for PHUs to reprioritise or change any of their existing key performance indicators in regard to other PHU imperatives.

Summary

My overall assessment is that all that can be done in the area of CT & CI is being done extremely well across the PHUs and NITC. I cannot find any immediate gaps or obvious cracks in the process which is encouraging.

As part of the scope of this assessment I was also asked to determine any opportunities for Police to support enhancements through Police operational activities. This included considering the impact of any possible COVID-19 resurgence as part of this assessment. On this point I refer to the earlier assessment I completed in regard to the "*Contact tracing (CT) standby team draft plan assessment/ considerations*" (see appendix two). This report discussed recommendations in relation to contingency planning and the scaling up of the CT & CI workforce across "All of Government" should large outbreaks emerge across the different regions due to the potential to overwhelm the current PHU/NITC workforce. Any large-scale outbreaks, like experienced in Victoria, Australia over June/July 2020, may well require additional 'surge' teams to supplement the current COVID-19 CT & CI workforce. These surge teams would need to come from other government agencies, such as Police and others.

My overall findings are highly complementary of:

- your people (management and clinicians),
- your CT & CI process,
- your ever-present attitude to continuous improvement,
- the openness, agility and the expertise of PHU's to swiftly adapt to handling what is a complex virus to manage.

Finally, I want to acknowledge your team and the PHUs I visited. They were most hospitable, welcoming and frank about their work - all of which they should be very proud of. They should be aware that their splendid efforts do not go unnoticed. Working with you and your team and travelling to the different PHUs has been a humbling experience for me; as well as privilege to see such expertise and passion in action.

I wish you and your wider teams all the best for what the future brings.

Tim Anderson *LLB (Hons)*

Detective Superintendent, New Zealand Police.

Appendix Two: Terms of Reference

NEW ZEALAND POLICE
Ngā Pirihimana o Aotearoa

Terms of Reference

Review of Contact Tracing Support – Ministry of Health

2 September 2020

Detective Superintendent Tim Anderson

New Zealand Police

Police National Headquarters

WELLINGTON

REVIEW OF CONTACT TRACING SUPPORT – MINISTRY OF HEALTH

Background

As discussed, I have offered New Zealand Police support to review Ministry of Health's contact tracing approach. I should be grateful if you would lead this work on our behalf.

Objectives & Scope

The purpose of the review is to identify any possible gaps or limitations within the current approach (including resourcing or intelligence requirements), and determine any opportunities for Police to support enhancements through our operational activities. Please consider the impact of any possible COVID resurgence as part of this review.

There is no limit to the scope of this work within the remit of contact tracing, but it is desirable any opportunities are identified quickly. If you require any resource or support to undertake the review, please let me know.

Approach & Outputs

Initially, I would like you to make contact with Deputy Director of Health, Sue Gordon, who will refer you to the best people in her team to work with.

Following your review with her team, I would appreciate a brief memo from you outlining any opportunities you have identified for Police to lean in to support the Ministry's contact tracing activity (as well as any risks and operational implications of that). In addition, I would like you to detail areas where Police are not best placed, or should not be offering to provide support (as well as why you have reached that view).

Please keep Acting Assistant Commissioner Johnson abreast of progress, or any issues with this work, and thank you for your offer to support this.

Methodology/Manner

The manner in which we approach this work is probably more important than any methodology you choose to use to assist Health. It is important that Police are seen a "critical friend" that is offering to assist, not positioning to take over, and that we are aware of the limitations that any police response in contact tracing may have on the Ministry of Health's ability to fulfil their responsibilities, or on their reputation.

Timings

Whilst there is no rigid timeframes on this work, I would think that we should be reviewing your progress at the start of October, and deciding next steps.

Any issues please advise.

Regards

Glenn Dunbier

Deputy Commissioner