

COVID-19 testing in Alert Levels 3 and 2 to support New Zealand's elimination strategy

28 April 2020

Executive Summary

This paper provides an overview of the Ministry of Health's approach to testing for COVID-19 throughout Alert Level 3 and into Alert Level 2.

The four objectives of this testing approach are:

1. Quickly identifying all cases of COVID-19, in order to isolate them and trace and quarantine their contacts, including as part of managing cluster outbreaks.
2. Ensuring that access to testing is equitable – for Māori and Pacific people and other priority groups, as well as across the country.
3. Identifying any undetected community spread in New Zealand
4. Monitoring for any COVID-19 in people at higher risk of exposure to help ensure the safety systems in place are working.

In order to achieve the objectives above, District Health Boards (DHBs) will be asked to:

- Ensure that any people fitting the case definition are tested.
- Ensure all cases and contacts in high-risk settings (for example aged residential care (ARC)) are tested and isolated or quarantined to prevent further spread.
- Test all contacts where the source of infection is unknown regardless of symptoms
- Undertake targeted testing of asymptomatic people at high-risk of exposure

DHBs are asked to develop and submit plans on how they will carry out the above actions, with a particular focus on ensuring equity. Plans for testing during Alert Level 3 should be submitted by Thursday 30 April. For Alert Level 2, the Ministry of Health will ensure that any sampling frameworks for targeted testing of asymptomatic people are statistically robust.

This testing approach is part of the broader surveillance plan for COVID-19 that the Ministry of Health, DHBs and the All-Of-Government group are implementing to both address and monitor our progress in eliminating COVID-19.

Background

Identifying cases of COVID-19 is an essential part of New Zealand's elimination strategy. It forms the key starting point for the testing, tracking and tracing of cases and their contacts. In order to be confident that the New Zealand elimination strategy is working and that we can move down alert levels, we need to be confident that we are identifying all cases and that there is no ongoing undetected community transmission. We also want to ensure that we have an equitable response to this pandemic, and that we are not creating or exacerbating inequities in our community.

At this stage of the response, we are currently trying to gain further intelligence about the epidemic in New Zealand, with a particular emphasis on finding new and undetected cases. As such, the objectives of the current approach to testing include:

1. Quickly identifying all cases of COVID-19, in order to isolate them and trace and quarantine their contacts, including as part of managing cluster outbreaks.
2. Ensuring that access to testing is equitable – for Māori and Pacific people and other priority groups, as well as across the country.
3. Identifying any undetected community spread in New Zealand
4. Monitoring for any COVID-19 in people at higher risk of exposure to help ensure the safety systems in place are working.

To meet these objectives, this document outlines a structured approach to ensuring that all cases with COVID-19 are identified quickly. This approach includes ensuring that testing is equitably accessible to Māori and Pacific people (as well as other priority groups), that we continue to prioritise identifying COVID-19 cases (and managing cluster outbreaks), and that we develop testing approaches to enable us to identify any undetected community spread and to assess the risk of infection in high risk workers.

Although elements of this testing approach apply across all Alert Levels of the response to eliminate COVID-19, other elements will need to be updated as the response changes, new research emerges and new technologies are developed. The testing approach will need to ensure that access to testing is equitable and widespread and should be able to identify and monitor if there are gaps in testing access.

A key component of the testing approach will be a clear communication strategy – both nationally and at the local level for both the general public and health professionals around both access to testing and encouraging the appropriate use of testing.

This testing approach is only one part of surveillance; community and other sentinel testing need to continue as part of the ongoing surveillance needed to support the response to COVID-19. Testing approaches will continue to be reviewed as part of future updates to the Surveillance Plan.

At this stage of the response, PCR testing is used to identify COVID-19 cases and this approach focuses on this testing. The testing approach may change with the development of alternative diagnostic tests. In addition, serology testing may be used in the future for analysis of prevalence of past exposure within the population but is not considered in the context of the objectives of this current testing approach.

Our testing approach to support elimination of COVID-19

Ensuring equitable access to testing

Equity and access to testing should be considered for all groups being tested. The first priority is ensuring that symptomatic testing (i.e. testing of people who fit the current case definition) is accessible and appropriate for all communities. DHBs should monitor testing rates in various communities, and if testing rates are identified to be lower than expected the DHB should develop and implement a plan to increase the testing rates. In particular, consideration should be given to ensuring communities with potentially low access (e.g. rural, Māori, Pacific, high deprivation communities) are being tested at appropriate levels. DHBs and Public Health Units (PHUs) should engage with their Māori Health Units and providers when developing their plans.

Equity will also need to be considered beyond access to testing. There needs to be a focus on actively protecting the health and wellbeing of whānau, hapū, iwi and Māori communities from risk of increased infection, and ensuring equitable health outcomes. Specific actions to ensure equity is considered in all aspects of our surveillance response will be further developed in updates to the Surveillance Plan.

Identifying cases of COVID-19 and managing cluster outbreaks

Testing people with symptoms of a respiratory illness

Any people who fit the **current case definition** should be tested. The top priority is to ensure that testing is accessible to all populations with a specific focus on testing in rural communities and Māori and Pacific communities.

DHBs will be asked to develop and submit plans on how they will deliver this testing and ensure that it is accessible to all those who are eligible to be tested. The plan should include where they are locating their community-based assessment centres (CBACs) and other testing facilities and how they decided on these locations. The plan will also need to include a communications plan on how DHBs will raise awareness about the location of and access to the CBACs and other testing facilities.

Managing cluster outbreaks, particularly in high-risk settings

Managing cluster outbreaks is an important component of eliminating COVID-19.

It is important that DHBs and PHUs ensure all cases and contacts in high-risk settings (for example aged residential care (ARC)) are tested and isolated or quarantined to prevent further spread in this setting.

For clusters in high-risk groups, it is recommended that a lower threshold of testing occur, including testing asymptomatic contacts. As part of this testing, asymptomatic contacts need to be aware that even if their results are negative that they may still be incubating so will need to present again if they have symptoms.

Further consideration will need to occur to determine at what stage to test after exposure and whether it will be a one-off test. The Ministry will work with its Technical Advisory Groups to ensure the best advice is given to DHBs who are considering testing asymptomatic contacts in cluster settings.

Testing all contacts where the source of infection is unknown

In order to support an elimination strategy, it is important that all efforts are made to identify potential sources of infection. As a result, during Alert Levels 2 and 3, in cases where the source of infection is unknown, all contacts (both casual and close) should be tested regardless of symptoms. This includes

household, work and social contacts. As part of this testing, asymptomatic contacts need to be aware that even if their results are negative that they may still be incubating so will need to present again if they have symptoms.

As above, further consideration will need to occur to determine at what stage to test after exposure and whether it will be a one-off test.

Close contacts will need to continue to quarantine themselves for 14 days even if the test is negative.

Developing a structured approach for identifying undetected community spread

Although the latest data suggests there is a low prevalence of COVID-19 in the community, testing of asymptomatic people will help provide assurance that there is no undetected community spread occurring.

Before we move from Alert Level 3 to Alert Level 2, we need to undertake targeted testing of higher risk asymptomatic people. The Epidemiology subgroup of the Ministry of Health's Technical Advisory Group does not currently recommend a representative population sample at this stage, with a high-risk sampling approach preferred. The purpose of this testing would be to ensure that as we move into more freedom of movement that the risk of re-introducing COVID-19 into communities is low.

The benefits for undertaking targeted asymptomatic testing among higher risk populations will be reduced at very low prevalence levels. At this time, different approaches to identifying any changes in community transmission will be more appropriate and these are considered in the Surveillance Plan.

Targeting testing of asymptomatic people at high-risk of exposure

There are groups in the community that are at higher risk of being exposed to COVID-19. These higher risk groups include:

- Health care workers and other staff working at health facilities, including aged residential care facilities
- Essential workers in workplaces where there has been a case
- Staff in quarantine hotels
- International airline crew
- International travellers
- Tourism industry workers
- Police working in areas with a higher incidence of confirmed cases
- Migrant workers

There are also groups where there is a high consequence of undetected transmission even though there is a potentially lower risk of exposure, including:

- Backpacker hostels
- Prisons

DHBs will consider undertaking asymptomatic testing of these communities.

Māori, Pacific people, and people in communities with high deprivation, crowded housing, and barriers to access to healthcare should be prioritised.

Targeted testing of asymptomatic people will be contingent on testing capacity. Testing of symptomatic people who fit the case definition will remain the top priority.

DHBs will be expected to identify who the higher risk populations are in their regions. The Ministry will work with DHBs to determine what targeted asymptomatic testing needs to occur. The Ministry will also provide statistical support to develop a sampling frame that will ensure any results obtained are nationally robust. Consideration should be given to ensure equity is addressed and that priority populations are not missed (e.g. Māori and Pacific people). Sampling should provide equal explanatory power and ensure equity is addressed.

When testing asymptomatic people, it is not expected that people should quarantine while awaiting results (unless they are required to quarantine for other reasons – for example, they are identified as a close contact).

Targeted testing of asymptomatic people in locations with higher rates of COVID-19

Targeted testing in locations with higher rates of COVID-19 could be considered on a case-by-case basis.