COVID-19

MINISTRY OF HEALTH
MANATŪ HAUORA
New Zealand Government

New Zealand's national testing strategy for COVID-19 for June to August 2020

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Summary

We have reached a new stage in the management of COVID-19: maintaining the elimination of the disease in our country. To remain effective, our surveillance and testing strategy across the country and at the borders must evolve. To do this, we're implementing an integrated, five-part national system which will adapt and respond rapidly to manage any new outbreaks, should they arise. We'll explain this new system here, and what it means in practical terms for frontline health workers.

Overall goal

The new testing approach aims to keep COVID-19 out of our communities by finding any new cases arriving at our borders and stamping the disease out as quickly as possible before it has a chance to spread widely.

Why the testing strategy is changing

Under Alert Levels 3 and 2, while we were working towards eliminating COVID-19 in New Zealand, the testing strategy focussed on two areas: (1) diagnosing cases from people with clinical symptoms and tracking down and testing the people close to them, and (2) finding out if there were people in high-risk groups that were infected but not showing any symptoms. This second area was focussed on ensuring that COVID-19 was not widespread in our communities.

Now that there are so few cases of COVID-19 within New Zealand, the second approach is unlikely to uncover any new cases. Future sampling and testing effort is better targeted where new cases are most likely to arise, i.e. at the border (the highest risk originating from overseas travellers, air and maritime crew and border workers, depending on where they have travelled from).

At the same time, our system must allow the detection of early warning signs should a new outbreak occur within New Zealand and should be flexible enough to respond: deploying resources to where they are needed to contain any emerging situation.

This means implementing a new system including: targeted testing, use of existing surveillance systems for other respiratory illnesses, and the timely capture and sharing of information to inform rapid action at local and national level, as soon as it is needed. And we must also continue to ensure that access to testing is equitable – for Māori and Pacific people and other priority groups, as well as across the country.

We also need to ensure that testing is proportionate to the assessed risk and does not unduly impact on health care and timely access to health services more generally, especially during the winter months when there is a seasonal increase in respiratory illness.

Over time, the strategy for testing will continue to evolve as the situation changes in New Zealand and internationally, and if new testing methods become available.

The five interconnected parts of the new testing strategy

Figure 1 Objectives of the new testing system and supporting activities (five parts)

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Note:

- The list of symptoms for COVID-19 remains the same: any acute respiratory infection with or without fever, with at least one of the following symptoms: new or worsening cough, sore throat, shortness of breath, coryza (runny nose, sneezing etc), or anosmia (loss of sense of smell).
- At present, all testing will focus on detecting the presence of viral RNA. Serology tests to detect antibodies will be implemented in the longer term, once these tests become available and can produce reliable results.

Parts 1, 2 and 3 Activities within New Zealand

Part 1 Test people presenting to primary and secondary care[1] with relevant symptoms

Any person presenting to primary or secondary care[1] must be sampled and tested if:

- their symptoms include a new or worsening cough, sore throat, shortness of breath, coryza (runny nose, sneezing etc), or anosmia (loss of sense of smell), and
- if they are at a higher risk[2] of exposure to the virus through: recent contact with a confirmed or probable case, recent overseas travel, direct contact with overseas travellers (e.g. staff working at the borders and in managed isolation facilities), worked on an aircraft or vessel on international routes, or cleaned at an international airport or port in areas visited by people arriving from abroad.

If a patient has the relevant symptoms and is at a higher risk of exposure (as above), or if they are a confirmed or probable case of COVID-19, the doctor or nurse treating them must notify their local Medical Officer of Health. Laboratories must also notify the local Medical Officer of Health immediately of any confirmed cases. All people with any of the symptoms above, and who are at a higher risk of exposure for the reasons above (i.e. they meet the HIS criteria[2]), must self-isolate while awaiting their COVID-19 test results.

The testing and reporting combined are crucial because the results will be analysed regularly by regional and national decision-makers (part 5b).

It remains important to ensure that people have access to testing if they are symptomatic but not in a higher-risk group for exposure to COVID-19 (i.e. they do not meet the HIS criteria[2]), and on advice from a clinician.

People who have existing access issues to primary health care (e.g. Māori, Pacific Peoples, and people with disabilities) may need a more proactive approach outside of community-based testing centres and designated GP practices on the advice from the Ministry's routine analysis of surveillance information. This will ensure that these people have access to testing if they meet the clinical criteria.

People with symptoms but are not at a high risk of exposure to COVID-19 (i.e. they **do not** meet the HIS criteria[2]) do not need to self-isolate while awaiting test results.

Part 2 Contact tracing and testing around identified cases

This activity has been in place throughout the COVID-19 response. If a person tests positive for COVID-19, the local Medical Officer of Health is informed and the details are added to official records, so that investigation and contact tracing can be undertaken immediately to identify the source of infection (if possible) and to limit the forward spread. Where the source of infection is unknown, close contacts must be tested and any contacts with negative test results but who later develop symptoms must be retested.

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[1] Explanation for non-health professionals using this document:

Primary care: first and most generalised level of patient care, e.g. GP or nurse

Secondary care: medical specialist, patient is generally referred by a GP or other primary healthcare provider

[2] The criteria for this Higher Index of Suspicion (HIS) are defined in the COVID-19 case definition

When a person is tested based on their symptoms and history, a decision may be made to start contact tracing immediately (before the test result is confirmed), if there is a high risk that they could have COVID-19[3].

Testing casual contacts depends on the circumstances; this may be considered in high-risk situations or where no source has been identified. In some cases, repeat testing may be needed. And as the investigation progresses, Medical Officers of Health may recommend additional screening in other at-risk groups or underrepresented demographics, if the situation warrants it.

Part 3 Monitor trends in diseases with similar symptoms

Now that there are minimal cases of COVID-19 in New Zealand, random testing of people without COVID-19 symptoms is unlikely to uncover unknown cases in our communities. Instead, the existing surveillance streams for influenza-like illnesses (ILIs) will provide signals that could be interpreted as early warnings of the presence of the disease (Table 1).

This allows constraints to be set for the testing system, to safeguard against any future supply chain issues, or a severe influenza season. So, it is important to keep reporting into these systems.

Any increase of cases reported into the ILI surveillance systems will initially be considered as a cue for discussion, rather than for immediate action. The Ministry of Health will analyse the information (along with all other available information) and present findings to a national working group of technical advisors (the role of this working group is explained in Part 5b below).

The working group will then discuss and clarify the observations with the DHB or PHU concerned and establish the best surveillance approach for the community.

Table 1: Existing and planned ILI surveillance systems in New Zealand and the organisations responsible for analysing information and advising on deploying risk-based or stratified random surveillance

Surveillance system	**Description**
Healthline	Patients self-identify over the phone
FluTracker	Online survey of ~60,000 weekly participants reporting on influenza like illnesses (ILIs)
Healthstat	Data from 380 participating GP practices tracking ILIs
GP sentinel surveillance	Annual participation from ~90 GP practices to collect samples from ILI-presenting patients
HealthLink form for mild respiratory illness	Enrol practices to collect information that would not be flagged on other ILI systems
Testing people with mild respiratory illnesses	A planned collection from a subset of people with mild acute respiratory illness
Text mining	Application rolled out over primary healthcare providers to monitor the number of mild and acute respiratory conditions and ILIs presented in the primary healthcare system

[3] Use the decision tree in the clinical algorithm to determine high-risk scenarios

Part 4 COVID-19 management at the border

A main objective of the new system is to ensure that the virus is contained at our borders and does not enter the New Zealand community. Procedures to manage COVID-19 at our borders are designed for the following groups of people:

- passengers arriving from overseas (by air and sea), including people on pleasure craft or yachts
- air and maritime crew, and
- people who work at the border (frontline contact roles for international arrivals, customs, biosecurity, aviation staff, shipping and port staff, people working in managed facilities where arriving travellers are housed, cleaners of vessels and areas frequented by overseas travellers).

Passengers arriving from overseas by air will stay in managed facilities for a set period of time and will be swabbed and tested. Passengers arriving by sea will be isolated onboard the vessel they arrived on, or in managed onshore facilities. Some people may be given an exemption on compassionate grounds and allowed to self-isolate elsewhere, if their application for an exemption is approved.

Air and maritime crew will be tested if they have symptoms consistent with COVID-19. If they are considered at high risk of exposure, they will be requested to isolate themselves until a test result is confirmed.

People who work at the border will be strongly encouraged to seek testing if they experience symptoms (however mild), and airports and ports must ensure that there are no disincentives to test.

In addition, testing of asymptomatic people who have been potentially exposed to COVID-19 infection through their work will be available.

Parts 5a and 5b Information gathering, decision-making, support and guidance

Information gathering is a key part of any surveillance and testing system, to feedback and allow rapid public heath action, adaptation, and redeployment of resources (if needed) following a change in the ongoing situation.

A COVID-19 expert working group is responsible for providing support and guidance to the DHBs/PHUs on situations as they arise. Their guidance is based on all available information.

Part 5a Information gathering

The whole system relies on analysis of data gathered locally and nationally from:

- the testing and activities outlined above in parts 1 to 4 of the system
- supplementary data attached to the test results
- rapid and comprehensive investigations of a new outbreak, including lessons learned from operational performance locally and nationally, and details of active clusters and activity at the border
- a thorough understanding of the individual circumstances at the DHB/PHU level, and
- integration of one-off findings from local and international research and experience, and emerging evidence

- information from new COVID-19 testing methods as they become available, such as serology tests and detecting SARS-CoV-2 in wastewater
- interpretation of modelling of disease spread, and
- the results of intermittent surveys on attitudes towards health services.

Part 5b Information gathering

The COVID-19 expert working group is a team of technical experts drawn from ESR and teams from the Ministry of Health. This working group will work closely with other related advisory groups and stakeholders as appropriate.

Regular data and information are gathered and supplied to the working group about active clusters, investigations, observed symptoms, border activity, testing and other pertinent information to inform next steps.