

Limitations of COVID-19 test surveillance

15. Surveillance of COVID-19 is limited by the performance of the available tests for the disease and the underlying community prevalence of the disease. Understanding the strengths and limitations of the available tests is fundamental to accurate interpretation of COVID-19 surveillance, and to assessing the true usefulness of different testing options. Misinterpreting these issues comes with a high risk of false assurance from testing regimes that are not well designed. This presents a risk of policy advice being based on inaccurate or misleading information.
16. The swab-based tests that are currently being conducted in New Zealand are based on swabs of a patient's naso-pharyngeal passage (where the back of the nasal canal meets the throat) that then undergo laboratory analysis. § 9(2)(g)(i)
[REDACTED]
17. Antibody tests, also referred to as immunology tests, are a blood test that aims to find antibodies to COVID-19, indicating that a person has been exposed to the disease. These tests are not generally appropriate for diagnosis because the quality of these tests is poorer than the swab-based tests. A suitable laboratory antibody test is being developed and is likely to be available in New Zealand in June.
18. The portable, near-patient versions of antibody tests that are available to date only have sensitivities of 30% or lower – far less sensitive than swab-based tests currently in use. While there has been prominent mention of near-patient antibody tests in international media, these tools have very limited value, and risk providing misleading information and inaccurate results, for diagnosis, case management and surveillance.
19. When a disease is rare, the imperfections in testing methods matter more, and there is an increased risk of producing misleading results. Only when the general prevalence of the disease is common enough to get a large number of positive results is it possible to adjust for the known imperfections of a test, and then find an accurate result that can support decisions.
20. If New Zealand's testing and contact tracing of patients with COVID-19 symptoms is working well, then the disease will be uncommon in those without symptoms. Random testing of people without symptoms in the community will not provide useful additional information and could potentially provide misleading information and inaccurate results. § 9(2)(g)(i)
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