



6 August 2020

Public Health Laboratory Network Statement on Asymptomatic Testing for SARS-CoV-2

Diagnostic testing for SARS-CoV-2 (the virus that causes COVID-19) is vital to containing the COVID-19 pandemic in Australia. PHLN note there is a risk that testing capacity in both private and public laboratories will be overwhelmed if several large concurrent outbreaks occurred. Sustained high levels of testing that are not well targeted to high risk populations, especially in the absence of outbreaks, further enhances this risk.

To ensure Australia's laboratories can continue meeting testing demands, PHLN encourage decision makers to consider Australia's finite laboratory capacity when deciding on testing strategies. Australia must ensure testing strategies are targeted to strike the right balance between maintaining epidemic control and protecting the sustainability of laboratory capacity.

PHLN notes unfocussed testing in asymptomatic populations has several unintended consequences. PHLN encourages decision makers to consider the following issues when determining testing strategies:

Maximum Daily Throughput Capacity

- Australia currently has the capability and capacity to meet the current testing demands. However, several laboratories are operating at and above capacity and have requested both intra- and inter-jurisdictional assistance in order to meet current testing demands.
- Laboratories' maximum daily throughput cannot increase without procuring new platforms, training new skilled medical laboratory scientists, and identifying additional laboratory space. Operating reverse transcriptase polymerase chain reaction (RT-PCR) testing platforms require specially trained scientists, for which there is a finite workforce.

Workforce

- The technically skilled laboratory workforce is currently under significant pressure. Laboratory workers are experiencing fatigue due to the length of time in heightened pandemic response. These workers are required to maintain additional infection control measures and work split shifts to ensure protection and sustainability of the system.
- Several laboratories across Australia are currently operating 24 hours a day, seven days per week. This requires staff to work 12–14 hour shifts at a time.

Testing Supply Chains

- As at the time of publishing this statement, neither the public or private pathology sector have reported any critical commercial testing supply constraints resulting in failure to deliver results. However, several laboratories have recently raised concerns regarding several suppliers' capacity to maintain supply.
- Laboratories continue to monitor this situation as deliveries largely occur weekly. This means any changes in supply will rapidly impact laboratory capacity. Further, there are limited stocks for the majority of test kits and reagents available. This is due to considerable ongoing international demand for SARS-CoV-2 testing.

Accuracy of tests

- SARS-CoV-2 RT-PCR tests are high-fidelity tests designed for maximal sensitivity and minimal off-target reactivity. RT-PCR tests are the gold standard for diagnostic SARS-CoV-2 testing in Australia. Available evidence for the reliability of RT-PCR tests mainly comes from symptomatic patients. The test's clinical role in detecting asymptomatic carriers is still unclear given these in vitro diagnostic devices were not designed for screening.
- As community prevalence of COVID-19 falls and the rate of asymptomatic testing increases, the proportion of false positive results may increase. However, it is important to note that PHLN emphasises the likelihood of false positive and false negative results occurring is still low.

Recommendations

PHLN notes that large-scale population-wide testing of asymptomatic individuals could be counterproductive to Australia's response to the COVID-19 pandemic. Unintended consequences of asymptomatic testing includes wastage of testing consumables, impacts on staff welfare and longer testing turn-around times. All of which delay public health intervention.

To ensure Australia's testing capacity is not overwhelmed, PHLN recommends governments carefully consider laboratory and clinical capacity when designing testing strategies. They should ensure testing aligns with the advice outlined in the Australian National Disease Surveillance Plan for COVID-19. PHLN encourages decision makers to consult with and inform public health authorities and laboratory directors well in advance of commencing testing surge arrangements. Adopting these recommendations will mitigate against potential testing capacity pressures and resource shortages.

PHLN is of the strong view that testing is targeted toward population cohorts where the maximum value is derived, and emphatically discourage non-clinically indicated asymptomatic testing. PHLN further advises that States and Territories with low COVID-19 prevalence should build up supplies of testing reagents and provide laboratory staff with leave. Rather than consuming both staffing and testing resources in an environment with low levels of COVID-19 infection.

PHLN raises concerns that Victoria's introduction of mandatory of pre-operative testing for elective surgery patients will significantly impact on both laboratory capacity and patient flow through the hospital system. PHLN recommends a strong National stance against this testing strategy and similar asymptomatic screening for SARS-CoV-2.