In brief

Rapid antigen testing

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- Rapid antigen tests are one of four main types of COVID-19 tests.[1]
- The other test types are nucleic acid amplification tests (PCR), rapid molecular tests (e.g. Xpert Xpress) and antibody tests.[1, 2]
- The strengths of rapid antigen tests[3] are:
    - Timeliness, with most taking 15-30 minutes from test to result
    - Sample type used (usually a nasal swab or saliva) which are more acceptable to people
    - No requirement for specialist equipment (although some use immunofluorescence)[4]
    - Relatively low cost, with most costing $5-$20 per test.[5]
- Rapid antigen tests have lower sensitivity and specificity compared with gold standard PCR tests.[1]
- Current Australian advice is that rapid antigen tests are not suitable for diagnostic purposes due to high rates of false positives and false negatives when used as a single one-off test.[6]
- However, rapid antigen tests have value as a screening step followed by confirmatory gold-standard PCR testing – particularly in outbreaks where there is high local disease prevalence (such as currently in Sydney).[7-9]
- Issues with false positive and false negative test can be addressed by repeat testing.[10]
- Rapid tests can play an important role in expanding testing capacity for example in emergency departments, schools and certain industries.[11]
- Rapid testing is used differently across jurisdictions, for example a rapid, regular community testing program (lateral flow) for asymptomatic individuals was rolled out in England.[12]
- Self-testing is currently prohibited in Australia.[13]
- In Australia, the Royal College of Pathologists of Australasia remains concerned over the uncontrolled use of rapid antigen tests, however recognises that in localised outbreaks use of these tests for surveillance alongside mainstream testing may be appropriate.[14]
- The Therapeutics Good Administration (TGA) recommends antigen tests should be performed by health professionals in accordance with the manufacturer's instructions.[2] Training is required in the correct use of the device and interpretation of results.[9]
- Other options to increase testing capacity include sample pooling.[15]

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