



At home COVID-19 testing: summary of international evidence

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Summary

This review identified international COVID-19 at-home testing strategies to assess how they could be integrated in Canada. 63 sources that examined self-collected tests were found after searching relevant health databases and websites. The majority of sources focused on current diagnosis of COVID-19 and a small number focused on previous infection. The sources reported that self-collected tests were less accurate than PCR tests but they had the potential to be used for screening. No sources reported on the use of self-collected tests on broader test-trace-isolate strategy. Based on the findings a systematic review can be conducted to compare the accuracy of COVID-19 at home-tests.

What does this mean?

Self-collected tests are used globally and are accessible to the general public. Studies are being conducted to compare performance of at-home test to health worker administered tests. The sources suggest that at-home tests have advantages and potential to be used because there was willingness in the population to collect samples. However, more data is required for their implementation and evaluation in real-world setting.

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What is the current situation?

Covid-19 was widespread as of February 2021. Until then, only health professional were allowed and trained to use diagnostic tests for COVID-19. At-home tests were not approved in Canada but were being used internationally. There was interest in exploring international strategies in at-home testing and how it could be adapted in Canada.

What questions did we aim to answer in our research?

To summarize what has been published internationally on the use of COVID-19 at-home tests and examine how at-home test can be integrated into COVID-19 test-trace-isolate strategy.

How did we approach these questions?

Studies published in major health databases between January 1, 2019 and January 29, 2021 were searched. Additional searches were also performed on websites of relevant public health organizations, COVID-19 resource centers and Google. Any letters of correspondences, commentaries and perspectives published in research journals were also included. Abstracts were reviewed by one reviewer and full texts were reviewed by two reviewers to include any studies that examined self-collected COVID-19 tests. Data from the included studies were collected on study setting, population, COVID-19 symptoms, details of COVID-19 tests, impact of testing on COVID-19 transmission and lessons learned.

What answers did we find from our research?

In total, 63 sources were included in this review among which 49 sources described at-home tests or self-collected samples which included tests like Rapid Antigen tests, PCR-tests with self-collected swab samples, saliva tests etc. Most of the sources focused current infection rather than past infection. The sources that compared self-collected test to PCR, reported that self-collected tests were less accurate but they could be used to replace tests administered by health workers. Self-administered fluid swabs and throat gargles were reported to have higher accuracy than self-collected nasal swabs.

How confident are we in these findings?

Most of the studies included in this review focused on self-collected tests in an outpatient clinic or under supervision of health worker rather than at-home tests. No published data on the implementation and effectiveness of at-home tests were found in real-world setting. In addition, no studies were found that examined impact of at-home tests on COVID-19 transmission rate.