

The implementation of rapid point of care testing in non-traditional settings: A rapid review

Summary

The body of evidence on the implementation, use, and outcomes of rapid point-of-care (PoC) testing for COVID-19 in non-traditional (i.e., non-hospital) settings is limited. Few of the included studies describe implementation processes or outcomes; instead, research has focused on sensitivity and specificity of rapid COVID-19 tests. Evidence in this topic area is rapidly emerging. Evidence presented here should be considered carefully, as it comes from a range of sources, and each setting should be more thoroughly examined prior to implementation of strategies. No high-quality evidence was identified that focused on the implementation of rapid PoC tests for COVID-19 in non-traditional settings.

Implications

A strategy for implementing rapid PoC testing for COVID-19 should consider multiple factors. Outreach and incentive programs were not found. The costs and effectiveness of implementing rapid PoC tests in non-traditional settings is largely unstudied. We did not identify any peer reviewed studies on the implementation and use of rapid PoC tests at borders and points of entry.

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For more information, please contact Meaghan Sim, project lead (Meaghan.sim@nshealth.ca)

What is the current situation?

Jurisdictions are looking for the best evidence on how to implement rapid PoC testing in various non-traditional settings to reduce the spread of COVID-19.

What is the objective?

To summarize the evidence on the use of rapid PoC testing (e.g., antigen, rapid point of care PCR) for screening in non-traditional testing environments (i.e., borders, schools, primary care centres), specifically the impact on transmission of COVID-19. We did not assess risk of bias in publications.

How was the review conducted?

Comprehensive literature search conducted on December 17 2020 to retrieve studies published from January 1 2020 until the search date.

The search was designed by a library scientist and executed in MEDLINE, Scopus, medRxiv, the Cochrane Database of Systematic Reviews, and Epistemonikos. A targeted grey literature search was also conducted. Based on timelines, articles were screened independently by one reviewer for inclusion. Data was extracted independently by one reviewer, and then reviewed by another team member.

What did the review find?

835 unique academic articles were identified. After screening, 17 articles were included and 14 more identified through reference chaining. Thirty-seven grey literature articles were included.

Borders and points of entry: Evidence of use of rapid PoC testing at borders is currently limited. Multiple mitigation strategies at points of entry are being used including screening, testing (pre and post-arrival) and quarantine.

Schools: Mass rapid testing campaigns are underway in public and secondary schools. Some guidance on protocols exists; implementation and impact on transmission in the community is not available.

Long-term care: Guidelines for using rapid PoC tests were found; however, implementation varied across different settings.

Primary care: Rapid testing in primary care was found to be used for symptomatic and non-severe cases of COVID-19 – not asymptomatic patients.

Other settings: Rapid tests are employed in settings where traditional lab PCR is unavailable (e.g., remote areas); where physical distancing is difficult (e.g., prisons, congregated living facilities); and where negative perceptions may inhibit cooperation for sample collection.