

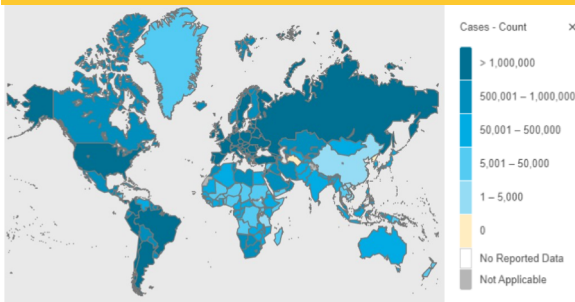
# Diagnostic Accuracy of Rapid Antigen Tests for COVID-19 Compared to the Viral Genetic Tests in Adults: A Systematic Review Protocol

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## Introduction

### The COVID-19 Pandemic



- As of 22 March 2021, there have been **122,992,844** confirmed cases of COVID-19.<sup>1</sup>
- There is a need for diagnostic tests that are affordable, accessible, sensitive and specific.

### Available Tests

- PCR - Gold Standard
  - Detects viral nucleic acid
  - Requires transport, special training, and advanced technology
- Rapid Antigen
  - Detects viral protein, glycan, or nucleic acid
  - Low complexity
- Both can be collected by nasopharyngeal swab

## Methods

### JBI Methodology<sup>2</sup>

- A systematic review protocol is a detailed description of the objectives and methods of the review.
- The protocol includes information regarding the context and rationale for the review, primary outcomes of interest, search strategy, inclusion/exclusion criteria, data synthesis, and other aspects of the research plan.

### The Search Strategy

- is an essential element of a systematic review and protocol.
- retrieves the majority of the studies used to assess for eligibility and inclusion.
- Documenting allows for reproducibility and show transparency.

## Our Research Question

What is the diagnostic accuracy of the currently available and upcoming **point-of-care rapid antigen tests** used in primary care settings relative to **viral genetic RT-PCR test** as a reference for the diagnosis of **COVID-19/SARS-CoV-2 in adults (18+)?**

Participants  
Index Test  
Reference Test  
Diagnosis of Interest

### JBI Types of Systematic Reviews<sup>2</sup>

1. Systematic reviews of experiences or meaningfulness
2. Systematic reviews of effectiveness
3. Systematic reviews of text and opinion/policy
4. Systematic reviews of prevalence and incidence
5. Systematic reviews of costs of a certain intervention, process, or procedure
6. Systematic reviews of etiology and risk
7. Systematic reviews of mixed methods
8. **Systematic reviews of diagnostic test accuracy**
9. Umbrella reviews
10. Scoping reviews

## Next Steps in the Systematic Review Process

- Adapt search string
  - Embase, Scopus, Qinsight, WHO COVID-19 Dashboard
- Compile & de-duplicate
- Study selection
- Critical appraisal
  - JBI 10 question critical appraisal checklist
- Data extraction
  - Synthesis, analyze for sensitivity and specificity in reference to PCR

### References

1. World Health Organization. WHO Coronavirus Disease (COVID-19) Dashboard 2021. Available from: <https://covid19.who.int/>.
2. Aromataris E, Munn Z (Editors). *JBI Manual for Evidence Synthesis*. JBI, 2020. Available from <https://synthesismanual.jbi.global>. <https://doi.org/10.46658/JBIMES-20-01>