RESEARCH BRIEF

International Guidance on COVID-19 Surveillance in a Vaccinated Population: A Targeted Literature Review

Summary

This review is current to June 13, 2021. Seven broad surveillance methods were identified in this review of the guidance literature. PCR testing was the most recommended surveillance method, followed by genomic screening, serosurveillance, wastewater surveillance, antigen testing, health record screening, and syndromic surveillance. Evidence-based guidelines for COVID-19 surveillance were very limited. Only one guidance document looked at surveillance in vaccinated-populations specifically. It was published by Public Health England and recommended four surveillance methods that could be used in a vaccinated population: PCR-testing, health record screening, serosurveillance, and genome sequencing.

Implications

There is very limited evidence-based guidance internationally on COVID-19 surveillance in vaccinated populations. Additional scientific guidance is still needed on the best approaches to testing and conducting surveillance as more of the population is fully vaccinated.

Reference: Egunsola O, Farkas B, Flanagan J, Salmon C, Mastikhina L, Clement FM on behalf of the University of Calgary Health Technology Assessment Unit. Surveillance of COVID-19 in a Vaccinated Population: A Rapid Literature Review. June 25, 2021.

PMID:

This research brief was written on June 25, 2021 and co-developed with our patient partner, JoAnne Mosel.

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What is the current situation?

- The process of monitoring for new COVID-19 cases is called surveillance.
- Several countries have vaccinated a substantial percentage of their population against COVID-19. As a result, the focus of public health officials is now shifting to identifying COVID-19 cases among the vaccinated population.
- Infection after vaccination is expected because the vaccines are not 100% effective and may not be fully effective against new COVID-19 variants.

What is the objective?

- The objective of this review was to identify international guidance on testing and surveillance for COVID-19, including variants of concern, in vaccinated populations.

How was the review conducted?

- A targeted search was conducted of the websites for several national and international health organizations (e.g. Centers for Disease Control and Prevention; World Health Organization). The search looked for both surveillance guidance published after December 2020 (when COVID-19 vaccinations began) as well as any relevant guidelines from before this date. The review is current to June 13, 2021.
- Google was also used to search for surveillance guidelines more generally.
- Any guidelines found were initially evaluated quickly by two reviewers to decide if they were suitable for a detailed review. One reviewer read through the most suitable guidelines in detail and highlighted the most important information in them.

What did the review find?

- A total of 26 guidelines were included in our review. Most were not specific to vaccinated populations but were included because they reported on COVID-19 surveillance. Guidelines from 11 countries and regions were included (Australia, Brazil, France, Germany, India, New Zealand, Spain, United Kingdom, United States, Europe, and international).
- Seven broad surveillance methods were identified in the literature. PCR-testing was the most recommended method, followed by genomic screening, serosurveillance, wastewater surveillance, antigen testing, health record screening, and syndromic surveillance.
- All of the guidance documents included surveillance methods suitable for use in community settings. Some also included other settings such as healthcare facilities (e.g. hospitals, doctors' offices), long-term care facilities, points of entry for travel, schools, and closed sites (e.g., prisons).
- Only one guidance document was included that looked at surveillance in vaccinated populations. It was published by Public Health England and outlined a plan to monitor COVID-19 using a series of different approaches, such as PCR-testing, health record screening, serosurveillance, and genome sequencing.

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