

COVID-19 CADTH REFERENCE LIST

# Digital Stethoscope for Patients with Confirmed or Suspected Infectious Disease: Guidelines

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## Research Question

What are the evidence-based guidelines regarding the use of digital stethoscope for pulmonary auscultation in patients with suspected or confirmed infectious disease?

## Key Findings

No relevant evidence-based guidelines were identified regarding the use of digital stethoscope for pulmonary auscultation in patients with suspected or confirmed infectious disease.

## Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE All (1946– ) via Ovid, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were stethoscopes, auscultation, and infection control. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 01, 2015 and April 07, 2020. Internet links were provided, where available.

## Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

**Table 1: Selection Criteria**

<b>Population</b>	Patients of all ages with suspected or confirmed infectious disease
<b>Intervention</b>	Pulmonary auscultation using digital stethoscope (also known as electronic stethoscope)
<b>Comparator</b>	Not applicable
<b>Outcomes</b>	Recommendations regarding the use of digital stethoscope
<b>Study Designs</b>	Evidence-based guidelines

## Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Normally, health technology assessment reports and systematic reviews are presented first; however, in reports where guidelines are primarily sought, the aforementioned evidence types are presented in the appendix.

No evidence-based guidelines regarding the use of digital stethoscope for pulmonary auscultation in patients with suspected or confirmed infectious disease.

References of potential interest are provided in the appendix.

## Overall Summary of Findings

No relevant evidence-based guidelines or recommendations were found regarding the use of digital stethoscope for pulmonary auscultation in patients with suspected or confirmed infectious disease, therefore no summary can be provided.

## References Summarized

### Guidelines and Recommendations

No literature identified.

## Appendix — Further Information

### Non-Randomized Studies

1. Rao A, Chu S, Batlivala N, Zetumer S, Roy S. Improved detection of lung fluid with standardized acoustic stimulation of the chest. *IEEE J Transl Eng Health Med.* 2018;6:3200107.  
[PubMed: PM30310761](#)
2. Rao A, Ruiz J, Bao C, Roy S. Tabla: a proof-of-concept auscultatory percussion device for low-cost pneumonia detection. *Sensors (Basel).* 2018 Aug 16;18(8):16.  
[PubMed: PM30115828](#)

### Clinical Practice Guidelines – Methodology Not Specified

#### Digital Stethoscope Not Specified - COVID-19 Specific Guidelines

3. COVID-19 guidelines version 1. Melbourne (AU): The Australian and New Zealand Intensive Care Society (ANZICS); 2020  
<https://www.anzics.com.au/wpcontent/uploads/2020/03/ANZICS-COVID-19-Guidelines-Version-1.pdf>. Accessed 2020 Apr 09.  
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4. Coronavirus disease- 2019 (COVID-19): infection prevention and control in the hospital setting. Version 6. Perth (AU): Government of Western Australia, Department of Health; 2020:  
<https://ww2.health.wa.gov.au/~media/Files/Corporate/general%20documents/Infectious%20diseases/PDF/Coronavirus/Infection%20Prevention%20and%20Control%20in%20Hospitals.pdf>. Accessed 2020 Apr 09.  
*See: Patient Care Equipment; page 7*
5. Infection prevention and control for COVID-19 in healthcare settings – third update. Stockholm (SE): European Centre for Disease Prevention and Control; 2020:  
[https://www.ecdc.europa.eu/sites/default/files/documents/Infection-prevention-control-for-the-care-of-patients-with-2019-nCoV-healthcare-settings\\_update-31-March-2020.pdf](https://www.ecdc.europa.eu/sites/default/files/documents/Infection-prevention-control-for-the-care-of-patients-with-2019-nCoV-healthcare-settings_update-31-March-2020.pdf). Accessed 2020 Apr 09.  
*See: page 1*
6. Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected. Geneva (CH): World Health Organization; 2020:  
[https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected-20200125](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125). Accessed 2020 Apr 09.  
*See: page 2*

#### General Infection Control Guidelines

7. Cleaning and disinfection of telehealth equipment and peripheral devices. (Virtual health standard VH-S2.0). Edmonton (AB): Alberta Health Services (AHS); 2018:  
<https://www.albertahealthservices.ca/assets/healthinfo/ipc/if-hp-telehealth-equipmentcleaning-disinfection-bpg.pdf>. Accessed 2020 Apr 09.

### Additional References

8. Ekuore. Electronic stethoscope against coronavirus spreads. 2020;  
<https://www.ekuore.com/electronic-stethoscope-against-coronavirus-spread/>.  
Accessed 2020 Apr 09.
9. Michard F. A sneak peek into digital innovations and wearable sensors for cardiac monitoring. J Clin Monit Comput. 2017 Apr;31(2):253-259.  
[PubMed: PM27566472](#)