

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

# Isolation Measures to Prevent Tuberculosis Transmission: Clinical Effectiveness and Guidelines

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## Research Questions

1. What is the clinical effectiveness of home or community isolation for the prevention of tuberculosis transmission?
2. What are the evidence-based guidelines regarding home or community isolation for the prevention of tuberculosis transmission?

## Key Findings

One evidence-based guideline was identified regarding home or community isolation for the prevention of tuberculosis transmission. No clinical evidence was identified regarding home or community isolation for the prevention of tuberculosis transmission.

## Methods

A limited literature search was conducted by an information specialist on key resources including PubMed, 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 social isolation and tuberculosis and other respiratory illnesses. No filters were applied to limit the retrieval by study type. The search was also limited to English language documents published between Jan 1, 2015 and Apr 21, 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 who have been diagnosed with active tuberculosis
<b>Intervention</b>	Home or community isolation (i.e., receiving care and treatment in a non-hospital setting)
<b>Comparator</b>	Q1: Hospital-based or no isolation Q2: Not applicable
<b>Outcomes</b>	Q1: Prevention of tuberculosis transmission or infection Q2: Recommendations regarding home isolation and when it is appropriate (e.g., length of isolation after the onset of treatment)
<b>Study Designs</b>	Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, and evidence-based guidelines

## Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports and systematic reviews are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One evidence-based guideline<sup>1</sup> was identified regarding home or community isolation for the prevention of tuberculosis transmission. No relevant health technology assessments, systematic reviews, randomized controlled trials, or non-randomized studies were identified.

Additional references of potential interest are provided in the appendix.

## Overall Summary of Findings

One evidence-based guideline<sup>1</sup> was identified regarding home or community isolation for the prevention of tuberculosis (TB) transmission. The National Institute of Health and Care Excellence recommends that individuals in prisons or immigration removal centers, who have undergone an X-ray for suspected active TB, be isolated in a ventilated room or cell.<sup>1</sup> Patients must be isolated until: (1) they are smear-negative and have a normal x-ray, or (2) they have completed two weeks of treatment and are not at risk of multidrug-resistant TB.<sup>1</sup>

No relevant literature was identified regarding the clinical effectiveness of home or community isolation for the prevention of tuberculosis transmission; therefore, no summary can be provided.

## References Summarized

### Health Technology Assessments

No literature identified.

### Systematic Reviews and Meta-Analyses

No literature identified.

### Randomized Controlled Trials

No literature identified.

### Non-Randomized Studies

No literature identified.

### Guidelines and Recommendations

1. Tuberculosis. NICE Guidelines. London (GB): NICE; 2016 Jan 13: <https://www.nice.org.uk/guidance/ng33/resources/tuberculosis-pdf-1837390683589>. Accessed 2020 Apr 27.  
See: Recommendation 1.5.2.2, page 46.

## Appendix — Further Information

### Systematic Reviews — Alternative Conditions

2. Fong MW, Gao H, Wong JY, et al. Nonpharmaceutical Measures for Pandemic Influenza in Nonhealthcare Settings-Social Distancing Measures. *Emerg Infect Dis.* 2020 May;26(5):976-984. [https://wwwnc.cdc.gov/eid/article/26/5/19-0995\\_article](https://wwwnc.cdc.gov/eid/article/26/5/19-0995_article) Accessed 2020 Apr 28.  
[PubMed: PM32027585](#)

### Clinical Practice Guidelines

#### *Methodology Not Specified*

3. Mycobacterial infections (tuberculosis). Melbourne (AU): Department of Health and Human Services; 2020: <https://www2.health.vic.gov.au/public-health/infectious-diseases/disease-information-advice/tuberculosis>. Accessed 2020 Apr 28.  
See: Control measures for tuberculosis, Control of case.
4. Communicable Disease Control Manual. Chapter 4: Tuberculosis. Appendix B: Infection Prevention and Control. Vancouver: BC Centre for Disease Control; 2019: <http://www.bccdc.ca/resource-gallery/Documents/Communicable-Disease-Manual/Chapter%204%20-%20TB/Appendix%20B.pdf>. Accessed 2020 Apr 28.  
See: 2. Home Isolation, page 4.
5. Tuberculosis program guideline, 2018. Toronto: Ministry of Health and Long-Term Care; 2018: [http://www.health.gov.on.ca/en/pro/programs/publichealth/oph\\_standards/docs/protocols\\_guidelines/Tuberculosis\\_Program\\_Guideline\\_2018.pdf](http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Tuberculosis_Program_Guideline_2018.pdf). Accessed 2020 Apr 28.  
See: 4.3.4 Shelters and Drop-In Centres for the Homeless, page 40.
6. Guidelines for the assessment of tuberculosis patient infectiousness and placement into high and lower risk settings. Sacramento: California Department of Public Health; 2018: <https://www.sfgcdcp.org/wp-content/uploads/2018/01/Guidelines-for-the-assessment-of-TB-patient-infectiousness-and-placement-into-high-and-low-risk-settings-id940.pdf> Accessed 2020 Apr 28.  
See: VIII. Home Isolation, page 11.
7. Nunavut Tuberculosis Manual. Iqaluit: The Government of Nunavut; 2017: [https://www.gov.nu.ca/sites/default/files/nunavut\\_tb\\_manual\\_2017.pdf](https://www.gov.nu.ca/sites/default/files/nunavut_tb_manual_2017.pdf). Accessed 2020 Apr 28.  
See: Section 13: Infection Prevention and Control.

8. Prevention, diagnosis and management of tuberculosis. Singapore: Ministry of Health; 2016: <https://www.moh.gov.sg/docs/librariesprovider4/guidelines/moh-tb-cpg-full-version-for-website.pdf>. Accessed 2020 Apr 28.  
See: 8.7 Infection prevention in the home and the community, page 77.

### *Alternative Conditions*

9. Guidelines for the Prevention, Control and Public Health Management of Influenza Outbreaks in Residential Care Facilities in Australia. Canberra: Communicable Diseases Network Australia; 2017: [https://www1.health.gov.au/internet/main/publishing.nsf/Content/27BE697A7FBF5AB5CA257BF0001D3AC8/\\$File/RCF\\_Guidelines.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/27BE697A7FBF5AB5CA257BF0001D3AC8/$File/RCF_Guidelines.pdf). Accessed 2020 Apr 28.  
See: 5.4 Isolation and cohorting, page 19.
10. Routine practices protocol. Winnipeg: Shared Health; 2020: <https://sharedhealthmb.ca/files/routine-practices-protocol.pdf>. Accessed 2020 Apr 28.  
See: 5. Accommodation and Placement, page 17.

### Additional References

11. Battista Migliori G, D'Ambrosio L, Centis R, Van Den Boom M, Ehsani S, Dara M. Guiding Principles to Reduce Tuberculosis Transmission in the WHO European Region. Geneva: World Health Organization; 2018: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0008/377954/ic-principles-eng.pdf](http://www.euro.who.int/_data/assets/pdf_file/0008/377954/ic-principles-eng.pdf). Accessed 2020 Apr 28.  
See: "Question 5. Which patients need hospital admission (and respiratory isolation) because of their infectiousness?", page 24.

### Review Articles

12. Petersen E, Khamis F, Migliori GB, et al. De-isolation of patients with pulmonary tuberculosis after start of treatment - clear, unequivocal guidelines are missing. *Int J Infect Dis*. 2017 Mar;56:34-38.  
[PubMed: PM28163167](#)
13. Segal-Maurer S. Tuberculosis in Enclosed Populations. *Microbiol*. 2017 03;5(2):03.  
[PubMed: PM28361734](#)

### *Alternative Conditions*

14. Social distancing evidence summary. Canberra: Australian Government Department of Health; 2019: <https://www1.health.gov.au/internet/main/publishing.nsf/Content/519F9392797E2DDC CA257D47001B9948/%24File/Social-2019.PDF>. Accessed 2020 Apr 28.
15. Rashid H, Ridda I, King C, et al. Evidence compendium and advice on social distancing and other related measures for response to an influenza pandemic. *Paediatr Respir Rev* 2015;16:119-26.  
[PubMed: PM24630149](#)