UK Health Security Agency

Contact tracing strategies for detecting tuberculosis in people exposed to tuberculosis in low incidence countries

A rapid systematic review

Contents

Main messages

1. The purpose of this rapid systematic review was to identify and assess the available randomised controlled trial (RCT) evidence for the effectiveness of contact tracing strategies for detection of tuberculosis (TB) in people exposed to a person with active TB in low TB incidence countries (search date: up to 4 November 2025).

2. Contact tracing strategies were defined as the methods of finding contacts of a person with infectious TB, including risk-assessment approaches informing who to screen.

3. In total, 11,220 records from 4 databases and 4 trial registries were screened. No relevant RCT evidence was identified to answer the research question.

Purpose

The purpose of this rapid systematic review was to identify and assess the available evidence from randomised controlled trials for the effectiveness of contact tracing strategies for detection of TB in people exposed to a person with active TB in low TB incidence countries. For the purposes of this review, contact tracing strategies were defined as the methods of finding contacts of a person with infectious TB, including risk-assessment approaches informing who to screen. This review did not address the effectiveness of different methods of testing and treating contacts of TB once they have been identified.

This rapid systematic review was commissioned to inform the development of the UKHSA TB Contact Tracing Operational Guidance for UKHSA Health Protection Teams.

Methods

There was one review question:

1. What is the effectiveness of contact tracing strategies for detection of TB in people exposed to a person with active TB in low TB incidence countries?

A rapid systematic review was conducted, following streamlined systematic methodologies to accelerate the review process (1) and provide a timely, evidence-informed answer to the review question without compromising the rigour of the review process. A literature search was conducted to identify relevant randomised controlled trials (RCTs) published (or available as preprints) up to 27 October 2023.

An updated search was undertaken in November 2025 using the same search terms to check for any additional studies. The updated search covered the period from 1 January 2023 to 4 November 2025 to minimise the risk of records being missed. Any duplicate records identified from the overlapping search period were removed by comparing the EndNote library records.

This review used World Health Organization (WHO) 2020 estimates for countries with a low TB incidence (defined as any country or territory with an estimated TB incidence rate of less than 40 per 100,000 people) (2). The WHO now defines low TB incidence countries as those with estimated TB incidence rate of less than 10 per 100,000 people. This does not however change the inclusion status of any studies screened. Full details of the methods and search strategy are available in the protocol in Annexe A.

Screening on title and abstract was undertaken in duplicate by 2 reviewers for 20% of the eligible studies, with the remainder completed by one reviewer. Screening on full text was undertaken by one reviewer and checked by a second. Relevant reviews encountered during title and abstract screening were also searched for relevant primary studies.

Evidence

The original search (up to 27 October 2023) identified 9,794 records for title and abstract screening. The updated search (1 January 2023 to 4 November 2025) identified 1,426 records for title and abstract screening. In total, 11,220 records were reviewed at the title and abstract screening stage. Twenty-nine studies (all from the original search) were sought for full text review, of which one could not be retrieved (3). No studies from the updated search were sought for full text review. PRISMA diagrams showing the flow of studies through the review (for both the original and updated searches) are shown in Annexe B.

None of the 28 studies screened at full text were eligible for inclusion in the review, Annexe C lists these studies and their reasons for exclusion.

Overall, no evidence was found meeting the inclusion criteria for this review.

Limitations

This review was conducted using streamlined methodology, and an extensive search of other sources (such as websites of public health organisations) was not conducted, meaning relevant studies may have been missed. The review was limited to RCT evidence, other evidence may exist that could inform the review question.

Conclusion

No RCTs were identified that assessed the effectiveness of contact tracing strategies for detecting TB in people exposed to TB in low incidence countries.

As part of the UKSHA Public Health and Social Measures programme, a rapid systematic review was conducted that reported on the effectiveness of contact tracing to reduce transmission of infectious disease as part of epidemic or pandemic response (4). The review was designed to include evidence from observational studies as well as from randomised control trials, however no evidence from countries or territories with low TB incidence was identified.

Acknowledgments

We would like to thank colleagues within the All Hazards Public Health Response division who either reviewed or input into aspects of the review.

Disclaimer

UKHSA's rapid systematic reviews and evidence summaries aim to provide the best available evidence to decision makers in a timely and accessible way, based on published peer-reviewed scientific papers, and papers on preprint servers. Note that the reviews:

- use accelerated methods and may not be representative of the whole body of evidence publicly available
- have undergone an internal independent peer review but not an external peer review
- are only valid as of the date stated on the review

In the event that this review is shared externally, note additionally, to the greatest extent possible under any applicable law, that UKHSA accepts no liability for any claim, loss or damage arising out of, or connected with the use of, this review by the recipient or any third party including that arising or resulting from any reliance placed on, or any conclusions drawn from, the review.

References

1. Tricco AC and others. 'Rapid reviews to strengthen health policy and systems: A practical guide' World Health Organization 2017
2. UK Health Security Agency and others. 'WHO estimates of tuberculosis incidence by country and territory' 2020 (viewed on 24 October 2023)
3. Stefanescu I. '[Chemotherapy of the source and the risk of infection in home contacts]' Revista de Igiena Bacteriologie Virusologie Parazitologie Epidemiologie Pneumoftiziologie Seria Pneumoftiziologia 1976: volume 25, issue 4, pages 201 to 208
4. Isca E and others. 'Effectiveness of contact tracing to reduce transmission of infectious disease as part of epidemic or pandemic response: a rapid systematic review' Zenodo; 2025
5. National Institute for Health and Care Excellence (NICE). 'Tuberculosis NICE guideline (NG33)' 2019 (viewed on 27 October 2023)
6. The Cochrane Collaboration. 'Cochrane handbook for systematic reviews of interventions version 6 – technical supplement to chapter 4: searching for and selecting studies' 2019 (viewed on 25 October 2023)
7. The InterTASC Information Specialists' Sub-Group. 'Randomized controlled trials and other trials: filters' 2023 (viewed on 25 October 2023)
8. Sterne JAC and others. 'RoB 2: a revised tool for assessing risk of bias in randomised trials' BMJ 2019: volume 366, l4898

Annexe A. Protocol

Review question

The review question is:

1. What is the effectiveness of contact tracing strategies for detection of tuberculosis (TB) in people exposed to a person with active TB in low TB incidence countries?

An original search was conducted up to 27 October 2023.

An updated search, using the same search terms, will be conducted from 1 January 2023 to 4 November 2025. The overlap period is to minimise the risk of records being missed. Any duplicate records identified from the overlapping search period to be removed by comparing EndNote library records. There will be no changes from the original protocol apart from the search dates.

Table A.1. Inclusion and exclusion criteria

	Included	Excluded
Population	Contacts of people with TB, as defined by included studies	
Settings	Countries or territories with low TB incidence (estimated incidence rate less than 40 per 100,000 in 2020)	Countries or territories with high TB incidence (estimated incidence rate at least 40 per 100,000 in 2020)
Context	Community settings and institutional settings, for example hospitals, workplaces, prisons, and places of detention	
Intervention or exposure	Contact tracing strategies: methods of identifying contacts of a person with infectious TB, including risk-assessment approaches informing who to screen (for example stone-in-pond approach, social network analysis) Comparator: any other method of identifying and risk-assessing contacts including usual practice or no contact tracing	• methods of screening contacts for TB only (for example, symptom screening, microbiological or radiological tests) • treatment of contacts only (for example vaccination, TB prophylaxis, TB treatment) • linkage to care practices and interventions to reduce loss to follow up of contacts only (for example, methods of communicating with contacts)

	Included	Excluded
Outcomes	• proportion of contacts diagnosed with latent or active TB • community TB incidence or prevalence • TB-related morbidity or mortality (amongst contacts or the community) • TB treatment outcomes (amongst contacts or the community)	
Language	English	Any other language
Date of publication	1 January 2023 to 4 November 2025	
Study design	• randomised-controlled trials, including cluster-randomised designs	• reviews • quasi-experimental studies • observational studies • modelling studies • qualitative studies
Publication type	• peer-reviewed published research • preprints	• editorials • letters • news articles

Contact tracing strategies are public health interventions designed to locate contacts of people with an active TB infection (the index case), screen the contacts for TB, then treat or otherwise manage contacts who test positive for latent or active TB. Contacts are typically defined as people with whom the index case has spent time in close proximity, although this varies between contact tracing strategies. Close contacts are generally considered to have had prolonged, frequent, or intense contact with a person with infectious TB (5).

This review will use World Health Organization (WHO) 2020 estimates for countries with a low TB incidence (defined as any country or territory with an estimated TB incidence rate of less than 40 per 100,000 people) (2). The WHO now defines low TB incidence countries as those with estimated TB incidence rate of less than 10 per 100,000 people. This includes: Albania, American Samoa, Andorra, Anguilla, Antigua and Barbuda, Argentina, Armenia, Aruba, Australia, Austria, Bahamas, Bahrain, Barbados, Belarus, Belgium, Belize, Bermuda, Bosnia and Herzegovina, British Virgin Islands, Bulgaria, Cabo Verde, Canada, Cayman Islands, Chile, Colombia, Comoros, Cook Islands, Costa Rica, Croatia, Cuba, Curacao, Cyprus, Czechia, Denmark, Dominica, Egypt, Estonia, Finland, France, French Polynesia, Germany, Greece, Grenada, Guam, Guatemala, Honduras, Hungary, Iceland, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kuwait, Latvia, Lebanon, Lithuania,

Luxembourg, Maldives, Malta, Mauritius, Mexico, Monaco, Montenegro, Montserrat, Netherlands, New Caledonia, New Zealand, Niue, North Macedonia, Norway, Occupied Palestinian Territory, Oman, Palau, Panama, Poland, Portugal, Puerto Rico, Qatar, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, San Marino, Saudi Arabia, Serbia, Seychelles, Sint Maarten (Dutch part), Slovakia, Slovenia, Spain, Suriname, Sweden, Switzerland, Syrian Arab Republic, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turks and Caicos Islands, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Vanuatu, and Wallis and Futuna Islands.

Identification of studies

The following databases and trial registries were searched for studies published up to 27 October 2023 initially.

An updated search, using the same search terms, will be conducted from 1 January 2023 to 4 November 2025. The overlap period is to minimise the risk of records being missed. Any duplicate records identified from the overlapping search period will be removed by comparing EndNote library records: Medline, Embase, Cochrane CENTRAL, Latin American Caribbean Health Sciences Literature (LILACS), CINAHL, Web of Science Core Collection (Science Citation Index Expanded, and Social Sciences Citation Index), Web of Science (Preprints Citation Index), WHO International Clinical Trials Registry Platform, ClinicalTrials.gov, and the Clinical Trials Unit of the International Union Against Tuberculosis and Lung Disease. The 2023 revisions of the sensitivity-maximising version of the Cochrane highly sensitive search filter for identifying randomised controlled trials in Ovid will be used to limit searches in Medline and Embase (6, 7).

The search strategy for the original and updated search is presented in Search strategy below. The search strategy will be checked by another information specialist. Duplicate references will be removed using Deduklick.

Screening

Screening on title and abstract will be undertaken in duplicate by 2 reviewers for at least 20% of the eligible studies, with the remainder completed by one reviewer. Disagreement will be resolved by discussion. Screening on full text will be undertaken by one reviewer and checked by a second.

Data extraction

Summary information for each study will be extracted and reported in tabular form. Information to be extracted will include country, study period, study design, intervention,

participants, results, and any relevant contextual data. This will be undertaken by one reviewer and checked by a second.

Risk of bias assessment

Two reviewers will independently complete a risk of bias assessment for included randomised-controlled trials using version 2 of the Cochrane risk-of-bias tool (8), with disagreements resolved by discussion or with a third reviewer.

Synthesis

If data is presented in a consistent format between studies, a narrative synthesis will be produced to describe the results from this review. Alternatively, if data are too heterogeneous, a narrative summary of each study will be provided.

Search strategy

Database: Ovid Medline

Search: 1946 to 26 October 2023	Search: 1 January 2023 to 4 November 2025
1. exp Tuberculosis/ (207,096)	1. exp Tuberculosis/ (214,568)
2. Mycobacterium tuberculosis/ (57,830)	2. Mycobacterium tuberculosis/ (61,751)
3. tubercul*.tw,kf. (268,923)	3. tubercul*.tw,kf. (286,606)
4. TB.tw,kf. (74,629)	4. TB.tw,kf. (87,441)
5. LTBI.tw,kf. (3,141)	5. LTBI.tw,kf. (3,620)
6. or/1-5 (322,812)	6. or/1-5 (345,141)
7. Contact Tracing/ (6,277)	7. Contact Tracing/ (6,714)
8. (contact* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (32,302)	8. (contact* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (36,227)
9. (case* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (315,508)	9. (case* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (355,425)
10. (source* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (48,340)	10. (source* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (56,503)

Search: 1946 to 26 October 2023	Search: 1 January 2023 to 4 November 2025
11. (transmission adj3 dynamic*).tw,kf. (8,269)	11. (transmission adj3 dynamic*).tw,kf. (10,631)
12. referral*.tw,kf. (146,310)	12. referral*.tw,kf. (168,027)
13. stone in pond.tw,kf. (0)	13. stone in pond.tw,kf. (0)
14. (household adj5 screen*).tw,kf. (504)	14. (household adj5 screen*).tw,kf. (607)
15. social network*.tw,kf. (26,543)	15. social network*.tw,kf. (31,138)
16. (index patient* or index case*).tw,kf. (12,951)	16. (index patient* or index case*). tw,kf. (14,197)
17. (chain* adj2 infection*).tw,kf. (538)	17. (chain* adj2 infection*).tw,kf. (586)
18. or/7-17 (577,044)	18. or/7-17 (656,664)
19. 6 and 18 (15,408)	19. 6 and 18 (17,328)
20. exp randomized controlled trial/ (602,879)	20. exp randomized controlled trial/ (650,954)
21. controlled clinical trial.pt. (95,424)	21. controlled clinical trial.pt. (95,747)
22. randomi#ed.ab. (742,058)	22. randomi#ed.ab. (853,249)
23. placebo.ab. (242,489)	23. placebo.ab. (263,451)
24. drug therapy.fs. (2,630,761)	24. drug therapy.fs. (2,867,195)
25. randomly.ab. (419,289)	25. randomly.ab. (472,705)
26. trial.ab. (669,317)	26. trial.ab. (783,036)
27. groups.ab. (2,586,347)	27. groups.ab. (2,939,302)
28. or/20-27 (5,804,223)	28. or/20-27 (6,477,006)
29. 19 and 28 (4,798)	29. 19 and 28 (5,374)
	30. limit 29 to yr="2023 -Current" (759)

Database: Embase

Search: 1974 to 26 October 2023	Search: 1 January 2023 to 4 November 2025
1. exp tuberculosis/ (224,245)	1. exp tuberculosis/ (254,268)
2. Mycobacterium tuberculosis/ (75,391)	2. Mycobacterium tuberculosis/ (84,804)
3. tubercul*.tw,kf. (243,118)	3. tubercul*.tw,kf. (269,292)
4. TB.tw,kf. (92,040)	4. TB.tw,kf. 110,653)
5. LTBI.tw,kf. (4,491)	5. LTBI.tw,kf. (5,245)
6. or/1-5 (327,174)	6. or/1-5 (367,752)
7. contact examination/ (8,645)	7. contact examination/ (9,684)
8. (contact* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (41,251)	8. (contact* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (49,995)

Search: 1974 to 26 October 2023	Search: 1 January 2023 to 4 November 2025
9. (case* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (463,741)	9. (case* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (532,764)
10. (source* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (60,759)	10. (source* adj5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* or find* or notif* or monitor*)).tw,kf. (71,354)
11. (transmission adj3 dynamic*).tw,kf. (9,309)	11. (transmission adj3 dynamic*).tw,kf. (12,244)
12. referral*.tw,kf. (241,756)	12. referral*.tw,kf. (287,002)
13. stone in pond.tw,kf. (1)	13. stone in pond.tw,kf. (1)
14. (household adj5 screen*).tw,kf. (643)	14. (household adj5 screen*).tw,kf. (826)
15. social network*.tw,kf. (30,247)	15. social network*.tw,kf. (36,143)
16. (index patient* or index case*).tw,kf. (20,041)	16. (index patient* or index case*).tw,kf. (22,402)
17. (chain* adj2 infection*).tw,kf. (619)	17. (chain* adj2 infection*).tw,kf. (693)
18. or/7-17 (845,996)	18. or/7-17 (985,645)
19. 6 and 18 (22,164)	19. 6 and 18 (25,656)
20. exp randomized controlled trial/ (790,503)	20. exp randomized controlled trial/ (1,120,270)
21. Controlled clinical trial/ (471,236)	21. Controlled clinical trial/ (460,774)
22. random$.ti,ab. (1,987,165)	22. random$.ti,ab. (2,522,926)
23. randomization/ (98,805)	23. randomization/ (101,598)
24. intermethod comparison/ (301,757)	24. intermethod comparison/ (317,362)
25. placebo.ti,ab. (366,904)	25. placebo.ti,ab. (468,091)
26. (compare or compared or comparison).ti. (607,882)	26. (compare or compared or comparison).ti. (694,762)
27. ((evaluated or evaluate or evaluating or assessed or assess) and (compare or compared or comparing or comparison)).ab. (2,797,155)	27. ((evaluated or evaluate or evaluating or assessed or assess) and (compare or compared or comparing or comparison)).ab. (3,378,930)
28. (open adj label).ti,ab. (109,690)	28. (open adj label).ti,ab. (190,679)
29. ((double or single or doubly or singly) adj (blind or blinded or blindly)).ti,ab. (275,061)	29. ((double or single or doubly or singly) adj (blind or blinded or blindly)).ti,ab. (371,210)
30. double blind procedure/ (211,673)	30. double blind procedure/ (312,515)
31. parallel group$1.ti,ab. (32,308)	31. parallel group$1.ti,ab. (53,616)
	32. (crossover or cross over).ti,ab. (157,675)

Search: 1974 to 26 October 2023	Search: 1 January 2023 to 4 November 2025
32. (crossover or cross over).ti,ab. (125,066) 33. ((assign$ or match or matched or allocation) adj5 (alternate or group$1 or intervention$1 or patient$1 or subject$1 or participant$1)).ti,ab. (417,560) 34. (assigned or allocated).ti,ab. (493,387) 35. (controlled adj7 (study or design or trial)).ti,ab. (453,299) 36. (volunteer or volunteers).ti,ab. (283,435) 37. human experiment/ (647,576) 38. trial.ti. (404,559) 39. or/20-38 (6,364,140) 40. (random$ adj sampl$ adj7 ("cross section$" or questionnaire$1 or survey$ or database$1)).ti,ab. not (comparative study/ or controlled study/ or randomi?ed controlled.ti,ab. or randomly assigned.ti,ab.) (9,635) 41. Cross-sectional study/ not (exp randomized controlled trial/ or controlled clinical study/ or controlled study/ or randomi?ed controlled.ti,ab. or control group$1.ti,ab.) (3,637,93) 42. (((case adj control$) and random$) not randomi?ed controlled).ti,ab. (21,671) 43. Systematic review.ti,ab. not (trial or study).ti. (329,373) 44. (nonrandom$ not random$).ti,ab. (19,000) 45. "random field$".ti,ab. (2,973) 46. (random cluster adj3 sampl$).ti,ab. (1,592) 47. (review.ab. and review.pt.) not trial.ti. (1,138,760) 48. "we searched".ab. and (review.ti. or review.pt.) (49,788)	33. ((assign$ or match or matched or allocation) adj5 (alternate or group$1 or intervention$1 or patient$1 or subject$1 or participant$1)).ti,ab. (518,102) 34. (assigned or allocated).ti,ab. (615,695) 35. (controlled adj7 (study or design or trial)).ti,ab. (644,093) 36. (volunteer or volunteers).ti,ab. (324,296) 37. human experiment/ (733,170) 38. trial.ti. (569,542) 39. or/20-38 (7,584,117) 40. (random$ adj sampl$ adj7 ("cross section$" or questionnaire$1 or survey$ or database$1)).ti,ab. not (comparative study/ or controlled study/ or randomi?ed controlled.ti,ab. or randomly assigned.ti,ab.) (10,765) 41. Cross-sectional study/ not (exp randomized controlled trial/ or controlled clinical study/ or controlled study/ or randomi?ed controlled.ti,ab. or control group$1.ti,ab.) (474,468) 42. (((case adj control$) and random$) not randomi?ed controlled).ti,ab. (24,711) 43. Systematic review.ti,ab. not (trial or study).ti. (430,190) 44. (nonrandom$ not random$).ti,ab. (21,425) 45. "random field$".ti,ab. (3,247) 46. (random cluster adj3 sampl$).ti,ab. (1,809) 47. (review.ab. and review.pt.) not trial.ti. (1,341,155) 48. "we searched".ab. and (review.ti. or review.pt.) (60,551) 49. "update review".ab. (156) 50. (databases adj4 searched).ab. (80,039) 51. (rat or rats or mouse or mice or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or

Search: 1974 to 26 October 2023	Search: 1 January 2023 to 4 November 2025
49. "update review".ab. (136) 50. (databases adj4 searched).ab. (63,226) 51. (rat or rats or mouse or mice or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or monkey or monkeys or trout or marmoset$1).ti. and animal experiment/ (1,225,234) 52. Animal experiment/ not (human experiment/ or human/) (2,573,881) 53. or/40-52 (4,404,690) 54. 39 not 53 (5,599,469) 55. 19 and 54 (3,122)	monkey or monkeys or trout or marmoset$1).ti. and animal experiment/ (1,323,546) 52. Animal experiment/ not (human experiment/ or human/) (2,798,333) 53. or/40-52 (5,032,722) 54. 39 not 53 (6,672,318) 55. 19 and 54 (3,906) 56. limit 55 to yr="2023 -Current" (709)

CINAHL

Search: 27 October 2023	Search: 4 November 2025
1. (MH "Tuberculosis+") (25,906) 2. (MH "Mycobacterium Tuberculosis") (4,403) 3. tubercul* (35,094) 4. TB (24,845) 5. LTBI (780) 6. S1 OR S2 OR S3 OR S4 OR S5 (40,571) 7. (MH "Contact Tracing") (2,640) 8. ((contact* OR case* OR source*) N5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* OR find* or notif* or monitor*)) (113,949) 9. (transmission N3 dynamic*) (1,098) 10. referral* (88,260) 11. stone in pond (0) 12. (household N5 screen*) (265) 13. "social network*" (27,066) 14. "index patient*" or "index case*" (2,678) 15. (chain* N2 infection*) (230)	1. (MH "Tuberculosis+") (25,906) 2. (MH "Mycobacterium Tuberculosis") (4,403) 3. tubercul* (35,094) 4. TB (24,845) 5. LTBI (780) 6. S1 OR S2 OR S3 OR S4 OR S5 (40,571) 7. (MH "Contact Tracing") (2,640) 8. ((contact* OR case* OR source*) N5 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* up or list* OR find* or notif* or monitor*)) (113,949) 9. (transmission N3 dynamic*) (1,098) 10. referral* (88,260) 11. stone in pond (0) 12. (household N5 screen*) (265) 13. "social network*" (27,066) 14. "index patient*" or "index case*" (2,678) 15. (chain* N2 infection*) (230) 16. S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 (227,483) 17. S6 AND S16 (3,437)

Search: 27 October 2023	Search: 4 November 2025
16. S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 (227,483) 17. S6 AND S16 (3,437) 18. (MH "Randomized Controlled Trials+") (140,420) 19. (MH "Double-Blind Studies") (54,557) 20. (MH "Single-Blind Studies") (16,095) 21. (MH "Random Assignment") (81,735) 22. (MH "Pretest-Posttest Design") (54,005) 23. (MH "Cluster Sample+") (6,350) 24. TI (randomised OR randomized) (144,647) 25. AB (random*) (402,791) 26. TI (trial) (186,022) 27. MH ("sample size") AND AB (assigned OR allocated OR control) (4,441) 28. (MH "Placebos") (14,228) 29. PT (randomized controlled trial) (154,007) 30. AB (control W5 group) (146,551) 31. MH ("crossover design") OR MH ("comparative studies") (487,495) 32. AB (cluster W3 RCT) (501) 33. (MH "animals+") (105,215) 34. MH ("animal studies") (154,620) 35. TI ("animal model*") (3,653) 36. S33 OR S34 OR S35 (250,838) 37. MH ("human") (2,730,270) 38. S36 NOT S37 (216,542) 39. S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 (1,034,116) 40. S39 NOT S38 (985,919) 41. S17 AND S40 (549)	18. (MH "Randomized Controlled Trials+") (140,420) 19. (MH "Double-Blind Studies") (54,557) 20. (MH "Single-Blind Studies") (16,095) 21. (MH "Random Assignment") (81,735) 22. (MH "Pretest-Posttest Design") (54,005) 23. (MH "Cluster Sample+") (6,350) 24. TI (randomised OR randomized) (144,647) 25. AB (random*) (402,791) 26. TI (trial) (186,022) 27. MH ("sample size") AND AB (assigned OR allocated OR control) (4,441) 28. (MH "Placebos") (14,228) 29. PT (randomized controlled trial) (154,007) 30. AB (control W5 group) (146,551) 31. MH ("crossover design") OR MH ("comparative studies") (487,495) 32. AB (cluster W3 RCT) (501) 33. (MH "animals+") (105,215) 34. MH ("animal studies") (154,620) 35. TI ("animal model*") (3,653) 36. S33 OR S34 OR S35 (250,838) 37. MH ("human") (2,730,270) 38. S36 NOT S37 (216,542) 39. S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 (1,034,116) 40. S39 NOT S38 (985,919) 41. S17 AND S40 (549) 42. Limiters - Publication Date: 20230101-20251231 (35)

Web of Science

Web of Science Core Collection (Editions Science Citation Index Expanded 1970-current, Social Science Citation Index 1970-current)

Search: 27 October 2023	Search: 1 January 2023 to 4 November 2025
TS=(tubercul*) OR TS=(TB) OR TS=(LTBI) (224,300) AND TS=(contact* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=(case* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=(source* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=((transmission NEAR/2 dynamic*)) OR TS=(referral*) OR TS=("stone in pond") OR TS=((household NEAR/4 screen*)) OR TS=("social network*") OR TS=(("index patient*" or "index case*")) OR TS=((chain* NEAR/1 infection*)) (676,133) AND TS=(randomised OR randomized OR placebo OR randomly OR trial OR groups) (7,078,317) Results: 2500	TS=(tubercul*) OR TS=(TB) OR TS=(LTBI) (283,490) AND TS=(contact* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=(case* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=(source* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=((transmission NEAR/2 dynamic*)) OR TS=(referral*) OR TS=("stone in pond") OR TS=((household NEAR/4 screen*)) OR TS=("social network*") OR TS=(("index patient*" or "index case*")) OR TS=((chain* NEAR/1 infection*)) (1,014,970) AND TS=(randomised OR randomized OR placebo OR randomly OR trial OR groups) (9,346,880) AND Date limit applied: 01 January 2023 to 04 November 2025 Results: 578

Web of Science

Web of Science Core Collection (Editions Preprint Citation Index 1991-current)

Search: 27 October 2023	Search: 1 January 2023 to 4 November 2025
TS=(tubercul*) OR TS=(TB) OR TS=(LTBI) (2,910) AND TS=(contact* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=(case* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=(source* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=((transmission NEAR/2 dynamic*)) OR TS=(referral*) OR TS=("stone in pond") OR TS=((household NEAR/4 screen*)) OR TS=("social network*") OR TS=(("index patient*" or "index case*")) OR TS=((chain* NEAR/1 infection*)) (35,508) AND TS=(randomised OR randomized OR placebo OR randomly OR trial OR groups) (190,686) Results: 29	TS=(tubercul*) OR TS=(TB) OR TS=(LTBI) (4,580) AND TS=(contact* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=(case* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=(source* NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or “follow* up” or list* or find* or notif* or monitor*)) OR TS=((transmission NEAR/2 dynamic*)) OR TS=(referral*) OR TS=("stone in pond") OR TS=((household NEAR/4 screen*)) OR TS=("social network*") OR TS=(("index patient*" or "index case*")) OR TS=((chain* NEAR/1 infection*)) (48,601) AND TS=(randomised OR randomized OR placebo OR randomly OR trial OR groups) (263,135) Date limit applied: 01 January 2023 to 04 November 2025 Results: 33

Cochrane Central Register or Randomised Controlled Trials

Search: 27 October 2023	Search: 1 January 2023 to 4 November 2025
1. MeSH descriptor: [Tuberculosis] explode all trees (3,324)	1. MeSH descriptor: [Tuberculosis] explode all trees (3,576)

Search: 27 October 2023	Search: 1 January 2023 to 4 November 2025
2. MeSH descriptor: [Mycobacterium tuberculosis] explode all trees (450) 3. tubercul* (9,376) 4. TB (7,919) 5. LTBI (191) 6. MeSH descriptor: [Contact Tracing] explode all trees (132) 7. ((contact* OR case* OR source*) NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* or list* OR find* or notif* or monitor*)) (44,233) 8. (transmission NEAR/2 dynamic*) (94) 9. referral* (18,377) 10. "stone in pond" (1) 11. (household NEAR/4 screen*) (91) 12. social network* (6,102) 13. index patient* or index case* (156,393) 14. (chain* NEAR/1 infection*) (10) 15. #1 OR #2 OR #3 OR #4 OR #5 (14,271) 16. #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 (211,633) 17. #15 AND #16 (2,321) Filtered to CENTRAL/Trials only: 1,845 results	2. MeSH descriptor: [Mycobacterium tuberculosis] explode all trees (526) 3. tubercul* (10,272) 4. TB (8,943) 5. LTBI (200) 6. MeSH descriptor: [Mycobacterium tuberculosis] explode all trees (526) 7. ((contact* OR case* OR source*) NEAR/4 (trac* or screen* or manag* or investigat* or histor* or detect* or follow* or list* OR find* or notif* or monitor*)) (49,012) 8. (transmission NEAR/2 dynamic*) (101) 9. referral* (20,743) 10. "stone in pond" (1) 11. (household NEAR/4 screen*) (107) 12. social network* (7,234) 13. index patient* or index case* (180,688) 14. (chain* NEAR/1 infection*) (12) 15. #1 OR #2 OR #3 OR #4 OR #5 (15,792) 16. #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 (243,240) 17. #15 AND #16 (3,024) Filtered to CENTRAL/Trials only with date limits: 349 results

LILACS

Search: 27 October 2023	Search: 1 January 2023 to 4 November 2025
(TB OR LTBI OR tubercul*) AND (contact* OR social network* OR transmission dynamic OR index case OR index patient OR referral*) Filtered to controlled clinical trials only: 135 results	(TB OR LTBI OR tubercul*) AND (contact* OR social network* OR transmission dynamic OR index case OR index patient OR referral*) Filtered to controlled clinical trials only: 13 results

WHO International Clinical Trials Registry Platform

Search: 27 October 2023	Search: 1 January 2023 to 4 November 2025
(TB OR LTBI OR tubercul*) AND (contact* OR social network* OR transmission dynamic OR index case OR index patient OR referral*) 111 results for 107 trials	(TB OR LTBI OR tubercul*) AND (contact* OR social network* OR transmission dynamic OR index case OR index patient OR referral*) 5 records for 5 trials

Clinicaltrials.gov

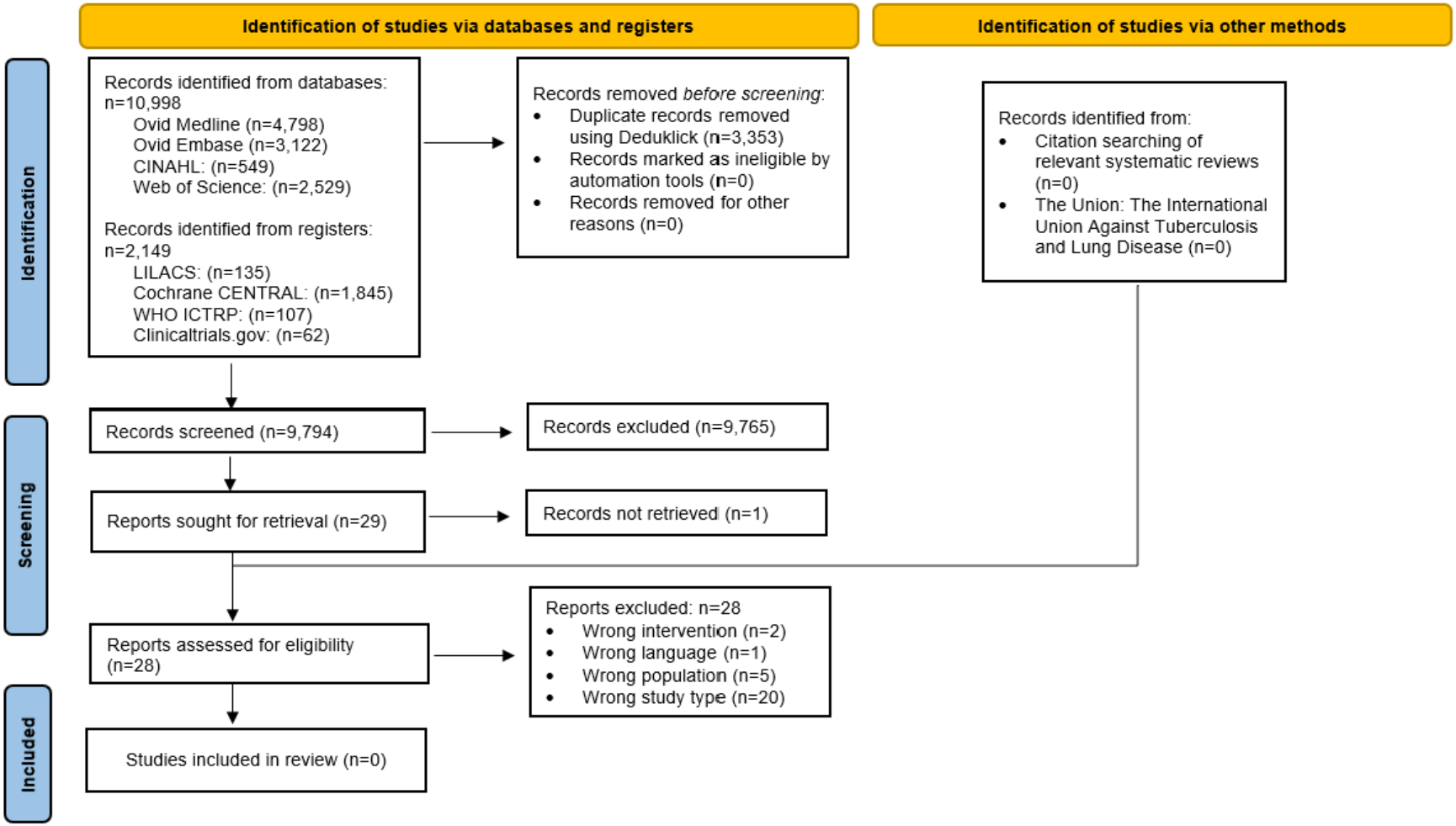
Search: 27 October 2023	Search: 1 January 2023 to 4 November 2025
(TB OR LTBI OR tuberculosis) AND (contact OR social network OR transmission dynamic OR index case OR index patient OR referral) 62 results	(TB OR LTBI OR tuberculosis) AND (contact OR social network OR transmission dynamic OR index case OR index patient OR referral) 13 results

The Union: The International Union Against Tuberculosis and Lung Disease

Date of search: 27 October 2023	Search: 4 November 2025
Browse of website – 0 relevant records identified	Browse of website – 0 relevant records identified

Annexe B. Study selection flowchart

Figure B.1. PRISMA diagram (search up to 27 October 2023)



Text version of Figure B.1. PRISMA diagram.

A PRISMA diagram showing the flow of studies from the search up to 27 October 2023, ultimately including 0 studies.

From identification of studies via databases, n=10,998 records identified:

- Ovid Medline (n=4,798)
- Ovid Embase (n=3,122)
- CINAHL (n=549)
- Web of Science (n=2,529)

From identification of studies via registers, n=2,149 records identified:

- Cochrane CENTRAL (n=1,845)
- LILACS (n=135)
- WHO ICTRP (n=107)
- ClinicalTrials.gov (n=62)

From these, records removed before screening:

- duplicate records removed (n=3,353)
- duplicate records removed manually (n=0)
- records marked as ineligible by automation tools (n=0)
- records removed for other reasons (n=0)

n=9,794 records screened, of which n=9,765 were excluded, leaving n=29 papers sought for retrieval, of which one was not retrieved.

From identification of studies via other methods, n=0 studies were identified from previous reviews and n=0 studies were identified from the website of the International Union Against Tuberculosis and lung disease.

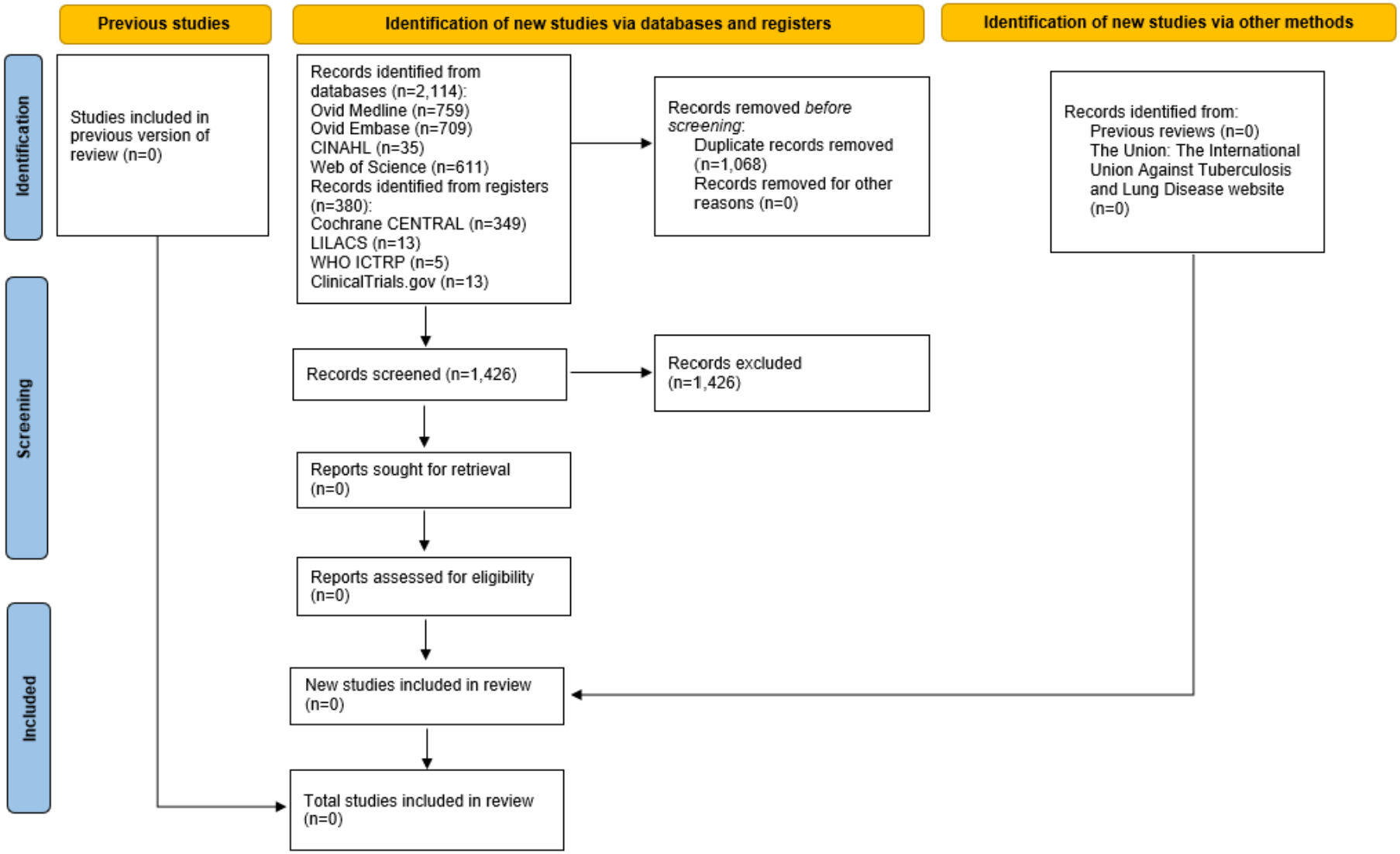
Of the n=28 papers assessed for eligibility, all were excluded:

- wrong intervention (n=2)
- wrong language (n=1)
- wrong population (n=5)
- wrong study type (n=20)

n=0 papers included in the review.

End of text version of Figure B.1.

Figure B.2. PRISMA diagram (search 1 January 2023 to 4 November 2025)



Text version of Figure B.2. PRISMA diagram.

A PRISMA diagram showing the flow of studies from the search 1 October 2023 to 4 November 2025, ultimately including 0 studies.

From identification of studies via databases, n=2,114 records identified:

- Ovid Medline (n=759)
- Ovid Embase (n=709)
- CINAHL (n=35)
- Web of Science (n=611)

From identification of studies via registers, n=380 records identified:

- Cochrane CENTRAL (n=349)
- LILACS (n=13)
- WHO ICTRP (n=5)
- ClinicalTrials.gov (n=13)

From these, records removed before screening:

- duplicate records removed (n=1,068)
- records removed for other reasons (n=0)

n=1,426 records screened, of which n=1,426 were excluded.

From identification of studies via other methods, n=0 studies were identified from previous reviews and n=0 studies were identified from the website of the International Union Against Tuberculosis and lung disease.

n=0 reports sought for retrieval
n=0 reports assessed for eligibility
n=0 new studies included in the review
n=0 total studies included in the review

End of text version of Figure B.2.

Annexe C. Excluded full texts

Wrong intervention (2 studies)

Munoz L and others. 'QuantiFERON-TB Gold in-tube as a confirmatory test for tuberculin skin test in tuberculosis contact tracing: a noninferiority clinical trial' Clinical Infectious Diseases 2018: volume 66, issue 3, pages 396 to 403

Oxlade O and others. 'Effectiveness and cost-effectiveness of a health systems intervention for latent tuberculosis infection management (ACT4): a cluster-randomised trial' The Lancet. Public Health 2021: volume 6, issue 5, pages e272 to e282

Wrong language (1 study)

Matsumoto K and others. '[Prevention of secondary tuberculosis in the contact tracing]' Kekkaku 2011: volume 86, issue 11, pages 889 to 890

Wrong population (5 studies)

World Health Organization International Clinical Trials Registry Platform. 'Community and universal testing for tuberculosis among contacts' 2020: ISRCTN10003903

Moonan PK and others. 'A neighbor-based approach to identify tuberculosis exposure, the Kopanyo study' Emerging Infectious Diseases 2020: volume 26, issue 5, pages 1,010 to 1,013

National Library of Medicine. 'A Randomized Trial of DOTS Versus Enhanced DOTS for Community Control of Tuberculosis' 2006: NCT00317330

Law WS and others. 'Management of latent TB infection in child household contacts aged under 5 years' International Journal of Tuberculosis and Lung Disease 2021: volume 25, issue 2, pages 151 to 153

Reuter A and others. 'Household contact management for rifampicin-resistant tuberculosis' The Lancet Global Health 2022: volume 10, issue 10, page e1387

Wrong study type (20 studies)

Baxter S and others. ‘Interventions to improve contact tracing for tuberculosis in specific groups and in wider populations: an evidence synthesis’ Health Services and Delivery Research 2017

Borraccino A and others. 'Yield of tuberculosis contact investigation in a low-incidence country' Journal of Infection 2014: volume 68, issue 5, pages 448 to 454

Borrell S and others. 'Factors associated with differences between conventional contact tracing and molecular epidemiology in study of tuberculosis transmission and analysis in the city of Barcelona, Spain' Journal of Clinical Microbiology 2009: volume 47, issue 1, pages 198 to 204

Dou Y and others. 'An investigation of the impact of index case screening on commonly reported epidemiological estimates in tuberculosis household contact study' medRxiv 2023

Fournier A and others. 'Neither genotyping nor contact tracing allow correct understanding of multidrug-resistant tuberculosis transmission' European Respiratory Journal 2017: volume 50, issue 3, page 9

Fox GJ and others. 'Active case finding in contacts of people with tuberculosis' Cochrane Database of Systematic Reviews 2011, issue 9, page CD008477

Hossain AD and others. 'Effectiveness of contact tracing in the control of infectious diseases: a systematic review' The Lancet. Public Health 2022: volume 7, issue 3, pages e259 to e273

Kranzer K and others. 'Yield of HIV-associated tuberculosis during intensified case finding in resource-limited settings: a systematic review and meta-analysis' The Lancet Infectious Diseases 2010: volume 10, issue 2, pages 93 to 102

Kuehne A and others. 'Find and treat or find and lose? Tuberculosis treatment outcomes among screened newly arrived asylum seekers in Germany 2002 to 2014' Euro Surveillance: Bulletin Europeen sur les Maladies Transmissibles = European Communicable Disease Bulletin 2018: volume 23, issue 11, page 3

Marks GB and others. 'Tuberculosis: an old world disease providing new world challenges in NSW' New South Wales Public Health Bulletin 2013: volume 24, issue 1, pages 22 to 23

Ospina JE and others. 'Community health workers improve contact tracing among immigrants with tuberculosis in Barcelona' BMC Public Health 2012: volume 12, issue 158

Tibbetts KK and others. 'Public health response to tuberculosis outbreak among persons experiencing homelessness, Minneapolis, Minnesota, USA, 2017 to 2018' Emerging Infectious Diseases 2020: volume 26, issue 3, pages 420 to 426

van der Werf MJ and others. 'Whole-genome sequencing as tool for investigating international tuberculosis outbreaks: a systematic review' Frontiers in Public Health 2019: volume 7, page 87

van Wyk SS and others. 'Repairing boundaries along pathways to tuberculosis case detection: a qualitative synthesis of intervention designs' Health Research Policy and Systems 2022: volume 20, issue 1, page 7

Vasiliu A and others. 'Symptom-based screening versus chest radiography for TB child contacts: a systematic review and meta-analysis' Pediatric Infectious Disease Journal 2021: volume 40, issue 12, pages 1,064 to 1,049

Velen K and others. 'The effectiveness of contact investigation among contacts of tuberculosis patients: a systematic review and meta-analysis' European Respiratory Journal 2021: volume 58, issue 6, page 12

Velleca M and others. 'The yield of tuberculosis contact investigation in low- and middle-income settings: a systematic review and meta-analysis' BMC Infectious Diseases 2021: volume 21, issue 1, pages 1 to 12

Zenner D and others. 'Effectiveness and cost-effectiveness of screening migrants for active tuberculosis and latent tuberculous infection' International Journal of Tuberculosis and Lung Disease 2017: volume 21, issue 9, pages 965 to 976

Zenner D and others. 'Active TB case finding strategies in high-risk groups in low-incidence countries – A literature review' European Respiratory Journal 2013: volume 42

Zenner D and others. 'Active case finding for tuberculosis among high-risk groups in low-incidence countries' International Journal of Tuberculosis and Lung Disease 2013: volume 17, issue 5, pages 573 to 582

About the UK Health Security Agency

UK Health Security Agency (UKHSA) prevents, prepares for and responds to infectious diseases and environmental, radiological and chemical hazards, to keep all our communities safe, save lives and protect livelihoods. We provide scientific and operational leadership, working with local, national and international partners to protect the public's health.

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