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**Short title:** Global prevalence of chronic HBV/HCV among patients with TB

**Title:** Global prevalence of hepatitis B or hepatitis C infection among patients with tuberculosis – systematic review and meta-analysis

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# **Search strategy**

|  |
| --- |
| **MEDLINE** |
| **Search 1: tuberculosis and study design** |
| Tuberculosis  Title/abstract: tuberculos\*, TB  MESH: tuberculosis |
| Study design:  Title/abstract: randomized, placebo, trial, RCT, cross-sectional  MESH: clinical trials as topic, cohort studies, cross-sectional studies  Publication type: randomized controlled trial, controlled clinical trial |
| **Search 2: tuberculosis and hepatitis B/C** |
| Tuberculosis  Title/abstract: tuberculos\*, TB  MESH: tuberculosis |
| Hepatitis B/C  Title/abstract: hepatitis B, hepatitis C  MESH: hepatitis B, hepatitis C |
| Search 1 OR Search 2; limited to studies published since 2011 |

|  |
| --- |
| **EMBASE** |
| **Search 1: tuberculosis and study design** |
| Tuberculosis  TW: tuberculos\*, TB  MESH: tuberculosis |
| Study design:  TW: randomi#ed, placebo, trial, RCT, cohort, cross sectional  MESH: clinical trial (topic), cohort analysis, cross-sectional |
| **Search 2:** tuberculosis and hepatitis B/C |
| Tuberculosis  TW: tuberculos\*, TB  MESH: tuberculosis |
| Hepatitis B/C  TW: hepatitis B, hepatitis C  MESH: hepatitis B, hepatitis C |
| Search 1 OR Search 2; limited to studies published since 2011 |

|  |
| --- |
| **Web of Science/ LILACS** |
| **Search 1: tuberculosis and study design** |
| Tuberculosis  TI: tuberculos\*, TB  AB: tuberculos\*, TB |
| Study design:  TI: randomized controlled trial, controlled clinical trial, randomized, trial  AB: randomized controlled trial, controlled clinical trial, randomized, trial |
| **Search 2:** tuberculosis and hepatitis B/C |
| Tuberculosis  TI: tuberculos\*, TB  AB: tuberculos\*, TB |
| Hepatitis B/C  TI: hepatitis B\*, Hepatitis C\*  AB: hepatitis B\*, Hepatitis C\* |
| Search 1 OR Search 2; limited to studies published since 2011 |

## **Table S1. Extracted variables**

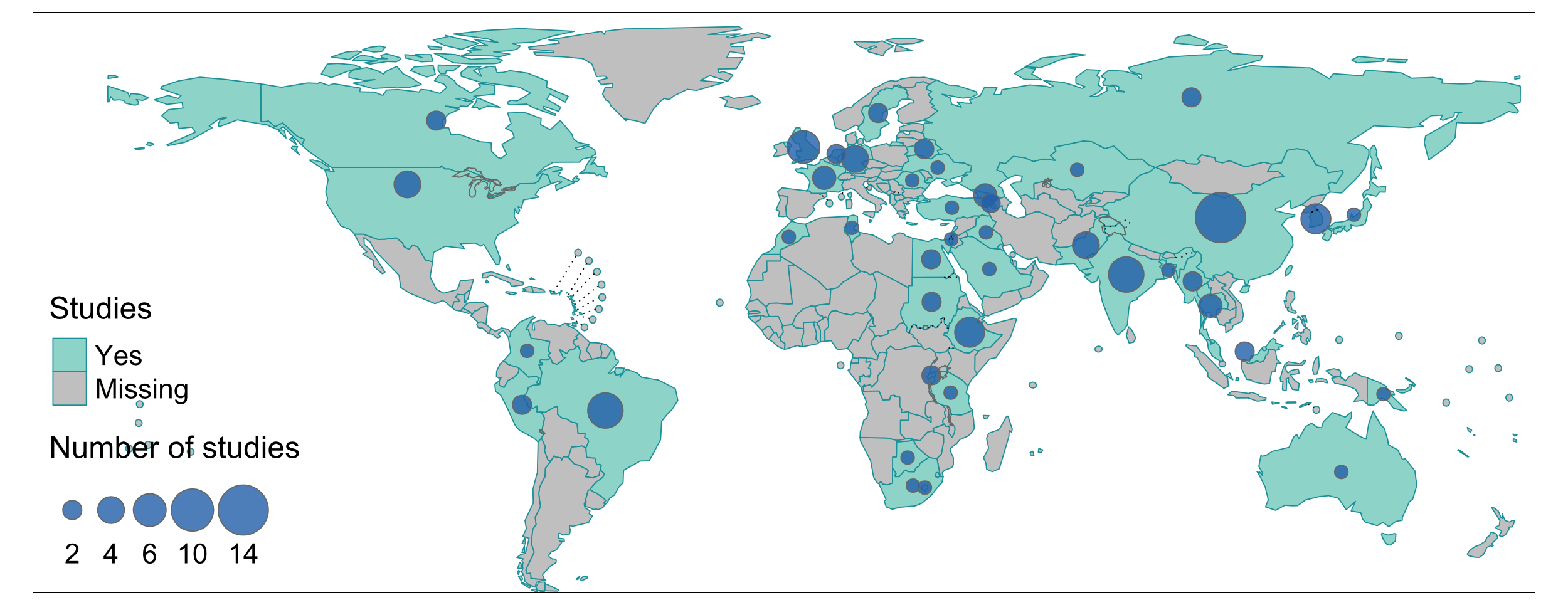
|  |  |  |  |
| --- | --- | --- | --- |
| **General** | **TB diagnosis** | **Hepatitis diagnosis** | **Other conditions and comorbidities** |
| First author;  Year of publication;  Study design;  Strategy for data collection (prospective, retrospective);  Strategy for participant inclusion (sequential, convenience);  Country of study;  Year(s) of study;  Study setting (outpatients, inpatients);  Basic demographics: age, sex. | Source of information for TB diagnosis (interview, medical records);  Site of TB infection (pulmonary, extrapulmonary);  Method(s) used for diagnosis;  Prevalence of drug-resistance;  Method(s) used to diagnose drug-resistance;  Number with TB;  Number with MDR/RR-TB. | Source of information for diagnosis (interview, medical records);  Decision to test for hepatitis (systematic, convenience, risk groups, etc.)  Methods used for HBV/HCV testing;  HCV genotype;  Co-infections HBV/HDV;  Disease stage (e.g. chronic hepatitis; cirrhosis);  Reported degree of fibrosis;  Number tested for hepatitis;  Number with HBV infection;  Number with HCV infection;  Number with co-infections HBV/HCV, HBV/HDV. | HIV infection;  Alcohol use; Intravenous drug-use;  Diabetes mellitus;  Mental health conditions;  Incarceration;  Migration |

*HBV: hepatitis D virus; HCV: hepatitis C virus; HDV: hepatitis D virus; MDR: multidrug-resistant; RR: rifampicin-resistant; TB: tuberculosis.*

# **Studies on chronic hepatitis B**

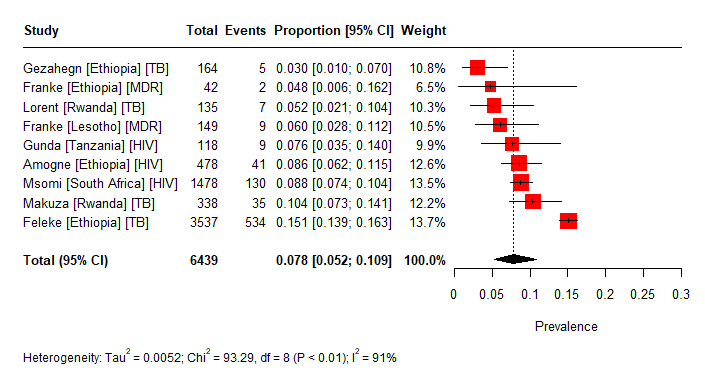
Studies that reported on the prevalence of hepatitis B by country were considered as separate datasets. China had the highest number of eligible studies (n=14), followed by Brazil (n=7), India (n=7), United Kingdom (n=6), Ethiopia (n=5), South Korea (n=5), Germany (n=4), Pakistan (n=4), and USA (n=4). Data from Georgia, and Thailand were reported in three studies. Two studies were identified each from Armenia, Belarus, Canada, Egypt, France, Malaysia, Myanmar, the Netherlands Peru, Russia, Rwanda, Sudan and Sweden. One publication was from Australia, Bangladesh, Botswana, Colombia, Iraq, Israel, Japan, Kazakhstan, Lesotho, Morocco, Papua New Guinea, Romania, Saudi Arabia, South Africa, Tanzania, Tunisia, Turkey, and Ukraine. In addition, three studies had data from multiple countries but did not report on the prevalence of hepatitis B by country.

## **Figure S1. Studies reporting on chronic hepatitis B prevalence**



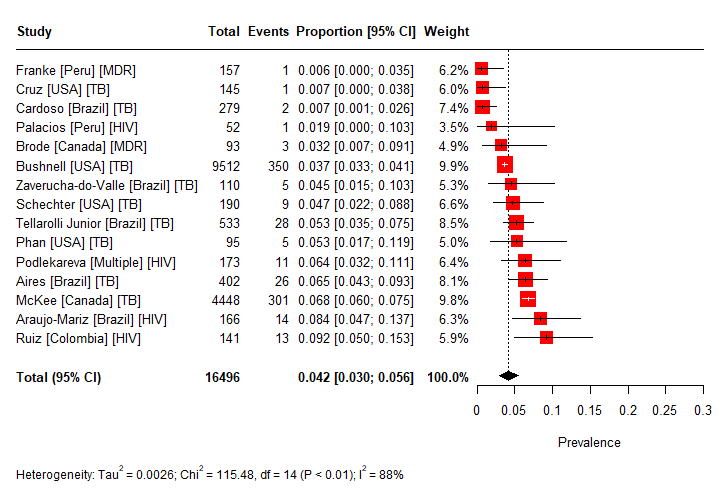
*Countries that have at least one study are shaded green; the size of the circle corresponds to the number of datasets available from the respective country.*

## **Figure S2. Prevalence of HBsAg positivity in WHO African Region**

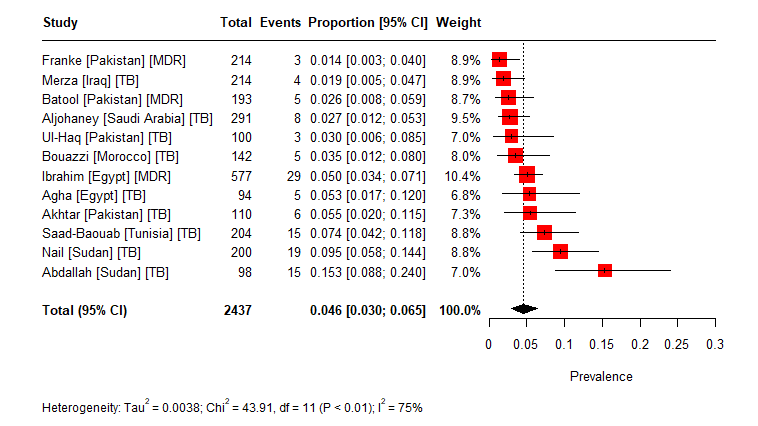


*The square parentheses following the author report on the country of study and the patient population: TB (drug-sensitive and/or resistant tuberculosis without restrictions to other sub-groups); MDR-TB: studies restricted to patients with multidrug-resistant tuberculosis; HIV: studies enrolling patients with TB and HIV.*

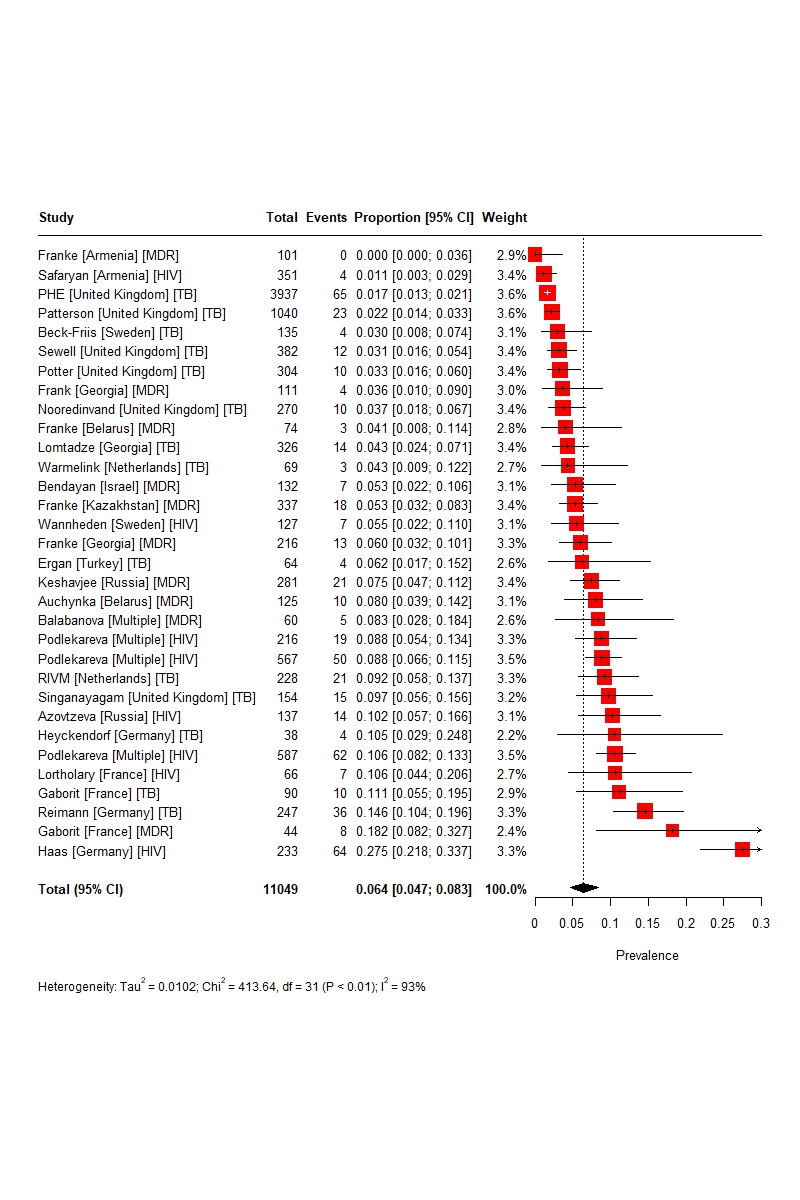
## **Figure S3. Prevalence of HBsAg positivity in WHO Americas Region**



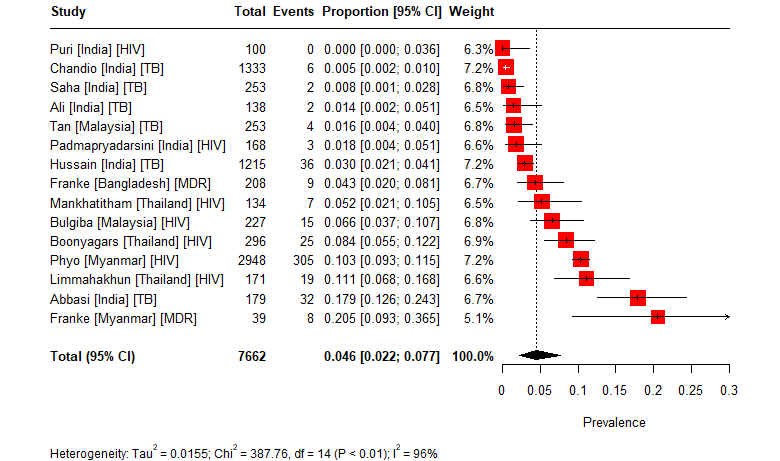
## **Figure S4 Prevalence of HBsAg positivity in WHO Eastern Mediterranean Region**



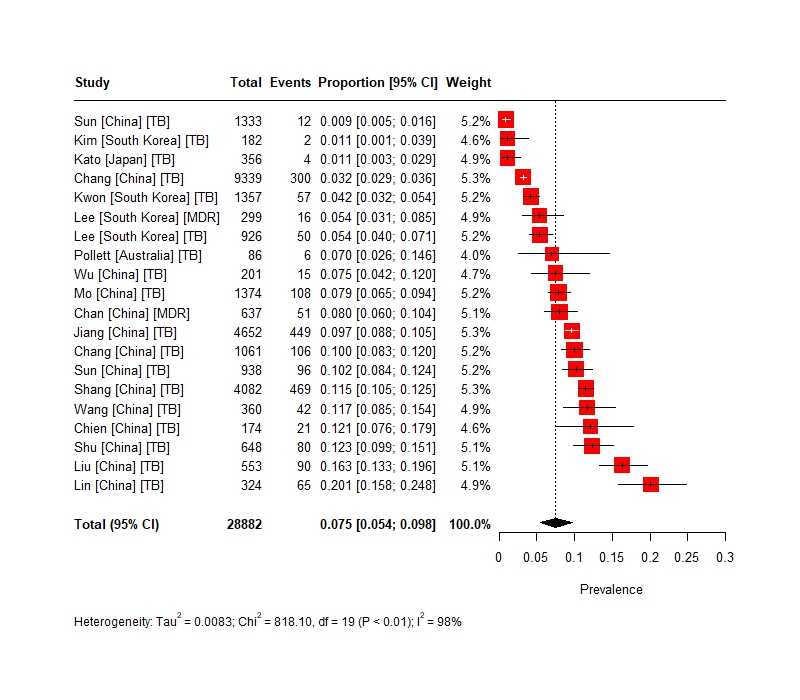
## **Figure S5. Prevalence of HBsAg positivity in WHO European Region**

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## **Figure S6. Prevalence of HBsAg positivity in WHO South East Asia Region**



## **Figure S7 Prevalence of HBsAg positivity in WHO Western Pacific Region**



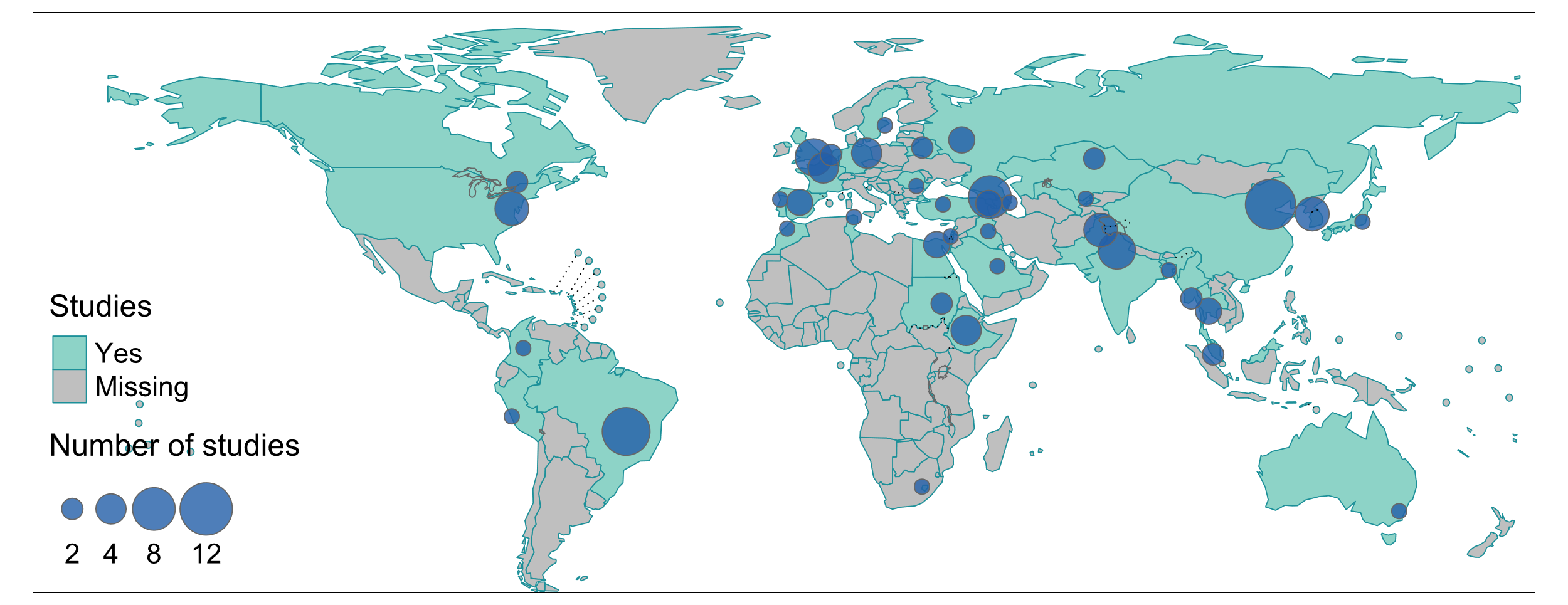
## **Table S2 Prevalence of chronic hepatitis B infection among patients with tuberculosis**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country** | **Number of studies/ datasets** | **TB incidence per 100,000** | **Number tested for hepatitis B** | **Pooled prevalence (95%CI)** |
| **WHO Region Africa** | | | | |
| Ethiopia | 4 | 119 | 4221 | 7·7 (3·1-14·2) |
| Lesotho | 1 | 614 | 149 | 6·0 (2·8-10·4) |
| Rwanda | 2 | 56 | 473 | 7·9 (3·5-13·7) |
| South Africa | 1 | 513 | 1478 | 8·8 (7·4-10·3) |
| Tanzania | 1 | 208 | 118 | 7·6 (3·6-13·1) |
| **WHO Region Americas** | | | | |
| Brazil | 5 | 48 | 1490 | 4·6 (2·1- 7·9) |
| Canada | 2 | 5·3 | 4541 | 5·5 (2·6- 9·4) |
| Colombia | 1 | 41 | 141 | 9·2 (5·0-14·5) |
| Peru | 2 | 130 | 209 | 0·9 (0·1- 2·6) |
| USA | 4 | 2.6 | 9942 | 3·3 (1·8- 5·3) |
| **WHO Region Eastern Mediterranean** | | | | |
| Egypt | 2 | 10 | 671 | 5·1 (3·5- 6·9) |
| Iraq | 1 | 24 | 214 | 1·9 (0·5- 4·1) |
| Morocco | 1 | 94 | 142 | 3·5 (1·1- 7·2) |
| Pakistan | 4 | 264 | 617 | 2·7 (1·4- 4·4) |
| Saudi Arabia | 1 | 8·2 | 291 | 2·7 (1·2- 4·9) |
| Sudan | 2 | 58 | 298 | 11·8 (6·8-17·8) |
| Tunisia | 1 | 36 | 204 | 7·4 (4·2-11·3) |
| **WHO Region Europe** | | | | |
| Armenia | 2 | 27 | 452 | 0·4 (0·0- 2·7) |
| Belarus | 2 | 30 | 199 | 6·3 (2·9-10·7) |
| France | 3 | 7·7 | 200 | 12·4 (8·2-17·3) |
| Georgia | 3 | 64 | 653 | 4·7 (3·2- 6·5) |
| Germany | 3 | 5·0 | 518 | 17·8 (8·9-28·9) |
| Israel | 1 | 2·8 | 132 | 5·3 (2·1- 9·8) |
| Kazakhstan | 1 | 74 | 337 | 5·3 (3·2- 8·0) |
| Netherlands | 2 | 4·4 | 297 | 7·2 (3·2-12·7) |
| Russia | 2 | 47 | 418 | 8·3 (5·9-11·2) |
| Sweden | 2 | 3·8 | 262 | 4·1 (2·0- 6·9) |
| Turkey | 1 | 18 | 64 | 6·2 (1·7-13·4) |
| United Kingdom | 6 | 6·3 | 6087 | 3·2 (2·0- 4·8) |
| **WHO Region South-East Asia** | | | | |
| Bangladesh | 1 | 221 | 208 | 4·3 (2·0- 7·5) |
| India | 7 | 210 | 3386 | 2·1 (0·4- 5·0) |
| Malaysia | 2 | 97 | 480 | 3·7 (0·4-10·1) |
| Myanmar | 2 | 360 | 2987 | 13·5 (5·8-23·8) |
| Thailand | 3 | 143 | 601 | 8·3 (5·5-11·5) |
| **WHO Region Western Pacific** | | | | |
| Australia | 1 | 6·5 | 86 | 7·0 (2·6-13·3) |
| China | 14 | 55 | 25676 | 9·4 (6·6-12·5) |
| Japan | 1 | 11 | 356 | 1·1 (0·3- 2·5) |
| South Korea | 4 | 44 | 2764 | 4·1 (2·6- 5·8) |

# **Studies on chronic hepatitis C**

Studies reported on data from 41 countries (Figure S8). China had the highest number of eligible studies (n=11), followed by Brazil (n=10), Georgia (n=8), United Kingdom (n=6), India (n=6), USA (n=5), Pakistan (n=5), South Korea (n=5), Ethiopia (n=4), Germany (n=4), Armenia (n=3), Egypt (n=3), France (n=3), Russia (n=3), Spain (n=3), and Thailand (n=3). There were two studies each from Belarus, Canada, Kazakhstan, Malaysia, Myanmar, the Netherlands, and Sudan. Australia, Azerbaijan, Colombia, Bangladesh, Iraq, Israel, Japan, Lesotho, Morocco, Peru, Portugal, Romania, Saudi Arabia, Sweden, Tunisia, Turkey, and Uzbekistan each had one study. In addition, five studies reported data from multiple countries.

## **Figure S8. Studies reporting on chronic hepatitis C prevalence**

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*Countries that have at least one study or dataset are shaded green; the size of the circle corresponds to the number of studies available from the respective country.*

## **Figure S9 Prevalence of HCV-antibody positivity in WHO African Region**

A picture containing table

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*The square parentheses following the author report on the country of study and the patient population: TB (drug-sensitive and/or resistant tuberculosis without restrictions to other sub-groups); MDR-TB: studies restricted to patients with multidrug-resistant tuberculosis; HIV: studies enrolling patients with TB and HIV.*

## **Figure S10. Prevalence of HCV-antibody positivity in WHO Americas Region**

Chart

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## **Figure S12. Prevalence of HCV-antibody positivity in WHO Eastern Mediterranean Region**

Chart

Description automatically generated

## **Figure S13. Prevalence of HCV-antibody positivity in WHO European Region**

Table

Description automatically generated with medium confidence

## **Figure S14. Prevalence of HCV-antibody positivity in WHO South-East Asia Region**

Chart

Description automatically generated

## **Figure S15. Prevalence of HCV-antibody positivity in WHO Western Pacific Region**

Chart

Description automatically generated

## **Table S3. Prevalence of chronic hepatitis C infection among patients with tuberculosis**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country** | **Number of studies/ datasets** | **TB incidence per 100,000** | **Number tested for hepatitis C** | **Pooled prevalence (95%CI)** |
| **WHO Region Africa** | | | | |
| Ethiopia | 3 | 119 | 4057 | 5·7 (0·0-21·5) |
| Lesotho | 1 | 614 | 154 | 0·0 (0·0- 0·6) |
| **WHO Region Americas** | | | | |
| Brazil | 8 | 48 | 1977 | 7·4 (4·0-11·8) |
| Canada | 2 | 5·3 | 4541 | 6·2 (0·4-18·1) |
| Colombia | 1 | 41 | 152 | 2·6 (0·7- 5·8) |
| Peru | 1 | 130 | 156 | 0·0 (0·0- 0·6) |
| USA | 5 | 2·6 | 11295 | 10·2 (6·2-15·1) |
| **WHO Region Eastern Mediterranean** | | | | |
| Egypt | 3 | 10 | 806 | 10·9 (1·8-26·4) |
| Iraq | 1 | 24 | 214 | 0·5 (0·0- 1·8) |
| Morocco | 1 | 94 | 142 | 0·0 (0·0- 0·7) |
| Pakistan | 5 | 264 | 1017 | 10·2 (6·1-15·1) |
| Saudi Arabia | 1 | 8·2 | 291 | 3·1 (1·4- 5·4) |
| Sudan | 2 | 58 | 298 | 2·3 (0·5- 5·5) |
| Tunisia | 1 | 36 | 204 | 2·5 (0·8- 5·0) |
| **WHO Region Europe** | | | | |
| Armenia | 3 | 27 | 908 | 18·9 (15·3-22·7) |
| Belarus | 2 | 30 | 200 | 21·5 (9·6-36·7) |
| France | 4 | 7·7 | 247 | 17·6 (5·0-35·7) |
| Georgia | 7 | 64 | 1985 | 23·5 (21·0-26·0) |
| Germany | 3 | 5·0 | 519 | 12·2 (9·1-15·7) |
| Israel | 1 | 2·8 | 132 | 18·9 (12·7-26·0) |
| Kazakhstan | 1 | 74 | 338 | 15·4 (11·7-19·4) |
| Netherlands | 2 | 4·4 | 268 | 8·6 (1·0-22·6) |
| Portugal | 1 | 16 | 468 | 18·2 (14·8-21·8) |
| Russia | 3 | 47 | 472 | 34·7 (3·6-76·9) |
| Spain | 3 | 8·2 | 2384 | 15·7 (13·0-18·6) |
| Sweden | 1 | 3·8 | 127 | 8·7 (4·4-14·2) |
| Turkey | 1 | 18 | 64 | 0·0 (0·0- 1·5) |
| United Kingdom | 6 | 6·3 | 6169 | 1·9 (1·1- 3·0) |
| Uzbekistan | 1 | 62 | 802 | 29·8 (26·7-33·0) |
| **WHO Region South-East Asia** | | | | |
| Bangladesh | 1 | 221 | 208 | 0·0 (0·0- 0·5) |
| India | 6 | 210 | 1985 | 2·0 (0·2- 5·5) |
| Malaysia | 2 | 97 | 469 | 28·2 (0·0-85·1) |
| Myanmar | 2 | 360 | 2987 | 14·5 (13·3-15·8) |
| Thailand | 3 | 143 | 601 | 15·9 (9·2-24·0) |
| **WHO Region Western Pacific** | | | | |
| Australia | 1 | 6·5 | 70 | 7·1 (2·3-14·3) |
| China | 10 | 55 | 19119 | 8·6 (4·5-14·0) |
| Japan | 1 | 11 | 356 | 4·5 (2·6- 6·9) |
| South Korea | 4 | 44 | 2745 | 2·0 (0·8- 3·7) |

# **Comparison of hepatitis prevalence in patients with TB and the general population**

Figure S16. Pooled prevalence of HBs-antigen positivity among patients with TB and MDR-TB in comparison the general population according to WHO region. Data on the general population is from the WHO Global Hepatitis Report, 2017[1]

Chart, scatter chart

Description automatically generated

Figure S17. Pooled prevalence of HCV-antibody positivity among patients with TB and MDR-TB in comparison the general population according to WHO region. Data on the general population is from the WHO Global Hepatitis Report, 2017[1]

Chart, scatter chart

Description automatically generated

*Confidence intervals for the general population are not visible (very narrow around the central estimate)*

# **Sensitivity analysis: comparison between methods for estimating prevalence**

Table S4: comparison of prevalence estimates using the arcsine and logit transformations (generalised linear model)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | **Pooled prevalence estimates and 95% CI** | | | |
|  | **Arcsine transformation** | | **Logit transformation** | | |
| **Hepatitis B** | | | | |  |
| AFR | | 7·8 (5·2-10·9) | | 7·9 (5·8-10·7) | |
| AMR | | 4·2 (3·0- 5·6) | | 4·1 (2·9- 5·8) | |
| EMR | | 4·6 (3·0- 6·5) | | 4·4 (2·9- 6·5) | |
| EUR | | 6·4 (4·7- 8·4) | | 5·9 (4·5- 7·6) | |
| SEAR | | 4·6 (2·2- 7·7) | | 3·7 (1·9- 6·8) | |
| WPR | | 7·5 (5·5- 9·8) | | 6·7 (4·7- 9·4) | |
| Global | | 5·8 (5·0- 6·8) | | 5·2 (4·4- 6·1) | |
| **Hepatitis C** | |  | | |  |
| AFR | | 3·2 (0·0-15·8) | | | 2·0 (2·9-12·4) |
| AMR | | 7·4 (5·2-9·9) | | | 6·6 (4·1-10·3) |
| EMR | | 5·5 (3·0-8·8) | | | 4·6 (2·4-8·5) |
| EUR | | 17·4 (12·2-23·3) | | | 14·8 (10·6-20·1) |
| SEAR | | 7·6 (3·2-13·6) | | | 4·5 (1·6-12·0) |
| WPR | | 6·2 (3·6-9·4) | | | 4·5 (2·3-8·5) |
| Global | | 10·3 (8·4-12·3) | | | 7·7 (6·0-10·0) |

**Sources of heterogeneity in studies on chronic hepatitis B among different categories of patients with TB**

**Table S5** Effect of different variables on the prevalence of HBsAg positivity among patients with TB for explaining heterogeneity of studies.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable potentially explaining heterogeneity** | **Estimated residual heterogeneity τ2** | **Amount of heterogeneity accounted for** | **Residual I2** | **Test of moderators** |
| None | 0·0080\* | - | 95·50% | - |
| Year of publication | 0·0085 | 0% | 95·94% | 0·2466 |
| Year of study& | 0·0918 | 0% | 95·55% | 0·2236 |
| **Country of study** | **0·0071** | **13·54%** | **94·19%** | **0·0009** |
| WHO region | 0·0079 | 3·13% | 94·87% | 0·1084 |
| Country income | 0·0072 | 11·24% | 94·70% | 0·0633 |
| TB category | 0·0078 | 2·48% | 95·37% | 0·1797 |
| TB burden | 0·0081 | 0·64% | 95·63% | 0·7281 |
| Study size | 0·0082 | 0% | 95·32% | 0·9750 |
| Age | 0·0094 | 0% | 95·80% | 0·1258 |
| Sex | 0·0087 | 0% | 95·67% | 0·0844 |
| HIV | 0·0064 | 6·81% | 93·12% | 0·1533 |
| Diabetes | 0·0100 | 0% | 95·72% | 0·5768 |
| PWID | 0·0050 | 17·77% | 89·90% | 0·3561 |
| Incarceration | 0·0030 | 4·03% | 89·44% | 0·1794 |
| Site of TB | 0·0079 | 0% | 95·25% | 0·9313 |
| Proportion tested for hepatitis among enrolled | 0·0081 | 0% | 95·55% | 0·3147 |
| Alcohol use | 0·0087 | 9·11% | 95·91% | 0·9217 |
| Foreign born | 0·0053 | 15·04% | 91·54% | 0·5047 |

\**Between study heterogeneity;* *NOTE: for the meta-regression, continuous variables rather than categorical were used whenever possible. &For studies conducted over multiple years, the middle year was used.*

**Sources of heterogeneity in studies on chronic hepatitis C among different categories of patients with TB**

**Table S6** Effect of different variables on the prevalence of HCVAb positivity among patients with TB for explaining heterogeneity of studies.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable potentially explaining heterogeneity** | **Estimated residual heterogeneity τ2** | **Amount of heterogeneity accounted for** | **Residual I2** | **Test of moderators** |
| None | 0·0226 | - | 98·3% | - |
| Year of publication | 0·0310 | 0% | 98·72% | 0·6742 |
| Year of study& | 0·0319 | 0% | 98·67% | 0·9976 |
| **Country of study** | **0·0144** | **36·20%** | **96·51%** | **<0·0001** |
| **WHO region** | **0·0218** | **3·3%** | **97·85%** | **<0·0007** |
| **Country income** | **0·0242** | **0%** | **98·18%** | **0·0034** |
| **TB category** | **0·0230** | **23·32%** | **98·21%** | **<0·0001** |
| TB burden | 0·0227 | 0% | 98·23% | 0·0489 |
| Study size | 0·0295 | 1·18% | 98·58% | 0·1649 |
| Age | 0·0360 | 0% | 98·72% | 0·3137 |
| **Sex** | **0·0295** | **8·20%** | **98·54%** | **<0·0001** |
| **HIV** | **0·0249** | **24·78%** | **98·11%** | **0·0004** |
| Diabetes | 0·0318 | 0% | 98·40% | 0·3188 |
| **PWID** | **0·0147** | **70·21%** | **96·62%** | **<0·0001** |
| **Incarceration** | **0·0199** | **35·34%** | **98·01%** | **<0·0001** |
| Site of TB | 0·0293 | 0% | 98·57% | 0·9494 |
| Proportion tested for hepatitis among enrolled | 0·0297 | 0·91% | 98·61% | 0·0407 |
| **Alcohol use** | **0·0202** | **31·05%** | **98·14%** | **<0·0001** |
| **Foreign born** | **0·0196** | **58·81%** | **97·87%** | **<0·0001** |

*&For studies conducted over multiple years, the middle year was used.*

# **Funnel plots for studies included in the meta-analysis**

**Figure S18** Funnel plot for studies reporting on the prevalence of hepatitis B among patients with TB

Chart, scatter chart

Description automatically generated

Egger’s test: intercept 0.223 (95%CI -1.20-1.65; t = 0.307, p = 0.760). The test does not indicate funnel plot asymmetry.

**Figure S19** Funnel plot for studies reporting on the prevalence of hepatitis C among patients with TB

Chart, scatter chart

Description automatically generated

Egger’s test: intercept 4.081 (95%CI 1.67-6.50; t = 3.311, p = 0.001). The test indicates funnel plot asymmetry. (Note: these finding should be interpreted with caution given the very high between-study heterogeneity).

# **Quality assessment for included studies**

The assessment of the methodological quality of the studies was done using the Joanna Briggs Institute (JBI) prevalence critical appraisal tool (*Munn et al. Int J Evid Based Healthc, 2015*). The JBI tool has nine domains and responses are graded as “yes”: item performed appropriately and sufficient information about its performance is provided in the manuscript; “no”: the item was not performed appropriately; and “unclear”: the authors do not provide sufficient information to be able to determine whether the item was performed appropriately or not.

*Munn Z, Moola S, Lisy K, Riitano D, Tufanaru C. Methodological guidance for systematic reviews of observational epidemiological studies reporting prevalence and incidence data. Int J Evid Based Healthc. 2015;13(3):147–153.*

**Johanna Briggs Institute Critical Appraisal Tool for systematic reviews of prevalence studies: questions**

1. Was the sample frame appropriate to address the target population?
2. Were study participants sampled in an appropriate way?
3. Was the sample size adequate?
4. Were the study subjects and the setting described in detail?
5. Was the data analysis conducted with sufficient coverage of the identified sample?
6. Were valid methods used for the identification of the condition?
7. Was the condition measured in a standard, reliable way for all participants?
8. Was there appropriate statistical analysis?
9. Was the response rate adequate, and if not, was the low response rate managed appropriately?

**Answers:** Yes/ No/ Unclear/ Not applicable

The specific questions were considered as follows:

1. Appropriateness of the sample frame for the target population: this item considered the overall strategy for selection of potential participants, the characteristics of the population of patients with TB in the respective setting, and the appropriateness of eligibility criteria for inclusion.
2. Appropriateness of participant sampling: this item considered if participants were included consecutively or randomly into the study or if a convenience sample was used. Studies that used registries or facility databases over a given time period were considered to use appropriate sampling if the description provided sufficient detail to judge if all records could be retrieved for analysis.
3. Sample size was considered adequate if at least 10 participants with the target condition (HBV/HCV) were included in the study.
4. Description of participants and setting was considered appropriate if sufficient detail was provided.
5. Analysis conducted with sufficient coverage: this item considered whether testing and/or reporting for hepatitis differed between subgroups of study participants. Given the research question of the current review, we do not anticipate that uptake of testing/ reporting will be different between subgroups.
6. Valid methods used for the identification of the condition: this item evaluated if the testing methods for HBV/HCV infection were reported and for HCV if the presence of HCVAb was followed by a confirmatory test. The item was graded as “unclear” if the authors only reported on the prevalence of hepatitis without mentioning the testing method.
7. Condition measured in a standard, reliable way for all participants: this item required to report that the same strategy for ascertaining HBV/HCV infection was used in all participants.
8. Appropriateness of statistical analysis: this item evaluated if the methods used by the authors to report on prevalence were adequate.
9. Adequate response rate: this item assessed if the study reported on refusals to participate into the study, unnecessary or high number of exclusions, and missingness of medical records. If exclusions and missingness were not discussed the information was graded as “unclear”. It was assumed that some missingness/ exclusions are unavoidable and studies not reporting on this item were graded as accordingly as “no” (response rate inadequate) or “unclear” (missingness not described).

Studies were considered of low risk of bias if information from at most two domains was not provided, moderate for three domains and high risk otherwise.

## **Figure S20.** Quality of evidence for individual studies according to the JBI critical appraisal tool for prevalence studies

Chart, treemap chart

Description automatically generated

## **Figure S21** Quality of evidence across different domains according to the JBI critical appraisal tool for prevalence studies

Chart, bar chart

Description automatically generated

# **Table S7.** **Characteristics of included studies**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Study** | **Country** | **Study years** | **Study design** | **Strategy for data collection** | **Strategy for patient enrolment** | **TB group** | **Patient**  **population** | **Age group** | **Site of TB disease** | **Tests done for HBV diagnosis** | **Tests done for HCV diagnosis** |
| **WHO Region Africa** | | | | | | | | | | | |
| Amogne [2015][2] | Ethiopia | 2008-2011 | RCT | Prospective | Consecutive | HIV | Outpatients with suspected or confirmed TB | Adults | Both | HBsAg | HCVAb |
| Feleke [2020][3] | Ethiopia | 2016-2019 | Cohort | Prospective | Consecutive | TB | Patients on TB treatment | Mixed | Both | ELISA | ELISA |
| Gezahegn [2020][4] | Ethiopia | 2015-2018 | Cross-sectional | Retrospective | Consecutive | TB | Patients who were treated for TB at the TB clinic | Adults | Both | NR | NR |
| Gunda [2016][5] | Tanzania | 2012-2013 | Cross-sectional | Prospective | Consecutive | HIV | Patients diagnosed with PTB and started on TB treatment | Adults | PTB | NR | NR |
| Lorent [2011][6] | Rwanda | 2008-2010 | Cohort | Prospective | Consecutive | TB | Inpatients and outpatients started on first line treatment | Adults | Both | HBsAg | NR |
| Makuza [2019][7] | Rwanda | 2018-2018 | Cross-sectional | Prospective | Consecutive | TB | Individuals >25 years invited for hepatitis B screening | Adults | Both | HBsAg | NR |
| Msomi [2020][8] | South Africa | 2004-2013 | Mixed Cohort/ RCT | Mixed | Consecutive | HIV | Patients with HIV and TB enrolled in two cohorts | Mixed | Both | HBsAg | NR |
| **WHO Region Americas** | | | | | | | | | | | |
| Aires [2012][9] | Brazil | 2008-2010 | Cross-sectional | Prospective | Consecutive | TB | Inpatients and outpatients with a clinical diagnosis of TB | Adults | Both | HBsAg, HBV-DNA | NR |
| Araujo-Mariz [2016][10] | Brazil | 2007-2012 | Cross-sectional | Prospective | Unclear | HIV | Patients starting on TB treatment | Adults | Both | HBcAg, HBsAg, HBsAb, HBV-DNA | HCVAb |
| Brode [2015][11] | Canada | 2000-2011 | Cohort | Retrospective | Consecutive | MDR | Patients diagnosed with MDR-TB at one clinic | Mixed | Both | NR | NR |
| Bushnell [2015][12] | USA | 2000-2010 | Cohort | Retrospective | Consecutive | TB | New York City residents diagnosed with TB during the study | Adults | Both | HBsAg, HBeAg, HBV-DNA | HCVAb, HCV-RNA |
| Campo [2014][13] | USA | 2000-2010 | Cohort | Retrospective | Consecutive | TB | Patients treated for active TB | Adults | Both | NR | NR |
| Cardoso [2017][14] | Brazil | 2010-2014 | Cohort | Retrospective | Consecutive | TB | Patients diagnosed with TB and treated at the study center | Adults | Both | NR | NR |
| Costi [2017][15] | Brazil | 2005-2007 | Cross-sectional | Prospective | Unclear | TB | Outpatients attending a public TB reference hospital | Adults | Both | HBsAg | HCVAb, HCV-RNA, genotype |
| Cruz [2013][16] | USA | 1987-2012 | Cohort | Retrospective | Consecutive | TB | Adolescents treated for TB | Adolescents | Both | NR | NR |
| Junior [2015][17] | Brazil | 2010-2010 | Cohort | Retrospective | Consecutive | TB | Patients diagnosed with TB on smear microscopy | Adults | PTB | NR | NR |
| McKee [2018][18] | Canada | 1990-2013 | Cross-sectional | Retrospective | Consecutive | TB | Patients tested for HIV and HCV | Mixed | Both | NR | HCVAb HCV-RNA, genotype |
| Moreira Puga [2019][19] | Brazil | 2014-2017 | Cross-sectional | Prospective | Consecutive | Prisoners | Male prisoners with bacteriologically confirmed TB | Adults | Both | HBsAg HBcAb HBSab | HCVAb&PCR |
| Palacios [2012][20] | Peru | 1996-2005 | Cohort | Retrospective | Consecutive | HIV | All HIV patients starting treatment for MDR-TB | Adults | Both | NR | NR |
| Phan [2016][21] | USA | 2010-2014 | Cohort | Retrospective | Consecutive | TB | Patients treated for active TB | Adults | Both | NR | NR |
| Pursnami [2014][22] | USA | 2002-2009 | Case-control | Retrospective | Consecutive | TB | Patients with suspected or proven active pulmonary TB | Adults | Both | NR | NR |
| Reis [2011][23] | Brazil | 2008-2010 | Cross-sectional | Prospective | Consecutive | TB | Patient with clinically diagnosed TB undergoing treatment | Adults | Both | NR | HCVAb, RIBA, HCV-RNA, genotype |
| Ruiz [2018][24] | Colombia | 2007-2015 | Cohort | Retrospective | Consecutive | HIV | Hospitalized patients with TB/HIV coinfection | Adults | Both | HBsAg | HCVAb |
| Schechter [2017][25] | USA | 2008-2015 | Cohort | Retrospective | Consecutive | TB | Patients with culture-confirmed pulmonary TB | Adults | PTB | HBsAg | HCVAb |
| Teixiera [2014][26] | Brazil | 2008-2010 | Cross-sectional | Prospective | Consecutive | TB | Adult patients with TB | Adults | Both | NR | NR |
| Tellarolli Junior [2017][27] | Brazil | 2002-2011 | Cohort | Retrospective | Consecutive | TB | New TB cases among residents of a municipality | Mixed | Both | NR | NR |
| Zaverucha-do-Valle [2014][28] | Brazil | 2001-2008 | Cohort | Retrospective | Consecutive | TB | Patients treated for microbiologically confirmed TB | Adults | Both | HBsAg, HBcAb, HBsAb | NR |
| **WHO Region Eastern Mediterranean** | | | | | | | | | | | |
| Abdallah [2015][29] | Sudan | 2014-2014 | Cross-sectional | Prospective | Consecutive | TB | Patients admitted for TB treatment | Both | Both | HBsAg ELISA and RDT | HCVAb ELISA and RDT |
| Agha [2014][30] | Egypt | 2013-2014 | Cohort | Prospective | Unclear | TB | Patients with newly diagnosed TB | Adults | Both | Serology | Serology and HCV-RNA |
| Akhtar [2013][31] | Pakistan | 2011-2012 | Cross-sectional | Prospective | Unclear | TB | Patients diagnosed with TB | Adults | Both | HBsAg | HCVAb |
| Aljohaney [2018][32] | Saudi Arabia | 2011-2016 | Cohort | Retrospective | Consecutive | TB | Inpatients with a microbiological, histological or radiological diagnosis of TB | Adults | Both | NR | NR |
| Badawy [2011][33] | Egypt | NR | Cross-sectional | Unclear | Unclear | TB | Adult patients with TB from one hospital | Adults | Both | NR | HCVAb |
| Batool [2019][34] | Pakistan | 2008-2016 | Cohort | Retrospective | Consecutive | MDR | Patients enrolled in the DR-TB register | Mixed | Both | NR | NR |
| Bouazzi [2016][35] | Morocco | 2014-2015 | Cohort | Prospective | Convenience | TB | Patients on TB treatment | Adults | Both | NR | NR |
| Ibrahim [2017][36] | Egypt | 2006-2015 | Cohort | Retrospective | Consecutive | MDR | Inpatients with MDR-TB | Adults | Both | NR | NR |
| Merza [2016][37] | Iraq | 2015-2016 | Cross-sectional | Prospective | Consecutive | TB | Patients with TB with microbiological, radiological or histological diagnosis | Mixed | Both | HBsAg | HCVAb |
| Nail [2012][38] | Sudan | 2010-2011 | Cross-sectional | Prospective | Unclear | TB | Patients with confirmed TB who started TB treatment | unclear | Both | HBsAg | HCVAb |
| Rehman [2020][39] | Pakistan | 2018-2019 | Cross-sectional | Prospective | Consecutive | TB | Patients with TB | Mixed | Both | NR | NR |
| Saad-Baouab [2019][40] | Tunisia | 2010-2016 | case-control | Retrospective | Convenience | TB | Patients with pulmonary TB | Adults | Both | NR | NR |
| Ul-Haq [2013][41] | Pakistan | 2010-2010 | Cross-sectional | Prospective | Unclear | TB | Consecutive smear positive patients | Adults | PTB | HBSAg RDT then ELISA | HCVAb RDT then ELISA |
| **WHO Region Europe** | | | | | | | | | | | |
| Adamashvili [2021][42] | Georgia | 2015-2017 | Cohort | Retrospective | Consecutive | MDR | Adult patients with bacteriologically confirmed pulmonary TB | Adults | PTB | NR | NR |
| Auchynka [2020][43] | Belarus | 2016-2018 | Cohort | Retrospective | Unclear | MDR | Adult patients with M/XDR-TB starting delamanid-containing regimens | Adults | Both | NR | NR |
| Azovtzeva [2019][44] | Russia | 2016-2018 | Cohort | Retrospective | Unclear | HIV | Patients with TB and HIV | Adults | - | NR | NR |
| Balabanova [2016][45] | Estonia Latvia Lithuania Romania | 2007-2012 | Cohort | Prospective | Consecutive | MDR | Adult new and retreatment patients with M/XDR-TB | Adults | Both | NR | NR |
| Beck-Friis [2020][46] | Sweden | 1992-2017 | Case-control | Retrospective | Consecutive for cases; age matched controls | TB | Pregnant and non-pregnant women undergoing treatment for TB | Adults | Both | NR | NR |
| Bendayan [2011][47] | Israel | 2000-2005 | Cohort | Retrospective | Consecutive | MDR | Hospitalized patients with a new microbiological diagnosis of MDR-TB | Mixed | Both | NR | NR |
| Brugueras [2020][48] | Spain | 2000-2016 | Cohort | Retrospective | Consecutive | TB | Patients starting TB treatment | Adults | Both | NR | NR |
| Buziashvili [2021][49] | Georgia | 2016-2018 | Cohort | Retrospective | Consecutive | MDR | Patients with RR-TB starting treatment with new and repurposed drugs | Mixed | Both | NR | NR |
| Buziashvili [2019][50] | Georgia | 2010-2012 | Cohort | Retrospective | Convenience | MDR | Patients with culture-confirmed TB | Adults | Both | NR | NR |
| Ergan [2017][51] | Turkey | 1997-2007 | Cohort | Retrospective | Consecutive | TB | Patients with microbiological or histological diagnosis of TB | Adults | Both | NR | NR |
| Frank [2019][52] | Georgia | 2011-2013 | Cohort | Retrospective | Consecutive | MDR | Population-based study of patients starting treatment for XDR-TB | Adults | Both | NR | NR |
| Franke [2020][53] | Multiple (10 countries) | 2015-2018 | Cohort | Prospective | Consecutive | MDR | Patients with MDR-TB who received treatment with bedaquiline or delamanid | Mixed | Both | NR | NR |
| Gaborit [2018][54] | France | 2002-2013 | Case-control | Retrospective | Consecutive | MDR | Adult inpatients with culture-confirmed MDR-TB | Mixed | Both | NR | NR |
| Gonzalez-Garcia [2018][55] | Spain | 1995-2013 | Cohort | Retrospective | Consecutive | TB | Adults with microbiologically or clinically diagnosed TB | Adults | Both | NR | NR |
| Guglielmetti [2017][56] | France | 2011-2013 | Cohort | Retrospective | Convenience | MDR | Inpatients with MDR-TB treated with bedaquiline | Adults | Both | NR | NR |
| Gurbanova [2016][57] | Azerbaijan | 2007-2013 | Cohort | Retrospective | Consecutive | Prisoners | New and previously treated patients with microbiologically confirmed RR-TB | Adults | PTB | NR | NR |
| Haas [2014][58] | Germany | 2001-2011 | Cohort | Unclear | Consecutive | HIV | Patients enrolled in an HIV clinical surveillance cohort | Adults | Both | NR | NR |
| Hermosilla [2015][59] | Kazakhstan | 2009-2012 | Cross-sectional | Prospective | Unclear | PWID | PWID and their partners self-reporting on previous TB | Adults | Both | NR | HCVAb |
| Hewison [2018][60] | Armenia and Georgia | 2013-2015 | Cohort | Retrospective | Convenience | MDR | Patients with MDR-TB receiving treatment with bedaquiline | Adults | Both | NR | HCVAb |
| Heyckendorf [2018][61] | Germany | 2013-2016 | Cohort | Prospective | Convenience | TB | Patients with microbiologically confirmed TB | Adults | PTB | NR | NR |
| Kempker [2020][62] | Georgia | 2015-2017 | Cohort | Prospective | Convenience | MDR | Adults with culture-confirmed MDR-TB starting bedaquiline, clofazimine, linezolid and./or delamanid | Adults | PTB | NR | NR |
| Keshavjee [2012][63] | Russia | 2000-2004 | Cohort | Retrospective | Unclear | MDR | Patients with culture-confirmed MDR-TB | Adults | PTB | NR | NR |
| Khachatryan [2021][64] | Armenia | 2014-2017 | Cohort | Retrospective | Consecutive | MDR | Adults with RR/MDR-TB started on second line treatment | Adults | Both | NR | NR |
| Lomtadze [2013][65] | Georgia | 2007-2010 | Cohort | Prospective | Consecutive | TB | Patients with microbiologically confirmed TB staring treatment | Adults | Both | HBsAg HBcAb | HCVAb, HCV-RNA, genotype |
| Lortholary [2016][66] | France | 2005-2008 | RCT | Prospective | Unclear | HIV | Patients with HIV who were treated for <3 months | Adults | Both | HBsAg HBcAb HBsAb | HCVAb |
| Martinez-Sanz [2018][67] | Spain | 2005-2016 | Cohort | Retrospective | Consecutive | TB | All patients diagnosed with TB from one province | Adults | Both | NR | NR |
| Massavirov [2021][68] | Uzbekistan | 2013-2017 | Cohort | Retrospective | Consecutive | HIV | Adult patients with HIV and TB | Adults | Both | NR | NR |
| Meira [2019][69] | Portugal | 2007-2013 | Cohort | Retrospective | Consecutive | TB | Patients with culture-confirmed from one hospital | Adults | Both | NR | NR |
| Nooredinvand [2015][70] | United Kingdom | 2008-2011 | Cross-sectional | Prospective | Unclear | TB | Patients with newly diagnosed TB starting on treatment | Adults | Both | HBsAg HBcAg HBeAg HBcAb | HCVAb, HCV-RNA |
| Oprea [2018][71] | Romania | 2009-2014 | Cohort | Prospective | Consecutive | PWID | Adult PWID with HIV admitted to one hospital | Adults | Both | NR | NR |
| Pape [2019][72] | Germany | 2011-2016 | Cohort | Retrospective | Consecutive | Prisoners | Prisoners with documented active TB | Adults | PTB | NR | NR |
| Patterson [2021][73] | United Kingdom | 2015-2018 | Cohort | Retrospective | Consecutive | TB | Adult patients with active TB starting TB treatment | Adults | Both | NR | NR |
| Podlekareva [2016][74] | Multiple (19 countries) | 2011-2013 | Cohort | Prospective | Consecutive | HIV | Consecutive patients with active TB and HIV | Adults | Both | HBsAg | HCVAb |
| Podlekareva [2014][75] | Multiple (12 countries) | 2004-2006 | Cohort | Retrospective | Unclear | HIV | Adult patients with HIV and confirmed or presumptive TB starting TB treatment | Adults | Both | HBsAg | HCVAb |
| Potter [2014][76] | United Kingdom | 2013-2013 | Cohort | Retrospective | Consecutive | TB | Patients with active TB entered in the London TB register | Both | Both | HBsAg | HCVAb |
| Reimann [2019][77] | Germany | 2012-2017 | Cohort | Retrospective | Consecutive | TB | Inpatients diagnosed with TB from one hospital | Adults | PTB | NR | NR |
| Russkikh [2021][78] | Russia | 2018-2019 | Cohort | Retrospective | Consecutive | MDR | Adult patients with pulmonary XDR-TB | Adults | PTB | NR | NR |
| Safaryan [2021][79] | Armenia | 2015-2019 | Cohort | Retrospective | Consecutive | HIV | Adults and children with HIV and TB | Mixed | Both | NR | NR |
| Sewell [2015][80] | United Kingdom | 2009-2012 | Cross-sectional | Retrospective | Consecutive | TB | Adults with TB attending an outpatient service | Adults | Both | HBsAg | HCVAb, HCV-RNA |
| Singanayagam [2012][81] | United Kingdom | 2007-2009 | Cohort | Prospective | Unclear | TB | Adult patients starting TB treatment at one hospital | Adults | Both | NR | NR |
| Wannheden [2014][82] | Sweden | 1987-2010 | Cohort | Retrospective | Consecutive | HIV | Patients with HIV and TB treated at a referral clinic | Adults | Both | NR | NR |
| Warmelink [2011][83] | Netherlands | 2005-2008 | Cohort | Retrospective | Consecutive | TB | Adult patients with active TB | Adults | Both | NR | NR |
| PHE [2020][84] | United Kingdom | 2019-2019 | - | - | - | TB | Sub-national TB report for England | Mixed | Both | - | - |
| RIVM [2020][85] | Netherlands | 2019-2019 | - | - | - | TB | National TB report for the Netherlands | Mixed | Both | - | - |
| **WHO Region South East Asia** | | | | | | | | | | | |
| Abbasi [2014][86] | India | 2012-2013 | Cross-sectional | Retrospective | Consecutive | TB | Patients with smear positive TB presenting to one hospital | Adults | PTB | NR | NR |
| Ali [2020][87] | India | 2017-2019 | Cohort | Prospective | Consecutive | TB | Adult inpatients newly diagnosed with TB | Adults | Both | NR | NR |
| Bansal [2017][88] | India | 2012-2013 | Cross-sectional | Retrospective | Unclear | TB | Patients diagnosed with TB from one department | Unclear | Both | NR | HCVAb |
| Boonyagars [2018][89] | Thailand | 2008-2015 | Cohort | Retrospective | Consecutive | HIV | Adult patients with HIV and TB started on first-line treatment | Adults | Both | HBsAg | HCVAb |
| Bulgiba [2013][90] | Malaysia | 2010-2010 | Cohort | Retrospective | Consecutive | HIV | Patients with HIV who were registered for TB treatment | Adults | Both | HBsAg | HCVAb |
| Chandio [2018][91] | India | 2009-2013 | Cross-sectional | Prospective | Convenience | TB | Patients with TB starting first-line treatment | Adults | Both | HBsAg, HBcAb | HCVAb |
| Hussain [2016][92] | India | 2007-2010 | Cross-sectional | Prospective | Unclear | TB | Outpatients with active TB | Adults | Both | HBsAg | NR |
| Limmahakhun [2012][93] | Thailand | 2000-2009 | Cohort | Retrospective | Consecutive | HIV | Patients in care at the HIV clinic who were diagnosed with TB | Adults | Both | NR | NR |
| Mankhatitham [2011][94] | Thailand | 2006-2007 | RCT | Prospective | Unclear | HIV | Patients with HIV and TB treated with NNRTIs | Adults | Both | HBsAg | HCVAb |
| Padmapryadarsini [2013][95] | India | 2006-2008 | RCT | Prospective | Unclear | HIV | Patients with HIV and TB and CD4<250/mmc | Adults | Both | NR | NR |
| Phyo [2019][96] | Myanmar | 2011-2017 | Cohort | Retrospective | Consecutive | HIV | Patients with HIV enrolled at Integrated HIV Care clinics | Adults | Both | HBsAg | HCVAb |
| Puri [2017][97] | India | 2015-2016 | Cohort | Prospective | Convenience | HIV | Patients with HIV and TB starting TB treatment | Adults | Both | HBsAg | HCVAb |
| Saha [2016][98] | India | 2008-2012 | Cohort | Retrospective | Convenience | TB | Patients of all ages with smear positive TB | Mixed | PTB | NR | NR |
| Tan [2020][99] | Malaysia | 2015-2017 | Cohort | Retrospective | Consecutive | TB | Adults with pulmonary TB diagnosed in Manjung | Adults | PTB | NR | NR |
| **WHO Region Western Pacific** | | | | | | | | | | | |
| Chan [2013][100] | Taiwan | 2000-2008 | Cohort | Retrospective | Consecutive | MDR | Patients with pulmonary MDR-TB diagnosed nationwide | Adults | PTB | NR | NR |
| Chang [2015][101] | Taiwan | 2000-2010 | Cohort | Retrospective | Consecutive | TB | Patients aged >20 years diagnosed with TB nationwide | Adults | Both | NR | NR |
| Chang [2019][102] | Taiwan | 2009-2017 | Cohort | Prospective | Consecutive | TB | Patients with microbiologically confirmed TB receiving first-line treatment | Adults | Both | HBsAg | HCVAb |
| Chen [2013][103] | China | 2006-2011 | Cross-sectional | Retrospective | Consecutive | PWID | Four methadone maintenance therapy clinics from one Chinese province | Adults | NR | NR | HCVAb |
| Chien [2014][104] | Taiwan | 2006-2010 | Cohort | Retrospective | Consecutive | TB | Patients newly treated for TB from one referral hospital | Adults | Both | HBsAg | HCVAb |
| Heo [2012][105] | South Korea | 2001-2010 | Cohort | Retrospective | Consecutive | Homeless | Homeless individuals recorded in the national TB surveillance system | Adults | PTB | NR | NR |
| Jiang [2021][106] | China | 2011-2017 | Cohort | Mixed | Consecutive | TB | Patients diagnosed with active TB and treated with first-line drugs | Adults | Both | NR | NR |
| Kato [2013][107] | Japan | 2008-2011 | Cohort | Retrospective | Consecutive | TB | Patients admitted to two hospitals for PTB | Adults | PTB | NR | NR |
| Kim [2013][108] | South Korea | 2003-2008 | Cohort | Retrospective | Convenience | TB | Patients older than 65 years with culture-confirmed TB admitted to a hospital | Adults | PTB | NR | NR |
| Kwon [2020][109] | South Korea | 2003-2016 | Cohort | Retrospective | Unclear | TB | Patients diagnosed with active TB treated with first-line treatment | Adults | Both | HBsAg | HCVAb |
| Lee [2016][110] | South Korea | 2009-2013 | Cohort | Retrospective | Consecutive | TB | Adult patients starting on anti-TB treatment | Adults | Both | NR | NR |
| Lee [2016][111] | South Korea | 2009-2013 | Cohort | Retrospective | Consecutive | MDR | Adults with MDR-TB starting treatment in two hospitals | Adults | Both | HBsAg, HBV-DNA | HCVAb, HCV-RNA |
| Lin [2016][112] | Taiwan | 2005-2011 | Cohort | Retrospective | Consecutive | TB | Patients with culture-confirmed TB starting treatment | Adults | Both | HBsAg | HCVAb |
| Liu [2014][113] | Taiwan | 2002-2009 | Cohort | Retrospective | Unclear | TB | Patients receiving treatment for TB at a referral hospital | Adults | Both | HBsAg | HCVAb |
| Mo [2014][114] | China | 2003-2013 | Cohort | Retrospective | Unclear | TB | TB patients with and without HIV | Adults | Both | HBsAg HBeAg HBeAb HBcAb, HBV-DNA | HCVAb, HCV-RNA |
| Pollett [2016][115] | Australia | 2008-2011 | Cohort | Retrospective | Convenience | TB | Adult patients with EPTB treated at a referral center | Adults | EPTB | HBsAg | HCVAb |
| Shang [2011][116] | China | 2007-2008 | Cohort | Prospective | Unclear | TB | Patients with TB receiving DOTS in four regions of China | Adults | PTB | HBsAg | NR |
| Shu [2013][117] | Taiwan | 2005-2009 | Cohort | Retrospective | Unclear | TB | Adults with microbiologically or clinically-diagnosed TB | Adults | PTB | HBsAg | HCVAb |
| Sun [2012][118] | China | 2006-2008 | Cohort | Retrospective | Consecutive | TB | Patients with confirmed PTB living in one district | Mixed | PTB | NR | NR |
| Sun [2016][119] | China | 2011-2012 | Cohort | Prospective | Unclear | TB | Patients treated for TB at one hospital | Adults | Both | NR | NR |
| Wang [2011][120] | Taiwan | 2007-2008 | Cohort | Prospective | Unclear | TB | Adult patients with culture-confirmed PTB | Adults | PTB | Serology, HBV-DNA | HCVAb, HCV-RNA |
| Wu [2016][121] | China | 2007-2008 | Cohort | Retrospective | Unclear | TB | Patients with newly diagnosed PTB living in one district | Adults | PTB | NR | NR |
| Ghosh [2021][122] | Multiple | 2014-2019 | Cohort | Unclear | Convenience | MDR | Patients receiving delamanid through the compassionate-use programme | Mixed | Both | NR | NR |
| **Studies with <50 patients with TB** | | | | | | | | | | | |
| Avaliani [2021][123] | Georgia | 2019 | Cohort | Prospective | Consecutive | MDR | Patients with MDR-TB starting the short all oral treatment | Adults | PTB | NR | NR |
| Bierhals [2021][124] | Brazil | 2016-2017 | Cross-sectional | Retrospective | Unclear | Prisoners | Prisoners with TB | Adults | PTB | NR | NR |
| Chiang [2019][125] | Ukraine | 2011-2016 | Cohort | Retrospective | Consecutive | MDR | Children with MDR-TB | Child-ren | PTB | NR | NR |
| Mason [2021][126] | Papua New Guinea | 2017-2018 | Cohort | Retrospective | Unclear | MDR | Patients with MDR-TB receiving short course treatment | Adults | PTB | HBsAg | NR |
| Phinius [2020][127] | Botswana | 2008-2011 | Cohort | Retrospective | Unclear | TB | People living with HIV starting Truvada | Adults | Both | HBsAg, HBV-DNA | NR |
| Woreta [2014][128] | Ethiopia | 2012-2013 | Cross-sectional | Retrospective | Unclear | HIV | Patients with TB and HIV | Adults | Both | HBsAg | HCVAb |

*DOTS: directly-observed treatment, short-course; DR: drug-resistant; HCV: hepatitis C virus; HCV-Ab: HCV antibodies; HBV: hepatitis B virus; HBV-Ag: hepatitis B antigen; HIV: human immunodeficiency virus; MDR: multidrug resistant; NR: not reported; NNRTI: non-nucleosidic reverse transcriptase inhibitors; PHE: Public Health England; PWID: people who inject drugs; RIVM: Rijksinstituut voor Volksgezondheid en Milieu (Country TB report for the Netherlands); RR: rifampicin resistant; XDR: extensively drug-resistant; WHO: World Health Organization.*

*Age is reported as means or medians according to the information provided by the authors. If an age range is provided instead of a single value, then age was reported as a grouped variable. Incarceration and use of injectable drugs are considered as previous and/or current.*

# **Table S8. Overview of patient characteristics and testing results for the included studies**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Study** | **Country** | **Age (mean or median)** | **Proportion male** | **Proportion with comorbidities and other risk factors** | | | | | | | **Number tested for HBV** | **HBsAg +ve** | **Number tested for HCV** | **HCVAb +ve** |
| HIV | Excessive alcohol use | PWID | Diabetes | Mental health conditions | Incarceration | Foreign born |
| **WHO Region Africa** | | | | | | | | | | | | | | |
| Amogne [2015][2] | Ethiopia | 36 mean | 51% | 100% | NR | NR | NR | NR | NR | NR | 478 | 41 | 478 | 8 |
| Feleke [2020][3] | Ethiopia | 35 mean | 49% | 75% | 89% | NR | NR | NR | NR | NR | 3537 | 534 | 3537 | 612 |
| Gezahegn [2020][4] | Ethiopia | median 30-39 | 56% | 29% | NR | NR | NR | NR | NR | NR | 164 | 5 | NR | NR |
| Gunda [2016][5] | Tanzania | 38 median | 58% | 100% | NR | NR | NR | NR | NR | NR | 118 | 9 | NR | NR |
| Lorent [2011][6] | Rwanda | 32-36 median | 55% | 66% | 68% | 0% | NR | NR | NR | NR | 135 | 7 | NR | NR |
| Makuza [2019][7] | Rwanda | NR | NR | NR | NR | NR | NR | NR | NR | NR | 338 | 35 | NR | NR |
| Msomi [2020][8] | South Africa | 35 mean | 48% | 100% | NR | NR | NR | NR | NR | NR | 1478 | 130 | NR | NR |
| **WHO Region Americas** | | | | | | | | | | | | | | |
| Aires [2012][9] | Brazil | 44 mean | 72% | 28% | NR | 5% | NR | NR | 230% | NR | 402 | 26 | NR | NR |
| Araujo-Mariz [2016][10] | Brazil | 39 | 68% | 100% | 16% | 24% | NR | NR | NR | NR | 166 | 14 | 166 | 11 |
| Brode [2015][11] | Canada | 36 mean | 60% | 1% | NR | NR | 10% | 8% | NR | 96% | 93 | 3 | 93 | 2 |
| Bushnell [2015][12] | USA | 18-44 median | 61% | 18% | 18% | 4% | NR | NR | 2% | 72% | 9512 | 350 | 9512 | 400 |
| Campo [2014][13] | USA | 41 median | 58% | 6% | 11% | 2% | NR | NR | 2% | 79% | NR | NR | 1421 | 52 |
| Cardoso [2017][14] | Brazil | 40 mean | 56% | 24% | 22% | NR | 8% | NR | NR | NR | 279 | 2 | 279 | 2 |
| Costi [2017] | Brazil | 38 mean | 67% | 25% | 13% | 21% | NR | NR | 7% | NR | NR | NR | 138 | 27 |
| Cruz [2013][16] | USA | 15 median | 50% | 0% | NR | NR | <1% | NR | NR | 51% | 145 | 1 | NR | NR |
| Junior [2015][17] | Brazil | 39 mean | 83% | 10% | 71% | 16% | 3% | 4% | NR | NR | NR | NR | 114 | 14 |
| McKee [2018][18] | Canada | NR | NR | 8% | NR | NR | NR | NR | NR | NR | 4448 | 301 | 4448 | 496 |
| Moreira Puga [2019][19] | Brazil | 29 median | 100% | 7% | NR | NR | NR | NR | 100% | NR | 279 | 4 | 279 | 13 |
| Palacios [2012][20] | Peru | 31 mean | 77% | 100% | 8% | 33% | 2% | 33% | NR | NR | 52 | 1 | NR | NR |
| Phan [2016][21] | USA | 48 mean | 69% | 0% | 14% | NR | 38% | NR | NR | NR | 95 | 5 | 93 | 16 |
| Pursnami [2014][22] | USA | 42 mean | 65% | 61% | 38% | 52% | NR | 25% | 18% | 38% | NR | NR | 79 | 18 |
| Reis [2011][23] | Brazil | 44 mean | 72% | 28% | NR | 6% | NR | NR | 25% | NR | NR | NR | 402 | 35 |
| Ruiz [2018][24] | Colombia | 38 median | 77% | 100% | 3% | 2% | NR | NR | 3% | NR | 141 | 13 | 152 | 4 |
| Schechter [2017][25] | USA | 48 median | 77% | 37% | 54% | 26% | 16% | NR | 42% | 23% | 190 | 9 | 190 | 30 |
| Teixiera [2014][26] | Brazil | <38 median | 67% | 8% | NR | 4% | NR | NR | NR | NR | NR | NR | 224 | 7 |
| Tellarolli Junior [2017][27] | Brazil | NR | 73% | 23% | NR | NR | NR | NR | NR | NR | 533 | 28 | 533 | 50 |
| Zaverucha-do-Valle [2014][28] | Brazil | 40 mean | 66% | 47% | 30% | NR | NR | NR | NR | NR | 110 | 5 | 121 | 9 |
| **WHO Region Eastern Mediterranean** | | | | | | | | | | | | | | |
| Abdallah [2015][29] | Sudan | 36 mean | 71% | 0% | NR | NR | NR | NR | NR | NR | 98 | 15 | 98 | 1 |
| Agha [2014][30] | Egypt | ~50 mean | 60% | NR | 3% | NR | NR | NR | NR | NR | 94 | 5 | 94 | 18 |
| Akhtar [2013][31] | Pakistan | 42 mean | 59% | NR | NR | 0% | NR | NR | NR | NR | 110 | 6 | 110 | 11 |
| Aljohaney [2018][32] | Saudi Arabia | 37-56 mean | 52% | 10% | NR | NR | 18% | NR | NR | 70% | 291 | 8 | 291 | 9 |
| Badawy [2011][33] | Egypt | NR | NR | NR | NR | NR | NR | NR | NR | NR | NR | NR | 135 | 21 |
| Batool [2019][34] | Pakistan | 29 median | 51% | NR | NR | NR | 7% | 1% | NR | NR | 193 | 5 | 193 | 9 |
| Bouazzi [2016][35] | Morocco | 43 mean | 59% | 11% | 14% | NR | 12% | 1% | NR | NR | 142 | 5 | 142 | 0 |
| Ibrahim [2017][36] | Egypt | 39 mean | 76% | <1% | 7% | 11% | 18% | NR | NR | NR | 577 | 29 | 577 | 15 |
| Merza [2016][37] | Iraq | 40 mean | 59% | NR | 29% | 0% | NR | NR | NR | NR | 214 | 4 | 214 | 1 |
| Nail [2012][38] | Sudan | <40 median | 63% | NR | NR | 0% | NR | NR | NR | NR | 200 | 19 | 200 | 7 |
| Rehman [2020][39] | Pakistan | 35 mean | 54% | NR | NR | NR | NR | NR | NR | NR | NR | NR | 400 | 31 |
| Saad-Baouab [2019][40] | Tunisia | 36-43 mean | 100% | 2% | 15% | 15% | 11% | 2% | NR | NR | 204 | 15 | 204 | 5 |
| Ul-Haq [2013][41] | Pakistan | 33 median | 56% | NR | NR | NR | NR | NR | NR | NR | 100 | 3 | 100 | 22 |
| **WHO Region Europe** | | | | | | | | | | | | | | |
| Adamashvili [2021][42] | Georgia | 31-45 median | 76% | 3% | 42% | 3% | 10% | NR | 9% | NR | NR | NR | 849 | 202 |
| Auchynka [2020][43] | Belarus | 43 | 72% | 15% | 35% | 5% | 11% | NR | NR | NR | 125 | 10 | 125 | 19 |
| Azovtzeva [2019][44] | Russia | 38 mean | 69% | 100% | 71% | 61% | NR | NR | 46% | NR | 137 | 14 | 137 | 102 |
| Balabanova [2016][45] | Estonia, Latvia, Lithuania, Romania | 40-49 median | 79% | 4% | 58% | 5% | NR | NR | NR | NR | 60 | 5 | 67 | 14 |
| Beck-Friis [2020][46] | Sweden | 26 median | 0% | 3% | NR | NR | NR | NR | NR | 2% | 135 | 4 | NR | NR |
| Bendayan [2011][47] | Israel | 40 median | 77% | 6% | 26% | 24% | 13% | NR | NR | 96% | 132 | 7 | 132 | 25 |
| Brugueras [2020][48] | Spain | 40 median | 87% | 22% | 45% | 20% | 6% | NR | 9% | 56% | NR | NR | 839 | 141 |
| Buziashvili [2021][49] | Georgia | 40 mean | 78% | 7% | 40% | 5% | 9% | NR | NR | NR | NR | NR | 225 | 57 |
| Buziashvili [2019][50] | Georgia | 35 median | 65% | 3% | 34% | 7% | 12% | NR | 18% | NR | NR | NR | 147 | 29 |
| Ergan [2017][51] | Turkey | 48 median | 48% | NR | 0% | NR | 13% | NR | NR | NR | 64 | 4 | 64 | 0 |
| Frank [2019][52] | Georgia | 34 median | 69% | 3% | 40% | 3% | 8% | 8% | 31% | NR | 111 | 4 | 111 | 23 |
| Franke [2020][53] | Multiple (10 countries) | 36 median | 67% | 11% | NR | NR | 20% | NR | NR | NR | 101 | 0 | 106 | 27 |
| Gaborit [2018][54] | France | 33 mean | 75% | 14% | 25% | 23% | 7% | NR | 18% | 75% | 44 | 8 | 44 | 8 |
| Gonzalez-Garcia [2018][55] | Spain | 47 median | 64% | 23% | 21% | 18% | 7% | NR | NR | 24% | NR | NR | 1284 | 222 |
| Guglielmetti [2017][56] | France | 38 median | NR | 4% | NR | 13% | NR | NR | NR | 98% | NR | NR | 45 | 21 |
| Gurbanova [2016][57] | Azerbaijan | 38 mean | 99% | 8% | NR | NR | 4% | NR | 100% | NR | NR | NR | 444 | 283 |
| Haas [2014][58] | Germany | 37 median | 81% | 100% | NR | 9% | 3% | NR | NR | 60% | 233 | 64 | 233 | 23 |
| Hermosilla [2015][59] | Kazakhstan | 40 mean | 81% | 34% | NR | 95% | NR | NR | NR | NR | NR | NR | 122 | 108 |
| Hewison [2018][60] | Armenia and Georgia | 41 median | 83% | 5% | NR | 11% | 7% | NR | 24% | NR | NR | NR | 53 | 23 |
| Heyckendorf [2018][61] | Germany | 39 median | 64% | 0% | NR | NR | 9% | NR | NR | NR | 38 | 4 | 39 | 5 |
| Kempker [2020][62] | Georgia | 38 median | 82% | 2% | 32% | NR | 13% | 0% | 24% | NR | NR | NR | 95 | 20 |
| Keshavjee [2012][63] | Russia | 34 median | 82% | <1% | 36% | 15% | 4% | 5% | 28% | NR | 281 | 21 | 281 | 43 |
| Khachatryan [2021][64] | Armenia | 47 mean | 81% | 12% | NR | NR | 7% | NR | 3% | NR | NR | NR | 451 | 77 |
| Lomtadze [2013][65] | Georgia | 37 median | 71% | 2% | 51% | 18% | NR | NR | 9% | NR | 326 | 14 | 326 | 68 |
| Lortholary [2016][66] | France | 43 median | 71% | 100% | NR | NR | NR | NR | NR | 77% | 66 | 7 | 68 | 5 |
| Martinez-Sanz [2018][67] | Spain | 40 median | 61% | 10% | NR | NR | NR | NR | NR | 22% | NR | NR | 261 | 30 |
| Massavirov [2021][68] | Uzbekistan | 41 mean | 78% | 100% | 47% | 25% | 2% | NR | NR | NR | NR | NR | 802 | 239 |
| Meira [2019][69] | Portugal | 51 mean | 72% | 20% | 26% | NR | 12% | NR | NR | NR | NR | NR | 468 | 85 |
| Nooredinvand [2015][70] | United Kingdom | NR | NR | NR | NR | NR | NR | NR | NR | NR | 270 | 10 | 270 | 6 |
| Oprea [2018][71] | Romania | 30 median | 85% | 100% | 15% | 100% | NR | NR | 28% | NR | 170 | 11 | 170 | 168 |
| Pape [2019][72] | Germany | 37 median | 97% | 8% | 68% | 27% | NR | NR | 100% | 82% | 137 | 38 | 123 | 33 |
| Patterson [2021][73] | United Kingdom | 45-50 mean | 57% | 3% | NR | NR | NR | NR | NR | NR | 1040 | 23 | 1103 | 9 |
| Podlekareva [2016][74] | Multiple (19 countries) | 35 median | 75% | 100% | NR | 68% | NR | NR | NR | 2% | 567 | 50 | 575 | 433 |
| Podlekareva [2014][75] | Multiple (12 countries) | 31 median | 71% | 100% | NR | 71% | NR | NR | NR | 4% | 587 | 62 | 587 | 268 |
| Potter [2014][76] | United Kingdom | 38 mean | 62% | 3% | NR | NR | NR | NR | NR | 85% | 304 | 10 | 302 | 12 |
| Reimann [2019][77] | Germany | 43 mean | 71% | 6% | 11% | 7% | 9% | NR | NR | NR | 247 | 36 | 247 | 36 |
| Russkikh [2021][78] | Russia | 36 mean | 56% | 19% | 11% | 13% | 17% | NR | 7% | NR | NR | NR | 54 | 10 |
| Safaryan [2021][79] | Armenia | 31-40 median | 82% | 100% | NR | NR | NR | <1% | 8% | NR | 351 | 4 | 351 | 63 |
| Sewell [2015][80] | United Kingdom | 42 mean | 54% | 17% | NR | NR | NR | NR | NR | 72% | 382 | 12 | 382 | 15 |
| Singanayagam [2012][81] | United Kingdom | 35 median | 54% | 6% | 4% | NR | 4% | NR | NR | NR | 154 | 15 | 175 | 2 |
| Wannheden [2014][82] | Sweden | 30-39 median | 57% | 100% | NR | NR | NR | NR | NR | 85% | 127 | 7 | 127 | 11 |
| Warmelink [2011][83] | Netherlands | 38 median | 77% | 9% | 35% | 26% | NR | NR | NR | NR | 69 | 3 | 71 | 11 |
| PHE [2020][84] | United Kingdom | 15-44 median | 60% | NR | 4% | 5% | 12% | NR | 5% | 74% | 3937 | 65 | 3937 | 51 |
| RIVM [2020][85] | Netherlands | 37 median | 58% | 4% | NR | NR | 6% | NR | NR | 75% | 228 | 21 | 197 | 8 |
| **WHO Region South East Asia** | | | | | | | | | | | | | | |
| Abbasi [2014][86] | India | 37 mean | 56% | NR | NR | NR | NR | NR | NR | NR | 179 | 32 | 179 | 16 |
| Ali [2020][87] | India | 46 mean | 62% | 7% | NR | NR | NR | NR | NR | NR | 138 | 2 | 138 | 2 |
| Bansal [2017][88] | India | NR | NR | 3% | NR | NR | NR | NR | NR | NR | NR | NR | 1147 | 75 |
| Boonyagars [2018][89] | Thailand | 38 mean | 67% | 100% | NR | NR | NR | NR | NR | NR | 296 | 25 | 296 | 48 |
| Bulgiba [2013][90] | Malaysia | 39 mean | 88% | 100% | 24% | 56% | 3% | NR | 19% | 19% | 227 | 15 | 216 | 127 |
| Chandio [2018][91] | India | 47 mean | 67% | NR | 39% | NR | 17% | NR | NR | NR | 1333 | 6 | NR | NR |
| Hussain [2016][92] | India | 21-30 median | 78% | 2% | NR | NR | NR | NR | NR | NR | 1215 | 36 | NR | NR |
| Limmahakhun [2012][93] | Thailand | 37 mean | 59% | 100% | NR | NR | 3% | NR | NR | NR | 171 | 19 | 171 | 16 |
| Mankhatitham [2011] | Thailand | 37 mean | 67% | 100% | NR | NR | NR | NR | NR | NR | 134 | 7 | 134 | 32 |
| Padmapryadarsini [2013][95] | India | 36 mean | 79% | 100% | 44% | NR | NR | NR | NR | NR | 168 | 3 | 168 | 1 |
| Phyo [2019][96] | Myanmar | 41-60 median | 73% | 100% | 19% | NR | NR | NR | NR | NR | 2948 | 305 | 2948 | 429 |
| Puri [2017][97] | India | 40 mean | 67% | 100% | 38% | NR | NR | NR | NR | NR | 100 | 0 | 100 | 0 |
| Saha [2016][98] | India | NR | NR | 15% | 10% | NR | NR | NR | NR | NR | 253 | 2 | 253 | 1 |
| Tan [2020][99] | Malaysia | 44 median | 64% | 6% | NR | NR | 31% | NR | NR | 8% | 253 | 4 | 253 | 15 |
| **WHO Region Western Pacific** | | | | | | | | | | | | | | |
| Chan [2013][100] | Taiwan | 49 median | 76% | <1% | 19% | NR | 36% | NR | NR | NR | 637 | 51 | 622 | 56 |
| Chang [2015][101] | Taiwan | 61 mean | 67% | NR | NR | NR | 24% | NR | NR | NR | 9339 | 300 | 9339 | 201 |
| Chang [2019][102] | Taiwan | 67 mean | 70% | 1% | 16% | NR | 21% | NR | NR | NR | 1061 | 106 | 1061 | 43 |
| Chen [2013][103] | China | NR | NR | 11% | NR | 80% | NR | NR | NR | NR | NR | NR | 101 | 87 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chien [2014][104] | Taiwan | 64 mean | 71% | 0% | 5% | NR | 38% | NR | NR | 0% | 174 | 21 | 201 | 41 |
| Heo [2012][105] | South Korea | 47 mean | 97% | NR | 58% | NR | 15% | 11% | NR | 0% | 142 | 13 | 142 | 9 |
| Jiang [2021][106] | China | 36-44 mean | 64% | <1% | 10% | NR | 9% | NR | NR | NR | 4652 | 449 | 4652 | 6 |
| Kato [2013][107] | Japan | 64 mean | 69% | <1% | 24% | NR | 23% | NR | NR | NR | 356 | 4 | 356 | 16 |
| Kim [2013][108] | South Korea | 71 median | 61% | 0% | NR | NR | 25% | NR | NR | NR | 182 | 2 | 182 | 2 |
| Kwon [2020][109] | South Korea | 50 median | 53% | 0% | 10% | NR | 10% | NR | NR | NR | 1357 | 57 | 1333 | 12 |
| Lee [2016][110] | South Korea | 56 mean | 59% | NR | 14% | NR | 20% | NR | NR | NR | 926 | 50 | 931 | 27 |
| Lee [2016][111] | South Korea | 47 median | 85% | 0% | NR | NR | 30% | NR | NR | NR | 299 | 16 | 299 | 11 |
| Lin [2016][112] | Taiwan | 67 mean | 76% | 0% | NR | NR | 24% | NR | NR | NR | 324 | 65 | 321 | 106 |
| Liu [2014][113] | Taiwan | 62-69 mean | 73% | 0% | 0% | NR | NR | NR | NR | NR | 553 | 90 | 553 | 86 |
| Mo [2014][114] | China | 40-43 median | 73% | 5% | NR | NR | NR | NR | NR | NR | 1374 | 108 | 1374 | 112 |
| Pollett [2016][115] | Australia | 36 median | 54% | 4% | 0% | 2% | 6% | NR | NR | 98% | 86 | 6 | 70 | 5 |
| Shang [2011][116] | China | 42 median | 72% | NR | NR | NR | 1% | NR | NR | NR | 4082 | 469 | NR | NR |
| Shu [2013][117] | Taiwan | 62 mean | 68% | 7% | NR | NR | 21% | NR | NR | NR | 648 | 80 | 636 | 48 |
| Sun [2012][118] | China | 28-58 median | 69% | NR | NR | NR | 4% | NR | NR | NR | 1333 | 12 | NR | NR |
| Sun [2016][119] | China | 42 median | 59% | 0% | 19% | NR | 14% | NR | NR | NR | 938 | 96 | NR | NR |
| Wang [2011][120] | Taiwan | ~60 median | 64% | 1% | NR | NR | 18% | NR | NR | NR | 360 | 42 | 360 | 24 |
| Wu [2016][121] | China | <50 median | 64% | NR | 28% | NR | 20% | NR | NR | NR | 201 | 15 | NR | NR |
| Ghosh [2021][122] | Multiple | 35 mean | 61% | 33% | NR | NR | 5% | NR | NR | NR | 202 | 3 | 202 | 11 |
| **Studies with <50 patients with TB** | | | | | | | | | | | | | | |
| Avaliani [2021][123] | Georgia | 48 mean | 68% | 8% | NR | NR | 16% | NR | NR | NR | NR | NR | 25 | 3 |
| Bierhals [2021][124] | Brazil | 26-35 median | 97% | 9% | NR | NR | NR | NR | 100% | NR | 34 | 0 | 33 | 0 |
| Chiang [2019][125] | Ukraine | 5 median | 45% | 15% | NR | NR | 5% | NR | NR | NR | 20 | 0 | NR | NR |
| Mason [2021][126] | Papua New Guinea | NR | 58% | 19% | NR | NR | NR | NR | NR | NR | 26 | 4 | NR | NR |
| Phinius [2020][127] | Botswana | 37-39 median | 54% | 100% | NR | NR | 57% | NR | NR | NR | 46 | 16 | NR | NR |
| Woreta [2014][128] | Ethiopia | NR | NR | 100% | NR | NR | NR | NR | NR | NR | 49 | 11 | 49 | 5 |

*HCV: hepatitis C virus; HCV-Ab: HCV antibodies; HBV: hepatitis B virus; HBV-Ag: hepatitis B antigen; HIV: human immunodeficiency virus; NR: not reported; PHE: Public Health England; PWID: people who inject drugs; RIVM: Rijksinstituut voor Volksgezondheid en Milieu (Country TB report for the Netherlands); WHO: World Health Organization.*

*Age is reported as means or medians according to the information provided by the authors. If an age range is provided instead of a single value, then age was reported as a grouped variable. Incarceration and use of injectable drugs are considered as previous and/or current.*

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