Annex 2

Country profiles
FOR 30 HIGH TB BURDEN COUNTRIES

20 high TB burden countries based on absolute number of incident cases

10 high TB burden countries based on severity of disease burden (incidence per capita)
**Global Tuberculosis Report 2019**

Data for all countries and years can be downloaded from [www.who.int/tb/data](http://www.who.int/tb/data)

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### Angola

**Population 2018**
- **31 Million**

### Disease Burden, 2018

<table>
<thead>
<tr>
<th>Disease Category</th>
<th>New Incidence (thousands)</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>109 (71–156)</td>
<td>355 (230–507)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>11 (6.8–15)</td>
<td>34 (22–49)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>3.9 (1.7–7.1)</td>
<td>13 (5.4–23)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>19 (11–28)</td>
<td>60 (36–91)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>3.7 (2.4–5.3)</td>
<td>12 (7.9–17)</td>
</tr>
</tbody>
</table>

### Estimated Proportion of TB Cases with MDR/RR-TB, 2018

- **New cases**: 2.4% (1.1–4.2)
- **Previously treated cases**: 15% (11–19)

### TB Case Notifications, 2018

- **Total new and relapse**: 66,189
  - % tested with rapid diagnostics at time of diagnosis: 68%
  - % with known HIV status: 94%
  - % pulmonary: 56%
  - % children aged 0–14 years: 34%
  - % women: 18%
  - % men: 82%
- **Total cases notified**: 70,362

### Universal Health Coverage and Social Protection

- **TB treatment coverage (notified/estimated incidence), 2018**: 61% (62–94)
- **TB patients facing catastrophic total costs**: 21% (11–33)

### TB/HIV Care in New and Relapse TB Patients, 2018

- **Patients with known HIV-status who are HIV-positive**: 4,127 (10%)
  - on antiretroviral therapy: 2,101 (49%)

### Drug-Resistant TB Care, 2018

- **% of bacteriologically confirmed TB cases tested for rifampicin resistance**: <1%
  - New cases: 9%
  - Previously treated cases: 9%

### Treatment Success Rate and Cohort Size

- **New and relapse cases registered in 2017**
  - Success: 25%
  - Cohort: 57,877
- **Previously treated cases, excluding relapse, registered in 2017**
  - HIV-positive TB cases registered in 2017: 175
  - MDR/RR-TB cases started on second-line treatment in 2016: 0

### TB Preventive Treatment, 2018

- **% of HIV-positive people (newly enrolled in care) on preventive treatment**: 42%
- **% of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment**: 20%

### TB Financing, 2019

- **National TB budget (US$ millions)**: 67
- **Funding source**: 21% domestic, 10% international, 70% unfunded

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Data as are reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

* Ranges represent uncertainty intervals.
* MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
* Calculated for pulmonary cases only.
* Includes cases with unknown previous TB treatment history.
* Includes patients diagnosed before 2018 and who were not laboratory-confirmed.
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data 2000</th>
<th>Data 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking prevalence (% of population aged ≥15 years)</td>
<td>0</td>
<td>10000</td>
</tr>
<tr>
<td>Diabetes prevalence (% of population aged ≥18 years)</td>
<td>0</td>
<td>10000</td>
</tr>
<tr>
<td>Alcohol use disorders, 12 month prevalence (% of population aged ≥15 years)</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Smoking prevalence (% of population aged ≥15 years)</td>
<td>0</td>
<td>10000</td>
</tr>
<tr>
<td>Health expenditure per capita, PPPb (current international $)</td>
<td>0</td>
<td>500</td>
</tr>
<tr>
<td>Greater than 10% of total household expenditure or income on health (% of population)</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>UHC index of essential service coveragea (based on 16 tracer indicators including TB treatment)</td>
<td>0</td>
<td>50</td>
</tr>
</tbody>
</table>

a Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

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**GLOBAL TUBERCULOSIS REPORT 2019**

Data for all countries and years can be downloaded from www.who.int/tb/data
Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

a Ranges represent uncertainty intervals.

b MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
c Calculated for pulmonary cases only.
d Includes cases with unknown previous TB treatment history.
e Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

Data for all countries and years can be downloaded from www.who.int/tb/data
### INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2000</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3 Good Health and Well-Being</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV prevalence (%) of population aged 15–49 years</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Diabetes prevalence (%) of population aged ≥18 years</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Alcohol use disorders, 12 month prevalence (%) of population aged ≥15 years</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Smoking prevalence (%) of population aged ≥15 years</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Health expenditure per capita, PPPb (current international $)</td>
<td></td>
<td>200</td>
</tr>
<tr>
<td>Greater than 10% of total household expenditure or income on health (%) of population</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>UHC index of essential service coverageb (based on 16 tracer indicators including TB treatment)</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td><strong>1 No Poverty</strong></td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Population living below the international poverty line (%) of population</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1 No Poverty</strong></td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>Population covered by social protection floors/systems (%) of population</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2 Zero Hunger</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevalence of undernourishment (%) of population</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2 Zero Hunger</strong></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Access to clean fuels and technologies for cooking (%) of population</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td><strong>3 Decent Work and Economic Growth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP per capita, PPPb (constant 2011 international $)</td>
<td></td>
<td>5000</td>
</tr>
<tr>
<td><strong>3 Decent Work and Economic Growth</strong></td>
<td>0</td>
<td>5000</td>
</tr>
<tr>
<td>GINI index (0 = perfect equality, 100 = perfect inequality)</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td><strong>4 Reduced Inequalities</strong></td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Population living in slums (%) of urban population</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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*a Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

*b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Brazil

ESTIMATES OF TB BURDEN, 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>95 (81–110)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>11 (9.1–13)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>2.5 (1.9–3.2)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>4.8 (4.6–5)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>1.9 (1.4–2.4)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- New cases: 1.5% (1.1–2)
- Previously treated cases: 8% (6–10)

TB CASE NOTIFICATIONS, 2018

- Total new and relapse: 82 409
  - % tested with rapid diagnostics at time of diagnosis: 34%
  - % with known HIV status: 79%
  - % pulmonary: 87%
  - % bacteriologically confirmed: 74%
  - % children aged 0–14 years: 3%
  - % women: 29%
  - % men: 68%
- Total cases notified: 90 527

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- TB treatment coverage (notified/estimated incidence), 2018: 87% (75–100)
- TB patients facing catastrophic total costs
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 7% (6–8)

TB/HIV CARE IN NEW AND REPEAT TB PATIENTS, 2018

- Patients with known HIV-status who are HIV-positive: 7 445 (11%)
  - on antiretroviral therapy: 3 776 (51%)

DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance:
  - New cases: 43%
  - Previously treated cases: 48%
- Laboratory-confirmed cases: MDR/RR-TB: 1 119, XDR-TB: 26
- Patients started on treatment: MDR/RR-TB: 756, XDR-TB: 26
- MDR/RR-TB cases tested for resistance to second-line drugs: 141

TREATMENT SUCCESS RATE AND COHORT SIZE

- New and relapse cases registered in 2017: 71% (78 652)
- Previously treated cases, excluding relapse, registered in 2017: 39% (7 350)
- HIV-positive TB cases registered in 2017: 51% (7 617)
- MDR/RR-TB cases started on second-line treatment in 2016: 61% (546)
- XDR-TB cases started on second-line treatment in 2016: 41% (17)

TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment

TB FINANCING, 2019

- National TB budget (US$ millions): 38
- Funding source: 100% domestic, <1% international, 0% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

a Ranges represent uncertainty intervals.
b MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
c Calculated for pulmonary cases only.
d Includes cases with unknown previous TB treatment history.
e Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

Data for all countries and years can be downloaded from www.who.int/tb/data
Data for all countries and years can be downloaded from www.who.int/tb/data

**INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE**

**HIV prevalence** (% of population aged 15–49 years)

**Diabetes** (% of population aged ≥18 years)

**Undernourishment** (% of population)

**Smoking** prevalence (% of population aged ≥15 years)

**Harmful use of alcohol**

**Population living below the international poverty line** (% of population)

**Population covered by social protection floors/systems** (% of population)

**Prevalence of undernourishment** (% of population)

**Access to clean fuels and technologies for cooking** (% of population)

**GDP per capita, PPP**

**GINI index**

**Population living in slums** (% of urban population)

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**NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018**

† Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

‡ GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage.
China

ESTIMATES OF TB BURDEN, a 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>866 (740–1 000)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>18 (9.8–28)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>66 (50–85)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>37 (34–41)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>2.4 (1.2–4)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

New cases 7.1% (5.6–8.7)
Previously treated cases 21% (21–21)

TB CASE NOTIFICATIONS, 2018

Total new and relapse 795 245
  - % tested with rapid diagnostics at time of diagnosis 15%
  - % with known HIV status 60%
  - % pulmonary 95%
  - % bacteriologically confirmed c 37%
  - % children aged 0-14 years 1%
  - % women 31%
  - % men 68%
Total cases notified 801 532

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

TB treatment coverage (notified/estimated incidence), 2018 92% (79–110)
TB patients facing catastrophic total costs
TB case fatality ratio (estimated mortality/estimated incidence), 2018 5% (4–6)

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

| NUMBER (%)
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with known HIV-status who are HIV-positive</td>
</tr>
<tr>
<td>- on antiretroviral therapy</td>
</tr>
</tbody>
</table>

DRUG-RESISTANT TB CARE, 2018

% of bacteriologically confirmed TB cases tested for rifampicin resistance a
  - New cases 58%
  - Previously treated cases 100%
Laboratory-confirmed cases a MDR/RR-TB: 14 636, XDR-TB: 430
Patients started on treatment b, c MDR/RR-TB: 8 965, XDR-TB: 5 405
MDR/RR-TB cases tested for resistance to second-line drugs

TREATMENT SUCCESS RATE AND COHORT SIZE

New and relapse cases registered in 2017 93% 764 701
Previously treated cases, excluding relapse, registered in 2017 83% 5 077
HIV-positive TB cases registered in 2017 87% 5 308
MDR/RR-TB cases started on second-line treatment in 2016 52% 5 405
XDR-TB cases started on second-line treatment in 2016

TB PREVENTIVE TREATMENT, 2018

% of HIV-positive people (newly enrolled in care) on preventive treatment
% of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment

TB FINANCING, 2019

National TB budget (US$ millions) 719
Funding source: 92% domestic, 8% international, 7% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

a Ranges represent uncertainty intervals.

b MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

c Calculated for pulmonary cases only.

d Includes cases with unknown previous TB treatment history.

e Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

For more details, please visit the following link: [www.who.int/tb/data]
GLOBAL TUBERCULOSIS REPORT 2019

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

Ranges represent uncertainty intervals.

MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

Calculated for pulmonary cases only.

Includes cases with unknown previous TB treatment history.

Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018

INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE

HIV prevalence (% of population aged 15–49 years)

Diabetes prevalence (% of population aged ≥18 years)

Alcohol use disorders, 12 month prevalence (% of population aged ≥15 years)

Smoking prevalence (% of population aged ≥15 years)

Health expenditure per capita, PPPb (current international $)

Greater than 10% of total household expenditure or income on health (% of population)

UHC index of essential service coverageb (based on 16 tracer indicators including TB treatment)

Population living below the international poverty line (% of population)

Population covered by social protection floors/systems (% of population)

Prevalence of undernourishment (% of population)

Access to clean fuels and technologies for cooking (% of population)

GDP per capita, PPPb (constant 2011 international $)

GINI index (0 = perfect equality, 100 = perfect inequality)

Population living in slums (% of urban population)

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* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

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GLOBAL TUBERCULOSIS REPORT 2019
Democratic Republic of the Congo

**Population 2018**: 84 million

### Estimates of TB Burden, 2018

<table>
<thead>
<tr>
<th></th>
<th>Number (thousands)</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>270 (175–385)</td>
<td>321 (208–458)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>31 (9.6–65)</td>
<td>37 (11–77)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence*</td>
<td>6 (3–10)</td>
<td>7.2 (3.6–12)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>45 (25–65)</td>
<td>51 (30–77)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>10 (3.2–22)</td>
<td>12 (3.8–26)</td>
</tr>
</tbody>
</table>

### Estimated Proportion of TB Cases with MDR/RR-TB, 2018

- New cases: 1.7% (1.1–2.6)
- Previously treated cases: 9.3% (8.8–10)

### TB Case Notifications, 2018

- Total new and relapse cases notified: 169,748
  - % with known HIV status: 60%
  - % pulmonary: 83%
  - % bacteriologically confirmed**: 77%
  - % children aged 0–14 years: 11%
  - % women: 39%
  - % men: 50%
- Total cases notified: 171,682

### Universal Health Coverage and Social Protection

- TB treatment coverage (notified/estimated incidence), 2018: 63% (44–97)
- TB patients facing catastrophic total costs
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 20% (10–33)

### TB/HIV Care in New and Relapse TB Patients, 2018

- Patients with known HIV-status who are HIV-positive: 9,758 (9%)
  - on antiretroviral therapy: 8,481 (87%)

### Drug-Resistant TB Care, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance*:
  - New cases: 2%
  - Previously treated cases: 66%
- Laboratory-confirmed cases**: MDR/RR-TB: 765, XDR-TB: 22
- Patients started on treatment**: MDR/RR-TB: 690, XDR-TB: 15
- MDR/RR-TB cases tested for resistance to second-line drugs: 328

### Treatment Success Rate and Cohort Size

- New and relapse cases registered in 2017: 90% (149,657)
- Previously treated cases, excluding relapse, registered in 2017: 70% (1,593)
- HIV-positive TB cases registered in 2017: 78% (9,688)
- MDR/RR-TB cases started on second-line treatment in 2016: 86% (634)
- XDR-TB cases started on second-line treatment in 2016: 39% (18)

### TB Preventive Treatment, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 39%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 24% (22–26)

### TB Financing, 2019

- National TB budget (US$ millions): 44
  - Funding source: 4% domestic, 55% international, 41% unfunded

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Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

* Ranges represent uncertainty intervals.

** MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

† Calculated for pulmonary cases only.

‡ Includes cases with unknown previous TB treatment history.

§ Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
### Data for all countries and years can be downloaded from www.who.int/tb/data

**GLOBAL TUBERCULOSIS REPORT 2019**

- **HIV prevalence** (% of population aged 15–49 years)
- **Diabetes prevalence** (% of population aged ≥18 years)
- **Smoking prevalence** (% of population aged ≥15 years)
- **Health expenditure per capita, PPPb** (current international $)
- **Greater than 10% of total household expenditure or income on health** (% of population)
- **UHC index of essential service coverageb** (based on 16 tracer indicators including TB treatment)

**INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCEa**

- **Prevalence of undernourishment** (% of population)
- **Population covered by social protection floors/systems** (% of population)
- **Access to clean fuels and technologies for cooking** (% of population)
- **GINI index**

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*Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

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**NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018**

- **Undernourishment**
- **Smoking**
- **Diabetes**
- **Harmful use of alcohol**
- **HIV**

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**Data for all countries and years can be downloaded from www.who.int/tb/data**
Ethiopia

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

### ESTIMATES OF TB BURDEN,\(^a\) 2018

<table>
<thead>
<tr>
<th></th>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>165 (116–223)</td>
<td>151 (107–204)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>7.6 (5.3–10)</td>
<td>7.4 (5.9–9.4)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence(^b)</td>
<td>1.6 (1–2)</td>
<td>1.6 (0.96–2)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>24 (15–36)</td>
<td>22 (14–33)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>2.2 (1.5–3)</td>
<td>2 (1.4–2.8)</td>
</tr>
</tbody>
</table>

### ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- New cases: 0.71%
- Previously treated cases: 16% (14–17)

### TB CASE NOTIFICATIONS, 2018

- Total new and relapse: 113 613
  - % tested with rapid diagnostics at time of diagnosis
  - % with known HIV status: 92%
  - % pulmonary: 69%
  - % bacteriologically confirmed\(^c\): 62%
  - % children aged 0–14 years: 10%
  - % women: 40%
  - % men: 50%
- Total cases notified: 114 233

### UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- TB treatment coverage (notified/estimated incidence), 2018: 69% (51–98)
- TB patients facing catastrophic total costs
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 17% (9–25)

### TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

- Patients with known HIV-status who are HIV-positive: 4 816 (5%)
  - on antiretroviral therapy: 4 393 (91%)
- Laboratory-confirmed cases\(^a\):
  - New cases: 100%
  - Previously treated cases: 80%
- MDR/RR-TB cases tested for resistance to second-line drugs: 360

### DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance\(^a\):
  - New cases: 80%
  - Previously treated cases: 100%
- MDR/RR-TB: 741, XDR-TB: 3
- Patients started on treatment\(^a\):
  - MDR/RR-TB: 747, XDR-TB: 3

### TREATMENT SUCCESS RATE AND COHORT SIZE

<table>
<thead>
<tr>
<th></th>
<th>SUCCESS</th>
<th>COHORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>New cases registered in 2017</td>
<td>96%</td>
<td>113 690</td>
</tr>
<tr>
<td>Previously treated cases registered in 2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV-positive TB cases registered in 2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDR/RR-TB cases started on second-line treatment in 2016</td>
<td>72%</td>
<td>703</td>
</tr>
<tr>
<td>XDR-TB cases started on second-line treatment in 2016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 49%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 22% (20–24)

### TB FINANCING, 2019

- National TB budget (US$ millions): 94
- Funding source: 11% domestic, 29% international, 60% unfunded

---

\(^a\) Ranges represent uncertainty intervals.

\(^b\) MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

\(^c\) Calculated for pulmonary cases only.

\(^d\) Includes cases with unknown previous TB treatment history.

\(^e\) Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
Data for all countries and years can be downloaded from www.who.int/tb/data
India

ESTIMATES OF TB BURDEN,\(^a\) 2018

<table>
<thead>
<tr>
<th></th>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>2 690 (1 840–3 700)</td>
<td>199 (156–273)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>92 (63–126)</td>
<td>6.8 (4.6–9.3)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence(^a)</td>
<td>130 (77–198)</td>
<td>9.6 (5.7–15)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>440 (408–472)</td>
<td>32 (30–35)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>9.7 (5.7–15)</td>
<td>0.72 (0.42–1.1)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New cases</td>
<td>2.8% (2.3–3.5)</td>
<td></td>
</tr>
<tr>
<td>Previously treated cases</td>
<td>14% (14–16)</td>
<td></td>
</tr>
</tbody>
</table>

TB CASE NOTIFICATIONS, 2018

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total new and relapse</td>
<td>1 994 000</td>
<td></td>
</tr>
<tr>
<td>% tested with rapid diagnostics at time of diagnosis</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>% with known HIV status</td>
<td>72%</td>
<td></td>
</tr>
<tr>
<td>% pulmonary</td>
<td>82%</td>
<td></td>
</tr>
<tr>
<td>% bacteriologically confirmed(^d)</td>
<td>57%</td>
<td></td>
</tr>
<tr>
<td>% children aged 0–14 years</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>% women</td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>% men</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Total cases notified</td>
<td>2 155 894</td>
<td></td>
</tr>
</tbody>
</table>

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TB treatment coverage (notified/estimated incidence), 2018</td>
<td>74% (54–110)</td>
<td></td>
</tr>
<tr>
<td>TB patients facing catastrophic total costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB case fatality ratio (estimated mortality/estimated incidence), 2018</td>
<td>17% (12–24)</td>
<td></td>
</tr>
</tbody>
</table>

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with known HIV-status who are HIV-positive</td>
<td>49 067 (3%)</td>
<td></td>
</tr>
<tr>
<td>on antiretroviral therapy</td>
<td>44 080 (90%)</td>
<td></td>
</tr>
</tbody>
</table>

DRUG-RESISTANT TB CARE, 2018

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% of bacteriologically confirmed TB cases tested for rifampicin resistance(^e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New cases</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>Previously treated cases</td>
<td>91%</td>
<td></td>
</tr>
</tbody>
</table>

LABORATORY-CONFIRMED TB CASES TESTED FOR RESISTANCE TO SECOND-LINE DRUGS

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MDR/RR-TB</td>
<td>58 347</td>
<td></td>
</tr>
<tr>
<td>XDR-TB</td>
<td>3 400</td>
<td></td>
</tr>
</tbody>
</table>

TREATMENT SUCCESS RATE AND COHORT SIZE

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New and relapse cases registered in 2017</td>
<td>81% (1 568 392)</td>
<td></td>
</tr>
<tr>
<td>Previously treated cases, excluding relapse, registered in 2017</td>
<td>56% (146 982)</td>
<td></td>
</tr>
<tr>
<td>HIV-positive TB cases registered in 2017</td>
<td>71% (31 213)</td>
<td></td>
</tr>
<tr>
<td>MDR/RR-TB cases started on second-line treatment in 2016</td>
<td>48% (33 197)</td>
<td></td>
</tr>
<tr>
<td>XDR-TB cases started on second-line treatment in 2016</td>
<td>30% (2 464)</td>
<td></td>
</tr>
</tbody>
</table>

TB PREVENTIVE TREATMENT, 2018

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% of HIV-positive people (newly enrolled in care) on preventive treatment</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>% of children (aged &lt;5) household contacts of bacteriologically confirmed TB cases on preventive treatment</td>
<td>26% (24–28)</td>
<td></td>
</tr>
</tbody>
</table>

TB FINANCING, 2019

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>National TB budget (US$ millions)</td>
<td>583</td>
<td></td>
</tr>
<tr>
<td>Funding source:</td>
<td>77% domestic, 23% international, 0% unfunded</td>
<td></td>
</tr>
</tbody>
</table>

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries. Estimates of TB incidence and mortality for India are interim in nature, pending results from the national TB prevalence survey planned for 2019/2020.

\(^a\) Ranges represent uncertainty intervals.

\(^b\) MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

\(^c\) Calculated for pulmonary cases only.

\(^d\) Includes cases with unknown previous TB treatment history.

\(^e\) Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
GLOBAL TUBERCULOSIS REPORT 2019

Data for all countries and years can be downloaded from www.who.int/tb/data

HIV prevalence (% of population aged 15–49 years)

Diabetes prevalence (% of population aged ≥18 years)

Smoking prevalence (% of population aged ≥15 years)

Alcohol use disorders, 12 month prevalence (% of population aged ≥15 years)

Health expenditure per capita, PPPb (current international $)

Greater than 10% of total household expenditure or income on health (% of population)

UHC index of essential service coverageb (based on 16 tracer indicators including TB treatment)

Population covered by social protection floors/systemsb (% of population)

Prevalence of undernourishment (% of population)

Access to clean fuels and technologies for cooking (% of population)

GDP per capita, PPPb (constant 2011 international $)

GINI index (0 = perfect equality, 100 = perfect inequality)

Population living in slums (% of urban population)

Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

a GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

b $ = international dollar

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.
Indonesia

### ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>845 (770–923) 516 (288–565)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>21 (8–34) 7 (3.3–14)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence*</td>
<td>24 (17–32) 8.6 (6.2–12)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>95 (87–99) 35 (33–37)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>5.3 (2.1–9.8) 2 (0.79–3.7)</td>
</tr>
</tbody>
</table>

### ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

<table>
<thead>
<tr>
<th>CASE TYPE</th>
<th>PROPORTION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New cases</td>
<td>2.4% (1.8–3.3)</td>
</tr>
<tr>
<td>Previously treated cases</td>
<td>13% (9–18)</td>
</tr>
</tbody>
</table>

### TB CASE NOTIFICATIONS, 2018

<table>
<thead>
<tr>
<th>CASE TYPE</th>
<th>NOTIFIED CASES</th>
<th>RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total new and relapse</td>
<td>563 879</td>
<td>316 (288–345)</td>
</tr>
<tr>
<td>HIV-positive</td>
<td>21 (8–34) 7 (3.3–14)</td>
<td></td>
</tr>
<tr>
<td>MDR/RR-TB</td>
<td>24 (17–32) 8.6 (6.2–12)</td>
<td></td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>95 (87–99) 35 (33–37)</td>
<td></td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>5.3 (2.1–9.8) 2 (0.79–3.7)</td>
<td></td>
</tr>
</tbody>
</table>

### UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- TB treatment coverage (notified/estimated incidence), 2018: 67% (61–73)
- TB patients facing catastrophic total costs
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 12% (10–13)

### TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

<table>
<thead>
<tr>
<th>CASE TYPE</th>
<th>PATIENTS WITH KNOWN HIV-status who are HIV-positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New cases</td>
<td>10.1% (7–13)</td>
</tr>
<tr>
<td>Previously treated cases</td>
<td>40% (30–50)</td>
</tr>
</tbody>
</table>

### DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance:
  - New cases: 33%
  - Previously treated cases: 127%
- Laboratory-confirmed cases:
  - MDR/RR-TB: 9 038, XDR-TB: 80
- Patients started on treatment:
  - MDR/RR-TB: 4 194, XDR-TB: 59
- MDR/RR-TB cases tested for resistance to second-line drugs: 2 526

### TREATMENT SUCCESS RATE AND COHORT SIZE

- New and relapse cases registered in 2017: 85% (425 819)
- Previously treated cases, excluding relapse, registered in 2017: 73% (4 934)
- HIV-positive TB cases registered in 2017: 60% (7 966)
- MDR/RR-TB cases started on second-line treatment in 2016: 48% (1 905)
- XDR-TB cases started on second-line treatment in 2016: 21% (61)

### TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 10%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 10% (9.3–11)

### TB FINANCING, 2019

- National TB budget (US$ millions): 366
- Funding source: 30% domestic, 13% international, 57% unknown

---

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

* Ranges represent uncertainty intervals.

** MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

† Calculated for pulmonary cases only.

‡ Includes cases with unknown previous TB treatment history.

§ Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

¶ Funding from provincial and district budgets are not known at national level.
Data for all countries and years can be downloaded from www.who.int/tb/data
Kenya

**ESTIMATES OF TB BURDEN,** 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>150 (92–222)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>40 (25–50)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2.3 (1.1–4.1)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>19 (11–30)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>13 (8.1–20)</td>
</tr>
</tbody>
</table>

**ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018**

| New cases | 1.3% (0.74–2) |
| Previously treated cases | 4.4% (3.7–5.2) |

**TB CASE NOTIFICATIONS, 2018**

Total new and relapse: 94 534
- % tested with rapid diagnostics at time of diagnosis: 47%
- % with known HIV status: 98%
- % pulmonary: 85%
- % bacteriologically confirmed<sup>d</sup>: 58%
- % children aged 0–14 years: 10%
- % women: 32%
- % men: 58%

Total cases notified: 96 478

**UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION**

TB treatment coverage (notified/estimated incidence), 2018: 63% (43–100)
TB patients facing catastrophic total costs, 2017: 27% (21–32)
TB case fatality ratio (estimated mortality/estimated incidence), 2018: 23% (12–36)

**TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018**

Patients with known HIV-status who are HIV-positive: 24 950 (27%)
- on antiretroviral therapy: 24 186 (97%)

**DRUG-RESISTANT TB CARE, 2018**

- % of bacteriologically confirmed TB cases tested for rifampicin resistance<sup>e</sup>: 64%
- % of bacteriologically confirmed TB cases tested for isoniazid resistance: 79%

**TREATMENT SUCCESS RATE AND COHORT SIZE**

<table>
<thead>
<tr>
<th>SUCCESS</th>
<th>COHORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>New and relapse cases registered in 2017: 83%</td>
<td>83 088</td>
</tr>
<tr>
<td>Previously treated cases, excluding relapse, registered in 2017: 72%</td>
<td>1 583</td>
</tr>
<tr>
<td>HIV-positive TB cases registered in 2017: 76%</td>
<td>23 060</td>
</tr>
<tr>
<td>MDR/RR-TB cases started on second-line treatment in 2016: 68%</td>
<td>308</td>
</tr>
<tr>
<td>KDR-TB cases started on second-line treatment in 2016: 0</td>
<td></td>
</tr>
</tbody>
</table>

**TB PREVENTIVE TREATMENT, 2018**

% of HIV-positive people (newly enrolled in care) on preventive treatment: 34% (31–37)

% of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 34% (31–37)

**TB FINANCING, 2019**

National TB budget (US$ millions): 81
Funding source: 22% domestic, 15% international, 63% unfunded

---

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

<sup>a</sup> Ranges represent uncertainty intervals.

<sup>b</sup> MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

<sup>c</sup> Calculated for pulmonary cases only.

<sup>d</sup> Includes cases with unknown previous TB treatment history.

<sup>e</sup> Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE

1. HIV prevalence
   (% of population aged 15–49 years)

2. Diabetes prevalence
   (% of population aged ≥18 years)

3. Alcohol use disorders, 12 month prevalence
   (% of population aged ≥15 years)

4. Smoking prevalence
   (% of population aged ≥15 years)

5. Health expenditure per capita, PPPb
   (current international $)

6. Greater than 10% of total household expenditure or income on health
   (% of population)

7. Access to clean fuels and technologies for cooking
   (% of population)

8. GDP per capita, PPPb
   (constant 2011 international $)

9. GINI index
   (0 = perfect equality, 100 = perfect inequality)

10. UHC index of essential service coverage
    (based on 16 tracer indicators including TB treatment)

11. Population living in slums
    (% of urban population)

Harmful use of alcohol

Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Mozambique

ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>162 (105–232) 551 (356–787)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>58 (38–83) 197 (127–281)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence‡</td>
<td>8.3 (4.4–14) 28 (15–46)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence§</td>
<td>21 (13–32) 72 (43–109)</td>
</tr>
<tr>
<td>MDR/RR-TB mortality</td>
<td>22 (16–31) 73 (46–106)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

<table>
<thead>
<tr>
<th></th>
<th>Number (thousands)</th>
<th>Rate (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New cases</td>
<td>3.7% (2.5–5.2)</td>
<td>3% (2–5)</td>
</tr>
<tr>
<td>Previously treated</td>
<td>20% (5–20)</td>
<td>20% (5–20)</td>
</tr>
</tbody>
</table>

TB CASE NOTIFICATIONS, 2018

<table>
<thead>
<tr>
<th></th>
<th>Total new and relapse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>92 381</td>
</tr>
<tr>
<td>% with rapid diagnostics at time of diagnosis</td>
<td>41%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>HIV-positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>58 (38–83)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>MDR/RR-TB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.3 (4.4–14)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>HIV-negative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21 (13–32)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>HIV-positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22 (16–31)</td>
</tr>
</tbody>
</table>

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

<table>
<thead>
<tr>
<th></th>
<th>TB treatment coverage (notified/estimated incidence), 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>57% (40–88)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>TB patients facing catastrophic total costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>TB case fatality ratio (estimated mortality/estimated incidence), 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27% (15–41)</td>
</tr>
</tbody>
</table>

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

<table>
<thead>
<tr>
<th></th>
<th>NUMBER (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patients with known HIV-status who are HIV-positive</td>
</tr>
<tr>
<td></td>
<td>32 641 36%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>on antiretroviral therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31 440 96%</td>
</tr>
</tbody>
</table>

DRUG-RESISTANT TB CARE, 2018

<table>
<thead>
<tr>
<th></th>
<th>% of bacteriologically confirmed TB cases tested for rifampicin resistance*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New cases 54%</td>
</tr>
<tr>
<td></td>
<td>Previously treated cases 66%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Laboratory-confirmed cases‡,§</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MDR/RR-TB: 1 158, XDR-TB: 45</td>
</tr>
</tbody>
</table>

|                        | MDR/RR-TB: 1 154, XDR-TB: 45 |

<table>
<thead>
<tr>
<th></th>
<th>MDR/RR-TB cases tested for resistance to second-line drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>472</td>
</tr>
</tbody>
</table>

TREATMENT SUCCESS RATE AND COHORT SIZE

<table>
<thead>
<tr>
<th></th>
<th>SUCCESS</th>
<th>COHORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>New and relapse cases registered in 2017</td>
<td>90%</td>
<td>82 674</td>
</tr>
<tr>
<td>Previously treated cases, excluding relapse, registered in 2017</td>
<td>79%</td>
<td>1 139</td>
</tr>
<tr>
<td>HIV-positive TB cases registered in 2017</td>
<td>85%</td>
<td>34 056</td>
</tr>
<tr>
<td>MDR/RR-TB cases started on second-line treatment in 2016</td>
<td>50%</td>
<td>854</td>
</tr>
<tr>
<td>XDR-TB cases started on second-line treatment in 2016</td>
<td>32%</td>
<td>35</td>
</tr>
</tbody>
</table>

TB PREVENTIVE TREATMENT, 2018

<table>
<thead>
<tr>
<th></th>
<th>% of HIV-positive people (newly enrolled in care) on preventive treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of children (aged &lt;5) household contacts of bacteriologically confirmed TB cases on preventive treatment</td>
<td>100%</td>
</tr>
</tbody>
</table>

TB FINANCING, 2019

<table>
<thead>
<tr>
<th></th>
<th>National TB budget (US$ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Funding source:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7% domestic, 80% international, 13% unfunded</td>
</tr>
</tbody>
</table>

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries. Estimates of TB incidence and mortality for Mozambique will be reviewed after final results from the national TB prevalence survey are available in 2020.

* Ranges represent uncertainty intervals.
‡ MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
§ Calculated for pulmonary cases only.
§ Includes cases with unknown previous TB treatment history.
‡ Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
Data for all countries and years can be downloaded from www.who.int/tb/data
### Myanmar

#### ESTIMATES OF TB BURDEN, 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>Number (thousands)</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>181 (119–256)</td>
<td>338 (222–477)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>15 (10–22)</td>
<td>39 (19–41)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11 (7.4–16)</td>
<td>21 (14–30)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>21 (12–31)</td>
<td>39 (23–58)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>3.7 (2.5–5.2)</td>
<td>6.9 (4.6–9.7)</td>
</tr>
</tbody>
</table>

#### ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- New cases: 4.9% (4.7–5.1)
- Previously treated cases: 20% (19–21)

#### TB CASE NOTIFICATIONS, 2018

- Total new and relapse: 137,972
  - % tested with rapid diagnostics at time of diagnosis: 42%
  - % with known HIV status: 89%
  - % pulmonary: 91%
  - % bacteriologically confirmed<sup>c</sup>: 44%
  - % children aged 0–14 years: 19%
  - % women: 29%
  - % men: 52%
- Total cases notified: 139,518

#### UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- TB treatment coverage (notified/estimated incidence), 2018: 76% (54–120)
- TB patients facing catastrophic total costs, 2015: 60% (56–63)
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 14% (8–22)

#### TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

- Patients with known HIV-status who are HIV-positive: 10,516 (9%)
- % on antiretroviral therapy: 7464 (71%)

#### DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance<sup>e</sup>:
  - New cases: 92%
  - Previously treated cases: 84%

#### LABORATORY-CONFIRMED CASES

- MDR/RR-TB: 3,479, XDR-TB: 35
- Patients started on treatment<sup>f,g</sup>:
  - MDR/RR-TB: 2,650, XDR-TB: 29
- MDR/RR-TB cases tested for resistance to second-line drugs: 927

#### TREATMENT SUCCESS RATE AND COHORT SIZE

- New and relapse cases registered in 2017: 87% (126,746)
- Previously treated cases, excluding relapse, registered in 2017: 76% (163,839)
- HIV-positive TB cases registered in 2017: 73% (10,294)
- MDR/RR-TB cases started on second-line treatment in 2016: 79% (2,512)
- XDR-TB cases started on second-line treatment in 2016: 63% (8)

#### TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 15%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 3.1% (2.8–3.4)

#### TB FINANCING, 2019

- National TB budget (US$ millions): 62
- Funding source: 3% domestic, 60% international, 37% unfunded

---

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

<sup>a</sup> Ranges represent uncertainty intervals.

<sup>b</sup> MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

<sup>c</sup> Calculated for pulmonary cases only.

<sup>d</sup> Includes cases with unknown previous TB treatment history.

<sup>e</sup> Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
**INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>2000</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV prevalence</td>
<td>(% of population aged 15–49 years)</td>
<td><img src="image1.png" alt="Graph" /></td>
<td><img src="image2.png" alt="Graph" /></td>
</tr>
<tr>
<td>Diabetes prevalence</td>
<td>(% of population aged ≥18 years)</td>
<td><img src="image3.png" alt="Graph" /></td>
<td><img src="image4.png" alt="Graph" /></td>
</tr>
<tr>
<td>Alcohol use disorders, 12 month prevalence</td>
<td>(% of population aged ≥15 years)</td>
<td><img src="image5.png" alt="Graph" /></td>
<td><img src="image6.png" alt="Graph" /></td>
</tr>
<tr>
<td>Smoking prevalence</td>
<td>(% of population aged ≥15 years)</td>
<td><img src="image7.png" alt="Graph" /></td>
<td><img src="image8.png" alt="Graph" /></td>
</tr>
<tr>
<td>Health expenditure per capita, PPPb</td>
<td>(current international $)</td>
<td><img src="image9.png" alt="Graph" /></td>
<td><img src="image10.png" alt="Graph" /></td>
</tr>
<tr>
<td>Greater than 10% of total household expenditure or income on health</td>
<td>(% of population)</td>
<td><img src="image11.png" alt="Graph" /></td>
<td><img src="image12.png" alt="Graph" /></td>
</tr>
<tr>
<td>UHC index of essential service coverageb</td>
<td>(based on 16 tracer indicators including TB treatment)</td>
<td><img src="image13.png" alt="Graph" /></td>
<td><img src="image14.png" alt="Graph" /></td>
</tr>
<tr>
<td>Population covered by social protection floors/systems</td>
<td>(% of population)</td>
<td><img src="image15.png" alt="Graph" /></td>
<td><img src="image16.png" alt="Graph" /></td>
</tr>
<tr>
<td>Prevalence of undernourishment</td>
<td>(% of population)</td>
<td><img src="image17.png" alt="Graph" /></td>
<td><img src="image18.png" alt="Graph" /></td>
</tr>
<tr>
<td>Access to clean fuels and technologies for cooking</td>
<td>(% of population)</td>
<td><img src="image19.png" alt="Graph" /></td>
<td><img src="image20.png" alt="Graph" /></td>
</tr>
<tr>
<td>GDP per capita, PPPb</td>
<td>(constant 2011 international $)</td>
<td><img src="image21.png" alt="Graph" /></td>
<td><img src="image22.png" alt="Graph" /></td>
</tr>
<tr>
<td>GINI index</td>
<td>(0 = perfect equality, 100 = perfect inequality)</td>
<td><img src="image23.png" alt="Graph" /></td>
<td><img src="image24.png" alt="Graph" /></td>
</tr>
<tr>
<td>Population living in slums</td>
<td>(% of urban population)</td>
<td><img src="image25.png" alt="Graph" /></td>
<td><img src="image26.png" alt="Graph" /></td>
</tr>
</tbody>
</table>

---

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Nigeria

ESTIMATES OF TB BURDEN, 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>429 (280–609)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>55 (54–75)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>21 (13–32)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>125 (75–192)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>32 (20–47)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- New cases: 4.3% (3.2–5.5)
- Previously treated cases: 15% (11–19)

TB CASE NOTIFICATIONS, 2018

- Total new and relapse: 105 921
  - % tested with rapid diagnostics at time of diagnosis: 54%
  - % with known HIV status: 100%
  - % pulmonary: 96%
  - % bacteriologically confirmed: 77%
  - % children aged 0–14 years: 8%
  - % women: 34%
  - % men: 58%
- Total cases notified: 106 533

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- TB treatment coverage (notified/estimated incidence), 2018: 24% (17–37)
- TB patients facing catastrophic total costs, 2017: 71% (68–73)
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 38% (19–59)

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

- Patients with known HIV-status who are HIV-positive: 12 700 (12%)
  - on antiretroviral therapy: 11 032 (87%)

DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance
  - New cases: 65%
  - Previously treated cases: 88%
  - Laboratory-confirmed cases: MDR/RR-TB: 2 275, XDR-TB: 31
  - Patients started on treatment: MDR/RR-TB: 1 895, XDR-TB: 14
  - MDR/RR-TB cases tested for resistance to second-line drugs: 1 895

TREATMENT SUCCESS RATE AND COHORT SIZE

- New and relapse cases registered in 2017: 86% (101 734)
- Previously treated cases, excluding relapse, registered in 2017: 82% (2 781)
- HIV-positive TB cases registered in 2017: 76% (13 851)
- MDR/RR-TB cases started on second-line treatment in 2016: 77% (1 251)
- XDR-TB cases started on second-line treatment in 2016: 77%

TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 62%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 19% (17–21)

TB FINANCING, 2019

- National TB budget (US$ millions): 278
  - Funding source: 8% domestic, 32% international, 60% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
### NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>2000</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmful use of alcohol</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Diabetes</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Smoking</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>HIV</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Undernourishment</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

### INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE

1. **HIV prevalence** (% of population aged 15–49 years)

2. **Population living below the international poverty line** (% of population)

3. **Health expenditure per capita, PPPb** (constant 2011 international $)

4. **Access to clean fuels and technologies for cooking** (% of population)

5. **Population covered by social protection floors/systems** (% of population)

6. **GINI index** (0 = perfect equality, 100 = perfect inequality)

7. **Population living in slums** (% of urban population)

8. **Prevalence of undernourishment** (% of population)

9. **Smoking prevalence** (% of population aged ≥15 years)

10. **Alcohol use disorders, 12 month prevalence** (% of population aged ≥15 years)

11. **Population covered by social protection floors/systems** (% of population)

### Data Sources
- Missing values and empty boxes indicate data not available in these data sources.

### Notes
- GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

a Ranges represent uncertainty intervals.
b MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
c Calculated for pulmonary cases only.
d Includes cases with unknown previous TB treatment history.
e Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

Data for all countries and years can be downloaded from www.who.int/tb/data
**NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Harmful use of alcohol</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Diabetes</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Smoking</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Undernourishment</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE**

1. **HIV prevalence** (% of population aged 15–49 years)
2. **Diabetes prevalence** (% of population aged ≥18 years)
3. **Alcohol use disorders, 12 month prevalence** (% of population aged ≥15 years)
4. **Smoking prevalence** (% of population aged ≥15 years)
5. **Health expenditure per capita, PPP**
   - (current international $)
6. **GDP per capita, PPP**
   - (constant 2011 international $)
7. **Population living below the international poverty line** (% of population)
8. **Population covered by social protection floors/systems** (% of population)
9. **Prevalence of undernourishment** (% of population)
10. **Access to clean fuels and technologies for cooking** (% of population)
11. **GINI index**
    - (0 = perfect equality, 100 = perfect inequality)
12. **UHC index of essential service coverage**
    - (based on 16 tracer indicators including TB treatment)
13. **Population living in slums** (% of urban population)

---

Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

a GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Philippines

ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>591 (552–924)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>10 (6–19)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>18 (7–52)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>26 (22–50)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>0.6 (0–4.2)</td>
</tr>
</tbody>
</table>

Data for all countries and years can be downloaded from www.who.int/tb/data

- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

**ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018**

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>New cases</td>
<td>1.7% (1.1–2.5)</td>
</tr>
<tr>
<td>Previously treated cases</td>
<td>16% (13–20)</td>
</tr>
</tbody>
</table>

**TB CASE NOTIFICATIONS, 2018**

- % tested with rapid diagnostics at time of diagnosis: 36%
- % with known HIV status: 27%
- % pulmonary: 98%
- % bacteriologically confirmed: 36%
- % children aged 0–14 years: 12%
- % women: 30%
- % men: 58%
- Total cases notified: 382 543

**UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION**

- TB treatment coverage (notified/estimated incidence), 2018: 63% (40–110)
- TB patients facing catastrophic total costs, 2017: 35% (33–37)
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 5% (3–7)

**TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| Patients with known HIV-status who are HIV-positive | 1 477 (1%)
| - on antiretroviral therapy       | 1 350 (91%)

**DRUG-RESISTANT TB CARE, 2018**

- % of bacteriologically confirmed TB cases tested for rifampicin resistance:
  - New cases: ≤1%
  - Previously treated cases: 24%

**TREATMENT SUCCESS RATE AND COHORT SIZE**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New and relapse cases registered in 2017</td>
<td>91% (315 923)</td>
</tr>
<tr>
<td>Previously treated cases, excluding relapse, registered in 2017</td>
<td>82% (9 486)</td>
</tr>
<tr>
<td>HIV-positive TB cases registered in 2017</td>
<td>85% (1 258)</td>
</tr>
<tr>
<td>MDR/RR-TB cases started on second-line treatment in 2016</td>
<td>58% (5 071)</td>
</tr>
<tr>
<td>XDR-TB cases started on second-line treatment in 2016</td>
<td>20% (10)</td>
</tr>
</tbody>
</table>

**TB PREVENTIVE TREATMENT, 2018**

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 52%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 9.4% (8.7–10)

**TB FINANCING, 2019**

- National TB budget (US$ millions): 205
- Funding source: 12% domestic, 25% international, 63% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

* Ranges represent uncertainty intervals.
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data for all countries and years can be downloaded from <a href="http://www.who.int/tb/data">www.who.int/tb/data</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV prevalence (% of population aged 15–49 years)</td>
<td></td>
</tr>
<tr>
<td>Diabetes prevalence (% of population aged ≥18 years)</td>
<td></td>
</tr>
<tr>
<td>Smoking prevalence (% of population aged ≥15 years)</td>
<td></td>
</tr>
<tr>
<td>Alcohol use disorders, 12 month prevalence (% of population aged ≥15 years)</td>
<td></td>
</tr>
<tr>
<td>Health expenditure per capita, PPPb (current international $)</td>
<td></td>
</tr>
<tr>
<td>Greater than 10% of total household expenditure or income on health (% of population)</td>
<td></td>
</tr>
<tr>
<td>UHC index of essential service coverageb (based on 16 tracer indicators including TB treatment)</td>
<td></td>
</tr>
</tbody>
</table>

Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Russian Federation

ESTIMATES OF TB BURDEN, 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>79 (51–112)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>16 (10–22)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>4.3 (2.6–5.9)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>9.2 (8.3–10)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>1.3 (0.57–2.2)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

New cases: 35% (34–35)
Previously treated cases: 71% (70–71)

TB CASE NOTIFICATIONS, 2018

Total new and relapse: 78,258
- % tested with rapid diagnostics at time of diagnosis: 73%
- % with known HIV status: 95%
- % pulmonary: 92%
- % bacteriologically confirmed: 54%
- % children aged 0–14 years: 3%
- % women: 29%
- % men: 68%
Total cases notified: 106,913

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

TB treatment coverage (notified/estimated incidence), 2018: 99% (70–150)
TB patients facing catastrophic total costs
TB case fatality ratio (estimated mortality/estimated incidence), 2018: 14% (9–20)

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

Patients with known HIV-status who are HIV-positive: 14,797 (20%)
- on antiretroviral therapy: 10,077 (68%)

DRUG-RESISTANT TB CARE, 2018

% of bacteriologically confirmed TB cases tested for rifampicin resistance:
- New cases: 88%
- Previously treated cases: 95%

Laboratory-confirmed cases: MDR/RR-TB: 27,438, XDR-TB: 5,112
Patients started on treatment: MDR/RR-TB: 27,014, XDR-TB: 4,140

MDR/RR-TB cases tested for resistance to second-line drugs: 24,601

TREATMENT SUCCESS RATE AND COHORT SIZE

New and relapse cases registered in 2017: 69% (67–69)
Previously treated cases, excluding relapse, registered in 2017: 50% (9–52)
HIV-positive TB cases registered in 2017: 43% (9–45)
MDR/RR-TB cases started on second-line treatment in 2016: 54% (22–59)
XDR-TB cases started on second-line treatment in 2016: 38% (2–99)

TB PREVENTIVE TREATMENT, 2018

% of HIV-positive people (newly enrolled in care) on preventive treatment: 97%
% of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 100%

TB FINANCING, 2019

National TB budget (US$ millions): 1,451
Funding source: 100% domestic, 0% international, 0% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

- UN Population Division estimates are lower than the population registered by the Federal State Statistics Service of the Russian Federation.
- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Includes coverage by all molecular genetic methods, including those developed in the Russian Federation.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
Data for all countries and years can be downloaded from www.who.int/tb/data
South Africa

ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>301 (215–400)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>177 (127–235)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence*</td>
<td>11 (7.2–16)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>21 (20–25)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>42 (30–57)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- New cases: 3.4% (2.5–4.3)
- Previously treated cases: 7.1% (4.8–9.5)

TB CASE NOTIFICATIONS, 2018

- Total new and relapse: 227 999
  - % tested with rapid diagnostics at time of diagnosis: 71%
  - % with known HIV status: 90%
  - % pulmonary: 89%
  - % bacteriologically confirmedd: 70%
  - % children aged 0–14 years: 7%
  - % women: 37%
  - % men: 56%
- Total cases notified: 235 652

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- TB case fatality ratio (estimated mortality/estimated incidence): 2018 22% (14–30)

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

<table>
<thead>
<tr>
<th>NUMBER (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with known HIV-status who are HIV-positive: 120 862</td>
</tr>
<tr>
<td>– on antiretroviral therapy: 104 625</td>
</tr>
</tbody>
</table>

DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance:
  - New cases: 92%
  - Previously treated cases: 94%
- Laboratory-confirmed cases:
  - MDR/RR-TB: 13 199, XDR-TB: 553
- Patients started on treatment:
  - MDR/RR-TB: 9 558, XDR-TB: 539
- MDR/RR-TB cases tested for resistance to second-line drugs: 7 469

TREATMENT SUCCESS RATE AND COHORT SIZE

<table>
<thead>
<tr>
<th>SUCCESS</th>
<th>COHORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>New and relapse cases registered in 2017: 240 332</td>
<td>77%</td>
</tr>
<tr>
<td>Previously treated cases, excluding relapse, registered in 2017: 6 508</td>
<td>59%</td>
</tr>
<tr>
<td>HIV-positive TB cases registered in 2017: 13 472</td>
<td>75%</td>
</tr>
<tr>
<td>MDR/RR-TB cases started on second-line treatment in 2016: 11 159</td>
<td>54%</td>
</tr>
<tr>
<td>XDR-TB cases started on second-line treatment in 2016: 601</td>
<td>58%</td>
</tr>
</tbody>
</table>

TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 65%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 59% (54–65)

TB FINANCING, 2019

- National TB budget (US$ millions): 240
- Funding source: 87% domestic, 13% international, 0% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries. Estimates of TB incidence and mortality for South Africa will be reviewed after final results from the national TB prevalence survey are available in 2020.

- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

Data for all countries and years can be downloaded from www.who.int/tb/data
**INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE**

- **HIV prevalence** (% of population aged 15–49 years)
- **Diabetes prevalence** (% of population aged ≥18 years)
- **Alcohol use disorders, 12 month prevalence** (% of population aged ≥15 years)
- **Smoking prevalence** (% of population aged ≥15 years)
- **Health expenditure per capita, PPPb** (current international $)
- **Greater than 10% of total household expenditure or income on health** (% of population)
- **UHC index of essential service coverageb** (based on 16 tracer indicators including TB treatment)
- **Population covered by social protection floors/systems** (% of population)
- **Prevalence of undernourishment** (% of population)
- **Access to clean fuels and technologies for cooking** (% of population)
- **GDP per capita, PPPb** (constant 2011 international $)
- **GINI index** (0 = perfect equality, 100 = perfect inequality)
- **Population living below the international poverty line** (% of population)
- **Population living in slums** (% of urban population)

**DATA SOURCES:**
- SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.
- GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

Data for all countries and years can be downloaded from [www.who.int/tb/data](http://www.who.int/tb/data)
Thailand

**ESTIMATES OF TB BURDEN,** 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>106 (81–136)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>11 (8–2–14)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>2.3 (1.7–4)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>9.2 (6.9–12)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>2.3 (1.7–5)</td>
</tr>
</tbody>
</table>

**ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018**

<table>
<thead>
<tr>
<th></th>
<th>New cases</th>
<th>Previously treated cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.3% (1.3–3.4)</td>
<td>26% (18–31)</td>
</tr>
</tbody>
</table>

**TB CASE NOTIFICATIONS, 2018**

<table>
<thead>
<tr>
<th></th>
<th>Total new and relapse</th>
</tr>
</thead>
<tbody>
<tr>
<td>% tested with rapid diagnostics at time of diagnosis</td>
<td>19%</td>
</tr>
<tr>
<td>% with known HIV status</td>
<td>79%</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>85%</td>
</tr>
<tr>
<td>% bacteriologically confirmed</td>
<td>59%</td>
</tr>
<tr>
<td>% children aged 0–14 years</td>
<td>1%</td>
</tr>
<tr>
<td>% women</td>
<td>31%</td>
</tr>
<tr>
<td>% men</td>
<td>68%</td>
</tr>
<tr>
<td>Total cases notified</td>
<td>86,949</td>
</tr>
</tbody>
</table>

**UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION**

| TB treatment coverage (notified/estimated incidence), 2018 | 80% (63–110) |
| TB patients facing catastrophic total costs | |
| TB case fatality ratio (estimated mortality/estimated incidence), 2018 | 11% (8–15) |

**TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018**

| Patients with known HIV-status who are HIV-positive | 6,780 | 10% |
| on antiretroviral therapy | 5,391 | 80% |

**DRUG-RESISTANT TB CARE, 2018**

| % of bacteriologically confirmed TB cases tested for rifampicin resistance | New cases | 30% |
| Previously treated cases | 62% |
| Laboratory-confirmed cases | MDR/RR-TB: 1,312, XDR-TB: 29 |
| Patients started on treatment | MDR/RR-TB: 910, XDR-TB: 21 |
| MDR/RR-TB cases tested for resistance to second-line drugs | 665 |

**TREATMENT SUCCESS RATE AND COHORT SIZE**

| New and relapse cases registered in 2017 | 84% | 80,160 |
| Previously treated cases, excluding relapse, registered in 2017 | 55% | 1,848 |
| HIV-positive TB cases registered in 2017 | 73% | 7,130 |
| MDR/RR-TB cases started on second-line treatment in 2016 | 61% | 952 |
| KDR-TB cases started on second-line treatment in 2016 | 73% | 8 |

**TB PREVENTIVE TREATMENT, 2018**

| % of HIV-positive people (newly enrolled in care) on preventive treatment | |
| % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment | 6.4% (5.9–7.1) |

**TB FINANCING, 2019**

| National TB budget (US$ millions) | 27 |
| Funding source: | 88% domestic, 12% international, 0% unfunded |

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

a Ranges represent uncertainty intervals.

b MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

c Calculated for pulmonary cases only.

d Includes cases with unknown previous TB treatment history.

e Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

Data for all countries and years can be downloaded from www.who.int/tb/data
### Indicators in the Sustainable Development Goals Associated with TB Incidence

#### HIV Prevalence (% of population aged 15–49 years)

- **Females**
- **Males**

#### Diabetes Prevalence (% of population aged ≥18 years)

- **Females**
- **Males**

#### Alcohol Use Disorders, 12 month prevalence (% of population aged ≥15 years)

- **Females**
- **Males**

#### Smoking Prevalence (% of population aged ≥15 years)

- **Females**
- **Males**

#### Health Expenditure per capita, PPP\(^b\)

- **Current international $**

#### Greater than 10% of total household expenditure or income on health (% of population)

#### UHC Index of Essential Service Coverage\(^b\)

- **(based on 16 tracer indicators including TB treatment)**

#### GDP per capita, PPP\(^b\)

- **(constant 2011 international $)**

#### GINI Index (0 = perfect equality, 100 = perfect inequality)

#### Population Covered by Social Protection Floors/Systems (% of population)

#### Prevalence of Undernourishment (% of population)

#### Access to Clean Fuels and Technologies for Cooking (% of population)

#### Population Living Below the International Poverty Line (% of population)

#### Population Covered by Social Protection Floors/Systems (% of population)

#### Population Living in Slums (% of urban population)

\(^a\) Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

\(^b\) GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

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**Data for all countries and years can be downloaded from www.who.int/tb/data**

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**Global Tuberculosis Report 2019** 225
**United Republic of Tanzania**

**POPULATION 2018 56 MILLION**

### ESTIMATES OF TB BURDEN, * 2018

<table>
<thead>
<tr>
<th></th>
<th>NUMBER (thousands)</th>
<th>RATE (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>142 (67–245)</td>
<td>253 (119–435)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>40 (19–69)</td>
<td>71 (36–122)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>1.9 (0.67–3.7)</td>
<td>3.3 (1.2–6.6)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>22 (10–40)</td>
<td>40 (18–70)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>16 (7.8–27)</td>
<td>29 (14–49)</td>
</tr>
</tbody>
</table>

### ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- **New cases:** 0.97%
- **Previously treated cases:** 13% (11–15)

### TB CASE NOTIFICATIONS, 2018

- **New and relapse:** 74,692
  - % with rapid diagnostics at time of diagnosis: 18%
  - % with known HIV status: 99%
  - % pulmonary: 79%
  - % bacteriologically confirmed: 48%
  - % children aged 0–14 years: 16%
  - % women: 33%
  - % men: 53%
- **Total cases notified:** 75,828

### DATA FOR ALL COUNTRIES AND YEARS CAN BE DOWNLOADED FROM WWW.WHO.INTERN/TB/DATA

### UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- **TB treatment coverage (notified/estimated incidence), 2018:** 53% (30–110)
- **TB patients facing catastrophic total costs**
- **TB case fatality ratio (estimated mortality/estimated incidence), 2018:** 30% (11–53)

### TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

- **Patients with known HIV-status who are HIV-positive:** 20,695
  - on antiretroviral therapy: 20,337

### DRUG-RESISTANT TB CARE, 2018

- **% of bacteriologically confirmed TB cases tested for rifampicin resistance**
  - New cases: 70%
  - Previously treated cases: 81%
  - **Laboratory-confirmed cases:**
    - MDR/RR-TB: 449
    - XDR-TB: 0
  - **Patients started on treatment:**
    - MDR/RR-TB: 409
    - XDR-TB: 0
  - **MDR/RR-TB cases tested for resistance to second-line drugs:** 62

### TREATMENT SUCCESS RATE AND COHORT SIZE

- **Success and cohort size:**
  - New and relapse cases registered in 2017: 90% 68,278
  - Previously treated cases, excluding relapse, registered in 2017: 84% 1,250
  - HIV-positive TB cases registered in 2017: 80% 21,569
  - MDR/RR-TB cases started on second-line treatment in 2016: 80% 158
  - XDR-TB cases started on second-line treatment in 2016: 0

### TB PREVENTIVE TREATMENT, 2018

- **% of HIV-positive people (newly enrolled in care) on preventive treatment:**
  - % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 22% (20–24)

### TB FINANCING, 2019

- National TB budget (US$ millions): 62
  - Funding source: 4% domestic, 24% international, 72% unfunded

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Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
Data for all countries and years can be downloaded from www.who.int/tb/data

INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE

- HIV prevalence (% of population aged 15–49 years)
- Diabetes prevalence (% of population aged ≥18 years)
- Alcohol use disorders, 12 month prevalence (% of population aged ≥15 years)
- Smoking prevalence (% of population aged ≥15 years)
- Health expenditure per capita, PPPa (current international $)
- Greater than 10% of total household expenditure or income on health (% of population)
- UHC index of essential service coverageb (based on 16 tracer indicators including TB treatment)
- Population living below the international poverty line (% of population)
- Population covered by social protection floors/systems (% of population)
- Prevalence of undernourishment (% of population)
- Access to clean fuels and technologies for cooking (% of population)
- GDP per capita, PPPb (constant 2011 international $)
- GINI index (0 = perfect equality, 100 = perfect inequality)
- Population living in slums (% of urban population)

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

a GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Viet Nam

**ESTIMATES OF TB BURDEN,** 2018

<table>
<thead>
<tr>
<th></th>
<th>NUMBER (thousands)</th>
<th>RATE per 100 000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>176 (111–251)</td>
<td>182 (116–265)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>6 (3.8–8.6)</td>
<td>6.2 (4–9)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>8.6 (5.4–13)</td>
<td>9.1 (5.7–13)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>11 (6.7–15)</td>
<td>11 (7–16)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>2.2 (1.4–3.2)</td>
<td>2.3 (1.5–3.4)</td>
</tr>
</tbody>
</table>

**ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018**

- New cases: 3.6% (3.4–3.8)
- Previously treated cases: 17% (17–18)

**TB CASE NOTIFICATIONS, 2018**

- Total new and relapse: 99 658
  - % tested with rapid diagnostics at time of diagnosis: 20%
  - % with known HIV status: 85%
  - % pulmonary: 80%
  - % bacteriologically confirmed: 70%
  - % children aged 0–14 years: 2%
  - % women: 27%
  - % men: 71%
- Total cases notified: 102 171

**UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION**

- TB treatment coverage (notified/estimated incidence), 2018: 57% (40–90)
- TB patients facing catastrophic total costs, 2016: 63% (58–67)
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 8% (4–12)

**TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018**

<table>
<thead>
<tr>
<th>Patients with known HIV-status who are HIV-positive</th>
<th>%</th>
</tr>
</thead>
</table>
| Total                                             | 2 902 | 3%
| On antiretroviral therapy                         | 2 705 | 93%

**DRUG-RESISTANT TB CARE, 2018**

- % of bacteriologically confirmed TB cases tested for rifampicin resistance: 82%
  - New cases: 100%
  - Previously treated cases: 82%

- Patients started on treatment: 3 110, XDR-TB: 198

- MDR/RR-TB cases tested for resistance to second-line drugs: 1 922

**TREATMENT SUCCESS RATE AND COHORT SIZE**

- New and relapse cases registered in 2017: 92% (91–93)
- Prevalently treated cases, excluding relapse, registered in 2017: 87% (86–89)
- HIV-positive TB cases registered in 2017: 79% (78–81)
- MDR/RR-TB cases started on second-line treatment in 2016: 68% (66–70)
- XDR-TB cases started on second-line treatment in 2016: 28%

**TB PREVENTIVE TREATMENT, 2018**

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 39%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 22% (21–25)

**TB FINANCING, 2019**

- National TB budget (US$ millions): 72
  - Funding source: 14% domestic, 24% international, 62% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

Data for all countries and years can be downloaded from www.who.int/tb/data
### Data for all countries and years can be downloaded from [www.who.int/tb/data](http://www.who.int/tb/data)

**GLOBAL TUBERCULOSIS REPORT 2019**

**INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV prevalence</td>
<td>(% of population aged 15–49 years)</td>
<td>SDG indicators database, The World Bank, World Health Organization</td>
</tr>
<tr>
<td>Diabetes prevalence</td>
<td>(% of population aged ≥18 years)</td>
<td></td>
</tr>
<tr>
<td>Alcohol use disorders, 12 month prevalence</td>
<td>(% of population aged ≥15 years)</td>
<td></td>
</tr>
<tr>
<td>Smoking prevalence</td>
<td>(% of population aged ≥15 years)</td>
<td></td>
</tr>
<tr>
<td>Health expenditure per capita, PPPb</td>
<td>(current international $)</td>
<td></td>
</tr>
<tr>
<td>Greater than 10% of total household expenditure or income on health</td>
<td>(% of population)</td>
<td></td>
</tr>
<tr>
<td>UHC index of essential service coverageb</td>
<td>(based on 16 tracer indicators including TB treatment)</td>
<td></td>
</tr>
</tbody>
</table>

**NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018**

- Diabetes
- HIV
- Harmful use of alcohol
- Smoking
- Undernourishment

### Footnotes

- a Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.
- b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

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*Population living below the international poverty line (% of population)*

*Population covered by social protection floors/systems (% of population)*

*Prevalence of undernourishment (% of population)*

*Access to clean fuels and technologies for cooking (% of population)*

*GDP per capita, PPPa (constant 2011 international $)*

*GINI index (0 = perfect equality, 100 = perfect inequality)*

*Population living in slums (% of urban population)*
### Cambodia

#### ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th></th>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>49 (27–77)</td>
<td>302 (169–475)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>1.1 (0.59–1.7)</td>
<td>6.5 (3.6–10)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>1 (0.46–1.9)</td>
<td>6.4 (2.8–11)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>3 (1.9–4.5)</td>
<td>18 (12–26)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>0.38 (0.21–0.6)</td>
<td>2.3 (1.3–3.7)</td>
</tr>
</tbody>
</table>

#### ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- **New cases**: 1.8% (1.2–2.8)
- **Previously treated cases**: 8.2% (4–16)

#### TB CASE NOTIFICATIONS, 2018

- **Total new and relapse**: 28,620
  - % tested with rapid diagnostics at time of diagnosis
  - % with known HIV status
  - % pulmonary
  - % bacteriologically confirmed
  - % children aged 0–14 years
  - % women
  - % men
- **Total cases notified**: 28,757

#### UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- **TB treatment coverage (notified/estimated incidence), 2018**: 58% (37–100)
- **TB patients facing catastrophic total costs**:
- **TB case fatality ratio (estimated mortality/estimated incidence), 2018**: 7% (4–12)

#### TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

<table>
<thead>
<tr>
<th></th>
<th>NUMBER (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with known HIV-status who are HIV-positive</td>
<td>580 (2%)</td>
</tr>
<tr>
<td>- on antiretroviral therapy</td>
<td>580 100%</td>
</tr>
</tbody>
</table>

#### DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance
  - New cases
  - Previously treated cases
- **Laboratory-confirmed cases**: MDR/RR-TB: 128, XDR-TB: 0
- **Patients started on treatment**: MDR/RR-TB: 128, XDR-TB: 0
- **MDR/RR-TB cases tested for resistance to second-line drugs**: 125

#### TREATMENT SUCCESS RATE AND COHORT SIZE

<table>
<thead>
<tr>
<th></th>
<th>SUCCESS COHORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>New and relapse cases registered in 2017</td>
<td>94% 34,238</td>
</tr>
<tr>
<td>Previously treated cases, excluding relapse, registered in 2017</td>
<td>79% 229</td>
</tr>
<tr>
<td>HIV-positive TB cases registered in 2017</td>
<td></td>
</tr>
<tr>
<td>MDR/RR-TB cases started on second-line treatment in 2016</td>
<td>64% 101</td>
</tr>
<tr>
<td>XDR-TB cases started on second-line treatment in 2016</td>
<td></td>
</tr>
</tbody>
</table>

#### TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment

#### TB FINANCING, 2019

- **National TB budget (US$ millions)**: 31
- **Funding source**: 17% domestic, 23% international, 60% unfunded

---

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

* Ranges represent uncertainty intervals.
* MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
* Calculated for pulmonary cases only.
* Includes cases with unknown previous TB treatment history.
* Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018

HIV
Diabetes
Smoking
Harmful use of alcohol
Undernourishment

INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE*

**HIV prevalence** (% of population aged 15–49 years)

**Diabetes prevalence** (% of population aged ≥18 years)

**Alcohol use disorders, 12 month prevalence** (% of population aged ≥15 years)

**Smoking prevalence** (% of population aged ≥15 years)

**Health expenditure per capita, PPPb** (current international $)

Greater than 10% of total household expenditure or income on health (% of population)

**UHC index of essential service coverageb** (based on 16 tracer indicators including TB treatment)

Population living below the international poverty line (% of population)

Population covered by social protection floors/systems (% of population)

Prevalence of undernourishment (% of population)

Access to clean fuels and technologies for cooking (% of population)

GDP per capita, PPPb (constant 2011 international $)

GINI index (0 = perfect equality, 100 = perfect inequality)

Population living in slums (% of urban population)

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

Data for all countries and years can be downloaded from www.who.int/tb/data

GLOBAL TUBERCULOSIS REPORT 2019 231
Central African Republic

ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th></th>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>25 (16–36)</td>
<td>540 (349–771)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>6.6 (4.2–9.4)</td>
<td>141 (91–201)</td>
</tr>
<tr>
<td>MDR/RR-TB incidencea</td>
<td>0.18 (0.1–0.27)</td>
<td>3.8 (2.2–5.9)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>4.8 (2.8–7.3)</td>
<td>103 (60–157)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>3.1 (2–4.5)</td>
<td>67 (42–97)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>New cases</td>
<td>0.4% (0–2.2)</td>
</tr>
<tr>
<td>Previously treated cases</td>
<td>15% (11–19)</td>
</tr>
</tbody>
</table>

TB CASE NOTIFICATIONS, 2018

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total new and relapse</td>
<td>10 881</td>
</tr>
<tr>
<td>– % tested with rapid diagnostics at time of diagnosis</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>– % with known HIV status</td>
<td>79%</td>
</tr>
<tr>
<td>– % pulmonary</td>
<td>79%</td>
</tr>
<tr>
<td>– % bacteriologically confirmedd</td>
<td>64%</td>
</tr>
<tr>
<td>– % children aged 0–14 years</td>
<td>17%</td>
</tr>
<tr>
<td>– % women</td>
<td>35%</td>
</tr>
<tr>
<td>– % men</td>
<td>48%</td>
</tr>
<tr>
<td>Total cases notified</td>
<td>11 032</td>
</tr>
</tbody>
</table>

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TB treatment coverage (notified/estimated incidence), 2018</td>
<td>43% (30–67)</td>
</tr>
<tr>
<td>TB patients facing catastrophic total costs</td>
<td></td>
</tr>
<tr>
<td>TB case fatality ratio (estimated mortality/estimated incidence), 2018</td>
<td>33% (18–50)</td>
</tr>
</tbody>
</table>

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with known HIV-status who are HIV-positive</td>
<td>2 274 (26%)</td>
</tr>
<tr>
<td>– on antiretroviral therapy</td>
<td>1 923 (85%)</td>
</tr>
</tbody>
</table>

DRUG-RESISTANT TB CARE, 2018

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>% of bacteriologically confirmed TB cases tested for rifampicin resistancee</td>
<td></td>
</tr>
<tr>
<td>– New cases</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>– Previously treated cases</td>
<td>53%</td>
</tr>
<tr>
<td>Laboratory-confirmed casesa</td>
<td></td>
</tr>
<tr>
<td>Patients started on treatmentb</td>
<td></td>
</tr>
<tr>
<td>MDR/RR-TB: 58, XDR-TB: 0</td>
<td></td>
</tr>
<tr>
<td>MDR/RR-TB cases tested for resistance to second-line drugs</td>
<td>0</td>
</tr>
</tbody>
</table>

TREATMENT SUCCESS RATE AND COHORT SIZE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New and relapse cases registered in 2017</td>
<td>78% (9 302)</td>
</tr>
<tr>
<td>Previously treated cases, excluding relapse, registered in 2017</td>
<td>73% (1 167)</td>
</tr>
<tr>
<td>HIV-positive TB cases registered in 2017</td>
<td>76% (2 137)</td>
</tr>
<tr>
<td>MDR/RR-TB cases started on second-line treatment in 2016</td>
<td>59% (41)</td>
</tr>
<tr>
<td>XDR-TB cases started on second-line treatment in 2016</td>
<td>0</td>
</tr>
</tbody>
</table>

TB PREVENTIVE TREATMENT, 2018

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% of HIV-positive people (newly enrolled in care) on preventive treatment</td>
<td></td>
</tr>
<tr>
<td>% of children (aged &lt;5) household contacts of bacteriologically confirmed TB cases on preventive treatment</td>
<td>100%</td>
</tr>
</tbody>
</table>

TB FINANCING, 2019

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>National TB budget (US$ millions)</td>
<td>2.9</td>
</tr>
<tr>
<td>Funding source:</td>
<td>27% domestic, 41% international, 32% unfunded</td>
</tr>
</tbody>
</table>

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

a Ranges represent uncertainty intervals.
b MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
c Calculated for pulmonary cases only.
d Includes cases with unknown previous TB treatment history.
e Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018

INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE

- HIV prevalence (% of population aged 15–49 years)
- Diabetes prevalence (% of population aged ≥18 years)
- Alcohol use disorders, 12 month prevalence (% of population aged ≥15 years)
- Smoking prevalence (% of population aged ≥15 years)
- Health expenditure per capita, PPPb (current international $)
- Greater than 10% of total household expenditure or income on health (% of population)
- UHC index of essential service coverageb (based on 16 tracer indicators including TB treatment)
- Population living below the international poverty line (% of population)
- Population covered by social protection floors/systems (% of population)
- Prevalence of undernourishment (% of population)
- Access to clean fuels and technologies for cooking (% of population)
- GDP per capita, PPP (constant 2011 international $)
- GINI index (0 = perfect equality, 100 = perfect inequality)
- Population living in slums (% of urban population)

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Congo

**ESTIMATES OF TB BURDEN,** 2018

<table>
<thead>
<tr>
<th></th>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>20 (12–28)</td>
<td>375 (238–543)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>5.7 (2.9–9.4)</td>
<td>108 (55–179)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>0.56 (0.23–1)</td>
<td>11 (4.5–20)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>3 (1.7–4.6)</td>
<td>57 (32–89)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>2.3 (1.2–3.8)</td>
<td>43 (22–72)</td>
</tr>
</tbody>
</table>

**ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB,** 2018

- New cases: 2.4% (1.1–4.2)
- Previously treated cases: 12% (8.7–16)

**TB CASE NOTIFICATIONS,** 2018

- Total new and relapse: 10 706
  - % tested with rapid diagnostics at time of diagnosis: 9%
  - % with known HIV status: 19%
  - % pulmonary: 77%
  - % bacteriologically confirmed: 49%
  - % children aged 0–14 years: 8%
  - % women: 40%
  - % men: 52%
- Total cases notified: 10 981

**UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION**

- TB treatment coverage (notified/estimated incidence), 2018: 54% (18–86)
- TB patients facing catastrophic total costs
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 28% (14–44)

**TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS,** 2018

- Patients with known HIV-status who are HIV-positive: 553 (28%)
  - on antiretroviral therapy: 273 (49%)

**DRUG-RESISTANT TB CARE,** 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance:
  - New cases: 15%
  - Previously treated cases: 100%
- Laboratory-confirmed cases: MDR/RR-TB: 61, XDR-TB: 0
- Patients started on treatment: MDR/RR-TB: 47, XDR-TB: 0
- MDR/RR-TB cases tested for resistance to second-line drugs: 0

**TREATMENT SUCCESS RATE AND COHORT SIZE**

- New and relapse cases registered in 2017: 66% (10 005)
- Previously treated cases, excluding relapse, registered in 2017: 44% (258)
- HIV-positive TB cases registered in 2017: 25% (374)
- MDR/RR-TB cases started on second-line treatment in 2016: 0
- XDR-TB cases started on second-line treatment in 2016: 0

**TB PREVENTIVE TREATMENT,** 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment

**TB FINANCING,** 2019

- National TB budget (US$ millions): <1
- Funding source: 6% domestic, 94% international, 0% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

1. Ranges represent uncertainty intervals.
2. MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
3. Calculated for pulmonary cases only.
4. Includes cases with unknown previous TB treatment history.
5. Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
### Indicators in the Sustainable Development Goals Associated with TB Incidence

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>Data Sources</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV prevalence</td>
<td>(% of population aged 15–49 years)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>Missing values and empty boxes indicate data not available in these data sources.</td>
</tr>
<tr>
<td>Diabetes prevalence</td>
<td>(% of population aged ≥18 years)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>Missing values and empty boxes indicate data not available in these data sources.</td>
</tr>
<tr>
<td>Alcohol use disorders, 12 month prevalence</td>
<td>(% of population aged ≥15 years)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>Missing values and empty boxes indicate data not available in these data sources.</td>
</tr>
<tr>
<td>Smoking prevalence</td>
<td>(% of population aged ≥15 years)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>Missing values and empty boxes indicate data not available in these data sources.</td>
</tr>
<tr>
<td>Health expenditure per capita, PPPb</td>
<td>(current international $)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage</td>
</tr>
<tr>
<td>Greater than 10% of total household expenditure or income on health</td>
<td>(% of population)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>Missing values and empty boxes indicate data not available in these data sources.</td>
</tr>
<tr>
<td>UHC index of essential service coverageb</td>
<td>(based on 16 tracer indicators including TB treatment)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>Missing values and empty boxes indicate data not available in these data sources.</td>
</tr>
<tr>
<td>Population living below the international poverty line</td>
<td>(% of population)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>Missing values and empty boxes indicate data not available in these data sources.</td>
</tr>
<tr>
<td>GDP per capita, PPPb</td>
<td>(constant 2011 international $)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage</td>
</tr>
<tr>
<td>GINI index</td>
<td>(0 = perfect equality, 100 = perfect inequality)</td>
<td>Data sources: SDG indicators database, The World Bank, World Health Organization.</td>
<td>Missing values and empty boxes indicate data not available in these data sources.</td>
</tr>
</tbody>
</table>

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Lesotho

**ESTIMATES OF TB BURDEN,** 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>13 (8.3–18) 611 (395–872)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>8.6 (5.4–12) 398 (257–568)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>0.8 (0.47–1.2) 18 (22–58)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>0.95 (0.56–1.4) 45 (27–68)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>3.3 (2.1–4.7) 155 (98–223)</td>
</tr>
</tbody>
</table>

**ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018**

- New cases: 4.8% (3.7–6)
- Previously treated cases: 14% (9.5–18)

**TB CASE NOTIFICATIONS, 2018**

- Total new and relapse: 7,027
  - % tested with rapid diagnostics at time of diagnosis: 97%
  - % with known HIV status: 90%
  - % pulmonary: 67%
  - % children aged 0–14 years: 4%
  - % women: 34%
  - % men: 62%

**UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION**

- TB treatment coverage (notified/estimated incidence), 2018: 55% (18–84)
- TB patients facing catastrophic total costs: 34% (18–52)

**TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018**

<table>
<thead>
<tr>
<th>NUMBER (%)</th>
</tr>
</thead>
</table>
| Patients with known HIV-status who are HIV-positive | 4,615 (65%)
| on antiretroviral therapy | 4,077 (92%)

**DRUG-RESISTANT TB CARE, 2018**

- % of bacteriologically confirmed TB cases tested for rifampicin resistance:
  - New cases: 70%
  - Previously treated cases: 63%
- Laboratory-confirmed cases:
- Patients started on treatment:
- MDR/RR-TB cases tested for resistance to second-line drugs: 191

**TREATMENT SUCCESS RATE AND COHORT SIZE**

<table>
<thead>
<tr>
<th>SUCCESS</th>
<th>COHORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>New and relapse cases registered in 2017</td>
<td>76% 7,305</td>
</tr>
<tr>
<td>Previously treated cases, excluding relapse, registered in 2017</td>
<td>73% 121</td>
</tr>
<tr>
<td>HIV-positive TB cases registered in 2017</td>
<td>75% 4,969</td>
</tr>
<tr>
<td>MDR/RR-TB cases started on second-line treatment in 2016</td>
<td>77% 222</td>
</tr>
<tr>
<td>XDR-TB cases started on second-line treatment in 2016</td>
<td>0</td>
</tr>
</tbody>
</table>

**TB PREVENTIVE TREATMENT, 2018**

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 33%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 51% (47–56)

**TB FINANCING, 2019**

- National TB budget (US$ millions): 12
- Funding source: 5% domestic, 39% international, 57% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries. Estimates are rounded and totals are computed prior to rounding. Estimates of TB incidence and mortality for Lesotho will be reviewed after final results from the national TB prevalence survey are available in 2020.

- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
**NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018**

- Diabetes
- Harmful use of alcohol
- Smoking
- Undernourishment
- HIV

**INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE**

1. **Population living below the international poverty line** (% of population)
2. **Population covered by social protection floors/systems** (% of population)
3. **Prevalence of undernourishment** (% of population)
4. **Access to clean fuels and technologies for cooking** (% of population)
5. **GDP per capita, PPP**
   - (constant 2011 international $)
6. **GINI index**
   - (0 = perfect equality, 100 = perfect inequality)
7. **Population living in slums** (% of urban population)

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

Data for all countries and years can be downloaded from www.who.int/tb/data

GLOBAL TUBERCULOSIS REPORT 2019 237
Liberia

ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>15 (9.6–21)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>2.6 (1.7–5.7)</td>
</tr>
<tr>
<td>MDR/RR-TB incidencea</td>
<td>0.39 (0.15–0.72)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>2.7 (1.6–4.1)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>1 (0.67–1.5)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

<table>
<thead>
<tr>
<th></th>
<th>New cases</th>
<th>Previously treated cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.4% [1.1–4.2]</td>
<td>15% [11–19]</td>
</tr>
</tbody>
</table>

TB CASE NOTIFICATIONS, 2018

- Total new and relapse: 7,808
  - % with known HIV status: 77%
  - % pulmonary: 66%
  - % bacteriologically confirmedd: 60%
  - % children aged 0-14 years: 15%
  - % women: 37%
  - % men: 48%
- Total cases notified: 7,824

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- TB treatment coverage (notified/estimated incidence), 2018: 53% [37–81]
- TB patients facing catastrophic total costs
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 26% [14–41]

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

<table>
<thead>
<tr>
<th>NUMBER (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with known HIV-status who are HIV-positive</td>
</tr>
<tr>
<td>- on antiretroviral therapy</td>
</tr>
</tbody>
</table>

DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance a: 23%
  - New cases: 23%
  - Previously treated cases: 52%
- Laboratory-confirmed casesb: MDR/RR-TB: 73, XDR-TB: 0
- Patients started on treatmentd,e: MDR/RR-TB: 93, XDR-TB: 0
- MDR/RR-TB cases tested for resistance to second-line drugs

TREATMENT SUCCESS RATE AND COHORT SIZE

- New and relapse cases registered in 2017: 77% | 6,907
- Previously treated cases, excluding relapse, registered in 2017: 69% | 16
- HIV-positive TB cases registered in 2017: 65% | 833
- MDR/RR-TB cases started on second-line treatment in 2016: 73% | 74
- XDR-TB cases started on second-line treatment in 2016: 73%

TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 21%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 2% [1.9–2.3]

TB FINANCING, 2019

- National TB budget (US$ millions): 7.3
- Funding source: 0% domestic, 23% international, 77% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE

1. Poverty living below the international poverty line (percentage of population) 2000-2017

2. Population covered by social protection floors/systems (percentage of population) 2000-2017

3. Prevalence of undernourishment (percentage of population) 2000-2017

4. Access to clean fuels and technologies for cooking (percentage of population) 2000-2017

5. GDP per capita, PPP (current international $) 2000-2017

6. GINI index (0 = perfect equality, 100 = perfect inequality) 2000-2017

7. Population living in slums (percentage of urban population) 2000-2017

Data for all countries and years can be downloaded from www.who.int/tb/data

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

** GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Namibia

**ESTIMATES OF TB BURDEN,** 2018

<table>
<thead>
<tr>
<th>Condition</th>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>13 (9.2–17)</td>
<td>524 (375–697)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>6.5 (3.2–5.9)</td>
<td>182 (130–242)</td>
</tr>
<tr>
<td>MDR/RR-TB incidencea</td>
<td>0.9 (0.6–1.2)</td>
<td>37 (25–50)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>1.6 (1–2.5)</td>
<td>64 (41–92)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>1.5 (1–2.1)</td>
<td>62 (43–85)</td>
</tr>
</tbody>
</table>

**ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018**

New cases 5.8% [5–6.5]
Previously treated cases 12% [9.4–14]

**TB CASE NOTIFICATIONS, 2018**

Total new and relapse 7,808
- % tested with rapid diagnostics at time of diagnosis 60%
- % with known HIV status 99%
- % pulmonary 81%
- % bacteriologically confirmedd 84%
- % children aged 0–14 years 9%
- % women 34%
- % men 57%

**UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION**

TB treatment coverage (notified/estimated incidence), 2018 61% (46–85)
TB patients facing catastrophic total costs
TB case fatality ratio (estimated mortality/estimated incidence), 2018 25% (16–35)

**TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018**

Patients with known HIV-status who are HIV-positive 2,768 35%
- on antiretroviral therapy 2,675 97%

**DRUG-RESISTANT TB CARE, 2018**

% of bacteriologically confirmed TB cases tested for rifampicin resistancea
- New cases 88%
- Previously treated cases 73%

Laboratory-confirmed casesa
- MDR/RR-TB: 323, XDR-TB: 19

Patients started on treatmenta,c
- MDR/RR-TB: 311, XDR-TB: 19

MDR/RR-TB cases tested for resistance to second-line drugs 200

**TREATMENT SUCCESS RATE AND COHORT SIZE**

New and relapse cases registered in 2017 86% 8,559
Previously treated cases, excluding relapse, registered in 2017 64% 292
HIV-positive TB cases registered in 2017 82% 2,983
MDR/RR-TB cases started on second-line treatment in 2016 71% 348
XDR-TB cases started on second-line treatment in 2016 50% 10

**TB PREVENTIVE TREATMENT, 2018**

% of HIV-positive people (newly enrolled in care) on preventive treatment
% of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment 4.4% (40–48)

**TB FINANCING, 2019**

National TB budget (US$ millions) 50
Funding source: 61% domestic, 9% international, 30% unfunded

---

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
**NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018**

- Diabetes
- Smoking
- Harmful use of alcohol
- HIV
- Undernourishment

**INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE**

1. **HIV prevalence** (% of population aged 15–49 years)
2. **Diabetes prevalence** (% of population aged ≥18 years)
3. **Alcohol use disorders, 12 month prevalence** (% of population aged ≥15 years)
4. **Smoking prevalence** (% of population aged ≥15 years)
5. **Health expenditure per capita, PPPb** (current international $)
6. **Greater than 10% of total household expenditure or income on health** (% of population)
7. **UHC index of essential service coverage** (based on 16 tracer indicators including TB treatment)
8. **Population covered by social protection floors/systems** (% of population)
9. **Prevalence of undernourishment** (% of population)
10. **Access to clean fuels and technologies for cooking** (% of population)
11. **GINI index** (0 = perfect equality, 100 = perfect inequality)

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
**ESTIMATES OF TB BURDEN, 2018**

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>37 (30–45) 432 (352–521)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>2.7 (2.2–3.3) 32 (26–38)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>2 (1.2–2.9) 23 (14–33)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>4.5 (3–6.2) 52 (35–72)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>0.25 (0.1–0.45) 2.8 (1.2–5.2)</td>
</tr>
</tbody>
</table>

**ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018**

- New cases: 3.4% (1.7–5)
- Previously treated cases: 26% (15–16)

**TB CASE NOTIFICATIONS, 2018**

- Total new and relapse: 27,887
- % with known HIV status: 52%
- % pulmonary: 56%
- % bacteriologically confirmed: 30%
- % children aged 0–14 years: 24%
- % women: 36%
- % men: 40%
- Total cases notified: 29,364

**UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION**

- TB treatment coverage (notified/estimated incidence), 2018: 75% (62–92)
- TB patients facing catastrophic total costs
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 13% (8–18)

**TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018**

- Patients with known HIV-status who are HIV-positive: 1,124 (7%)
  - on antiretroviral therapy: 909 (81%)

**DRUG-RESISTANT TB CARE, 2018**

- % of bacteriologically confirmed TB cases tested for rifampicin resistance: 43%
  - New cases
  - Previously treated cases
  - Laboratory-confirmed cases: MDR/RR-TB: 433, XDR-TB: 8
  - Patients started on treatment: MDR/RR-TB: 401, XDR-TB: 8
  - MDR/RR-TB cases tested for resistance to second-line drugs: 252

**TREATMENT SUCCESS RATE AND COHORT SIZE**

- New cases registered in 2017: 68% 26,954
- Previously treated cases registered in 2017: 56% 983
- HIV-negative TB cases registered in 2017: 66% 835
- MDR/RR-TB cases started on second-line treatment in 2016: 75% 236
- XDR-TB cases started on second-line treatment in 2016: 63% 8

**TB PREVENTIVE TREATMENT, 2018**

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 21%
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment: 27% (25–30)

**TB FINANCING, 2019**

- National TB budget (US$ millions): 36
- Funding source: 52% domestic, 25% international, 24% unfunded

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Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

- Ranges represent uncertainty intervals.
- MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
- Calculated for pulmonary cases only.
- Includes cases with unknown previous TB treatment history.
- Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

For more detailed information, please visit www.who.int/tb/data.
### NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undernourishment</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Diabetes</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>HIV</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Harmful use of alcohol</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Smoking</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

Data for all countries and years can be downloaded from [www.who.int/tb/data](http://www.who.int/tb/data).

### INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2000</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No poverty living below the international poverty line (%)</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>2. Zero hunger (prevalence of undernourishment) (%)</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>3. Zero hunger (prevalence of undernourishment) (%)</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>4. Affordable and clean fuels and technologies for cooking (%)</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>5. GDP per capita, PPP (%) (constant 2011 international $)</td>
<td>0</td>
<td>5000</td>
</tr>
<tr>
<td>6. GINI index (0 = perfect equality, 100 = perfect inequality)</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>7. UHC index of essential service coverage (%) (based on 16 tracer indicators including TB treatment)</td>
<td>0</td>
<td>50</td>
</tr>
</tbody>
</table>

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

** GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Sierra Leone

ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 (15–33)</td>
<td>298 (191–427)</td>
</tr>
</tbody>
</table>

HIV-positive TB incidence

- 2.9 (1.9–6.2)
- 38 (25–55)

MDR/RR-TB incidence

- 0.64 (0.26–1.2)
- 8.3 (3.4–15)

HIV-negative TB mortality

- 2.6 (1.5–5.9)
- 33 (20–51)

HIV-positive TB mortality

- 0.7 (0.44–1)
- 9.2 (5.8–13)

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- New cases 2.4% (1.1–4.2)
- Previously treated cases 15% (11–19)

TB CASE NOTIFICATIONS, 2018

- Total new and relapse 17 144
- % tested with rapid diagnostics at time of diagnosis 5%
- % with known HIV status 98%
- % pulmonary 92%
- % bacteriologically confirmed† 65%
- % children aged 0–14 years 16%
- % women 53%
- % men 47%
- Total cases notified 17 169

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

TB treatment coverage (notified/estimated incidence), 2018 75% (53–120)

TB patients facing catastrophic total costs

TB case fatality ratio (estimated mortality/estimated incidence), 2018 15% (8–23)

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

- Patients with known HIV-status who are HIV-positive 2 168 13%
- on antiretroviral therapy 2 167 100%

DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance* 100%

- New cases
- Previously treated cases

Laboratory-confirmed cases

- MDR/RR-TB: 166, XDR-TB: 0

Patients started on treatment

- MDR/RR-TB: 120, XDR-TB: 0

MDR/RR-TB cases tested for resistance to second-line drugs 120

TREATMENT SUCCESS RATE AND COHORT SIZE

New and relapse cases registered in 2017 90% 15 935

Previously treated cases, excluding relapse, registered in 2017 65% 207

HIV-positive TB cases registered in 2017 82% 1 936

MDR/RR-TB cases started on second-line treatment in 2016

XDR-TB cases started on second-line treatment in 2016

TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment 57%

- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment

TB FINANCING, 2019

- National TB budget (US$ millions) 9.5

- Funding source: 3% domestic, 71% international, 25% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

* Ranges represent uncertainty intervals.

† MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.

+ Calculated for pulmonary cases only.

* Includes cases with unknown previous TB treatment history.

© Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.

Data for all countries and years can be downloaded from www.who.int/tb/data

GLOBAL TUBERCULOSIS REPORT 2019
**NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018**

- Diabetes
- Harmful use of alcohol
- Smoking
- HIV
- Undernourishment

<table>
<thead>
<tr>
<th>Year</th>
<th>Diabetes</th>
<th>Harmful use of alcohol</th>
<th>Smoking</th>
<th>HIV</th>
<th>Undernourishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

**INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE**

1. **1 NO POVERTY**
   - Population living below the international poverty line (% of population)

2. **2 ZERO HUNGER**
   - Population covered by social protection floors/systems (% of population)

3. **3 GOOD HEALTH AND WELL-BEING**
   - HIV prevalence (% of population aged 15–49 years)
   - Diabetes prevalence (% of population aged ≥18 years)
   - Alcohol use disorders, 12 month prevalence (% of population aged ≥15 years)
   - Smoking prevalence (% of population aged ≥15 years)
   - Health expenditure per capita, PPPb (current international $)

4. **7 AFFORDABLE AND CLEAN ENERGY**
   - Access to clean fuels and technologies for cooking (% of population)

5. **8-decent work and economic growth**
   - GDP per capita, PPPb (constant 2011 international $)

6. **10 REDUCED INEQUALITIES**
   - GINI index (0 = perfect equality, 100 = perfect inequality)

7. **11 SUSTAINABLE COMMUNITIES**
   - Population living in slums (% of urban population)

* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage

Data for all countries and years can be downloaded from www.who.int/tb/data
Zambia

ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>60 (59–66)</td>
<td>346 (225–493)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>36 (23–51)</td>
<td>205 (133–293)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence (a)</td>
<td>3.1 (1.6–5)</td>
<td>18 (9.4–29)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>4.8 (2.9–7.3)</td>
<td>28 (16–42)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>13 (8.3–19)</td>
<td>74 (48–107)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- New cases: 2.8% (2.5–3.1)
- Previously treated cases: 18% (12–26)

TB CASE NOTIFICATIONS, 2018

- Total new and relapse: 35 071
  - % tested with rapid diagnostics at time of diagnosis: 46%
  - % with known HIV status: 95%
  - % pulmonary: 87%
  - % bacteriologically confirmed (b): 56%
  - % children aged 0–14 years: 6%
  - % women: 32%
  - % men: 62%
- Total cases notified: 35 922

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- TB treatment coverage (notified/estimated incidence), 2018: 58% (41–90)
- TB patients facing catastrophic total costs
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 31% (17–46)

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

- Patients with known HIV-status who are HIV-positive: 20 202 (59%)
  - on antiretroviral therapy: 18 421 (91%)

DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance:
  - New cases: 98%
  - Previously treated cases: 54%
  - Laboratory-confirmed cases:
    - MDR/RR-TB: 627, XDR-TB: 1
  - Patients started on treatment:
    - MDR/RR-TB: 506, XDR-TB: 1
  - MDR/RR-TB cases tested for resistance to second-line drugs: 150

TREATMENT SUCCESS RATE AND COHORT SIZE

- New and relapse cases registered in 2017: 90% 36 010
- Previously treated cases, excluding relapse, registered in 2017: 85% 1 193
- HIV-positive TB cases registered in 2017: 86% 20 362
- MDR/RR-TB cases started on second-line treatment in 2016: 71% 136
- XDR-TB cases started on second-line treatment in 2016: 0

TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment
- % of children (aged <5) household contacts of bacteriologically confirmed TB cases on preventive treatment

TB FINANCING, 2019

- National TB budget (US$ millions): 31
- Funding source: 29% domestic, 43% international, 28% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

* Ranges represent uncertainty intervals.
  a MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
  b Calculated for pulmonary cases only.
  c Includes cases with unknown previous TB treatment history.
  d Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
### Data Sources
- SDG indicators database
- The World Bank
- World Health Organization

Data for all countries and years can be downloaded from [www.who.int/tb/data](http://www.who.int/tb/data)

### Indicators in the Sustainable Development Goals Associated with TB Incidence

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data Sources</th>
<th>Graph</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Poverty (living below the international poverty line) (%) of population</td>
<td>GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage</td>
<td><a href="#">Graph</a></td>
</tr>
<tr>
<td>2. Health expenditure per capita, PPP (constant 2011 international $)</td>
<td>GDP = gross domestic product; PPP = purchasing power parity</td>
<td><a href="#">Graph</a></td>
</tr>
<tr>
<td>3. Prevalence of undernourishment (%) of population</td>
<td></td>
<td><a href="#">Graph</a></td>
</tr>
<tr>
<td>4. Access to clean fuels and technologies for cooking (%) of population</td>
<td>GDP = gross domestic product; PPP = purchasing power parity</td>
<td><a href="#">Graph</a></td>
</tr>
<tr>
<td>5. GINI index (0 = perfect equality, 100 = perfect inequality)</td>
<td></td>
<td><a href="#">Graph</a></td>
</tr>
</tbody>
</table>

---

*Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage
Zimbabwe

ESTIMATES OF TB BURDEN,* 2018

<table>
<thead>
<tr>
<th>NUMBER (thousands)</th>
<th>RATE (per 100 000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TB incidence</td>
<td>30 (22–39)</td>
</tr>
<tr>
<td>HIV-positive TB incidence</td>
<td>19 (14–24)</td>
</tr>
<tr>
<td>MDR/RR-TB incidence</td>
<td>1.5 (1.1–2)</td>
</tr>
<tr>
<td>HIV-negative TB mortality</td>
<td>1.1 (0.69–1.7)</td>
</tr>
<tr>
<td>HIV-positive TB mortality</td>
<td>3.5 (2.6–4.8)</td>
</tr>
</tbody>
</table>

ESTIMATED PROPORTION OF TB CASES WITH MDR/RR-TB, 2018

- New cases: 3.9% [3.5–4.3]
- Previously treated cases: 14% [8.9–20]

TB CASE NOTIFICATIONS, 2018

- Total new and relapse: 25 204
  - % tested with rapid diagnostics at time of diagnosis: 87%
  - % with known HIV status: 94%
  - % pulmonary: 89%
  - % bacteriologically confirmed: 54%
  - % children aged 0–14 years: 6%
  - % women: 36%
  - % men: 58%
- Total cases notified: 25 775

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

- TB treatment coverage (notified/estimated incidence), 2018: 83% [64–110]
- TB patients facing catastrophic total costs, 2018: 80% [76–85]
- TB case fatality ratio (estimated mortality/estimated incidence), 2018: 15% [10–22]

TB/HIV CARE IN NEW AND RELAPSE TB PATIENTS, 2018

- Patients with known HIV-status who are HIV-positive: 15 062
  - on antiretroviral therapy: 13 636

DRUG-RESISTANT TB CARE, 2018

- % of bacteriologically confirmed TB cases tested for rifampicin resistance:
  - New cases: 91%
  - Previously treated cases: 97%
- Laboratory-confirmed cases:
  - MDR/RR-TB: 406
  - XDR-TB: 7
- Patients started on treatment:
  - MDR/RR-TB: 381
  - XDR-TB: 3

TREATMENT SUCCESS RATE AND COHORT SIZE

- New and relapse cases registered in 2017: 83% [82–84]
- Previously treated cases, excluding relapse, registered in 2017: 83% [53–55]
- HIV-positive TB cases registered in 2017: 82% [16 602]
- MDR/RR-TB cases started on second-line treatment in 2016: 57% [488]
- XDR-TB cases started on second-line treatment in 2016: 0% [5]

TB PREVENTIVE TREATMENT, 2018

- % of HIV-positive people (newly enrolled in care) on preventive treatment: 30% [27–33]

TB FINANCING, 2019

- National TB budget (US$ millions): 61
- Funding source: <1% domestic, 31% international, 69% unfunded

Data are as reported to WHO. Estimates of TB and MDR/RR-TB burden are produced by WHO in consultation with countries.

* Ranges represent uncertainty intervals.
* MDR is TB resistant to rifampicin and isoniazid; RR is TB resistant to rifampicin.
* Calculated for pulmonary cases only.
* Includes cases with unknown previous TB treatment history.
* Includes patients diagnosed before 2018 and patients who were not laboratory-confirmed.
NUMBER OF TB CASES ATTRIBUTABLE TO FIVE RISK FACTORS, 2018

INDICATORS IN THE SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH TB INCIDENCE

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* Data sources: SDG indicators database, The World Bank, World Health Organization. Missing values and empty boxes indicate data not available in these data sources.

b GDP = gross domestic product; PPP = purchasing power parity; UHC = universal health coverage