

REFERENCE  
TB/HIV

# **HIV-ASSOCIATED TB DATA & RECOMMENDED ACTIONS**

## **BRAZIL**

October 2021

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**See more annexes in the pdf documents attached to the email:**

Annex 2- National Commitment and Policy Instrument (NCPI)

As part of its commitments to the 2016 Political Declaration, Brazil reported on the existence of a set of laws and policies as instruments of the national response to AIDS and TB through the National Commitment and Policy Instrument (NCPI).

The NCPI is an integral component of Global AIDS Monitoring that aims to measure progress in developing and implementing policies, strategies and laws related to the HIV response, including efforts to prevent, diagnose and treat TB

Annex 3 – WHO country profile

NOTE: In downloading the pdf [from the WHO TB data website](#), the colour coding of the title of the graphic on the top right of the first page has been lost, it should read - **Incidence, New and relapse TB cases notified, HIV-positive TB incidence** – with the colours referring to the different lines on the graph.

Annex 4 - Stop TB Partnership country profile – TB situation and HLM targets

## Brazil: HIV-associated TB Data

In 2019, in Brazil, there were an estimated 96 000 **new incident cases<sup>1</sup> of tuberculosis (TB)**; of whom 11 000 occurred among people living with HIV.<sup>2</sup>

In the same year, there were an estimated 4 900 **TB deaths** among people who were HIV negative and an additional 1 800 **TB deaths among people living with HIV**.

In 2019, in Brazil, 83 547 people were diagnosed with TB<sup>3</sup>, started on treatment and notified to the national TB programme, representing 87% **TB treatment coverage**.

Of the 83 547 people on TB treatment, 80% **knew their HIV status**; of whom 11% were **known to be living with HIV**.

Of the 7 414 HIV positive people on TB treatment, 49% were **receiving antiretroviral therapy**.

**TB and HIV treatment coverage** – the proportion of people living with HIV who developed incident TB disease in 2019 and who received treatment for both diseases (ART and TB treatment) was 34% [29 - 39%].<sup>4</sup>

In 2019, in Brazil, there were an estimated 920 000 [420 000 - 1 300 000] people living with HIV.

During 2019, an estimated \_\_\_\_\_ people were **newly enrolled on antiretroviral therapy**; of whom " \_\_\_\_\_" % were **receiving TB preventive treatment<sup>5</sup>** and \_\_\_\_\_ % were **diagnosed with TB**.<sup>6</sup> These two percentages should add up to 100% as all people who were newly enrolled on antiretroviral therapy should be screened for TB and if positive, they should be tested and treated for TB. If they do not have TB symptoms or have a negative TB test, they should receive TB preventive treatment. When added together these two percentages give a measure of coverage of 'optimal TB care' for people living with HIV newly enrolled on ART.

In 2019, \_\_\_\_\_ % of people newly enrolled on antiretroviral therapy were **receiving optimal TB care** (either TB preventive treatment or TB treatment).

The available funding<sup>7</sup> for TB in 2019 was US\$ 38 169 385 with a gap of US\$ 0, and the funding gap for TB/HIV was US\$ 0.

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<sup>1</sup> TB cases refers to the total number of estimated incident cases occurring in the country in 2019, ie including those that have not been diagnosed.

<sup>2</sup> Unless otherwise indicated, all TB data come from the Global Tuberculosis Report 2020, World Health Organization, 2020.

<sup>3</sup> Refers to people with incident TB disease (including all new cases, relapse cases and cases with unknown previous TB treatment history) that have been diagnosed with TB, recorded in the national TB register and started on treatment.

<sup>4</sup> GAM Indicator 10.1 – Co-management of TB and HIV treatment (Percentage of estimated HIV-positive incident tuberculosis [TB] cases that received treatment for both TB and HIV) from the 2020 Global AIDS Monitoring. [www.aidsinfo.unaids.org](http://www.aidsinfo.unaids.org)

<sup>5</sup> GAM Indicator 10.3 – Proportion of people living with HIV receiving TB preventive treatment (Number of patients started on treatment for latent TB infection, expressed as a percentage of the total number newly enrolled in HIV care during the reporting) from the 2020 Global AIDS Monitoring.

<sup>6</sup> GAM Indicator 10.2 – Proportion of people living with HIV newly enrolled in HIV care with active TB disease (Total number of people living with HIV with active TB expressed as a percentage of those who are newly enrolled in HIV care [pre-antiretroviral therapy or antiretroviral therapy] during the reporting period) from the 2020 Global AIDS Monitoring.

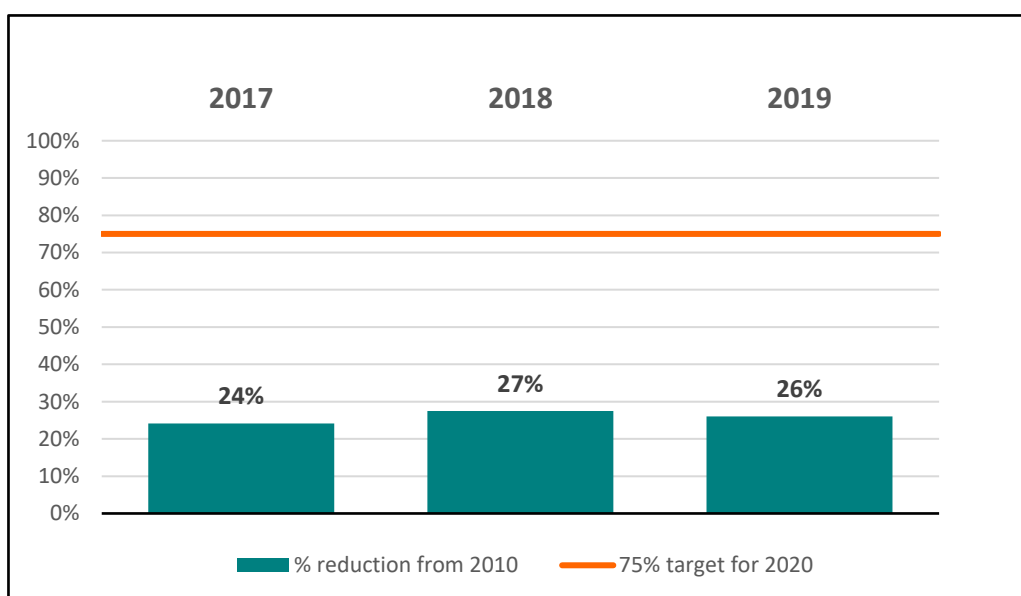
<sup>7</sup> \_\_\_\_\_ % indicates that no data were reported for this/these indicator(s).

## Progress towards the Political Declaration target

The 2016 Political Declaration on Ending AIDS set a global target of a 75% reduction in TB deaths among people living with HIV by 2020 from a 2010 baseline.

WHO estimated that there were 2 500 TB deaths among people living with HIV in Brazil in 2010 (the baseline for the Political Declaration); in 2019 there were an estimated 1 800 TB deaths among people living with HIV [in 2018 – 1 800 and in 2017 – 1 900]. This indicates that the **number of TB-related deaths among people living with HIV** in Brazil in 2019 has decreased by 26% since 2010, still far from the 75% reduction required by 2020.

**Figure 1:** Trend in percentage reduction in TB deaths among people living with HIV in Brazil 2017-2019 from a 2010 baseline



## Recommended priority actions to reduce the impact of HIV-associated TB in Brazil

We suggest that the following priority actions<sup>8</sup> be considered to reduce the burden of HIV-associated TB for Brazil in 2021, in discussion with national partners. This will help to reduce the impact of HIV-related TB; move towards achieving an 80% reduction in TB deaths among people living with HIV by 2025<sup>9</sup>, and to end TB and AIDS as public health threats by 2030 (SDG3).

<sup>8</sup> These recommended priority actions are based on an assessment of the above data from 2019 for Brazil, and global policy guidance from the latest WHO HIV and TB guidelines (see Annex 4) ; the PEPFAR Country Operational Plan (COP) Guidance (2021) <https://www.state.gov/wp-content/uploads/2020/12/PEPFAR-COP21-Guidance-Final.pdf> ; and the Political Declaration from the first UN General Assembly high-level meeting on tuberculosis (A/73/L.4) <https://undocs.org/A/73/L.4> that took place in September 2018.

<sup>9</sup> Modeling by WHO and UNAIDS proposed that the 2016 Political Declaration target of a 75% reduction in TB deaths among people living with HIV by 2020 be increased to an 80% reduction by 2025. This new target was adopted in the UN HLM Political Declaration on Ending HIV/AIDS 2021 ( [https://www.unaids.org/en/resources/documents/2021/2021\\_political-declaration-on-hiv-and-aids](https://www.unaids.org/en/resources/documents/2021/2021_political-declaration-on-hiv-and-aids) ).

**A. Achieving the 2016 Political Declaration target of reducing TB deaths among people living with HIV by 2020.**

1. Since 2010, TB deaths among people living with HIV have decreased by 26% in Brazil, moving too slowly towards the 75% reduction target.

a. In 2019 there were an estimated 1 800 deaths among people living with HIV compared to 2 500 in 2010.

b. **Brazil target for 2020 is fewer than 620 TB deaths among people living with HIV.**

2. Brazil is not progressing towards the Political Declaration target and unlikely to reach the target by 2020 unless rapid action is taken by the TB and HIV programmes to expand access to integrated TB and HIV services for people living with HIV. There were no reported funding gaps for TB and TB/HIV activities.

**B. Reducing the burden of HIV among people on TB treatment<sup>10</sup>**

1. **Good percentage of people on TB treatment know their HIV status** - 80% of people on TB treatment knew their HIV status and the country is progressing towards reaching the first 90 for people on TB treatment. People diagnosed with TB should always be offered HIV testing, high uptake is possible as people on TB treatment are already in regular contact with the health system.

11% of people on TB treatment who knew their HIV status were HIV positive, indicating that HIV is a significant risk factor for TB in the country.

a. In addition to all people on TB treatment, all people being investigated for TB symptoms<sup>11</sup> (suspected TB) should be offered an HIV test while waiting for TB investigations. People on TB treatment symptoms have a higher risk of HIV than the general population.

2. **Suboptimal ART coverage among HIV positive people on TB treatment** – 49% of HIV positive people on TB treatment were receiving life-saving antiretroviral therapy. There are many missed opportunities for early initiation of ART and optimal care for HIV positive people on TB treatment who have advanced HIV disease.

a. All people (adults and children) with TB should be offered HIV testing. For people with TB found to be HIV positive, TB treatment should be initiated first, followed by ART as soon as possible and within the first two weeks of TB treatment, regardless of CD4 count—unless there are signs of meningitis (Adults and adolescents: strong recommendation, high-quality evidence. Infants and children – strong recommendation, very low certainty evidence).

b. People with TB found to be HIV positive or suspected advanced HIV disease (AHD) should have a CD4 cell count. If CD4 count <200 cells/mm<sup>3</sup> they should be managed as having

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<sup>10</sup> “ \_\_\_\_\_ ” % indicates that no data were reported for this/these indicator(s).

<sup>11</sup> Any symptom of TB: cough, haemoptysis (coughing up blood) , fever, night sweats, weight loss, chest pain, shortness of breath, and/or fatigue should prompt investigations for TB. An HIV test should be offered according to national or local guidelines or clinical judgement. Similarly, chest radiographs could be performed at this stage as they can assist with the diagnosis of TB disease.

AHD. They should be provided with a package of interventions including screening, treatment and/or prophylaxis for major opportunistic infections, including cryptococcal disease, toxoplasmosis, and severe bacterial infections. If CD4 cell count is not available all people with TB living with HIV should be managed as AHD (TB automatically indicates WHO clinical stage 3 or 4 depending on type of TB).

- c. Caution is needed for people living with HIV with TB meningitis, since immediate ART can be associated with a higher risk of severe adverse events, including life-threatening immune reconstitution inflammatory syndrome, than those initiating ART two months after the start of TB treatment.
- d. All children <5 years old should be managed as AHD regardless of clinical status or CD4 cell count.
- e. Co-trimoxazole prophylaxis (CPT) reduces mortality among people living with HIV and is recommended for adults (including pregnant women) with a CD4 count  $\leq 350$  and/or with severe or advanced HIV clinical disease (WHO stage 3 or 4). Therefore, CPT is recommended for all people living with HIV who have active TB disease. In settings where malaria and/or severe bacterial infections are highly prevalent, CPT should be initiated regardless of CD4 cell count or WHO stage. CPT may be discontinued in adults (including pregnant women) with HIV who are clinically stable on ART, with evidence of immune recovery and viral suppression. In settings where malaria and/or severe bacterial infections are highly prevalent, CPT should be continued regardless of CD4 cell count or WHO clinical stage (conditional recommendation, moderate-quality evidence). CPT is recommended for infants, children, and adolescents with HIV, irrespective of clinical and immune conditions and especially for those with advanced HIV disease including those with active TB disease. In settings where malaria and/or severe bacterial infections are highly prevalent, CPT should be continued until adulthood. In settings with low prevalence for both malaria and bacterial infections, CPT may be discontinued for children 5 years of age and older who are clinically stable and/or virally suppressed on ART for at least 6 months and with a CD4 count  $>350$  cells/mm<sup>3</sup>.
- f. A viral load test should be performed at 6 months from starting ART, repeated at 12 months and then annually thereafter.
- g. Once TB treatment is completed the person can be discharged from the TB programme. However, HIV care and treatment must be continued. Support may be required to ensure they are enrolled into HIV care and treatment services, including treatment adherence support.
- h. At the end of TB treatment, each person living with HIV should be considered for TB preventive treatment.

**3. Low detection and treatment of people living with HIV who have TB:** 34% of the estimated HIV positive incident TB cases were diagnosed and started on TB treatment and ART. **Urgent, additional effort is required to find and treat the missing people with HIV-associated TB.**

- a. The national TB and HIV programmes should work together to enhance case finding for TB and HIV in health facilities and communities.
- b. All people living with HIV should be screened for TB at diagnosis and every clinic visit; and all people with TB or TB symptoms should be tested for HIV.
- c. All people attending primary health care clinics should be screened for TB (symptom screen) and offered an HIV test especially for men, children and adolescents and in antenatal, vaccination and sexual and reproductive health and rights services.
- d. Routine TB symptom screening for people with HIV, using an algorithm containing fever, cough of any duration, weight loss and night sweats, will help to identify people who should either be expedited for TB diagnosis (if symptoms) or given TB preventive treatment (if no symptoms). Where feasible, suspected TB should be confirmed through laboratory testing with Xpert MTB/RIF, as the first test at any CD4 cell count, and urinary lateral flow urine lipoarabinomannan assay (LF-LAM) for those with CD4 cell count less than 200 cells/mm<sup>3</sup> (see Section C.2.d below for further details). For people newly enrolled in HIV care, ART should be started while investigating for TB among people with TB symptoms (unless they have signs of meningitis).
- e. TB and HIV programmes should work together to carry out coordinated community index case-finding activities. TB and HIV often occur within families, households and community groupings. Index cases of TB and/or HIV should be followed up with voluntary partner notification, family/household testing and offer of HIV testing and TB screening for surrounding households, ensuring confidentiality and human rights are observed. HIV-self testing can be used to reach family and household members not present.
- f. Multi-disease screening/testing approaches (e.g. HIV, TB, COVID-19, malaria, non-communicable diseases) can be less stigmatizing, can reduce costs by cost-sharing between health programmes and increase yields.
- g. The TB and HIV programmes should also assess where the 'missing cases' of HIV and TB are likely to occur through geographic analysis of hot-spots and epidemiological analysis of missing risk groups e.g., men, children, young people, sex workers, men who have sex with men, people who use drugs, prisoners, miners, etc and plan specific approaches to reach these groups being left behind.

### ***C. Reducing the burden of TB among people living with HIV<sup>12</sup>***

**1. No data on coverage of optimal TB care at \_\_\_\_\_% - TB preventive treatment ("\_\_\_\_\_"%) and TB treatment (\_\_\_\_\_% ) among all people newly enrolled in HIV treatment.**

Among the estimated 920 000 [420 000 - 1 300 000] people living with HIV in Brazil, "\_\_\_\_\_"% **currently on ART** were receiving TB preventive treatment (Proportion of all people living with HIV **currently enrolled in HIV treatment** receiving TB preventive treatment).

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<sup>12</sup> "\_\_\_\_\_" % indicates that no data were reported for this/these indicator(s).

- a. 100% of people newly enrolled in HIV care or on treatment should be receiving either TB preventive treatment or TB treatment.

## 2. TB screening for all people living with HIV

- a. All people newly enrolled in HIV care or on treatment should be screened for TB symptoms. If they have TB symptoms, they should be fully investigated for TB according to national protocols.
- b. Optimal TB investigation should include WHO-recommended diagnostic tests such as Xpert MTB/Rif test, chest x-ray, and TB culture for drug sensitivity testing in cases of Rifampicin resistance on Xpert MTB/Rif.
- c. Digital or regular chest x-ray is a recommended addition for people living with HIV on ART to rule out the presence of abnormal radiographic findings ie a suspicion of active TB disease. Mobile and portable digital x-ray units are recommended by WHO to reach people who do not have access to health facilities.
- d. LF-LAM (lateral flow urine lipoarabinomannan assay) is a simple urine dipstick test that can be used to assist in the early diagnosis of active TB among HIV-positive adults, adolescents and children.

In inpatient settings, WHO strongly recommends using LF-LAM to assist in diagnosis of active TB in adults, adolescents and children with signs and symptoms of TB (pulmonary or extra-pulmonary) or who have advanced HIV disease<sup>13</sup>; who are seriously ill<sup>14</sup> or who have a CD4 cell count of less than 200 cells/mm<sup>3</sup> irrespective of signs and symptoms of TB (Strong recommendations; moderate certainty of evidence).

In out-patient settings other conditional recommendation apply (such as a CD4 cell count of less than 100 cell/mm<sup>3</sup> irrespective of signs and symptoms of TB) for LF-LAM to assist in the diagnosis of active TB in HIV-positive adults, adolescents and children; as an add-on to clinical judgement in combination with other tests (Conditional recommendation; low certainty in evidence about test accuracy).

In outpatient settings, WHO suggests using LF-LAM to assist in the diagnosis of active TB in HIV-positive adults, adolescents and children: without assessing TB symptoms (strong recommendation; very low certainty in the evidence about test accuracy); without TB symptoms and unknown CD4 cell count or without TB symptoms and CD4 cell count greater than or equal to 200 cells/mm<sup>3</sup> (strong recommendation; very low certainty in the evidence about test accuracy); and without TB symptoms and with a CD4 cell count of 100-200 cells/mm<sup>3</sup> (conditional recommendation; very low certainty in the evidence about test accuracy).

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<sup>13</sup> For adults, adolescents, and children aged 5 years or more, “advanced HIV disease” is defined as a CD4 cell count of less than 200 cells/mm<sup>3</sup> or a WHO clinical stage 3 or 4 event at presentation for care. All children with HIV aged under 5 years should be considered as having advanced disease at presentation.

<sup>14</sup> “Seriously ill” is defined based on four danger signs: respiratory rate of more than 30/minute, temperature of more than 39 ° C, heart rate of more than 120/minute and unable to walk unaided.



**NOTES** The recommendations apply to the use of AlereLAM only, because other in-house LAM-based assays have not been adequately validated or used outside limited research settings. Any new or generic LAM-based assay should be subject to adequate validation in the settings of intended use. All patients with signs and symptoms of pulmonary TB who can produce sputum should have as their initial diagnostic test at least one sputum specimen submitted for Xpert® MTB/RIF (Ultra) assay. This also includes children and adolescents living with HIV who can provide a sputum sample.

### 3. TB preventive treatment (TPT)

- a. TPT reduces TB incidence and mortality (by up to 39%) among people living with HIV.
- b. All adults, adolescents and children newly enrolled in HIV care or on treatment who have no TB symptoms and have an unknown or positive test for latent TB infection (LTBI) should be started on TB preventive treatment, irrespective of status of immunosuppression. TPT should be given to people who have previously been treated for TB and to pregnant women. TPT should be delivered as part of routine HIV care by the HIV programme in collaboration with the TB programme.
- c. WHO treatment options for LTBI:
  - i. Isoniazid monotherapy for 6 months is recommended for treatment of LTBI in both adults and children in countries with high and low TB incidence. (*Strong recommendation, high-quality evidence. Existing recommendation*)
  - ii. Rifampicin plus isoniazid daily for 3 months should be offered as an alternative to 6 months of isoniazid monotherapy as preventive treatment for children and adolescents aged < 15 years in countries with a high TB incidence. (*Strong recommendation, low-quality evidence. New recommendation*)
  - iii. Rifapentine and isoniazid weekly for 3 months may be offered as an alternative to 6 months of isoniazid monotherapy as preventive treatment for both adults and children in countries with a high TB incidence. (*Conditional recommendation, moderate-quality evidence. New recommendation*)
  - iv. The following options are recommended for treatment of LTBI in countries with a low TB incidence as alternatives to 6 months of isoniazid monotherapy: 9 months of isoniazid, or a 3-month regimen of weekly rifapentine plus isoniazid, or 3–4 months of isoniazid plus rifampicin, or 3–4 months of rifampicin alone. (*Strong recommendation, moderate–high-quality evidence. Existing recommendation*)
  - v. In settings with high TB incidence and transmission, adults and adolescents living with HIV who have an unknown or a positive TST and are unlikely to have active TB disease should receive at least 36 months of IPT, regardless of whether they are receiving ART. IPT should also be given irrespective of the degree of immunosuppression, history of previous TB treatment and pregnancy. (*Conditional recommendation, low quality*).

- d. Both the three months weekly isoniazid and rifapentine (3HP) and one-month daily isoniazid and rifapentine (1HP) may maximize the likelihood that treatment is completed and may be preferable in terms of adherence, treatment completion and efficacy but cost and availability may be a barrier. Further information on drug interactions is needed before rifapentine can be recommended in children and pregnant women. Three months of rifampicin and pyrazinamide (3HR) is available in child-friendly formulations. Special care should be taken when using rifampicin with DTG-containing ART due to drug interactions. In adults taking DTG-based ART, the dose of DTG needs to be increased to 50mg twice daily when given together with rifampicin.
- e. TPT should also be given to pregnant women living with HIV and people who have previously been treated for TB, including all children living with HIV. Infants (aged <12 months) living with HIV who are a household contact with a case of TB should be given TPT (6-9 months isoniazid) provided there are no TB symptoms.
- f. HIV programmes should not delay implementation of TB preventive treatment while waiting for the introduction of newer regimens.

## 2018 UN HLM on TB proposed annual targets for Brazil

Based on the global commitments made at the United Nations high-level meeting on the fight against tuberculosis in New York, September 2018, below are proposed country-level targets<sup>15</sup>:

	2018	2019	2020	2021	2022	Total 2018-2022
TB diagnosis and treatment targets	90500	94500	90800	86500	81700	444000
TB preventive treatment (TPT) targets in People Living with HIV	9511	9637	7896	4924	0	31968
Childhood TB diagnosis and treatment targets	2800	3000	2900	2700	2600	14000
MDR-TB diagnosis and treatment targets	750	947	1700	2100	2100	7597

<sup>15</sup> Produced by the Stop TB Partnership and accessible at:

[http://www.stoptb.org/assets/documents/global/advocacy/unhlm/UNHLM\\_Targets&Commitments.pdf](http://www.stoptb.org/assets/documents/global/advocacy/unhlm/UNHLM_Targets&Commitments.pdf) and [http://www.stoptb.org/assets/documents/global/advocacy/unhlm/TB\\_NotificationTargets\\_November\\_2019.pdf](http://www.stoptb.org/assets/documents/global/advocacy/unhlm/TB_NotificationTargets_November_2019.pdf)

## Annex 1 - Data sources, policies and guidelines related to TB and HIV-associated TB

### Data sources

All data presented come from the following sources:

1. Global Tuberculosis Report 2020. World Health Organization <https://apps.who.int/iris/bitstream/handle/10665/336069/9789240013131-eng.pdf>
2. Global, regional and country TB data can be accessed from
  - a. WHO Global Tuberculosis Database <http://www.who.int/teams/global-tuberculosis-programme/data> and
  - b. WHO Tuberculosis Country Profiles from TB profile (shinyapps.io) [https://worldhealthorg.shinyapps.io/tb\\_profiles/?\\_inputs\\_&lan=%22EN%22](https://worldhealthorg.shinyapps.io/tb_profiles/?_inputs_&lan=%22EN%22)
3. Global AIDS Monitoring 2019 data set from AIDSinfo | UNAIDS <https://aidsinfo.unaids.org/>
4. UNAIDS 2019 estimates from [AIDSinfo | UNAIDS](#)

The WHO Global TB department use UNAIDS estimates of global, regional and national data to calculate TB incidence and mortality among people living with HIV. UNAIDS and WHO collaborate to collect, validate, analyse and report on the nationally reported TB/HIV indicators presented above.

### WHO policy documents related to HIV-associated TB

1. WHO policy on collaborative TB/HIV activities, 2012. Guidelines for national programmes and other stakeholders. [https://www.who.int/tb/publications/2012/tb\\_hiv\\_policy\\_9789241503006/en/](https://www.who.int/tb/publications/2012/tb_hiv_policy_9789241503006/en/)
2. WHO Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection, 2016 Recommendations for a public health approach - Second edition. <https://www.who.int/hiv/pub/arv/arv-2016/en/>
3. WHO Updated recommendations on HIV prevention, infant diagnosis, antiretroviral initiation and monitoring (WHO will update the Consolidated HIV Guideline in July 2021) <https://www.who.int/publications/i/item/9789240022232>
4. WHO Updated recommendations on first line and second-line antiretroviral regimens and post-exposure prophylaxis and recommendations on early infant diagnosis of HIV, 2018 - Interim guidance <https://apps.who.int/iris/bitstream/handle/10665/273632/WHO-CDS-HIV-18.18-eng.pdf>
5. WHO consolidated guidelines on HIV testing services 2019 <https://www.who.int/publications/i/item/978-92-4-155058-1>
6. WHO Guidelines for managing advanced HIV disease and rapid initiation of antiretroviral therapy, 2017 <https://www.who.int/hiv/pub/guidelines/advanced-HIV-disease/en/>
7. A guide to monitoring and evaluation for collaborative TB/HIV activities: 2015 revision. [https://www.who.int/tb/publications/m\\_and\\_e\\_document\\_page/en/](https://www.who.int/tb/publications/m_and_e_document_page/en/)
8. Cascade data use manual to identify gaps in HIV and health services for programme improvement, June 2018. WHO. For HIV-associated TB, see p. 37 <https://www.who.int/hiv/pub/toolkits/hiv-cascade-data-use-manual/en/>
9. Lateral flow urine lipoarabinomannan assay (LF-LAM) for the diagnosis of active tuberculosis in people living with HIV, 2019 Update <https://www.who.int/tb/publications/2019/LAMPolicyUpdate2019/en/>
10. Latent TB Infection: Updated and consolidated guidelines for programmatic management, 2018

- <https://www.who.int/tb/publications/2018/latent-tuberculosis-infection/en/>
11. WHO guidelines on tuberculosis infection prevention and control 2019 update  
<https://apps.who.int/iris/bitstream/handle/10665/311259/9789241550512-eng.pdf?ua=1>
  12. WHO Consolidated guidelines on tuberculosis: module 1: prevention: tuberculosis preventive treatment, 2020, WHO operational handbook on Tuberculosis: module 1, Prevention, tuberculosis Preventive treatment, 2020  
<https://www.who.int/publications/i/item/who-consolidated-guidelines-on-tuberculosis-module-1-prevention-tuberculosis-preventive-treatment>  
<https://www.who.int/publications/i/item/9789240002906>
  13. WHO consolidated guidelines on drug-resistant tuberculosis treatment, 2019  
<https://www.who.int/publications/i/item/9789241550529>
  14. Working together with businesses, 2012 Guidance on TB and TB/HIV prevention, diagnosis, treatment and care in the workplace  
[https://apps.who.int/iris/bitstream/handle/10665/44833/9789241503228\\_eng.pdf;sequence=1](https://apps.who.int/iris/bitstream/handle/10665/44833/9789241503228_eng.pdf;sequence=1)
  15. The joint WHO ILO UNAIDS policy guidelines for improving health workers' access to HIV and TB prevention, treatment, care and support services, 2010  
[https://www.ilo.org/global/topics/hiv-aids/publications/WCMS\\_149714/lang--en/index.htm](https://www.ilo.org/global/topics/hiv-aids/publications/WCMS_149714/lang--en/index.htm)
  16. Scaling up of collaborative TB/HIV activities in concentrated HIV epidemic settings, 2015 A case study from India  
[https://www.who.int/tb/publications/india\\_case\\_study\\_document\\_page/en/](https://www.who.int/tb/publications/india_case_study_document_page/en/)
  17. Integrating collaborative TB and HIV services within a comprehensive package of care for people who inject drugs, 2016 Consolidated guidelines  
<https://www.who.int/tb/publications/integrating-collaborative-tb-and-hiv-services-for-pwid/en/>
  18. Guidance for national tuberculosis programmes on the management of tuberculosis in children, 2014 Second edition  
[https://www.who.int/tb/publications/childtb\\_guidelines/en/](https://www.who.int/tb/publications/childtb_guidelines/en/)

#### **WHO policy documents related to TB detection and diagnosis**

1. Latent TB infection: Updated and consolidated guidelines for programmatic management; 2018 includes. guidelines on TB screening among people living with HIV  
<https://www.who.int/tb/publications/2018/latent-tuberculosis-infection/en/>
2. Chest radiography in tuberculosis detection Summary of current WHO recommendations and guidance on programmatic approaches  
<https://apps.who.int/iris/handle/10665/252424>
3. Lateral flow urine lipoarabinomannan assay (LF-LAM) for the diagnosis and screening of active tuberculosis in people living with HIV - Policy update, 2019  
<https://www.who.int/tb/publications/2019/LAMPolicyUpdate2019/en/>
4. Xpert MTB/RIF implementation manual Technical and operational 'how-to': practical considerations, 2014  
[https://www.who.int/tb/publications/xpert\\_implem\\_manual/en/](https://www.who.int/tb/publications/xpert_implem_manual/en/)
5. Recommendations for investigating contacts of persons with infectious tuberculosis in low- and middle-income countries  
[https://www.who.int/tb/publications/2012/contact\\_investigation2012/en/](https://www.who.int/tb/publications/2012/contact_investigation2012/en/)
6. The use of molecular line probe assays for the detection of resistance to isoniazid and rifampicin

- <https://www.who.int/tb/publications/molecular-test-resistance/en/>
7. Implementing tuberculosis diagnostics: A policy framework  
[https://www.who.int/tb/publications/implementing\\_TB\\_diagnostics/en/](https://www.who.int/tb/publications/implementing_TB_diagnostics/en/)
  8. Xpert MTB/RIF assay for the diagnosis of pulmonary and extrapulmonary TB in adults and children Policy update  
[https://www.who.int/tb/laboratory/xpert\\_policyupdate/en/](https://www.who.int/tb/laboratory/xpert_policyupdate/en/)
  9. Considerations for adoption and use of multidisease testing devices in integrated laboratory networks, 2017  
[https://www.who.int/tb/publications/2017/considerations\\_multidisease\\_testing\\_devices\\_2017/en/](https://www.who.int/tb/publications/2017/considerations_multidisease_testing_devices_2017/en/)
  10. Rapid Communication: Key changes to the treatment of drug-resistant tuberculosis, 2019  
[https://www.who.int/tb/publications/2019/rapid\\_communications\\_MDR/en/](https://www.who.int/tb/publications/2019/rapid_communications_MDR/en/)
  11. Rapid Communication on forthcoming changes to the programmatic management of tuberculosis preventive treatment, 2020  
<https://www.who.int/tb/publications/2020/rapid-communication-on-forthcoming-changes-to-tpt/en/>
  12. Rapid Communication: Molecular assays as initial tests for the diagnosis of tuberculosis and rifampicin resistance, 2020  
<https://www.who.int/tb/publications/2020/rapid-communications-molecular-assays/en/>
  13. Rapid Communication on the Systematic screening for tuberculosis, 2020  
<https://www.who.int/publications/i/item/rapid-communication-on-the-systematic-screening-for-tuberculosis>
  14. Rapid Communication: Update on the use of nucleic acid amplification tests to detect TB and drug-resistant TB, 2021  
<https://www.who.int/publications/i/item/update-on-the-use-of-nucleic-acid-amplification-tests-to-detect-tb-and-drug-resistant-tb-rapid-communication>

For other WHO publications on TB and HIV-associated TB, see: <http://www.who.int/tb/publications/tb-and-hiv/en/>

### **Stop TB Partnership publications on HIV-associated TB**

1. Key targets and commitments, 2018, The UNHLM key targets and commitments in different languages, as well as key country targets  
[http://www.stoptb.org/assets/documents/global/advocacy/unhlm/UNHLM\\_Targets&Commitments.pdf](http://www.stoptb.org/assets/documents/global/advocacy/unhlm/UNHLM_Targets&Commitments.pdf)
2. The Impact of COVID-19 on the TB epidemic: A community perspective (Sept 2020)  
<http://www.stoptb.org/assets/documents/resources/publications/acsm/Civil%20Society%20Report%20on%20TB%20and%20COVID.pdf>
3. A Deadly Divide: TB Commitments vs. TB Realities. A Communities Report on Progress Towards the UN Political Declaration on the Fight Against TB and a Call to Action to Close the Gaps in TB Targets (Nov 2020)  
[http://www.stoptb.org/assets/documents/communities/The%20Deadly%20Divide\\_TB%20Commitments%20vs%20TB%20Realities%20FINAL%20HLM%20Report.pdf](http://www.stoptb.org/assets/documents/communities/The%20Deadly%20Divide_TB%20Commitments%20vs%20TB%20Realities%20FINAL%20HLM%20Report.pdf)
4. Step Up for TB, 2020. Tuberculosis policies in 37 countries. A survey of prevention, testing and treatment policies and practices (Nov 2020)  
<http://stoptb.org/suft/Step%20Up%20for%20TB%20Report%20Final.pdf>