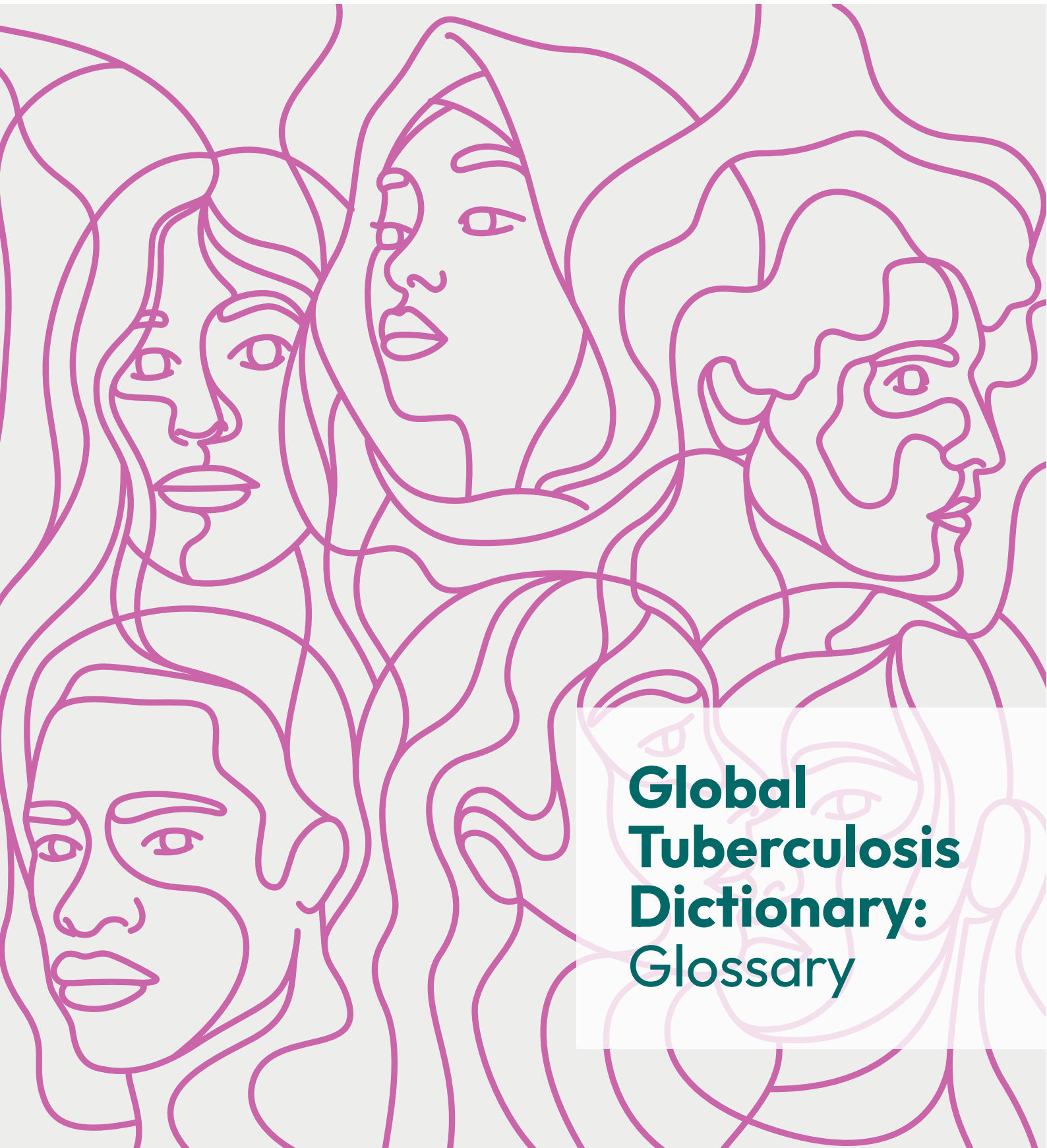
TB DICTIONARY

Global Tuberculosis Dictionary

1st Edition, March 2024



Global Tuberculosis Dictionary: Glossary

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ACKNOWLEDGEMENTS

We acknowledge the contributions of Francisco Ramiro García Catungal, for laying the groundwork for the initial phases of the TB Dictionary, and Cristina Castellana for facilitating the first expert review of terms and definitions. The contributions of all members of the editorial team, of which their time and expertise were provided voluntarily, were critical in the completion of this work. Their precision, careful attention to technical nuances, and timely feedback contributed to efficiency throughout this large undertaking. The literature reviews, data extraction, and expert reviews were managed by Joanna Ehrlich, who served as the TB Dictionary secretariat. The co-editors Dr. Alberto Garcia-Basteiro and Dr. Marcel A Behr provided strategic guidance throughout the review phase and critical technical input into the final draft of the TB Dictionary.

The branding for the TB Dictionary and webpage design was created by Maria Beltran at Beltmore, Barcelona, Spain. The webpage development was led by Israel Torres at TicTac Solutions, Barcelona, Spain. Global communication and dissemination activities were led by Beatriz Fiestas at the ISGlobal communications department and supported by the editorial team and their institutions. Rafa Vilasanjuan also provided institutional support at ISGlobal, and ensured widespread dissemination of this work.

The editorial team would like to acknowledge Dr. Rick Steketee, Chair of the Drafting Committee for the WHO malaria terminology document, for his time and valuable input in the planning and development of the TB Dictionary review process.

Further, the editorial team acknowledges the importance of including the TB-affected community in this work. The team would like to thank Adriana Jarrett (USA) and Rhoda Lewa (Kenya) for their continued advocacy for TB survivors and their critical review and input into the TB Dictionary.

THE GLOBAL TB DICTIONARY

A CONSENSUS DOCUMENT TO UNIFY THE LANGUAGE WE SPEAK:

Tuberculosis terminology must be adaptable so that it remains relevant despite the changing landscape of knowledge and with the constant revision and evolution of TB concepts.

INTRODUCTION

Tuberculosis (TB) remains a major cause of morbidity and mortality around the world, with an estimated 10.6 million cases and 1.6 million deaths resulting from the disease in 2022.[1] TB is one of the oldest foes to humankind, with its global reach of pandemic proportion spanning centuries and causing more deaths than any other disease in modern history. Targeted efforts to eliminate TB, such as the End TB Strategy and UN high-level meetings on TB, have led to increased investments in the fight against TB and enhanced political commitment made by world leaders. However, TB is still present in every country on earth, and continues to affect thousands of people per day.

Scientific outputs in the field of TB have experienced exponential growth in past decades,[2] propelled by renewed investments and unprecedented advances in

The Global TB dictionary has been developed through a systematic approach, guided by evidence and expert review to develop a consensus list of terms and definitions to harmonize TB-related vocabulary. The glossary will be periodically updated to reflect the evolving nature of knowledge generation and broad understanding of TB related terms. We hope this open-access glossary represents a useful resource that allows the community of TB researchers, policymakers, funders, and those affected by TB to unify around a common understanding of TB-related vocabulary with the ultimate goal of improving overall communication and harmonizing efforts in TB control.

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research, including the development of molecular diagnostics, improved treatment regimens, and a quest for new vaccine candidates.[3–6] Some of these advances have broadened our understanding of the spectrum of TB, which challenge long-standing concepts and introduce novel terms for application across research and control efforts. However, the introduction of new, inconsistently defined terms or the modification of previous definitions over time may lead to confusion, misunderstanding, and inconsistency in the utilization of TB-related terminology.

> **"Recognizing the dynamic nature of vocabulary and lexicology ... there is a need to harmonize and streamline the terminology associated with TB"**

Recognizing the dynamic nature of vocabulary and lexicology, particularly in the evolving realm of scientific ventures that aim to challenge established concepts and definitions, there is a need to harmonize and streamline the terminology associated with TB. The development of a living dictionary could serve as a reference for people interested in TB, including those engaged in TB control activities and research, or those directly affected by this condition. It is hoped that such a resource would contribute to clarity, consistency, and effective communication within the field.

Driven by this motivation, a diverse group of independent researchers, public health officers, and TB survivors, with different backgrounds, expertise, and geographic origins collaborated to establish the first edition of the Global TB Dictionary.

PROCESS

We conducted a comprehensive review of TB-related literature (published between 01 January 2000 and 31 December 2022) to identify terms and definitions associated with TB. All World Health Organization (WHO) publications were selected as a main source for extraction of terms, as they commonly represent an international reference for TB. We also reviewed TB-related publications from The International Union Against Tuberculosis and Lung Disease (The Union) and The Centers for Disease Control and Prevention (CDC) for further extraction of terms and definitions. In addition, we conducted a systematic search in PubMed using the keywords "tuberculosis" AND "defin*" OR "glossary" OR "term" to identify literature whose main objective was to discuss definitions of TB terms and concepts, or those that contained glossaries.

Terms were initially screened for their relevance to TB and were excluded if they were not TB-specific (e.g., "culture" or "adolescent") or had no specific connotations for the TB field. Terms were then classified into categories and distributed for review by a group of TB experts (associate editors) who were blinded to all other reviews. Each term and definition was assessed by two reviewers, who could reject, amend, or accept each term and definition. Conflicting opinions were solved by consensus or, if needed, through discussion with a third reviewer. All amendments underwent a final review for cohesion and consistency by the main editors. In case of conflicting opinion, the editors met to discuss and find consensus. In the last quarter of 2023, there were two final review iterations with all associate editors. The consensus terms and definitions were compiled into a glossary, representing the first edition of the Global TB Dictionary. The glossary has been refined to ensure alignment with the Stop TB Partnership's Words Matter language guide, and reviewed by two TB survivors to ensure that the language is acceptable to the TB-affected community.[7]

For a detailed methodology and other supplementary materials, please visit www.tbdictionary.org/resources.

UNIFYING THE LANGUAGE WE SPEAK

Throughout the document screening and editorial review, there were several notable examples of misaligned terms and definitions which had three common themes:

1. New terms lack consistent understanding in the literature and are used in different ways:

Emerging terms and concepts in TB have garnered substantial attention in recent years, such as "incipient TB" or "subclinical TB". However, there is notable variation in the use of these terms and their definitions in the literature and among policy-related documents.[8–10] As the research landscape in TB contributes to an evolving understanding of new concepts, such terms may be revised or refined based on the presentation of new evidence. However, the current variation of these terms in the literature cannot be solely represented by our evolving understanding. We caution TB researchers and policy-makers to define new terms in a way that is substantiated by evidence in research and practice, and refrain from introducing alternate definitions that are not directly supported by evidence, and may muddy the understanding of important concepts, which subsequently affects research outputs and limits the efficiency of our collective efforts to further TB understanding.

2. Older terms do not align with current scientific understanding or with currently accepted non-stigmatizing language:

Despite a large push in recent years to eliminate stigmatizing language in TB, the literature revealed that outdated and stigmatizing terms and concepts are still pervasive in TB-related literature. The TB dictionary editorial team calls upon the TB community to actively review all written work prior to publication to purge all outdated terminology, including language that could be stigmatizing to the TB-affected community.

3. Definitions have been used inconsistently in publications from the same organization and even from the same year:

There were several instances in which documents from an individual organization that were published in the same year contained the same terms that were defined differently. To eliminate confusion, we encourage organizations to adopt consensus definitions for the terms used throughout their documents, and to utilize these definitions consistently until scientific evidence prompts subsequent refining of definitions.

The use of 'tuberculosis'

One recurring discussion throughout the consensus phase was in the use of the term "tuberculosis" itself, which is presented differently throughout TB-related literature, often followed by the word "disease" ("TB disease") and/or preceded by the word "active" ("active TB"). The term "tuberculosis" has been used to refer to the disease caused by Mycobacterium tuberculosis (Mtb) and to the broader description of Mtb interactions within the human body. Whereas the term "active tuberculosis" is frequently used to denote a person with disease caused by Mtb, the contrasting term "latent TB infection" refers to a person who has been infected with Mtb, but where immune response prevents the bacteria from causing illness as well as to define past immunological exposure to Mtb.

> **"Mimicking the lexicology used in other diseases, our recommendation is to use the term 'Mtb infection' to refer to the traditional terms 'TB infection' or 'latent TB infection', and the term 'tuberculosis' to refer to the disease stage caused by Mtb."**

However, we now know that “latent TB” is not truly “inactive TB” or even “latent” as understood in other fields. The World Health Organization (WHO) has recently deemed it inaccurate and recommends using the term "TB infection" instead.[11] Similarly, the widely used case definitions for pediatric TB (“probable TB, “possible TB”, “unconfirmed TB”) have undergone multiple revisions by different authors, who use different terms to describe the same condition.[12]

In order to streamline the use of ‘tuberculosis’ across the spectrum of infection to disease and accurately describe each disease stage, the editorial team recommends adopting revised verbiage. Therefore, mimicking the lexicology used in other diseases (i.e. HIV infection as the cause of AIDS, or SARS-CoV-2 as the cause of COVID-19), our recommendation is to use the term “Mtb infection” to refer to the traditional terms “TB infection” or “latent TB infection”, and the term “tuberculosis” to refer to the disease stage caused by Mtb.

As this dictionary aims to be a participatory and iterative process, new or amended terms and definitions can be proposed on the TB Dictionary webpage (www.tbdictionary.org) for inclusion in subsequent editions of the dictionary. These suggestions, alongside new terms from the literature, will be reviewed on an annual basis by the editorial team, and the dictionary will be subsequently updated.

REFERENCES

1. World Health Organization. Global tuberculosis report 2022. Geneva; 2022.
2. Garrido-Cardenas JA, de Lamo-Sevilla C, Cabezas-Fernández MT, Manzano-Agugliaro F, Martínez-Lirola M. Global tuberculosis research and its future prospects. Tuberculosis (Edinb). 2020 Mar 1;121.
3. Cobelens F, Suri RK, Helinski M, Makanga M, Weinberg AL, Schaffmeister B, et al. Accelerating research and development of new vaccines against tuberculosis: a global roadmap. Vol. 22, The Lancet Infectious Diseases. Elsevier Ltd; 2022. p. e108–20.
4. Gill CM, Dolan L, Piggott LM, McLaughlin AM. New developments in tuberculosis diagnosis and treatment. Breathe. 2022;18(1).
5. MacLean E, Kohli M, Weber SF, Suresh A, Schumacher SG, Denkinger CM, et al. Advances in molecular diagnosis of tuberculosis. Vol. 58, Journal of Clinical Microbiology. American Society for Microbiology; 2020.
6. Ruhwald M, Carmona S, Pai M. Learning from COVID-19 to reimagine tuberculosis diagnosis. Lancet Microbe. 2021 May 1;2(5):e169–70.
7. Stop TB Partnership. Words Matter: Suggested language and usage for tuberculosis communications. Geneva; 2022.
8. World Health Organization. Development of a Target Product Profile (TPP) and a framework for evaluation for a test for predicting progression from tuberculosis infection to active disease 2017 WHO collaborating centre for the evaluation of new diagnostic technologies. Geneva; 2017.
9. Drain PK, Bajema KL, Dowdy D, Dheda K, Naidoo K, Schumacher SG, et al. Incipient and Subclinical Tuberculosis: a Clinical Review of Early Stages and Progression of Infection. American Society for Microbiology. 2018.
10. Migliori GB, Ong CWM, Petrone L, D'ambrosio L, Centis R, Goletti D. The definition of tuberculosis infection based on the spectrum of tuberculosis disease. Breathe. 2021 Sep 1;17(3).
11. World Health Organization. WHO consolidated guidelines on tuberculosis Module 5: Management of tuberculosis in children and adolescents. Geneva; 2022.
12. Graham SM, Cuevas LE, Jean-Philippe P, Browning R, Casenghi M, Detjen AK, et al. Clinical Case Definitions for Classification of Intrathoracic Tuberculosis in Children: An Update. Clinical Infectious Diseases. 2015 Oct 15;61(suppl_3):S179–87.

GLOSSARY

TERM	DEFINITION
Acid-fast bacilli (AFB)	Bacteria that do not lose their stain when exposed to acid or acid–alcohol mixture during the staining process, i.e. bacteria of the *Mycobacterium tuberculosis* complex and non-tuberculous mycobacteria.
Acid-fast bacilli (AFB) examination	Laboratory test that involves microscopic examination of a stained smear of a clinical specimen (usually sputum) to determine if mycobacteria are present.
Acquired drug resistance	Resistance to one or more anti-tuberculosis drugs which arises during or after the course of treatment.
Active case finding	Proactive strategy used to find tuberculosis cases in health facilities or in the community. It usually implies a systematic screening process in high-risk populations.
Active tuberculosis	Symptomatic tuberculosis that occurs in someone infected with *M. tuberculosis* or other mycobacteria from *M. tuberculosis* Complex. This term is broadly used but is outdated. **The preferred term is 'tuberculosis'.**
Adherence	Extent to which a person's behaviour (e.g. taking medicines, following a particular diet, changing lifestyle) corresponds with agreed recommendations from a health care provider. The threshold for determining if a patient has been adherent to treatment varies according to different tuberculosis treatment and preventive regimens.
Airborne *M. tuberculosis* transmission	Principal means of spreading *M. tuberculosis*, through which airborne droplet nuclei are suspended in airspace and subsequently inhaled by a host.
Annual risk of *M. tuberculosis* infection	Risk of an uninfected person becoming infected with *M. tuberculosis* in a one-year period.

Antiretroviral therapy (ART)-associated tuberculosis	Tuberculosis diagnosed during antiretroviral treatment in an HIV-positive patient that is not receiving anti-tuberculosis treatment when ART is initiated.
Bacillary load	Quantity of *M. tuberculosis* bacilli present in a human body, although usually used to refer to the *M. tuberculosis* concentration present in a sputum sample.
Bacille Calmette-Guérin (BCG)	Tuberculosis vaccine (live attenuated strain of *Mycobacterium bovis*) named after the French scientists who developed it, Albert Calmette and Camille Guérin.
Bacilli	Rod-shaped bacteria.
Bacteriologically confirmed tuberculosis (case definition)	Tuberculosis occurring in a patient from whom a biological specimen tests positive by smear microscopy, culture, or WHO-recommended rapid diagnostic test. Also known as laboratory or microbiologically confirmed tuberculosis case.
Basic management unit (BMU)	Functional area defined in terms of management, supervision, and monitoring responsibility. A BMU for tuberculosis control may consist of several treatment facilities, one or more laboratories, and one or more hospitals.
Basic management unit tuberculosis register	Registry book used primarily for recording and summarizing testing results, treatment decisions and outcomes in order to determine whether basic diagnostic and treatment guidelines are correctly implemented.
Boosting	Phenomenon in which some persons who receive a tuberculosis skin test (TST) many years after acquiring *M. tuberculosis* infection or being BCG vaccinated have a negative result to an initial TST followed by a positive result to a subsequent TST. The second (i.e., positive) result is caused by a boosted immune response of the prior sensitivity rather than a new infection.
Bovine tuberculosis	Disease caused by *M. bovis*.
Case notification	Reporting of tuberculosis cases to an authority such as a health department or national surveillance system, as required by national laws or regulations.

Case notification rate	New and recurrent tuberculosis cases notified for a given year and setting, expressed per 100 000 population. This excludes recurrent cases due to treatment failure or after being lost to follow up.
Catastrophic total costs due to tuberculosis	Direct medical and non-medical costs plus income losses due to an episode of tuberculosis that sum to or exceed 20% of annual household income.
Cavity	An air-filled space within lung consolidation. Consolidation may resolve and leave only a thin wall.
Clinically diagnosed tuberculosis (case definition)	Tuberculosis in a person who does not fulfil the criteria for bacteriological confirmation and has been diagnosed with tuberculosis by a medical practitioner who has decided to initiate anti-tuberculosis treatment.
Close community contact	A person who is not in the same household but shares an enclosed space, such as a social gathering place, workplace, or facility for extended periods during the day with the index patient during the 3 months before commencement of the current treatment episode.
Cluster (TB)	Group of persons with tuberculosis that are linked by epidemiological or genotyping data.
Community- or home-based directly observed therapy (DOT)	DOT delivered in the community close to the patient's home or workplace.
Community-based tuberculosis activities	Wide range of actions contributing to prevention, diagnosis, treatment, and care, with potential to improve the population-level tuberculosis burden indicators.
Computer-aided detection (CAD) for tuberculosis	The use of specialized software to interpret abnormalities on chest radiographs that are suggestive of tuberculosis.. The results are expressed as abnormality scores. CAD may be used for screening or triage.
Confirmed case of multi-drug resistant tuberculosis (MDR-TB)	Person with a positive culture for *M. tuberculosis* which has been confirmed through a drug-susceptibility test to be resistant in vitro to at least isoniazid and rifampicin.

Contact	Any person who has been exposed to a person with tuberculosis.
Contact investigation	Systematic screening of people with previously undiagnosed tuberculosis or *M. tuberculosis* infection among the contacts of an index case of tuberculosis in the household and in comparable settings in which transmission occurs. It consists of identification, screening, clinical evaluation and/or testing, as appropriate.
Contagious (infectious) tuberculosis patient	Person with pulmonary or laryngeal laboratory-confirmed tuberculosis who is able to spread infectious droplet nuclei containing viable *M. tuberculosis* while coughing, sneezing, talking or conducting any other respiratory maneuvers.
Continuation phase	Second period of tuberculosis treatment, after the intensive phase, during which treatment is maintained with a reduced number of anti-tuberculosis drugs.
Conversion of interferon-γ release assays	Change from a negative to a positive result as per manufacturer's threshold.
Critical concentration (CC)	The lowest concentration of an anti-tuberculosis drug that will inhibit the growth of 99% of phenotypically wild type isolates of *M. tuberculosis* complex (MTBC) in vitro.
Critical proportion	The proportion of resistant *M. tuberculosis* bacilli within a particular cultured isolate that is used to determine resistance to a particular drug. A 1% critical proportion is used to differentiate susceptible and resistant isolates.
Cross-resistance	Resistance to multiple anti-tuberculosis agents caused by a single genetic change (or multiple changes in case the given resistance mechanisms require several genetic alterations).
Cured (treatment outcome)	A person with bacteriologically confirmed pulmonary tuberculosis at the beginning of treatment who completed treatment as recommended by the national policy, with evidence of bacteriological response and no evidence of failure.
Death (treatment outcome)	Death for any reason while on TB treatment.

Directly observed therapy (DOT)	Person observing a tuberculosis patient taking medications in real time (face to face or remotely through digital means).
Directly observed treatment, short course (DOTS) strategy	Tuberculosis control strategy developed by The Union and first promoted by WHO in 1994–1995 until it was replaced by the STOP-TB strategy in 2006. It comprised five elements: political commitment, case detection using sputum microscopy among persons seeking care for prolonged cough, standardized short course chemotherapy under proper case-management conditions including directly observed treatment, regular drug supply, and a standardized recording and reporting system that allows assessment of individual patients as well as overall programme performance.
Disseminated tuberculosis	Simultaneous involvement of at least two non-contiguous organ sites of the body resulting from the hematogenous spread of *M. tuberculosis*.
Drug resistance among new case	Presence of resistant isolates of *M. tuberculosis* in persons who either do not report having had any prior anti-tuberculosis treatment (for up to one month) or in countries where adequate documentation is available, when there is no evidence of a previous history of anti-tuberculosis treatment.
Drug resistance among previously treated cases	Presence of resistant isolates of *M. tuberculosis* in persons who either report having been treated for tuberculosis for one month or more, or in countries where adequate documentation is available, there is evidence of such history.
Drug-resistant tuberculosis (DR-TB)	Tuberculosis caused by a strain of *M. tuberculosis* complex that is resistant to any anti-tuberculosis drug.
Drug-resistant tuberculosis (DR-TB) management centre	Specialized public or private health facility that provides comprehensive management for persons with DR-TB including diagnosis, treatment initiation, and monitoring.
Drug-susceptibility testing (DST)	In vitro testing using phenotypic methods to determine whether *M. tuberculosis* is susceptible to a particular drug. Also known as antimicrobial susceptibility testing (AST).

Drug-susceptible tuberculosis	Disease caused by a strain of *M. tuberculosis* that is susceptible to the most commonly used anti-tuberculosis drugs (isoniazid, rifampicin, pyrazinamide, and ethambutol).
Early bactericidal activity	The ability of anti-tuberculosis drugs or treatments to reduce the burden of *M. tuberculosis* in sputum specimens collected overnight from people with laboratory-confirmed pulmonary tuberculosis during the first 14 days of therapy.
Elimination (TB)	Incidence rate of tuberculosis less than 1 case per million population per year.
Empirical treatment	Treatment guided by observation and experience. In the tuberculosis context, it means providing treatment before (or without) confirming whether the disease is due to *M. tuberculosis*.
End TB Strategy	The World Health Organization's global strategy to end the tuberculosis epidemic by 2035. It was developed as a successor of the previous STOP TB strategy. The End TB strategy aims at reducing the number of TB deaths by 95% and the TB incidence rate by 90% between 2015 and 2035. It also pursues the elimination of catastrophic costs faced by TB-affected families by 2020.
Endemic tuberculosis	Above 100 tuberculosis cases per 100 000 population.
Enhanced (tuberculosis) case-finding	Health information or education, or awareness campaigns to provide information about what type of health-seeking behaviour is recommended when people experience symptoms of tuberculosis.
Environmental control measures	Physical or mechanical measures (as opposed to administrative control measures) used to reduce the risk for transmission of *M. tuberculosis*. Examples include ventilation, filtration, ultraviolet lamps, airborne infection isolation rooms, and local exhaust ventilation devices.
Epidemiologic (epi) link	Characteristic that two people with tuberculosis share that explains where and when tuberculosis could have been transmitted between them.
Exposed cohort	Groups of persons (e.g., family members, co-workers, friends, club, team or choir members,

	persons in correctional facilities, children in orphanages and other institutional living settings, or homeless shelter residents) who have shared the same air space with a person diagnosed with tuberculosis during the infectious period. A person in the exposed cohort is a contact.
Exposure period	Coincident period when a contact shared the same air space as a person with tuberculosis during the infectious period.
Exposure site	Location that the index patient visited during the infectious period (e.g., a school, bar, bus, or residence).
Extensively drug-resistant tuberculosis (XDR-TB)	Tuberculosis caused by a strain of *M. tuberculosis* complex that is resistant to rifampicin (and may also be resistant to isoniazid), and that is also resistant to at least one fluoroquinolone (levofloxacin or moxifloxacin) and to at least one other "Group A" drug (bedaquiline or linezolid).
Extrapulmonary tuberculosis (EPTB)	Any bacteriologically confirmed or clinically diagnosed case of tuberculosis involving organs other than the lungs (e.g. pleura, peripheral lymph nodes, abdomen, genitourinary tract, skin, joints and bones, meninges).
Favourable outcome	A tuberculosis patient who either has completed treatment without evidence of failure or has a negative result in the last two cultures performed towards the end of treatment and has not been classified as having an unfavourable outcome by a study-defined time point.
First-line drug	Drugs used as the first resort to treat a disease. In the case of tuberculosis, the following four drugs are usually chosen: isoniazid (H), rifampicin (R), ethambutol (E), pyrazinamide (Z).
Fixed-dose combination (FDC)	Two or more drugs combined into one pill or capsule in specific dosages. This is the WHO-recommended strategy for anti-tuberculosis treatment regimens.
Health facility-based directly observed therapy (DOT)	DOT delivered at a health centre, clinic, or hospital.

High incidence of tuberculosis	Estimated tuberculosis incidence rate (all forms) greater than 100 cases per 100 000 population in a year.
High multidrug-resistant tuberculosis (MDR-TB) burden countries	20 countries with the highest estimated number of incident MDR-TB cases, plus the 10 countries with the highest estimated MDR-TB incidence that are not in the top 20 by absolute number (threshold: >1000 estimated incident MDR-TB cases per year).
High TB/HIV burden countries	20 countries with the highest estimated numbers of incident TB/HIV cases, plus the 10 countries with the highest estimated TB/HIV incidence that are not in the top 20 by absolute number (threshold: >10 000 estimated incident TB/HIV cases per year).
High tuberculosis burden countries	20 countries with the highest absolute number of estimated incident cases, plus the 10 countries with the most severe burden in terms of incidence rates per capita.
High tuberculosis transmission setting	Setting with a high frequency of people with undetected or undiagnosed tuberculosis, or where people with infectious tuberculosis are present and there is a high risk of tuberculosis transmission.
Highly endemic tuberculosis	More than 300 tuberculosis cases per 100 000 population in a year.
HIV associated tuberculosis	Tuberculosis occurring in a person living with HIV.
Household contact	Person who shared the same enclosed living space as the index case of tuberculosis for one or more nights or for frequent or extended daytime periods during the 3 months before the start of current treatment.
Human rights-based tuberculosis response	A tuberculosis response that promotes public health measures and good clinical practice founded on the dignity and autonomy of people affected by tuberculosis and their critical role in all aspects of the response.
Incipient tuberculosis	Individuals with *M. tuberculosis* infection in whom progression to tuberculosis has started and who have no symptoms, no radiographic abnormalities suggestive of tuberculosis, and negative microbiological investigations.

Index patient of tuberculosis	Used in tuberculosis surveillance to refer to the person of any age who is initially identified with new or recurrent tuberculosis in a specific household or other comparable setting in which others may have been exposed. An index patient is the person on which a contact investigation is centered but is not necessarily the source patient.
Individualized treatment	Regimen designed based on the patient's previous history of anti-tuberculosis treatment, individual characteristics and/or DST results.
Infection-control programme (for tuberculosis)	Programme designed to control transmission of *M. tuberculosis* through early detection, isolation, and treatment of persons with infectious tuberculosis.
Infectious period	Time period during which a patient with tuberculosis is considered infectious and capable of transmitting *M. tuberculosis* to other persons. This period is typically defined as 12 weeks before tuberculosis diagnosis or onset of cough until the patient has been put on tuberculosis treatment and has evidence of negative microbiological tests from specimens of affected organs.
Infectious tuberculosis	Tuberculosis that is transmissible to others, i.e. contagious, usually determined by a bacteriologically positive sputum or other respiratory sample.
Infectiousness	Probability of tuberculosis transmission from an individual with tuberculosis (usually pulmonary tuberculosis) to a susceptible individual through aerosols with droplet nuclei containing viable *M. tuberculosis*.
Initial (intensive) phase of treatment	First period of tuberculosis treatment during which a combination of drugs is given to kill as many of the *M. tuberculosis* organisms as possible, as quickly as possible. In the 6-month regimen for drug susceptible tuberculosis, this period usually lasts 2 months.
Injectable agent	In the tuberculosis context, it refers to aminoglycosides such as amikacin, capreomycin, kanamycin, or streptomycin, previously considered to be key MDR-TB regimen components (the term as used here does not include the second-line anti-

	tuberculosis drugs imipenem and meropenem that are also given by injection).
Interferon-gamma release assay (IGRA)	In-vitro blood tests for cell-mediated immunity to *M. tuberculosis* that quantify the amount of interferon-gamma (IFN-γ) released from peripheral blood T-cells or enumerate the number of IFN-γ producing T-cells following stimulation with synthetic peptides simulating *M. tuberculosis* proteins.
Inventory study for tuberculosis	Study conducted with the aim of assessing the number of detected persons with tuberculosis during a defined period of time by actively observing health providers' practice, and then computing the proportion of detected cases not reported to health authorities.
Isoniazid preventive therapy (IPT)	Therapy with isoniazid (usually self-administered daily for 6 months) to prevent the development of tuberculosis.
Laboratory confirmed tuberculosis meningitis (TBM)	Tuberculosis diagnosed when 1) AFB are seen in cerebrospinal fluid (CSF), 2) AFB or *M. tuberculosis* is cultured from CSF or 3) *M. tuberculosis* DNA is detected by PCR from CSF.
Laboratory confirmed tuberculosis	Synonym of bacteriologically confirmed tuberculosis.
Laryngeal tuberculosis	Tuberculosis that involves the larynx and can be highly infectious.
Latent tuberculosis infection (LTBI)	A state of persistent immune response to stimulation by *M. tuberculosis* antigens with no evidence of clinically manifest tuberculosis. This term is outdated, and **the current recommended term is *M. tuberculosis* infection**.
Line-probe assay (LPA)	Rapid technique based on polymerase chain reaction (PCR) that is used to detect the most common mutations of *M. tuberculosis* that confer resistance to anti-tuberculosis drugs. It is also used to detect the species of multiple nontuberculous mycobacteria.
Lost to follow-up (treatment outcome)	A person who did not start treatment or whose treatment was interrupted for two consecutive months or more.

Low tuberculosis incidence settings	Countries or distinct parts of countries characterized by a low burden of tuberculosis (with a tuberculosis incidence <10/100 000 population).
M. tuberculosis infection	Condition in which a person harbours viable *M. tuberculosis* in the body, irrespective of signs or symptoms. When a person is infected with *M. tuberculosis*, TST or IGRA tests are frequently positive (TST≥5mm, or IGRA according to manufacturer's instructions). A positive TST or IGRA does not always mean *M. tuberculosis* infection is present. This condition has been broadly referred to as latent TB infection or TB infection.
M. tuberculosis uninfected	Condition in which a person has no *M. tuberculosis* infection, no tuberculosis, and may or may not be immunoreactive to IGRAs or TST.
Management of tuberculosis	The broad package of services to prevent, diagnose, treat, and rehabilitate people affected by tuberculosis.
Mantoux method	It is the recommended technique to perform the purified protein derivative (PPD)-based tuberculin skin test (TST). It consists of the injection of 0.1 ml containing 5 tuberculin units (TU) of PPD intradermally into the volar or dorsal surface of the forearm.
Miliary tuberculosis	A form of rapidly progressing tuberculosis characterized by hematogenous spread of *M. tuberculosis*. Its name derives from a pathognomonic chest radiograph (with millet seed-sized (1 to 2 mm) tuberculous foci).
Minimum inhibitory concentration (MIC)	The lowest concentration of an antimicrobial agent that prevents growth of more than 99% a microorganism in a solid medium or broth dilution susceptibility test.
Monoresistance	Resistance to only one first-line anti-tuberculosis drug.
Mtb antigen-based skin tests (TBST)	Skin tests for the detection of *M. tuberculosis* infection that use *Mtb* specific antigens (ESAT6 and CFP10).

Multidrug- or rifampicin-resistant tuberculosis (MDR/RR-TB)	Refers to either multidrug-resistant tuberculosis (MDR-TB) or rifampicin-resistant tuberculosis (RR-TB). This term is used given that both drug resistance profiles are eligible for MDR-TB regimens.
Multidrug-resistant tuberculosis (MDR-TB) regimen	Anti-tuberculosis treatment regimen designed to treat people with rifampicin-resistant (RR) or multidrug-resistant (MDR) tuberculosis.
Mycobacterium bovis (M. bovis)	Member organism of *M. tuberculosis* complex and a causative infectious agent of tuberculosis in cattle. It can also cause tuberculosis in humans.
Mycobacterium tuberculosis (M. tuberculosis, M.tb)	Member organism of *M. tuberculosis* complex and the main causative agent of tuberculosis in humans.
Mycobacterium tuberculosis complex (MTBC)	Group of closely related mycobacterial species that can cause tuberculosis (i.e., *M. tuberculosis*, *M. bovis*, *M. orygis*, *M. africanum*, *M. microti*, and the BCG strain).
National Tuberculosis Programme (NTP)	Countrywide, permanent programme responsible for activities directed at controlling tuberculosis through integrated efforts with the general national health services.
National Tuberculosis Programme (NTP) network	Health facilities, public or private, treating and notifying tuberculosis in line with the guidelines of the National Tuberculosis Programme.
New case	A person with tuberculosis who has never received treatment or has only previously ever taken anti-tuberculosis drugs for less than 1 month. **Note: this term is only used in the context of surveillance. In other contexts, the term 'case' should not be used, and we should use the term 'person with tuberculosis'.**
Non-Infectious tuberculosis	Tuberculosis which is not contagious. It usually refers to extrapulmonary or pulmonary tuberculosis for which the sputum-based microbiological tests are negative.
Non-severe tuberculosis	In the pediatric context, peripheral lymph node tuberculosis or respiratory tuberculosis (including uncomplicated intrathoracic lymph node disease) confined to one lobe without cavities, no significant

	airway obstruction, uncomplicated pleural effusion, and no miliary tuberculosis.
Nontuberculous Mycobacteria (NTM)	Mycobacterium species other than those included as part of *M. tuberculosis* complex. Also referred to as mycobacterium other than tuberculosis (MOTT).
Not evaluated (treatment outcome)	Person with tuberculosis for whom no treatment outcome is assigned.
Notified tuberculosis case	Case of tuberculosis that is reported to the National Tuberculosis Programme.
Number needed to screen	Number of people who need to undergo screening in order to diagnose one person with tuberculosis.
Other previously treated patients	People with tuberculosis who have previously been treated for tuberculosis but whose outcome after their most recent course of treatment is unknown or undocumented.
Paradoxical Tuberculosis-Associated IRIS (Immune Reconstitution Inflammatory Syndrome)	Recurrent, new, or worsening symptoms or signs of tuberculosis following initiation of antiretroviral therapy (ART) in people living with HIV, diagnosed with tuberculosis, and started on anti-tuberculosis treatment before ART. These signs or symptoms typically occur within the first few weeks and up to 3 months after ART is initiated.
Passive case-finding	Patient-initiated pathway to tuberculosis diagnosis involving a person with tuberculosis who experiences symptoms that they recognize as serious; the person having access to and seeking care and presenting spontaneously at an appropriate health facility; a health worker correctly assessing that the person fulfils the criteria for presumptive tuberculosis; and successful use of a diagnostic algorithm with sufficient sensitivity and specificity to diagnose tuberculosis.
People affected by tuberculosis	People with tuberculosis or who previously had tuberculosis, as well as their caregivers and immediate family members.
Persistent cough	Cough with a duration of >2 weeks. Also referred to as prolonged or unremitting cough.

Persistent unexplained fever	Persistent (>1 week) and unexplained fever (>38.0 C) reported by a guardian or objectively recorded at least once.
Person-centered approach to tuberculosis care	Person-centered approach considers the needs, perspectives, and individual experiences of people affected by tuberculosis, while respecting their right to be informed and receive the best quality care based on individual needs.
Persons with unknown previous tuberculosis treatment history	Persons who do not fit into any of the categories of relapse, treatment after failure, treatment after loss to follow up, and other previously treated.
Phenotypic drug susceptibility testing (DST)	Phenotypic testing determines if an isolate is resistant to an anti-tuberculosis drug by evaluating growth (or metabolic activity) in the presence of the drug. Also called conventional DST.
Polydrug resistance	Resistance to more than one first-line anti-tuberculosis drug (other than both isoniazid and rifampicin).
Possible tuberculous meningitis (TBM)	Clinical entry criteria consistent with tuberculous meningitis plus exclusion of alternative diagnoses.
Pre-elimination setting	1 person with tuberculosis per 100 000 population in a particular setting.
Pre-extensively drug resistant (XDR) tuberculosis	Tuberculosis caused by *M. tuberculosis* strains that fulfil the definition of multidrug-/rifampicin-resistant tuberculosis (MDR/RR-TB) and that are also resistant to any fluoroquinolone.
Presumptive tuberculosis	Condition in which a person has symptoms or signs suggestive of tuberculosis.
Prevalence surveys (for tuberculosis)	Studies to periodically measure tuberculosis burden in a particular country or setting. They usually measure bacteriologically confirmed TB in those ≥15 years of age.
Previously treated patients	People who have previously received 1 month or more of anti-tuberculosis drugs. Previously treated people may have been treated with a first-line regimen for drug-susceptible tuberculosis or a second-line regimen for drug-resistant forms.

Primary drug resistance	Presence of drug resistance to one or more anti-tuberculosis drugs in a person who has received either no or less than one month of prior tuberculosis chemotherapy.
Probable tuberculous meningitis (TBM)	Diagnosed when: 1) a person presented with clinical features of meningitis and 2) suggestive cerebrospinal fluid laboratory findings of TBM, plus 3) one or more of the following i) chest radiograph findings consistent with pulmonary tuberculosis, ii) an extra-meningeal specimen positive for AFB, iii) other evidence of extra-meningeal tuberculosis (e.g. abdominal ultrasound features) or iv) brain computed tomography (CT) evidence of TBM.
Programmatic management of tuberculosis preventive treatment	All coordinated activities by public and private healthcare providers and the community aimed at scaling up tuberculosis preventive treatment to people who need it.
Prolonged paradoxical tuberculosis-associated immune reconstitution inflammatory syndrome (TB-IRIS)	TB-IRIS symptoms lasting >90 days.
Proportion method	The most common method used for testing the susceptibility of *M. tuberculosis* complex isolates. In this method, the inoculum used is monitored by testing two dilutions of a culture suspension, and the growth (that is, the number of colonies) on a control medium without an anti-tuberculosis agent is compared with the growth (the number of colonies) present on a medium containing the critical concentration of the anti-tuberculosis drug being tested.
Provider-initiated tuberculosis screening pathway	The provider-initiated tuberculosis screening pathway systematically targets people at high risk of exposure or of developing tuberculosis and screens them by assessing symptoms, using tests, examinations, or other procedures to identify those who might have tuberculosis, following up with a diagnostic test and additional clinical assessments to make a definite diagnosis.

Pulmonary tuberculosis (PTB)	Any bacteriologically confirmed or clinically diagnosed case of tuberculosis involving the lung parenchyma or the tracheobronchial tree, including tuberculous intrathoracic lymphadenopathy. A person with both PTB and extrapulmonary tuberculosis should be classified as having PTB.
Purified protein derivative (PPD), tuberculin	Material used in diagnostic tests to measure immune reactivity to past or present *M. tuberculosis* infection. PPD is a purified tuberculin preparation that was developed in the 1930s and derived from old tuberculin. It is administered as part of a tuberculin skin test (TST) that is given as an intradermal injection of 0.1 ml containing 5 TU (Mantoux method) and read 48–72 hours later.
Recent transmission	Transmission of *M. tuberculosis* that has occurred in the recent past, often considered to be within the last 2 years.
Recurrence	A person who has previously been treated for tuberculosis, was declared cured or treatment completed at the end of the most recent course of treatment, and is now diagnosed with a recurrent episode of tuberculosis.
Reinfection	Second or subsequent *M. tuberculosis* infection by a different strain than the previous infection.
Relapse (true relapse)	Recurrent episode of tuberculosis caused by the same strain as was identified at baseline, is thought to be due to failure of chemotherapy to sterilize the host tissues, thereby enabling endogenous recrudescence of the original infection.
Retreatment case	Person previously treated for tuberculosis, who has received one month or more of anti-tuberculosis drugs in the past. **The current preferred term is 'previously treated patient'.**
Retreatment regimen	Regimen of first-line anti-tuberculosis drugs given to a person with tuberculosis whose previous treatment has failed. It may also be given for cases returning after loss to follow up (having had at least 4 weeks of treatment) and relapse cases after an initial first-line treatment regimen.
Rifampicin-resistant tuberculosis (RR-TB)	Tuberculosis caused by a strain of *M. tuberculosis* complex that is resistant to rifampicin. These

	strains may be susceptible or resistant to isoniazid (i.e. MDR-TB), or resistant to other first-line or second-line tuberculosis drugs.
Risk group	Any group of people in which the prevalence or incidence of tuberculosis is significantly higher than in the general population. **The current preferred term is 'tuberculosis key vulnerable populations'.**
Risk of *M. tuberculosis* transmission	Probability of passing *M. tuberculosis* to another individual. This may be influenced by factors such as the frequency of contact with the source person, proximity and duration of contact, use of respiratory protection, environmental factors, and infectiousness of the source person.
Scanty	In the tuberculosis context, result of examination of a sputum sample when fewer than 10 acid-fast bacilli (AFB) are observed.
Screening (TB)	Activity performed by a healthcare provider in a specific population in order to identify persons who have tuberculosis or *M. tuberculosis* infection.
Screening test, examination, or procedure for tuberculosis	A test, examination or other procedure for tuberculosis that distinguishes people with a high likelihood of having tuberculosis from people who are highly unlikely to have it. A screening test is not intended to be diagnostic. People with positive results on a screening test should undergo full diagnostic evaluation.
Second-line drug	Agent usually reserved for the treatment of drug-resistant tuberculosis. First-line tuberculosis drugs used to treat drug-susceptible tuberculosis – ethambutol, isoniazid and pyrazinamide – may also be used in MDR-TB regimens.
Second-line line probe assays (LPAs)	Molecular tests for detection of resistance to fluoroquinolones and injectable anti-tuberculosis drugs.
Secondary ('second generation') transmission	Transmission of *M. tuberculosis* from a secondary tuberculosis case whose index case had also been identified.
Secondary case (of tuberculosis)	Case of tuberculosis caused by transmission of *M. tuberculosis* from the source patient.

Severe extrapulmonary tuberculosis	The presence of disseminated (miliary) tuberculosis or tuberculous meningitis. In children aged under 15 years, extrapulmonary forms of disease other than lymphadenopathy (peripheral nodes or isolated mediastinal mass without compression) are considered as severe.
Severely endemic tuberculosis setting	Setting in which there are more than 500 cases of tuberculosis per 100 000 population in a single year.
Smear conversion	Change from sputum smear-positive to sputum smear-negative .
Smear conversion rate	Proportion of treated patients who convert from sputum smear-positive to sputum smear-negative within a specified period of time, usually after 2 or 3 months of the initial phase of tuberculosis treatment. It is not a true rate.
Smear microscopy	Test to see whether there are mycobacteria in a particular specimen (sputum or an extrapulmonary sample). To do this test, lab workers smear the specimen on a glass slide, stain the slide with a special dye, and look for any mycobacteria on the slide. Also known as acid fast bacilli (AFB) examination.
Source case investigation	Investigation to determine the index case (source) of a tuberculosis case of interest. Also called reverse contact investigation.
Sputum culture conversion	Two consecutive negative cultures from sputa collected at least 25 days apart.
Standardized treatment	In the tuberculosis context, it is a treatment regimen that is the same for all patients with similar characteristics or a similar type of tuberculosis. This is the opposite of individualized treatment.
Sterilizing activity	Ability of a drug to eliminate all bacteria. In the tuberculosis context it is often referred to the ability to kill slow replicating mycobacteria, once the large bulk of rapidly growing organisms has been killed.
Stop TB strategy	WHO recommended strategy for tuberculosis control elaborated in 2006 with the aim to reduce the burden of tuberculosis in line with global targets set for 2015. The Stop TB Strategy was developed as the successor to the previous DOTS strategy.

Subclinical tuberculosis	Tuberculosis detected by microbiologic investigation in the absence of self-reported tuberculosis-related symptoms with or without radiological abnormalities.
Sustained treatment success (treatment outcome)	An individual assessed at 6 months (for drug-resistant tuberculosis and drug-susceptible tuberculosis) and at 12 months (for drug-resistant tuberculosis only) after successful tuberculosis treatment, who is alive and without signs or symptoms suggestive of tuberculosis. This term is to be used in operational research only.
Symptom screen	In the tuberculosis context, procedure in which the person is asked if they have experienced any signs or symptoms frequently found in persons with tuberculosis.
Systematic screening for tuberculosis	The systematic identification of people with presumptive tuberculosis in a predetermined target group, using tests, examinations, or other procedures that can be applied rapidly.
Transfer in	Person who was originally registered in another basic management unit (BMU) tuberculosis register but transferred to the current BMU to continue care.
Treatment after failure patients	Persons previously treated for tuberculosis and whose treatment failed at the end of their most recent course of treatment.
Treatment after loss to follow-up patients	Persons who have previously been treated for tuberculosis and were declared lost to follow-up at the end of their most recent course of treatment.
Treatment completed (treatment outcome)	A person who completed anti-tuberculosis treatment as recommended by the national policy, whose outcome does not meet the definition for cure or treatment failure.
Treatment failed (treatment outcome)	A person whose anti-tuberculosis treatment regimen needed to be terminated or permanently changed to a new regimen or treatment strategy.
Treatment success (treatment outcome)	A person with tuberculosis whose treatment outcome is either ‘cured’ or ‘completed’.
Treatment support	An approach to supporting patients who are taking prescribed doses of anti-tuberculosis drugs, to help

	ensure adherence to treatment and maximize its efficacy.
Treatment supporter	Trained health worker or trained and supervised community member who directly observes a TB or DR-TB patient's treatment. When it is not convenient for a person with tuberculosis to visit a health facility during regular hours, a community-based treatment supporter may be selected to directly observe the person's treatment at a more convenient place and time or through the use of novel technologies (video-DOT), which might not observe TB treatment in real time.
Triage test for tuberculosis	A test that can be rapidly conducted among people presenting to a health facility to differentiate those who should have further diagnostic evaluation for tuberculosis from those who should undergo further investigation for non-tuberculosis diagnoses.
Tubercle bacilli	Bacilli that cause tuberculosis *(Mycobacterium tuberculosis)*.
Tuberculin	Purified protein derivative (PPD) – a mixture of antigens from a culture filtrate extract of *M. tuberculosis* that is used for skin testing; many of its antigens are non-species specific.
Tuberculin skin test (TST)	Intradermal injection of a combination of mycobacterial antigens that elicit an immune response (delayed-type hypersensitivity), represented by induration, which can be measured in millimeters. TST is used to diagnose *M. tuberculosis* infection.
Tuberculin skin test (TST) conversion	A change from a negative test result to a positive test result. The size of the change in the induration needs to be considered, as conversion varies based on the baseline testing results and whether the person has a known exposure to a person with tuberculosis. A TST conversion typically is interpreted as presumptive evidence of new *M. tuberculosis* infection and poses an increased risk for progression to tuberculosis.
Tuberculin skin test (TST) conversion rate	Proportion of a population in which TST results converted within a specified time. It is calculated by dividing the number of TST conversions among

	persons in the setting in a specified period (numerator) by the number of persons who received TSTs in the setting over the same period (denominator), multiplied by 100. It is not a true rate.
Tuberculin skin test (TST) reaction	Induration > 5mm for individuals who are at great risk of developing tuberculosis if they become infected with *M. tuberculosis*. Induration > 10 mm for individuals who have normal or mildly impaired immunity and a high likelihood of being infected with *M. tuberculosis* but are without other risk factors that would increase their likelihood of developing the disease. Induration >15 mm for individuals with no risk factors for tuberculosis. These cut-offs might be modified depending on the clinical setting or for research purposes.
Tuberculosis (TB)	An illness in humans caused by several bacterial microorganisms (species) belonging to the *M. tuberculosis* complex. The most common and important agent of human disease is *M. tuberculosis* and can affect any part of the body, creating parenchymal (tissue) damage. It is broadly referred to in the literature as 'tuberculosis disease' or 'active tuberculosis'.
Tuberculosis attributable mortality	Number of deaths caused by tuberculosis in HIV-negative people, according to the latest revision of the international classification of diseases, version 10 (ICD-10). Tuberculosis deaths among HIV-positive people are classified as HIV deaths in ICD-10.
Tuberculosis case	In the context of surveillance, it refers to the occurrence of tuberculosis in a person. **In clinical medicine or when referring to a particular person with tuberculosis, the term "case" should be avoided. In the latter context, the term patient should be used.**
Tuberculosis case detection	Activity consisting of identifying and reporting a case of tuberculosis within the national surveillance system.
Tuberculosis disease	**The preferred term is tuberculosis (TB).**

Tuberculosis episode	Occurrence of tuberculosis. It starts when TB-compatible symptoms are detected until the end of treatment or death.
Tuberculosis exposure	Situation in which any person has been exposed to a person with bacteriologically-confirmed tuberculosis (or to air containing *M. tuberculosis*).
Tuberculosis incidence rate	Number of estimated new and relapse (due to reinfection) cases of a disease in a defined population during a specified period of time. Tuberculosis incidence is usually reported as cases per 100 000 population per year. The size of the population is usually the estimated mid-year population.
Tuberculosis infection (TBI)	Any person who harbours viable M. tuberculosis in the body, irrespective of signs or symptoms. When a person is tuberculosis infected, TST or IGRA tests are frequently positive (TST≥5mm, or IGRA according to manufacturer's instructions). A positive TST or IGRA does not always mean tuberculosis infection is present. **The preferred term is '*M. tuberculosis* infection'.**
Tuberculosis key vulnerable populations (TB KVPs)	Subpopulations that are more prone to tuberculosis either due to more environmental, biological, poor nutrition or behavioral risks, or because of legal, human rights, gender, or other social barriers in accessing public health services.
Tuberculosis mortality rate	Estimated number of deaths attributable to tuberculosis in a given time period in a defined population, usually expressed per 100 000 population per year. The size of the population is usually the estimated mid-year population.
Tuberculosis patient	Individual diagnosed with tuberculosis. **The preferred term is 'Person with tuberculosis'.**
Tuberculosis prevalence (cases per 100 000 population)	Proportion of individuals with tuberculosis in a population at a given point in time, expressed per 100 000 population. In the context of prevalence surveys, it refers to the proportion of bacteriologically-positive pulmonary tuberculosis among general population aged 15 years and older at a particular time.

Tuberculosis preventive treatment (TPT)	Treatment offered to people considered at risk of tuberculosis to reduce that risk. Also referred to as "treatment of *M. tuberculosis* infection" or "tuberculosis preventive therapy" or "tuberculosis preventative therapy".
Tuberculosis stigma	The negative labelling or rejection of people with tuberculosis, and often also their families, due to stereotyping or other negative traits associated with tuberculosis and the affected communities.
Tuberculous meningitis (TBM)	Tuberculosis of the meninges. There are several TBM case definitions (definite, probable, and possible tuberculosis meningitis) which depend on the presence of a) signs or symptoms of meningitis, b) bacteriological confirmation, c) cerebral imaging features , or d) composite clinical score.
Unconfirmed tuberculosis (for intrathoracic tuberculosis in children)	Pediatric tuberculosis in which bacteriological confirmation is not obtained and at least 2 of the following conditions are present: Symptoms/signs suggestive of tuberculosis (as defined); Chest radiograph consistent with tuberculosis; Close tuberculosis exposure or immunologic evidence of *M. tuberculosis* infection; Positive response to tuberculosis treatment (requires documented positive clinical response on tuberculosis treatment—no time duration specified) - With *M. tuberculosis* infection; Immunological evidence of *M. tuberculosis* infection(TST and/or IGRA positive) - Without *M. tuberculosis* infection; No immunological evidence of *M. tuberculosis* infection. This term was developed for diagnostic research purposes.
Unfavorable outcome (proposed core research definition)	Composite outcome that includes death, treatment failure, treatment discontinuation, and recurrence.
Unlikely tuberculosis (for intrathoracic tuberculosis in children)	Condition in which a person does not have *M. tuberculosis* bacteriological confirmation and the criteria for "unconfirmed tuberculosis" is not met - With *M. tuberculosis* infection; Immunological evidence of *M. tuberculosis* infection (TST and/or IGRA positive) - Without *M. tuberculosis* infection; No immunological evidence of *M. tuberculosis* infection. This term was developed for diagnostic research purposes.

Unmasking tuberculosis-associated IRIS	Type of immune reconstitution inflammatory syndrome that occurs when a patient is not receiving treatment for tuberculosis when ART is initiated and then presents with tuberculosis within 3 months of starting ART. One of the following criteria must be met: Heightened intensity of clinical manifestations, presentation with pulmonary tuberculosis that is complicated by respiratory failure due to adult respiratory distress syndrome, or those who present with a marked systemic inflammatory syndrome related to tuberculosis.
Weak positive culture	One to nine colonies of *M. tuberculosis* detected.
WHO four-symptom screen	The presence of either cough, fever, weight loss, or night sweats used as a screening test in people living with HIV.
Ziehl–Neelsen staining method	Standard laboratory method of staining sputum smears for tuberculosis diagnosis. It involves staining a heat-fixed smear with an aqueous solution of a dye (usually basic fuchsin) containing chemicals (usually phenol) to help the dye penetrate into the cell, washing the smear with acid, alcohol or acid/alcohol and then counterstaining (usually with methylene blue).
Zoonotic tuberculosis	Form of tuberculosis in humans caused by strains of Mycobacteria transmitted from animals.

BIBLIOGRAPHY

Aziz MA. External quality assessment for AFB smear microscopy. Atlanta, GA: Centers for Disease Control and Prevention; 2002. Available from: https://stacks.cdc.gov/view/cdc/11440.

Bana TM, Lesosky M, Pepper DJ, van der Plas H, Schutz C, Goliath R, et al. Prolonged tuberculosis-associated immune reconstitution inflammatory syndrome: Characteristics and risk factors. BMC Infectious Diseases. 2016;16(1):1–12.

Behr MA, Kaufmann E, Duffin J, Edelstein PH, Ramakrishnan L. Latent tuberculosis: Two centuries of confusion. American Journal of Respiratory and Critical Care Medicine. 2021;204(2):142–8.

Centers for Disease Control and Prevention. Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005. MMWR. 2005;54(No. RR17):1–141.

Centers for Disease Control and Prevention. Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis Recommendations from the National Tuberculosis Controllers Association and CDC, and Guidelines for Using the QuantiFERON ®-TB Gold Test for Detecting Mycobacterium tuberculosis Infection, United States. MMWR. 2005;54(No. RR-15).

Centers for Disease Control and Prevention. Prevention and Control of Tuberculosis in Correctional and Detention Facilities: Recommendations from CDC Endorsed by the Advisory Council for the Elimination of Tuberculosis, the National Commission on Correctional Health Care, and the American Correctional Association. MMWR. 2006;55(No. RR-9).

Centers for Disease Control and Prevention. Recommendations for use of an isoniazid-rifapentine regime with direct observation to treat latent mycobacterium tuberculosis infection. MMWR. 2011;60(48):1650–3.

Chest radiography in tuberculosis detection: summary of current WHO recommendations and guidance on programmatic approaches. Geneva: World Health Organization; 2016. Available from: https://iris.who.int/handle/10665/252424.

Companion handbook to the WHO guidelines for the programmatic management of drug-resistant tuberculosis. Geneva: World Health Organization; 2014. Available from: https://iris.who.int/handle/10665/130918.

Connolly MA, Gayer M, Ottmani SE, WHO Disease Control in Humanitarian Emergencies Programme, UNHCR. et al. Tuberculosis care and control in refugee and displaced populations: an interagency field manual, edited by M.A. Connolly, M. Gayer and S. Ottmani, 2nd ed. 2007. Available from: https://iris.who.int/handle/10665/43661.

Consensus Meeting Report: Development of a Target Product Profile (TPP) and a framework for evaluation for a test for predicting progression from tuberculosis infection to active disease. Geneva: World Health Organization; 2017. Available from: https://www.who.int/publications/i/item/WHO-HTM-TB-2017.18.

Definitions and reporting framework for tuberculosis – 2013 revision. Geneva: World Health Organization; 2013. Available from: https://www.who.int/publications/i/item/9789241505345.

Diagnostic CXR Atlas for Tuberculosis in Children. Paris: International Union Against Tuberculosis and Lung Disease; 2022. Available from: https://theunion.org/technical-publications/diagnostic-cxr-atlas-for-tuberculosis-in-children.

DR-TB drugs under the microscope: the sources and prices of medicines. Paris: International Union Against Tuberculosis and Lung Disease; 2013. Available from: https://theunion.org/technical-publications/dr-tb-drugs-under-the-microscope-the-sources-and-prices-of-medicines.

Dunlap NE, Bass J, Fujiwara P, Hopewell P, Horsburgh CR, Salfinger M, et al. Diagnostic Standards and Classification of Tuberculosis in Adults and Children. American Respiratory Journal of Critical Care Medicine. 2012;161(4 I):1376–95.

Frequently Asked Questions on the WHO Rapid Communication: key changes to the treatment of multidrug- and rifampicin-resistant TB. Geneva: World Health Organization; 2018. Available from: https://www.who.int/publications/m/item/WHO-CDS-TB-2018.18.

Furin J, Alirol E, Allen E, Fielding K, Merle C, Abubakar I, et al. Drug-resistant tuberculosis clinical trials: proposed core research definitions in adults. International Journal of Tuberculosis and Lung Disease. 2016;20(3):290–4.

Global tuberculosis control: surveillance, planning, financing: WHO report 2008. Geneva: World Health Organization; 2008. Available from: https://iris.who.int/handle/10665/43831.

Global tuberculosis control: WHO report 2011. Geneva: World Health Organization; 2011. Available from: https://www.who.int/publications/i/item/9789241564380.

Global Tuberculosis Report 2013. Geneva: World Health Organization; 2013. Available from: https://www.who.int/publications/i/item/9789241564656.

Global tuberculosis report 2017. Geneva: World Health Organization; 2017. Available from: https://www.who.int/publications/i/item/9789241565516.

Global tuberculosis report 2022. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/9789240061729.

Good practice in legislation and regulations for TB control: an indicator of political will. Geneva: World Health Organization; 2001. Available from: https://iris.who.int/handle/10665/68708.

Graham SM, Ahmed T, Amanullah F, Browning R, Cardenas V, Casenghi M, et al. Evaluation of Tuberculosis Diagnostics in Children: 1. Proposed Clinical Case Definitions for Classification of Intrathoracic Tuberculosis Disease. Consensus From an Expert Panel. The Journal of Infectious Diseases. 2012;205(suppl_2):S199–208.

Graham SM, Cuevas LE, Jean-Philippe P, Browning R, Casenghi M, Detjen AK, et al. Clinical Case Definitions for Classification of Intrathoracic Tuberculosis in Children: An Update. Clinical Infectious Diseases. 2015;61:S179–87.

Guidance for national strategic planning for tuberculosis. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/9789240052055.

Guidance for national tuberculosis programmes on the management of tuberculosis in children, 2nd ed. Geneva: World Health Organization; 2014. Available from: https://www.who.int/publications/i/item/9789241548748.

Guide to the application of genotyping to tuberculosis prevention and control. Atlanta, GA: Centers for Disease Control and Prevention; 2004. Available from: https://www.cdc.gov/tb/programs/genotyping/manual.htm.

Guidelines for the programmatic management of drug-resistant tuberculosis: emergency update 2008. Geneva: World Health Organization, Stop TB Dept; 2008. Available from: https://www.who.int/publications/i/item/9789241547581.

Guidelines for treatment of drug-susceptible tuberculosis and patient care. Geneva: World Health Organization; 2017. Available from: https://www.who.int/publications/i/item/9789241550000.

Implementing the end TB strategy: the essentials. Geneva: World Health Organization; 2015. Available from: https://www.who.int/publications/i/item/9789240065093.

Khan FY. Review of literature on disseminated tuberculosis with emphasis on the focused diagnostic workup. Journal of Family and Community Medicine. 2019;26(2):83–91.

Line probe assays for detection of drug-resistant tuberculosis: interpretation and reporting manual for laboratory staff and clinicians. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/9789240046665.

Maher D, Boldrini F, Pathania V, Alli BO, Gabriel P, Kisting S, et al. Guidelines for workplace TB control activities: the contribution of workplace TB control activities to TB control in the community. Geneva: World Health Organization; 2003. Available from: https://iris.who.int/handle/10665/42704.

Management of drug-resistant tuberculosis: training for staff working at DR-TB management centres: training modules. Geneva: World Health Organization; 2014. Available from: https://www.who.int/publications/i/item/9789241548991.

Management of tuberculosis: a guide to essential practice. Paris: International Union Against Tuberculosis and Lung Disease; 2019. Available from: https://theunion.org/technical-publications/management-of-tuberculosis-a-guide-to-essential-practice.

Management of tuberculosis: training for district TB coordinators. ACT International (U.S.A.), American Thoracic Society, Centers for Disease Control and Prevention (U.S.A), Royal Netherlands Tuberculosis Association, World Health Organization et al; 2005. Available from: https://www.who.int/publications/i/item/WHO-HTM-TB-2005.347a.

Management of tuberculosis: training for health facility staff. Geneva: World Health Organization; 2010. Available from: https://www.who.int/publications/i/item/9789241598736.

Marais BJ, Heemskerk AD, Marais SS, van Crevel R, Rohlwink U, Caws M, et al. Standardized Methods for Enhanced Quality and Comparability of Tuberculous Meningitis Studies. Clinical infectious diseases: an official publication of the Infectious Diseases Society of America. 2017;64(4):501–9.

Marais S, Pepper DJ, Schutz C, Wilkinson RJ, Meintjes G. Presentation and Outcome of Tuberculous Meningitis in a High HIV Prevalence Setting. PLOS ONE. 2011;6(5):e20077.

Marais S, Thwaites G, Schoeman JF, Török ME, Misra UK, Prasad K, et al. Tuberculous meningitis: a uniform case definition for use in clinical research. The Lancet Infectious Diseases. 2010;10(11):803–12.

Meeting report of the WHO expert consultation on drug-resistant tuberculosis treatment outcome definitions. Geneva: World Health Organization; 2020. Available from: https://www.who.int/publications/i/item/9789240022195.

Meintjes G, Lawn SD, Scano F, Maartens G, French MA, Worodria W, et al. Tuberculosis-associated immune reconstitution inflammatory syndrome: case definitions for use in resource-limited settings. The Lancet Infectious Diseases. 2008;8(8):516–23.

Migliori GB, Ong CWM, Petrone L, D'ambrosio L, Centis R, Goletti D. The definition of tuberculosis infection based on the spectrum of tuberculosis disease. Breathe. 2021;17(3).

Nahid P, Dorman SE, Alipanah N, Barry PM, Brozek JL, Cattamanchi A, et al. Official American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of

America Clinical Practice Guidelines: Treatment of Drug-Susceptible Tuberculosis. Vol. 63, Clinical Infectious Diseases. Oxford University Press; 2016;63(7)e147–e195.

National tuberculosis prevalence surveys 2007-2016. Geneva: World Health Organization; 2021. Available from: https://www.who.int/publications/i/item/9789240022430.

Optimizing Active Case-Finding for Tuberculosis. Geneva: World Health Organization; 2019. Available from: https://www.who.int/publications/i/item/9789290228486.

Psychosocial counselling and treatment adherence support for people affected by tuberculosis (TB). Paris: International Union Against Tuberculosis and Lung Disease; 2021. Available from: https://theunion.org/technical-publications/psychosocial-counselling-and-treatment-adherence-support-for-people-affected-by-tuberculosis-tb.

Rapid communication: TB antigen-based skin tests for the diagnosis of TB infection. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/WHO-UCN-TB-2022.1.

Rapid implementation of the Xpert MTB/RIF diagnostic test: technical and operational "How-to"; practical considerations. Geneva: World Health Organization; 2011. Available from: https://www.who.int/publications/i/item/9789241501569.

Recommendations for investigating contacts of persons with infectious tuberculosis in low- and middle-income countries. Geneva: World Health Organization; 2012. Available from: https://www.who.int/publications/i/item/9789241504492.

Report of the technical consultation on innovative clinical trial designs for evaluating new TB preventive treatments, virtual meeting. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/9789240047150.

Rieder HL, International Union against Tuberculosis and Lung Disease. Interventions for tuberculosis control and elimination. Paris: International Union Against Tuberculosis and Lung Disease; 2002. Available from: https://tbrieder.org/publications/books_english/interventions.pdf.

Seddon JA, Perez-Velez CM, Schaaf HS, Furin JJ, Marais BJ, Tebruegge M, et al. Consensus statement on research definitions for drug-resistant tuberculosis in children. Journal of the Pediatric Infectious Diseases Society. 2013;2(2):100–9.

Sharma SK, Dhooria S, Barwad P, Kadhiravan T, Ranjan S, Miglani S, et al. A study of TB-associated immune reconstitution inflammatory syndrome using the consensus case-definition. Indian Journal of Medical Research. 2010;131(6):804–8.

Standards and benchmarks for tuberculosis surveillance and vital registration systems: checklist and user guide. Geneva: World Health Organization; 2014. Available from: https://iris.who.int/handle/10665/112673.

State of inequality: HIV, tuberculosis and malaria. Geneva: World Health Organization; 2021. Available from: https://www.who.int/publications/i/item/9789240039445.

Systematic screening for active tuberculosis: an operational guide. Geneva: World Health Organization; 2015. Available from: https://www.who.int/publications/i/item/9789241549172.

TB impact measurement policy and recommendations for how to assess the epidemiological burden of TB and the impact of TB control: Stop TB policy paper. Geneva: World Health Organization; 2009. Available from: https://www.who.int/publications/i/item/9789241598828.

Technical report on critical concentrations for drug susceptibility testing of isoniazid and the rifamycins (rifampicin, rifabutin and rifapentine). Geneva: World Health Organization; 2021. Available from: https://www.who.int/publications/i/item/9789240017283.

The global plan to end TB (2016-2020). Geneva: Stop TB Partnership; 2015. Available from: https://www.stoptb.org/global-plan-to-end-tb-2016-2020-2.

The global plan to stop TB 2011-2015: transforming the fight: towards elimination of tuberculosis. Geneva: Stop TB Partnership, World Health Organization; 2010. Available from: https://www.who.int/publications/i/item/9789241500340.

The use of bedaquiline in the treatment of multidrug-resistant tuberculosis: interim policy guidance. Geneva: World Health Organization; 2013. Available from: https://www.who.int/publications/i/item/9789241505482.

Toman K, Frieden TR & World Health Organization. (2004). Toman's tuberculosis : case detection, treatment, and monitoring : questions and answers / edited by T. Frieden, 2nd ed. World Health Organization. https://iris.who.int/handle/10665/42701.

Towards universal access to diagnosis and treatment of multidrug-resistant and extensively drug-resistant tuberculosis by 2015. Geneva: World Health Organization; 2011. Available from: https://iris.who.int/handle/10665/44557.

Tuberculosis patient cost surveys: a handbook. Geneva: World Health Organization; 2017. Available from: https://www.who.int/publications/i/item/9789241513524.

Western Pacific regional framework to end TB: 2021-2030. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/9789290619703.

WHO consolidated guidelines on drug-resistant tuberculosis treatment. Geneva: World Health Organization; 2019. Available from: https://www.who.int/publications/i/item/9789241550529.

WHO consolidated guidelines on tuberculosis: Module 1: Prevention: tuberculosis preventive treatment. Geneva: World Health Organization; 2020. Available from: https://www.who.int/publications/i/item/9789240001503.

WHO consolidated guidelines on tuberculosis: Module 2: screening: systematic screening for tuberculosis disease. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/9789240022676.

WHO consolidated guidelines on tuberculosis: Module 4: Treatment: drug-resistant tuberculosis treatment. Geneva: World Health Organization 2022. Available from: https://www.who.int/publications/i/item/9789240007048.

WHO consolidated guidelines on tuberculosis: Module 4: Treatment: drug-susceptible tuberculosis treatment. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/9789240048126.

WHO consolidated guidelines on tuberculosis: Module 5: Management of tuberculosis in children and adolescents. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/9789240046764.

WHO guidelines on tuberculosis infection prevention and control: 2019 update. Geneva: World Health Organization; 2019. Available from: https://iris.who.int/handle/10665/311259.

WHO meeting report of a technical expert consultation: non-inferiority analysis of Xpert MTB/RIF ultra compared to Xpert MTB/RIF. Geneva: World Health Organization; 2017. Available from: https://www.who.int/publications/i/item/WHO-HTM-TB-2017.04.

WHO operational handbook on tuberculosis: Module 2: screening - systematic screening for tuberculosis disease. Geneva: World Health Organization; 2021. Available from: https://www.who.int/publications/i/item/9789240022614.

WHO operational handbook on tuberculosis: Module 4: treatment: drug-susceptible tuberculosis treatment. Geneva: World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/9789240050761.

WHO treatment guidelines for drug-resistant tuberculosis: 2016 update. Geneva: World Health Organization; 2016. Available from: https://www.who.int/publications/i/item/9789241549639.

Wook KJ, International Civil Aviation Organization, International Air Transport Association, World Health Organization. Tuberculosis and air travel: guidelines for prevention and control, 2nd edition. Geneva; 2006. Available from: https://iris.who.int/handle/10665/43455.

Words Matter: Suggested language and usage for tuberculosis communications. Geneva: Stop TB Partnership; 2022. Available from: https://www.stoptb.org/words-matter-language-guide.

Wright A, Zignol Matteo, WHO/IUATLD Global Project on Anti-tuberculosis Drug Resistance Surveillance. Anti-tuberculosis drug resistance in the world: fourth global report: the World Health Organization/International Union Against Tuberculosis and Lung Disease (WHO/UNION) Global Project on Anti-Tuberculosis Drug Resistance Surveillance, 2002-2007. 2008;151.