In June 2006, the Global Tuberculosis Programme (GTB) in the World Health Organization (WHO) established a Global Task Force on TB Impact Measurement, with the TB monitoring, evaluation and strategic information (TME) unit in GTB acting as the secretariat.

The Task Force includes a wide range of experts in TB epidemiology, statistics and modelling, representatives from major technical and financial partners and representatives from countries with a high burden of TB. There have been seven full Task Force meetings since its inception and many other meetings on specific topics.

The initial aim of the Task Force was to ensure that WHO’s assessment of whether the 2015 global TB targets were achieved was rigorous, robust and consensus-based. Following publication of this assessment in the 2015 Global TB Report, and in the context of The End TB Strategy (2016–2035) and the Sustainable Development Goals (2016–2030), the Task Force reviewed and updated its mission and strategic areas of work for the post-2015 period.
The 2020 milestones of the End TB strategy were a 35% reduction in the absolute number of TB deaths and a 20% reduction in the TB incidence rate (new cases per 100,000 population per year) compared with levels in 2015, and that no TB patients and their households face catastrophic costs as a result of TB disease. The 2025 milestones are a 75% reduction in TB deaths and a 50% reduction in the TB incidence rate.

In the context of the End TB Strategy and the Sustainable Development Goals (SDGs), the Task Force’s mission is:

1. To ensure that assessments of progress towards End TB Strategy and SDG targets and milestones at global, regional and country levels are rigorous, robust and consensus-based.

2. To guide, promote and support the analysis and use of TB surveillance and survey data for policy, planning and programmatic action.

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Progress made towards the 2025 milestones of the End TB Strategy by the end of 2021

CURRENT STRATEGIC AREAS OF WORK

1. Strengthening surveillance
   - National systems for TB surveillance, for direct measurement of TB incidence
   - National or sample vital registration (VR) systems, for direct measurement of the number of deaths caused by TB

2. Priority studies to periodically measure TB disease burden
   These include (but are not limited to):
   - National TB prevalence surveys
   - Surveys of anti-TB drug resistance
   - Surveys of costs faced by TB patients and their households

3. Periodic review of methods used by WHO to produce estimates of the burden of TB disease

4. Analysis and use of TB surveillance and survey data at country level
Priority areas of work identified by the Task Force are:

**Strengthening national systems for TB surveillance, for direct measurement of TB incidence**
1. TB epidemiological reviews, including use of the WHO TB surveillance checklist.
2. Regional analysis workshops.
3. Transitioning from paper to digital case-based surveillance.
4. TB inventory studies to measure under-reporting of detected TB cases.

**Strengthening vital registration (VR) systems, for direct measurement of the number of deaths caused by TB**
1. Promoting use of VR data for measurement of TB mortality.
2. Creating and sustaining links with relevant stakeholders.
3. Mortality studies to validate VR data.

Between January 2013 and May 2023, 99 countries completed the TB surveillance checklist and a national TB epidemiological review (map). A mobile application to disseminate findings from these assessments is in development. WHO will issue updated guidance on TB surveillance, including a second edition of the WHO TB surveillance checklist, in 2023.
1: STRENGTHENING SURVEILLANCE

INVENTORY STUDIES TO MEASURE UNDER-REPORTING OF DETECTED TB CASES

For many countries, current estimates of TB incidence rely on the systematic analysis of case notification and programmatic data combined with assessment of the number of cases not reported and not diagnosed. The Assessing tuberculosis under-reporting through inventory studies guide, published in 2012, describes and explains how to design, implement and analyse inventory studies to measure the under-reporting of detected TB cases.

Inventory studies are being promoted in selected countries, linked to recommendations following national TB epidemiological reviews and use of the TB surveillance checklist. They are of particular relevance in countries with large private sectors or where large numbers of people with TB are thought to be treated in the public sector but not reported to national authorities.

By May 2023, an inventory study had been completed in 19 countries. Inventory studies have started in the Philippines and South Africa and are planned in Cambodia, Malaysia, Mongolia and Peru (map). A repeat study is planned in Indonesia.
Between 2007 and May 2023, 35 national surveys of the prevalence of TB disease were implemented in 32 countries (map), following guidance in the Tuberculosis prevalence surveys handbook (second edition: the “lime book”) developed by the Task Force. India completed a survey in 2021 and Timor-Leste is currently conducting its first survey. Cambodia, Ethiopia, Ghana, Malawi, Nigeria, Pakistan, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe are planning a repeat survey.

In 2021, WHO published a book that provides a global synthesis of results and lessons learned from surveys implemented 2007–2016; this was developed as a collaborative effort of 24 countries and their technical partners, with contributions from more than 450 people.

A 3rd edition of the WHO handbook on TB prevalence surveys is in development.
The Global Project on Anti-TB Drug Resistance Surveillance was launched in 1994. Its aims are to estimate the magnitude of drug resistance among people with TB and determine trends over time. Approaches to surveillance are described and explained in the Guidance for the surveillance of drug resistance in tuberculosis (6th ed: 2021).

In 2022, one country (Niger) completed a drug resistance survey and two more will be completed by mid-2023 (Burundi and Togo). By May 2023, 151 WHO Member States had continuous national surveillance systems based on routine drug susceptibility testing of people with TB and 30 countries relied on nationally (or sub-nationally) representative surveys.

Overall, 62 countries have implemented at least one nationally representative survey over the past 15 years (since 2008). In May 2023, 12 countries were planning or implementing a survey (map).
2: PRIORITY STUDIES TO MEASURE TB DISEASE BURDEN

C. TB PATIENT & HOUSEHOLD COST SURVEYS

A handbook to support countries to conduct nationally representative surveys of costs faced by TB patients and their households, and to assess whether these costs are catastrophic, was published by WHO in 2017. A second edition of the handbook is in development.

In May 2023, 29 countries had completed a survey: Benin, Brazil, Burkina Faso, China, Colombia, Democratic Republic of the Congo, El Salvador, Fiji, Ghana, Indonesia, Kenya, Lao People’s Democratic Republic, Lesotho, Mali, Mongolia, Myanmar, Niger, Nigeria, Papua New Guinea, Philippines, Republic of Moldova, Solomon Islands, South Africa, Thailand, Timor-Leste, Uganda, United Republic of Tanzania, Viet Nam and Zimbabwe. Eighteen other surveys are ongoing and 4 are planned (map).

The surveys inform policy discussions on how to improve TB services and their financing, and how to advance universal health coverage and enhance social protection, with the overall aim of eliminating catastrophic costs due to TB disease. In 2023, WHO published a book that provides a global synthesis of results and lessons learned from surveys implemented in 2015-2021.
3: METHODS TO ESTIMATE TB DISEASE BURDEN

Methods used by WHO to translate surveillance and survey data into estimates of TB incidence and mortality need to be periodically reviewed. The latest methods are documented in WHO’s Global Tuberculosis Report (2022).

<table>
<thead>
<tr>
<th>Incident cases of TB (2021)</th>
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<td>10.6 million</td>
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<th>TB deaths (HIV-negative; 2021)</th>
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<td>1.4 million</td>
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The first milestones of the End TB Strategy, set for 2020, were a 35% reduction in the absolute number of TB deaths and a 20% reduction in the TB incidence rate, compared with levels in 2015.

Globally between 2015 and 2021, the number of TB deaths fell 5.9% and the TB incidence rate declined by 10%; the world has not yet reached either of the milestones set for 2020.

By the end of 2021, 7 high TB burden and 3 global TB watchlist countries were assessed to have reached the 2020 milestone for TB incidence: Cambodia*, Ethiopia, Kenya, Lesotho, Myanmar, Namibia, Russian Federation*. South Africa, United Republic of Tanzania and Zimbabwe*. The WHO African and European regions also met the milestone.

By the end of 2021, 6 high TB burden and 1 global TB watchlist country were assessed to have reached the 2020 milestone for TB deaths: Bangladesh, Kenya, Mozambique, Russian Federation*, Uganda, United Republic of Tanzania and Zambia.

*global watchlist country

4: ANALYSIS AND USE OF DATA AT COUNTRY LEVEL

The Understanding and using tuberculosis data handbook provides guidance on recommended routine analyses of TB-relevant data, especially data from national notification and vital registration systems, and data from periodic surveys.

Resources are available to support countries with the transition from paper-based aggregate reporting to digital case-based TB surveillance. These include a readiness assessment and implementation guide to support planning and roll out of digital systems. A digital adaptation kit (DAK) to help countries implement WHO guidelines and guidance related to clinical care, data generation and use, and health systems strengthening is under development.

The WHO DHIS2 TB package was developed alongside other disease programmes (e.g. HIV, malaria). It is designed for the collection, reporting and visualisation of routine case-based or aggregated TB data on notifications, household contact tracing and laboratory testing. The package includes the metadata for system configuration and an associated guidance document and exercise book for the interpretation of TB data using WHO DHIS2 TB dashboards.

Harnessing the power of routine health facility data: Tuberculosis is an e-course under development with the WHO Academy. It aims to strengthen technical capacity to analyse, interpret and use routine TB data for programme planning.