

GLOBAL TUBERCULOSIS REPORT

2019



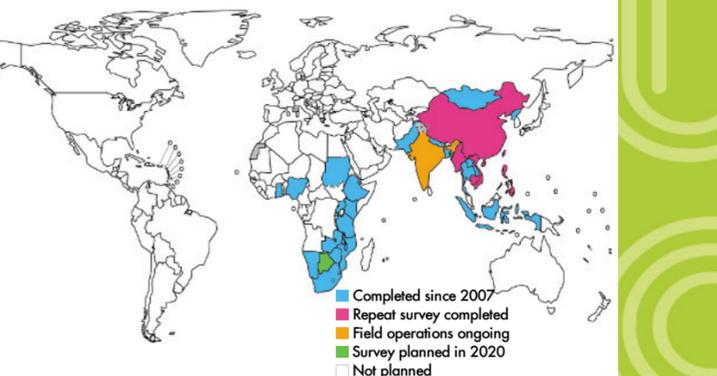
3: PRIORITY STUDIES TO MEASURE TB DISEASE BURDEN

A. NATIONAL TB PREVALENCE SURVEYS

Between 2007 and 2019, national surveys of the prevalence of TB disease were implemented in **27** countries (map), following guidance in the [Tuberculosis prevalence surveys handbook](#) (2nd ed: the "lime book") developed by the [Task Force](#). [Eswatini](#), [Lesotho](#), [Nepal](#) and [South Africa](#) completed field operations in 2019, and [Mozambique](#) did so in early 2020. [India](#) started a survey in 2019 and a survey is scheduled to start in [Botswana](#) in 2020.

In 2016, the [Task Force](#) recommended the following criteria for implementing a national TB prevalence survey: a country had already conducted a survey between 2007 and 2015 and the prevalence of bacteriologically confirmed TB was ≥ 250 per 100,000 population in the last survey; or an estimated incidence of ≥ 150 per 100,000 population per year, no nationwide [vital registration system with standard coding of causes of deaths and an infant mortality rate \$>10/1000\$ live births](#).

Numerous country missions and workshops have been used to facilitate high quality inter-country collaboration and use of results.



3: PRIORITY STUDIES TO MEASURE TB DISEASE BURDEN

B. SURVEYS OF ANTI-TB DRUG RESISTANCE

The Global Project on Anti-TB Drug Resistance Surveillance was launched in 1994. Its aims are to estimate the magnitude of drug resistance among TB patients and determine trends over time. Approaches to surveillance are described and explained in the [Guidelines for surveillance of drug resistance in tuberculosis](#) (5th ed: 2015). A 6th edition is planned for 2020.

In 2018-20, **14** countries completed a drug resistance survey (DRS). [Eritrea](#), [Indonesia](#), [Lao PDR](#) and [Togo](#) completed their first nationwide survey; [Bangladesh](#), [Cambodia](#), [Eswatini](#), [Ethiopia](#), [Philippines](#), [Sri Lanka](#), [Thailand](#), [Turkmenistan](#) and [United Republic of Tanzania](#) completed a repeat survey.

By February 2020, **105** WHO member states had continuous national surveillance systems based on routine drug susceptibility testing of TB patients and **59** countries relied on nationally (or sub-nationally) representative surveys. Overall, **66** countries have implemented at least one nationally representative (or subnational) survey since 2007. By March 2020, **13** countries were planning or implementing a survey (map).



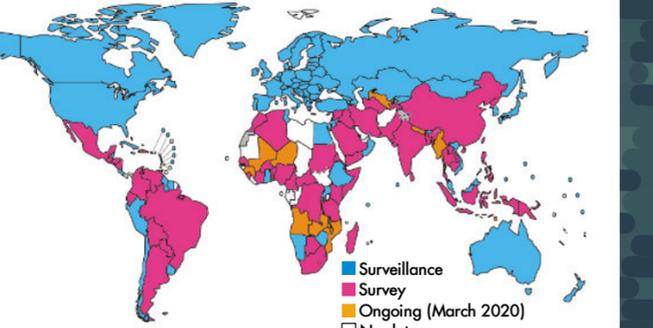
3: PRIORITY STUDIES TO MEASURE TB DISEASE BURDEN

C. MORTALITY SURVEYS

Mortality surveys can be used to provide a direct measurement of the number of deaths caused by TB in countries without national vital registration systems of sufficient quality and coverage. They can also be used to validate the quality of data compiled in national vital registration systems.

D. 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. By March 2020, **17** countries had completed a survey ([Benin](#), [China](#), [Fiji](#), [Ghana](#), [Kenya](#), [Lao PDR](#), [Malawi](#), [Mongolia](#), [Myanmar](#), [Nigeria](#), [Papua New Guinea](#), [Philippines](#), [Republic of Moldova](#), [Timor-Leste](#), [Uganda](#), [Viet Nam](#) and [Zimbabwe](#)), **11** other countries had started a survey and **30** were planning one in 2020 (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.



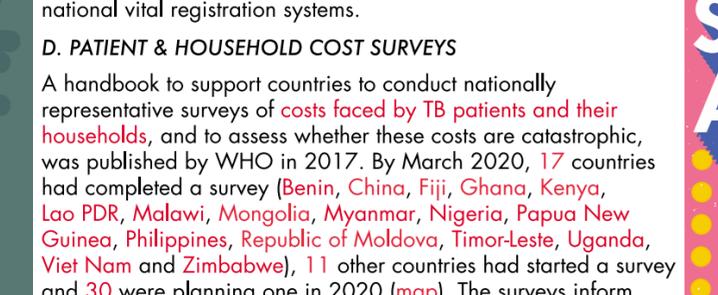
Guidelines for surveillance of drug resistance in tuberculosis

5th Edition



4: METHODS TO ESTIMATE 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](#) (2019).



The first milestones of the End TB Strategy, set for 2020, are a **35%** reduction in the absolute number of TB deaths and a **20%** reduction in the TB incidence rate, compared with levels in 2015. To reach these milestones, the TB incidence rate needs to be falling by **4–5%** per year globally by 2020 and the proportion of people with TB who die from the disease (the case fatality ratio or CFR) needs to be reduced to no more than **10%** globally by 2020.

Globally between 2015 and 2018, the number of TB deaths fell **11%** and the TB incidence rate declined by **6.3%**; **the world is not on track to reach the 2020 milestones**. Seven countries are on track to meet the 2020 milestones: [Kenya](#), [Lesotho](#), [Myanmar](#), [Russian Federation](#), [South Africa](#), the [United Republic of Tanzania](#) and [Zimbabwe](#). The WHO European region is also on track.

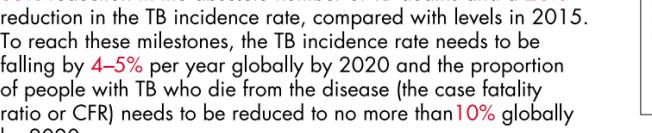
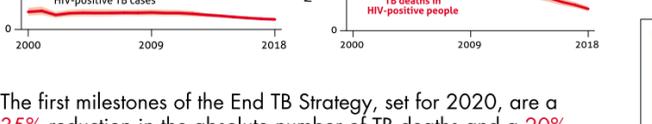
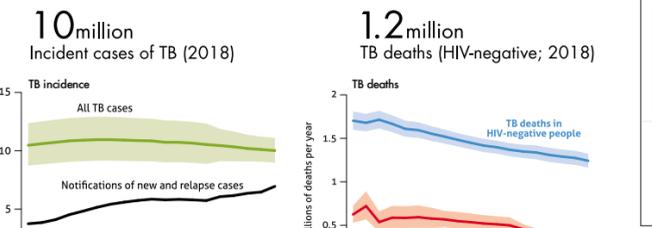


TUBERCULOSIS PATIENT COST SURVEYS: A HANDBOOK



5: ANALYSIS AND USE OF DATA AT COUNTRY LEVEL

[Understanding and using tuberculosis data](#) is a handbook that provides advice on analysis of TB-relevant data, especially surveillance data from national notification and vital registration systems, and data from periodic surveys.



A comprehensive [country package](#) is now available to support the transition from paper to electronic TB surveillance and the routine analysis and use of data for action. The package includes [DHIS2 TB modules](#) for [aggregated TB data](#) and [case-based TB data](#) and a [curriculum](#) with a guidance document and exercises on data interpretation, based on the standard analytical dashboards that are part of the DHIS2 modules.

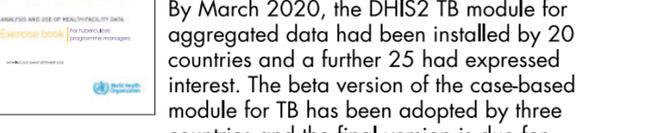
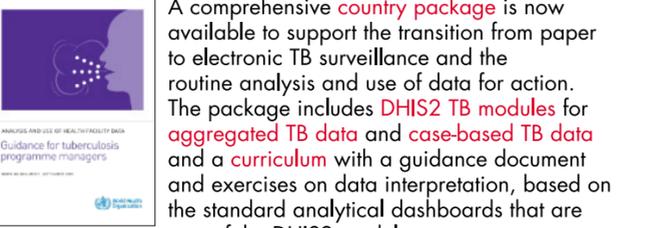
The [TB country package](#) was developed alongside packages for other programmes (e.g. HIV, malaria, immunization) under the umbrella of the [Health Data Collaborative](#).

By March 2020, the DHIS2 TB module for aggregated data had been installed by **20** countries and a further **25** had expressed interest. The beta version of the case-based module for TB has been adopted by three countries and the final version is due for release in March 2020. More than **65** countries have stored historic national and subnational data in a DHIS2 platform developed by WHO.

A guide on [TB modelling](#) at country level, developed under the leadership of the TB Modelling and Analysis Consortium ([TB MAC](#)) in close collaboration with WHO, was published in 2018.

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THE WHO GLOBAL TASK FORCE ON TB IMPACT MEASUREMENT

MARCH 2020





WHO ARE WE?

In June 2006, the Global TB 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 era in April 2016.

THE END TB STRATEGY TARGETS

	2030 [†]	2035
Reduction in the number of TB deaths compared with 2015 (%)	90%	95%
Reduction in TB incidence rate compared with 2015 (%)	80%	90%
TB-affected households facing catastrophic costs due to TB (%)	0%	0%

* Milestones have been defined for 2020 and 2025
[†] Targets linked to the Sustainable Development Goals. SDG target 3.3 is to end the TB epidemic by 2030.

WHAT IS OUR MISSION?

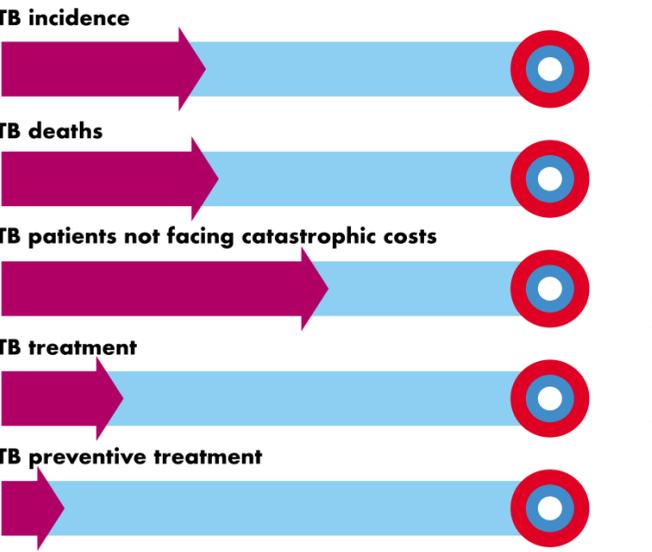
In the context of the End TB Strategy and the Sustainable Development Goals (SDGs), the **Task Force's** mission (2016-2020) is:

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.

The 2020 milestones of the End TB strategy are a 35% reduction in TB deaths and a 20% reduction in the TB incidence rate compared with levels in 2015, and that no TB patients and their households face catastrophic costs as a result of TB disease.

The political declaration at the first United Nations high-level meeting on TB (UNHLM), held in September 2018, included two new targets that were derived from the End TB Strategy: to treat 40 million people with TB disease and to reach at least 30 million people with preventive treatment for a latent TB infection in the five-year period 2018–2022.

Progress towards End TB Strategy milestones for 2020 and the two UNHLM targets for treatment enrolment: status at the end of 2018



FIVE STRATEGIC AREAS OF WORK, 2016-2020

1. Strengthening national notification systems for direct measurement of TB incidence, including drug-resistant TB and HIV-associated TB specifically.
2. Strengthening national vital registration systems for direct measurement of TB mortality.
3. Priority studies to periodically measure TB disease burden. These include (but are not limited to):
 - National TB prevalence surveys
 - Drug resistance surveys
 - Mortality surveys
 - Surveys of costs faced by TB patients and their households
4. Periodic review of methods used by WHO to estimate the burden of TB disease and latent TB infection.
5. Analysis and use of TB surveillance and survey data at country level.

1 & 2: STRENGTHENING NATIONAL NOTIFICATION & VITAL REGISTRATION SYSTEMS

Priority areas of work identified by the **Task Force** are:

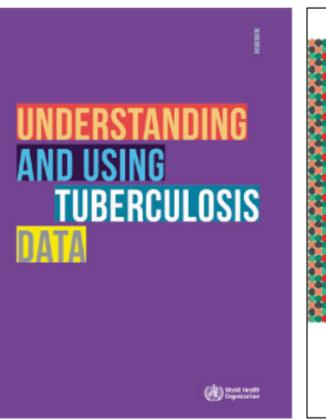
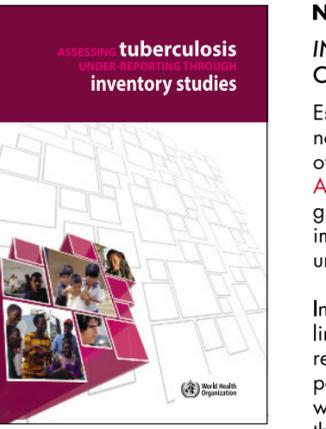
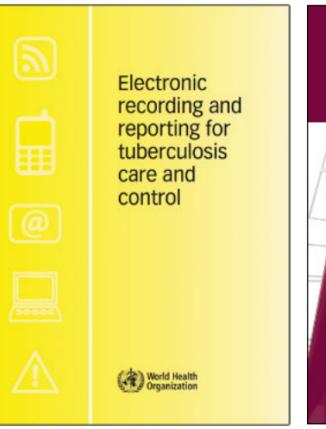
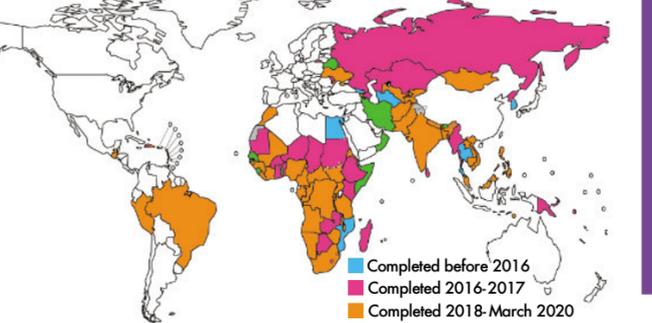
Strengthening national notification systems for direct measurement of TB incidence

1. TB epidemiological reviews, including use of the WHO TB surveillance checklist.
2. Regional analysis workshops.
3. Transitioning from paper to electronic case-based surveillance.
4. TB inventory studies to measure under-reporting of detected TB cases.

Strengthening national vital registration (VR) systems for direct measurement of TB mortality

1. Promote use of VR data for measurement of TB mortality.
2. Create and sustain links with relevant stakeholders.
3. Mortality studies to validate VR data.

Between January 2013 and March 2020, 80 countries completed the TB **surveillance checklist** and a national TB **epidemiological review** (map).

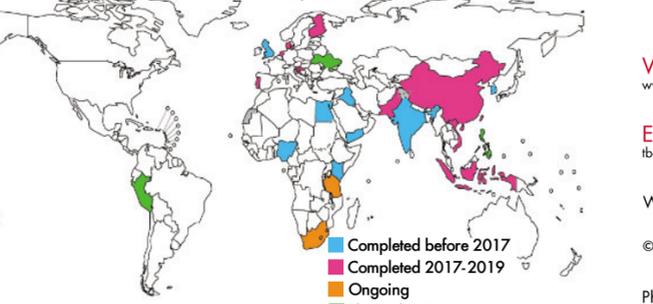


1 & 2: STRENGTHENING NATIONAL NOTIFICATION & VITAL REGISTRATION SYSTEMS INVENTORY STUDIES TO MEASURE UNDER-REPORTING OF DETECTED TB CASES

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 TB patients are thought to be treated in the public sector but not reported to national authorities.

By March 2020, a national inventory study had been completed in 18 countries. Inventory studies have started in **South Africa** and **Tanzania** and are planned in **Peru**, **the Philippines** and **Ukraine** (map).



MAJOR PARTNERS

NATIONAL TB PROGRAMMES OF MANY COUNTRIES



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WHO/CDS/TB/2020.6

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我们的产品



大数据平台

国内宏观经济数据库

国际经济合作数据库

行业分析数据库

条约法规平台

国际条约数据库

国外法规数据库

即时信息平台

新闻媒体即时分析

社交媒体即时分析

云报告平台

国内研究报告

国际研究报告

数据智慧平台

创客智慧：实体门店分析工具，助力创业者智能决策；

商情智慧：产品市场分析工具，助力实业家智能运营；

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