WE WILL END TB

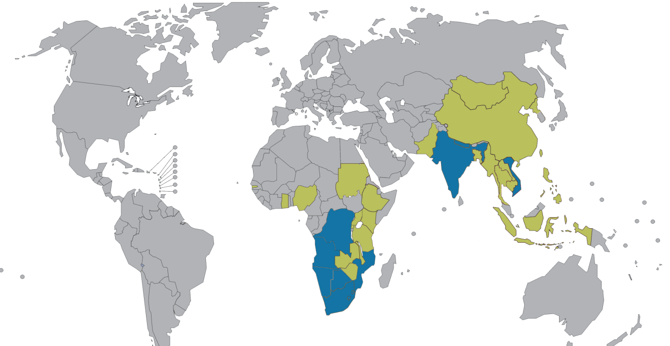
3: PRIORITY STUDIES TO MEASURE TB DISEASE BURDEN

A. NATIONAL TB PREVALENCE SURVEYS

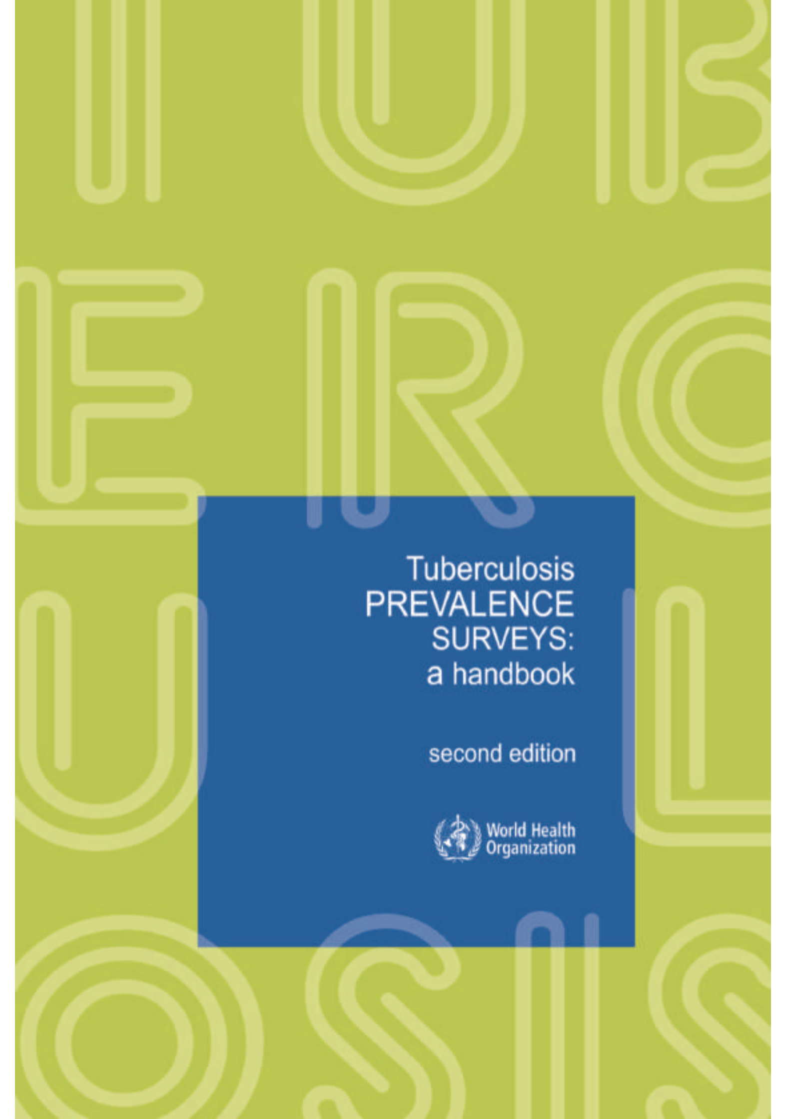
Between 2009 and 2016, national surveys of the prevalence of TB disease were implemented in 23 countries (map), following guidance in the Tuberculosis prevalence surveys handbook (2nd ed: the "lime book") developed by the Task Force in 2010. Surveys in Bangladesh, Kenya and the Phillippines, which were all completed in 2016, were the first to use both Xpert MTB/RIF and culture. Three high TB burden countries are scheduled to start surveys in 2017: Mozambique, South Africa and Viet Nam (repeat survey).

Numerous country missions and workshops have been used to facilitate inter-country collaboration and boost technical capacity to design and implement high-quality surveys and to analyse and report results according to best-practice standards.

A book that summarises key results and lessons learned from national TB prevalence surveys between 2009 and 2016 will be published in 2017.



National TB prevalence survey implemented since 2009 (23)
National TB prevalence survey planned to start in 2017-19 (11)



3: PRIORITY STUDIES TO MEASURE TB DISEASE BURDEN

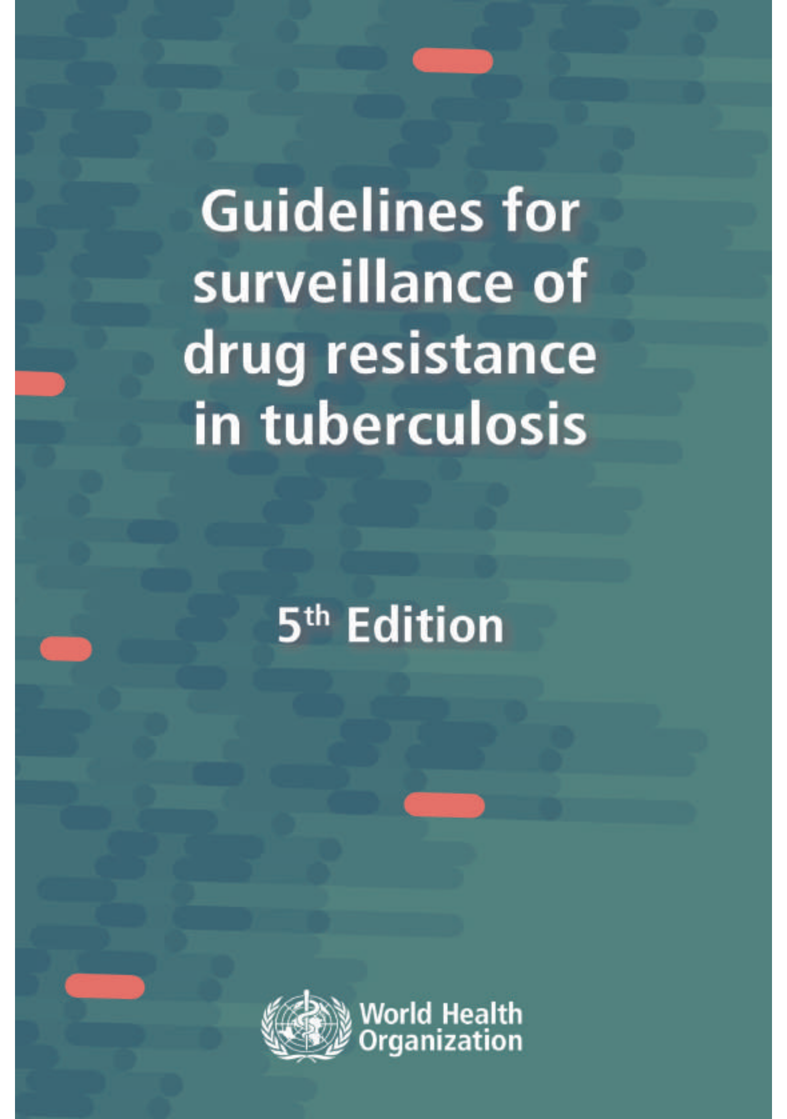
B. SURVEYS OF ANTI-TB DRUG RESISTANCE

The Global Project on Anti-TB Drug Resistance Surveillance was launched in 1994. It aims to estimate the magnitude of drug resistance among TB patients and determine trends over time. Approaches to surveillance are outlined in the Guidelines for surveillance of drug resistance in tuberculosis (5th ed: 2015).

In 2016, 11 countries completed a drug resistance survey (DRS). Burkina Faso, DR Congo, Ghana, India, Indonesia, Lao PDR and Sudan completed their first nationwide survey, and China, Côte d'Ivoire, Swaziland and Zimbabwe completed a repeat survey.

By January 2017, data from continuous national surveillance systems based on routine drug susceptibility testing of TB patients were available from 83 countries, and 72 countries had implemented at least one nationally representative survey. There are 18 countries that are either implementing or planning to start a survey in 2017.

Continuous national surveillance (83)
Drug resistance survey implemented (72)
Countries planning or implementing a survey in 2017 (18*)
No data
*12 of 18 countries have already implemented at least one survey



3: PRIORITY STUDIES TO MEASURE TB DISEASE BURDEN

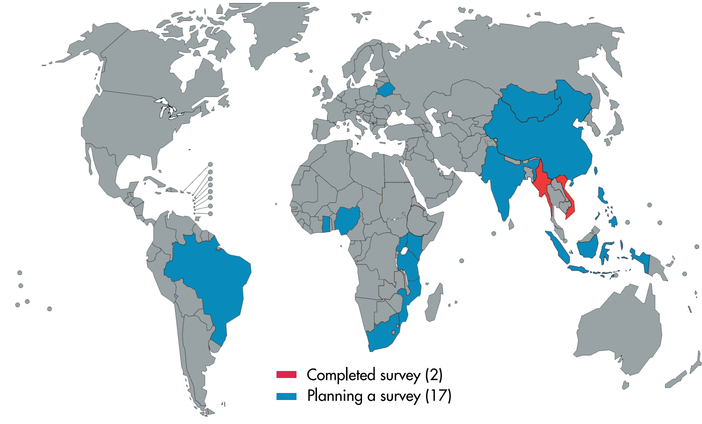
C. MORTALITY SURVEYS

Mortality surveys can be used to provide a direct measurement of TB deaths 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 generic protocol and questionnaire have been developed 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. Surveys are facility-based and cross-sectional. Myanmar and Viet Nam recently completed a survey, and 17 other countries are planning a survey (map).

A handbook on the design, implementation and analysis of these surveys will be published in 2017.

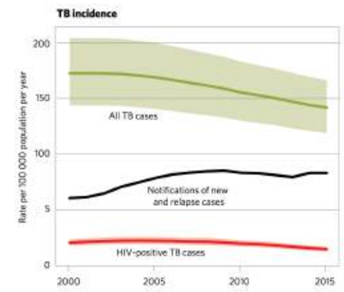


Completed survey (2)
Planning a survey (17)

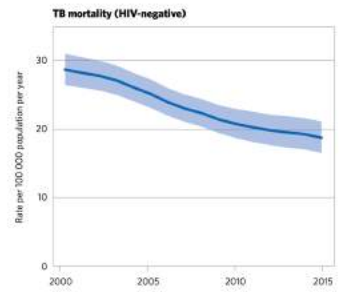
4: METHODS TO ESTIMATE DISEASE BURDEN

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 (2016). This is the first TB report to be produced in the post-2015 era of the Sustainable Development Goals and the End TB Strategy, which have superseded the Millennium Development Goals (2000-2015) and the Stop TB Strategy (2006-2015), respectively.

10.4 million
incident cases of TB (2015)

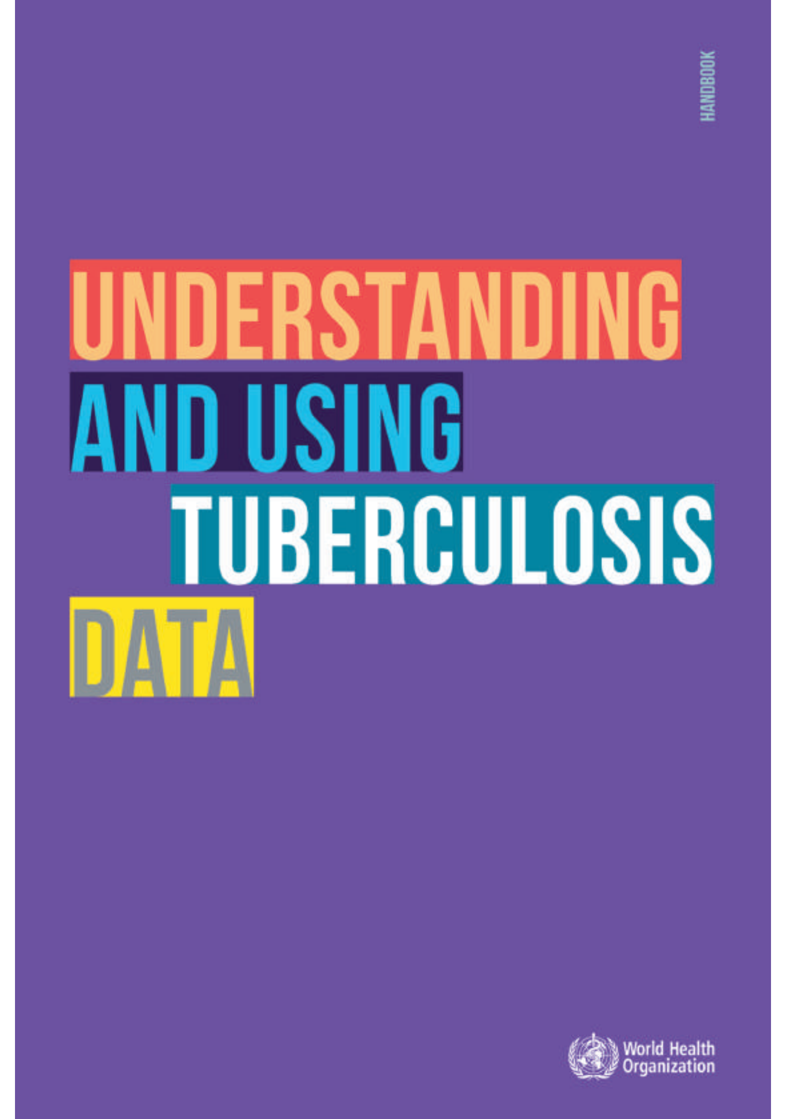


1.4 million
TB deaths (2015)



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 10% globally by 2020.

Globally, the absolute number of TB deaths (excluding TB deaths among HIV-positive people) and the TB incidence rate have fallen since 2000. The number of TB deaths fell from 1.8 million in 2000 to 1.4 million in 2015. However, the global rate of decline in the TB incidence rate was only 1.5% from 2014 to 2015, and the CFR in 2015 was 17%.



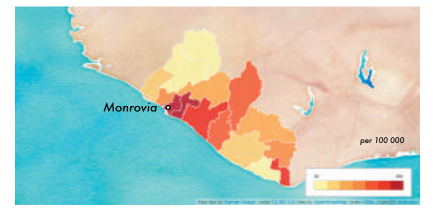
5: ANALYSIS AND USE OF DATA AT COUNTRY LEVEL

Country health information systems provide a rich source of data on the burden of disease caused by TB and the effectiveness of programmatic efforts to reduce this burden, both of which are crucial for public health action. However, the available data are often under-used, or not used at all.

Understanding and using tuberculosis data is a handbook that provides practical advice for national TB programmes, especially monitoring and evaluation units, to improve the understanding and use of the data that they collect. It sets out recommended approaches for the analysis of surveillance data relevant to TB, in particular TB notification data, data from surveillance of anti-TB drug resistance, and mortality data compiled in national vital registration systems. A module has been developed using the DHIS2 platform to facilitate the compilation, storage and standard analysis of subnational TB data (example map). A TB module for case-based surveillance of core TB indicators within the DHIS2 platform is under development.

Regional workshops and country missions will be used to support analysis and use of data, including disaggregated analyses that allow for within-country assessments of inequalities and equity. A first workshop was held for 16 West African countries in Benin in May 2016, and for 16 other African countries in Uganda in December 2016. A similar workshop is planned for countries in Asia in 2017.

Subnational TB case notification rate, Liberia (2015)



THE WHO GLOBAL TASK FORCE ON TB IMPACT MEASUREMENT

FEBRUARY 2017

World Health Organization

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 and evaluation (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 six 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 2015 global TB targets were achieved was as rigorous, robust and consensus-based as possible. 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 mandate 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

WHAT IS OUR MANDATE?

In the context of The End TB Strategy and the Sustainable Development Goals (SDGs), the Task Force's mandate (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 as rigorous, robust and consensus-based as possible.

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

The 2020 milestones 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.

FIVE STRATEGIC AREAS OF WORK, 2016-2020

1. Strengthening national notification systems for direct measurement of TB cases, including drug-resistant TB and HIV-associated TB specifically.

2. Strengthening national vital registration systems for direct measurement of TB deaths.

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 data at country level. This includes:
- Disaggregated analyses (e.g. age, sex, location) to assess inequalities and equity
- Projections of disease burden and intervention impact
- Guidance, tools and capacity building

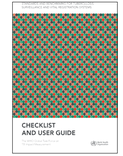
1 & 2: STRENGTHENING NATIONAL NOTIFICATION & VITAL REGISTRATION SYSTEMS

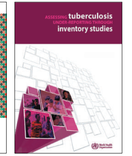
Priority areas of work identified by the Task Force are:

Strengthening national notification systems for direct measurement of TB cases
1. TB epidemiological reviews, including 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 vital registration (VR) systems for direct measurement of TB deaths
1. Promote use of VR data for measurement of TB deaths.
2. Create and sustain links with relevant stakeholders.
3. Mortality studies to validate VR data.

Between January 2013 and January 2017, 46 countries completed the TB surveillance checklist (map).

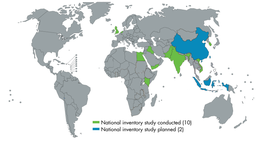




1 & 2: STRENGTHENING NATIONAL NOTIFICATION & VITAL REGISTRATION SYSTEMS

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 now being promoted in selected countries linked to TB epidemiological reviews and use of the TB surveillance checklist. At the end of 2016, a national inventory study had been done in 10 countries. Pakistan completed a second inventory study in 2016 focused on children, and a first study was completed in Viet Nam. Studies in China and Indonesia are planned to start in 2017 (map).



MAJOR PARTNERS

NATIONAL TB CONTROL PROGRAMMES OF MANY COUNTRIES

WEBSITE:
www.who.int/tb/data

EMAIL:
tbdata@who.int

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Photographs: Frank Bonss, Julia Evshova, Irwin Law, Marina Tadchiri