WHO Global Task Force on TB Impact Measurement

Progress update
December 2021

This update provides an overview of progress for five topics that are among the priorities of the WHO Global Task Force on TB Impact Measurement and on which it is especially useful to share regular information among countries and their technical and financial partners to facilitate planning, implementation and follow-up. These are:

1. National TB prevalence surveys
2. National TB drug resistance surveys
3. National TB epidemiological reviews, including assessments of TB surveillance using the WHO checklist of standards and benchmarks
4. In-country and multi-country workshops on analysis and use of data
5. National surveys of costs faced by TB patients and their households

For each topic, an overview of progress in recent years, major achievements and challenges in the period March 2021-December 2021, highlights of things coming up in the next 6 months, and key references are provided. This update complements the annual brochure published by WHO (shown below) about the work of the Task Force as a whole.
1. National TB Prevalence Surveys

Overview of progress

- After starting in 2019 and being delayed by the COVID-19 pandemic, the field operations phase of the first national survey in India was completed in 2021.

Figure 1. National TB prevalence surveys completed since 2007 and underway or planned in the next year

For surveys that are currently underway or planned within the next year, the stage of implementation, technical partners and sources of funding are shown below.

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<tr>
<th>Country</th>
<th>Initial discussions</th>
<th>Protocol development</th>
<th>Survey preparation</th>
<th>Data collection</th>
<th>Data analysis</th>
<th>Final report or publication</th>
<th>TA partners</th>
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† Lead technical partner.
TA – technical assistance; RIT/JATA – Research Institute of Tuberculosis, Japan; NIHRD, National Institute of Health and Research, Indonesia; KIT, Royal Tropical Institute, Netherlands.

Achievements (March 2021–December 2021)

- **Eswatini**: Report writing underway.
- **India**: Field activities completed.
- **Lesotho**: Paper for publication in preparation.
- **Mozambique**: Report writing underway.
- **Myanmar**: Results and a short report finalized; a longer report is in preparation.
- **South Africa**: Paper for publication being prepared.
- **Cambodia, Indonesia, Pakistan**: Planning for a repeat survey in 2022/2023 started.
- **Timor-Leste**: Planning for a first survey started.
Challenges (March 2021–December 2021)

- **India:** Completion of field operations in the context of the COVID-19 pandemic.
- Uncertainty about timelines for future surveys in the context of the COVID-19 pandemic.

Coming up in the next six months

- An online meeting of the Task Force subgroup on national TB prevalence surveys will be held.

Key references


Publications in 2021


2. National TB Drug Resistance Surveys

Overview of progress

- At the end of 2021, one country had results from a survey completed in Q4 2021 ready for publication, four countries were implementing surveys and eight were planning to start a survey within the next year.
- The sixth edition of the WHO “Guidance for the surveillance of drug resistance in tuberculosis” was published in April 2021.

Figure 2. National surveys of drug resistance implemented since 2007* and underway or planned in the next year, and countries relying on continuous surveillance to monitor drug resistance

*For 28 of the countries that have completed a survey since 2007, data are also available from continuous surveillance: Armenia, Azerbaijan, Burkina Faso, Belarus, Bhutan, China, Egypt, Eritrea, Ethiopia, Ghana, India, Kenya, Kyrgyzstan, Lao People’s Democratic Republic, Lebanon, Lesotho, Mongolia, Namibia, Romania, Rwanda, Togo, Tajikistan, Tunisia, Uganda, Ukraine, Viet Nam, Zambia and Zimbabwe. For five of the countries that have completed a survey since 2007, a survey is currently ongoing (Mozambique, Myanmar) or planned within the next year (Madagascar, Nepal, Uzbekistan).

The implementation stage and technical partners for current or planned surveys are shown below.

<table>
<thead>
<tr>
<th>Country</th>
<th>TA partners</th>
<th>Funding for survey activities</th>
<th>Funding for TA missions</th>
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<tbody>
<tr>
<td>Burundi</td>
<td>WHO, SRL Kampala</td>
<td>Global Fund</td>
<td>USAID</td>
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<td>Chad</td>
<td>WHO, SRL Kampala</td>
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<td>Gambia</td>
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<td>Guinea</td>
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<td>Global Fund</td>
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<td>Madagascar</td>
<td>WHO, Swiss TPH, CRCHUM, SRL Kampala</td>
<td>Global Fund, USAID</td>
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<td>Mozambique</td>
<td>WHO, SRL Milan, SRL Kampala</td>
<td>Global Fund</td>
<td>USAID</td>
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<td>Myanmar</td>
<td>WHO, SRL Chennai, University of Otago</td>
<td>Global Fund, USAID</td>
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<td>Nepal</td>
<td>WHO, SRL Gauting</td>
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<td>Republic of the Congo</td>
<td>WHO, SRL Cotonou</td>
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<td>Zambia</td>
<td>WHO</td>
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CRCHUM - Centre de Recherche du Centre Hospitalier de l’Université de Montréal; SRL – supranational reference laboratory; Swiss TPH - Swiss Tropical and Public Health Institute; TA – technical assistance; CDC – United States of America Centres for Disease Control and Prevention; WHO – World Health Organization.
Achievements (March 2021 – December 2021)

- **Burundi**: Patient enrolment for the first national survey began in Q3 2021.
- **Niger**: Patient enrolment for the first national survey began in Q3 2021.
- **Mozambique**: Patient enrolment will be completed at the end of December 2021.
- **Zambia**: The third national survey was completed in Q4 2020 and provisional survey results were available for publication in July 2021.

Challenges (March 2021 – December 2021)

- Survey preparation and implementation has been delayed in some countries due to the COVID-19 pandemic.
- Analysis of data from the fourth national survey in Myanmar was delayed due to political unrest. Patient enrolment was completed in 2020.

Coming up in the next six months

- New survey data are expected from Myanmar and Mozambique.
- A manuscript summarising 25 years of surveillance of drug-resistant tuberculosis will be published soon. Its title is “Twenty-five years of surveillance of drug-resistant tuberculosis: achievements, challenges and way forward”.

Key references

3. National TB epidemiological reviews including assessments of TB surveillance using the WHO checklist of standards and benchmarks

Overview of progress

- Between July 2012, when the first epidemiological review was carried out by the WHO Regional Office for Europe (EURO) using standard terms of reference, and the end of November 2021, 94 countries completed a national TB epidemiological review. Of these 94 countries, 92 countries assessed the performance of TB surveillance using the WHO Checklist of Standards and Benchmarks (S&B), including all 30 high TB burden countries.¹
- Of the 91 countries that have undertaken an epidemiological review including an S&B assessment and for which results are available, 20 countries conducted their first assessment between January 2019 and November 2021. A total of 57 reviews that included an S&B assessment were carried out during this period, of which 19 were in high TB burden countries:² Angola, Bangladesh, Central African Republic, Congo, Democratic Republic of the Congo, Gabon, India, Indonesia, Kenya, Liberia, Namibia, Nigeria, Pakistan, Philippines, Sierra Leone, South Africa, Uganda, Viet Nam and Zambia.
- Repeat epidemiological reviews including an S&B assessment have been conducted in 48 countries, of which 21 are high TB burden countries.
- Nine countries have conducted two repeat assessments (i.e. three assessments in total since 2013): six high TB burden countries (Indonesia, Kenya, Nigeria, Pakistan, Philippines and Zambia) and three other countries (Eswatini, Rwanda and Zimbabwe).
- There are confirmed plans for epidemiological reviews including an S&B assessment in three countries in 2022: Azerbaijan, Bolivia and Republic of Moldova. Planning is on hold for Egypt, Oman, Saudi Arabia, Senegal and Somalia.

Figure 3. National TB epidemiological reviews, including an assessment of TB surveillance using the WHO checklist of Standards and Benchmarks, conducted since July 2012 and with results available, or planned in 2022. Only latest review is shown per country.

The table below shows national TB epidemiological reviews, S&B assessments and/or surveillance system strengthening that have been completed since December 2020 or are planned within the next year, including the stage of implementation and technical partners involved.

¹ Results are not available from a partial assessment conducted in China. The two countries that conducted an epidemiological review without a Standards and Benchmarks assessment were Guyana (2014) and Senegal (2016).
² Numbers are based on the updated global lists of high burden countries defined by WHO for 2021-2025.
Figure 4: Status of repeat implementation of national TB epidemiological reviews, including an assessment of TB surveillance using the WHO checklist of Standards and Benchmarks*

* HBC = high TB burden countries; Non-HBC = non-high TB burden countries.

Achievements (March 2021 –December 2021)

- Epidemiological reviews, including an S&B assessment, were completed in nine countries: Argentina, Costa Rica, Ecuador, El Salvador, Equatorial Guinea, Georgia, Iran, Kenya and Romania.

Challenges (March 2021 –December 2021)

- The COVID-19 pandemic continues to disrupt implementation of epidemiological reviews.

Coming up in the next six months

- Epidemiological reviews are confirmed for Azerbaijan, Bolivia and Republic of Moldova.
- Publication of a second edition of the WHO Checklist of Standards and Benchmarks.

Key references


4. In-country and multi-country workshops on analysis and use of data

Overview of progress

In 2015, the first regional workshop on “Understanding and Using TB data”, based on the WHO handbook of the same name, was held in West Africa. It was organized by WHO headquarters, the WHO Regional Office for Africa (AFRO) and the Special Programme for Research and Training in Tropical Diseases (TDR).

Subsequently, five other regional workshops were held between 2016 and 2019, as part of an effort to support (i) strengthened TB surveillance and (ii) the use of surveillance data at the subnational level, under the Task Force’s strategic area of work on analysis and use of TB data. The aim is better understanding and tracking of the TB epidemic and use of data to inform policy and programmatic action at national and subnational levels. The workshops were organized by WHO, the Stop TB Partnership, the Global Fund and PAHO, and covered 60 countries: 16 in West Africa; 24 in East, Central or Southern Africa; 10 in Asia; and 10 in the Americas. The Asia workshop also introduced the use of GIS mapping tools for spatial analysis (KIT, the Netherlands), Patient Pathway Analysis (Linksbridge and McAlister University, USA) and TIME modelling (London School of Hygiene and Tropical Medicine, UK).

Country-level workshops that included an emphasis on analysis of subnational data and within-country capacity building were held in nine countries between 2016 and 2020: South Africa (using case-based data from the ETR.Net system); Mongolia (using case-based data from a system called TUBIS); and Ethiopia, Guinea, Indonesia, Pakistan, Rwanda, United Republic of Tanzania and Zimbabwe (all using standardised WHO dashboards in DHIS2). Due to international travel restrictions associated with the COVID-19 pandemic, the workshop in Indonesia was supported by WHO remotely.

Both regional and country-level workshops used the WHO handbook on “Understanding and Using TB data” and the WHO TB surveillance checklist of standards and benchmarks; all regional workshops made use of the TB module in the DHIS2 platform.

Figure 5. Countries in which a national workshop on analysis and use of TB data was held 2015–2021 or is planned within the next year

No workshops have been held since March 2021. The table below shows a list of upcoming workshops for which planning is on hold.
**Achievements (March 2021 – December 2021)**

- None

**Challenges (March 2021 – December 2021)**

- International workshops originally planned in a non-virtual format have had to be put on hold due to the COVID-19 pandemic. A virtual workshop may not be feasible in all instances.

**Coming up in the next six months**

- Data analysis and use workshops have been suspended until international travel restrictions are relaxed and large in-person meetings can be held.
- Workshop material on TB data analysis and use is being translated into an e-Learning package with the WHO Academy. This will serve as the TB module of a joint e-course that is being developed in collaboration with other WHO departments (HIV, hepatitis and STIs, HHS; the Global Malaria Programme, GMP; and Data Analytics and Delivery for Impact, DDI), under the Global Fund Strategic Initiative on Data. In the meantime, opportunities for virtual workshops are being explored as needed.

**Key references**

5. National surveys of costs faced by TB patients and their households

Overview of progress

- Between 2016 and the end of 2021, 25 countries completed a survey of costs faced by TB patients and their households: Benin, Brazil, Burkina Faso, China, the Democratic Republic of the Congo, El Salvador, Fiji, Ghana, Indonesia, Kenya, Lao People’s Democratic Republic, Lesotho, Mongolia, Myanmar, Nigeria, Papua New Guinea, the Philippines, Republic of Moldova, Solomon Islands, Thailand, Timor-Leste, Uganda, the United Republic of Tanzania, Viet Nam and Zimbabwe.
- Results from 23 of these surveys were featured in the WHO *Global Tuberculosis Report 2021*. Overall, about half of people with TB and their households were reported to have faced catastrophic costs; for people with drug-resistant TB, the figure was even higher, at 87%.
- At country level, survey results are being used to inform approaches to health financing, service delivery and social protection that will reduce these costs.
- Surveys are underway in eight countries: Colombia, Malawi, Mali, Niger, Paraguay, Rwanda, South Africa and Sudan.

Figure 6. National surveys of costs faced by TB patients and their households implemented since 2016 and underway or planned

For ongoing surveys, the stage of implementation and technical partners are shown in the table below.

<table>
<thead>
<tr>
<th>Country</th>
<th>Initial discussions</th>
<th>Protocol development</th>
<th>Data collection</th>
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ECSA-HC – East, Central and Southern Africa Health Community.
Achievements (March 2021 – December 2021)

- **Brazil**: Data collection was completed in April 2021. Results were disseminated in the Global TB Report 2021, at a conference of the Brazilian Society of Tropical Medicine (October) and at the Brazilian Epidemiology Congress (November).
- **Burkina Faso**: Data analysis was completed in September 2021 and a survey report and manuscript are in preparation. Results were disseminated at the 52nd World Conference on Lung Health in October and in the Global TB Report 2021. Official dissemination with multi-sectoral partners has been postponed to early 2022.
- **Colombia**: Data collection (using phone interviews due to COVID-19 restrictions) was completed in October 2021. Data analysis will be finalised in December 2021, followed by survey dissemination and policy discussion in early 2022.
- **DR Congo**: Survey results were disseminated, including in a journal article. Results have been used in multi-sectoral discussions with partners, international organizations and funders.
- **El Salvador**: The survey was completed and results were disseminated to partners in July 2021. A final report was issued in August 2021.
- **Indonesia**: Data collection and analysis was completed despite numerous challenges associated with the COVID-19 pandemic. A national consensus meeting was held, and results endorsed.
- **Mali**: Data collection was completed in August 2021. Analysis is ongoing.
- **Niger**: Provisional results are available; national review and finalisation of results is underway.
- **South Africa**: Data collection was completed and national consultations are underway.
- **United Republic of Tanzania**: A manuscript for journal publication was finalized.
- **Thailand**: Data collection and analysis were completed despite numerous challenges associated with the COVID-19 pandemic.

Challenges (February 2021 – December 2021)

- The COVID-19 pandemic affected survey implementation and preparations in many countries, as well as policy translation in countries that recently completed surveys.

Coming up in the next six months

- WHO will publish a book that provides a global synthesis of results and lessons learned from surveys completed 2015–2020.

Key references


Publications in 2021

