

End TB Strategy

Progress in implementing the global strategy and targets for tuberculosis prevention, care and control after 2015 (the End TB Strategy)

Report by the Director-General

BACKGROUND

1. Tuberculosis is one of the leading causes of death from an infectious agent worldwide. Provision of tuberculosis treatment to people with tuberculosis and antiretroviral therapy to people with tuberculosis and HIV coinfection saved 75 million lives between 2000 and 2022. However, disruption caused by the COVID-19 pandemic combined with already inequitable and inadequate health service provision, the adverse impact of armed conflicts, climate change, and disasters has derailed progress. As a result, the targets set in the 2018 Political Declaration of the High-Level Meeting of the General Assembly on the Fight Against Tuberculosis of reaching 40 million people with tuberculosis treatment and 30 million people with tuberculosis preventive treatment between 2018 and 2022 were missed, with only 34 million and 15.5 million people, respectively, being reached.^{1,2} Member States adopted a new political declaration³ during the second United Nations high-level meeting on the fight against tuberculosis in September 2023, with a commitment to significantly expand access to tuberculosis services, boost investment, promote human rights and accelerate research and innovation.

2. The present report is submitted pursuant to resolution WHA73.3 (2020), in which the Health Assembly requested the Director-General, inter alia, to report biennially, until 2030, on progress on the global strategy and targets for tuberculosis prevention, care and control after 2015, known, and hereinafter referred to, as the End TB Strategy,⁴ including progress on the implementation of the global strategy for tuberculosis research and innovation. The report summarizes activities based on the commitments made by Member States in resolutions WHA67.1 (2014) and WHA73.3 (2020), at the United Nations high-level meeting on the fight against tuberculosis, and in related regional committee resolutions and documents. It includes information on progress by Member States and the work of the Secretariat across all three levels of the Organization.

¹ Global Tuberculosis Report 2023. Geneva: World Health Organization; 2023 (<https://www.who.int/teams/global-tuberculosis-programme/tb-reports/>, accessed 26 October 2023).

² See United Nations General Assembly resolution 73/3 (2018).

³ See United Nations General Assembly resolution 78/5 (2023)

⁴ See document A67/11 and resolution WHA67.1 (2014).

PROGRESS TOWARDS GLOBAL TUBERCULOSIS TARGETS

3. The summary of the targets, milestones, principles, pillars and associated components of the End TB Strategy is available online.¹ The table below provides additional global targets adopted in 2023 by the second high-level meeting of the General Assembly on the fight against tuberculosis.

<i>Global tuberculosis targets set out in the 2023 Political Declaration of the High-Level Meeting of the General Assembly on the Fight Against Tuberculosis, hereinafter referred to as United Nations global targets.</i>	
Tuberculosis treatment coverage	90% by 2027 (equivalent to up to 45 million people globally from 2023–2027, including up to 4.5 million children and up to 1.5 million people with drug-resistant tuberculosis)
Coverage of tuberculosis preventive treatment	90% by 2027 (equivalent to up to approximately 45 million people globally from 2023–2027, including 30 million households, contacts of people with tuberculosis, and 15 million people living with HIV)
Coverage of rapid diagnostic testing for tuberculosis	100% by 2027
Coverage of health and social benefits package for people with tuberculosis	100% by 2027
Annual funding for essential tuberculosis services	US\$ 22 billion by 2027, US\$ 35 billion by 2030
Annual investment in tuberculosis research	US\$ 5 billion by 2027
Availability of new vaccines against tuberculosis that are safe and effective	Rollout initiated, preferably within five years

4. **Access to tuberculosis services after the COVID-19 pandemic.** WHO uses the number of people diagnosed with tuberculosis and notified to public health reporting systems as a proxy indicator of access to tuberculosis diagnostic and treatment services. This number fell substantially at the height of the pandemic, from 7.1 million in 2019 to 5.8 million in 2020, followed by a partial recovery to 6.4 million in 2021. This rebounded to 7.5 million in 2022, exceeding the pre-COVID level of 7.1 million in 2019.

5. **Tuberculosis incidence and mortality.** Worldwide, the estimated number of people falling ill with tuberculosis reached an estimated 10.6 million in 2022 (55% men, 33% women and 12% children under 15 years of age), following annual increases since 2020. The estimated increase can be attributed to restricted access to tuberculosis services, resulting in delayed diagnosis and increased community transmission during the height of the COVID-19 pandemic. Geographically, most people who developed tuberculosis in 2022 were in the African (23%), South-East Asia (46%) and Western Pacific (18%) regions. Among all incident cases of tuberculosis in 2022, 6.3% were people living with HIV. The proportion of people with a new episode of tuberculosis who were coinfecting with HIV was highest in the African Region, exceeding 50% in parts of southern Africa. The proportion of people with tuberculosis who developed rifampicin or multidrug-resistant tuberculosis was highest in Europe.

¹ The End TB Strategy: global strategy and targets for tuberculosis prevention, care and control after 2015. Geneva: World Health Organization; 2015 (<https://www.who.int/publications/i/item/WHO-HTM-TB-2015.19>, accessed 27 October 2023).

6. The estimated global number of tuberculosis deaths (including deaths among people with HIV) declined to the pre-pandemic (2019) level of 1.3 million in 2022, after increases in 2020 and 2021 due to disruptions caused by the COVID-19 pandemic. Reductions in tuberculosis mortality achieved between 2015 and 2022 fall far short of the 2025 milestone of the End TB Strategy (19% compared with 75%). Tuberculosis treatment coverage (a best estimate of 70% in 2022) needs to expand, particularly for children aged 14 years and younger (49% in 2022) to reach the United Nations global target of 90% by 2027.

7. **Costs faced by households affected by tuberculosis.** According to national surveys, on average 49% of tuberculosis patients and their households faced total costs (including direct medical expenditures, direct non-medical payments, and indirect costs such as lost income) which exceeded 20% of annual household income. The proportion is 83% for patients with drug-resistant tuberculosis and their households.

8. **Drug-resistant tuberculosis:** Globally in 2022, an estimated 410 000 people developed tuberculosis resistant to at least rifampicin, of whom only about two in five were reported to have been enrolled in treatment. Recently, the WHO Secretariat approved the use of new all-oral six-month regimens, to treat people with rifampicin, multidrug resistant and pre-extensively drug-resistant tuberculosis. Wider availability of these regimens requires improving supply and access to the drugs central to them, including through approaches that harmonize the interplay between trade, intellectual property and health.

9. The use of WHO-recommended rapid molecular tests as the initial diagnostic test for tuberculosis is slowly improving (47% in 2022, up from 38% in 2021), but remains far from the United Nations global target of 100% by 2027.

10. **People treated to prevent tuberculosis disease.** The number of people receiving tuberculosis preventive treatment increased to 3.8 million in 2022, from 2.9 million in 2020 and 2021, and 3.6 million in 2019. Significant scale-up is required to reach the United Nations global target of reaching up to 45 million people with tuberculosis preventive treatment between 2023 and 2027.

11. **Financing for universal access to care and prevention, and for tuberculosis research and innovation.** Funding for tuberculosis services remains far short of the globally estimated need. Based on data reported: US\$ 5.8 billion was available in 2022 in low- and middle-income countries, similar to that in 2020 and 2021 but lower than US\$ 6.6 billion in 2019. The amount needs to quadruple to reach the United Nations global target of US\$ 22 billion per year by 2027. Similar to previous years, 80% was from domestic sources, with the BRICS countries (Brazil, Russian Federation, India, China and South Africa) accounting for 65% of total domestic funding. The largest bilateral donor is the Government of the United States of America. The biggest international donor is the Global Fund to Fight AIDS, Tuberculosis and Malaria.

PROGRESS IN IMPLEMENTING THE PRINCIPLES, PILLARS AND COMPONENTS OF THE END TB STRATEGY

12. **Adaptation of the strategy and targets at country level, with global collaboration.** WHO recently launched a framework for collaborative action on tuberculosis and comorbidities¹ to comprehensively address tuberculosis and other co-existing health conditions. The Director-General's FIND.TREAT.ALL#ENDTB flagship initiative was renewed for the period of 2023–2028 to strengthen global cooperation with respect to scaling up access to comprehensive tuberculosis services.

13. The WHO Civil Society Task Force on TB is engaging with the Director-General, governments, guideline development groups and other bodies to inform the tuberculosis response at all levels. WHO recently developed guidance to facilitate the effective engagement of communities and civil society in the tuberculosis response, but increased investment is required to strengthen and sustain their participation.

14. **Pillar 1: Integrated patient-centred care and prevention.** The implementation updated policy guidelines and operational handbooks^{2,3} is critical to expand access to high-quality interventions and to improve the treatment success rate, particularly for drug-resistant tuberculosis, which was only 63% according to the latest data. The global coverage of HIV testing among people diagnosed with tuberculosis remained high in 2022, at 80% (up from 76% in 2021). The coverage of antiretroviral therapy among people diagnosed with tuberculosis and known to be HIV-positive was 85% in 2022, the same as in 2021. However, when compared with the total number of people living with HIV estimated to have developed tuberculosis in 2022, coverage was only 54% (up from 46% in 2021).

15. By the end of 2022, 40 countries had begun using the new six-month all-oral regimen for the treatment of drug-resistant tuberculosis, with a total of 92 countries using the shorter nine-month oral regimens (up from 65 in 2020).

16. **Pillar 2: Bold policies and systems.** Ending tuberculosis requires accelerated progress towards universal health coverage, through strong and sustainable primary health care. There was steady progress in the expansion of health service coverage between 2000 and 2015, followed by slower progress through 2021. However, overall, most of the 30 countries with the highest tuberculosis burden⁴ have below average index levels for health service coverage.

17. Countries have made notable progress in adapting the WHO multisectoral accountability framework to address the drivers of the epidemic, with 43 % of all countries overall and 73% with a high burden of tuberculosis reporting to have multisectoral accountability and review mechanisms in 2023. More work at national level is required to strengthen the engagement of all relevant sectors in the tuberculosis response, including civil society.

¹ Framework for collaborative action on tuberculosis and comorbidities. Geneva: World Health Organization; 2022.

² WHO TB Knowledge Sharing Platform (<https://extranet.who.int/tbknowledge>, accessed 27 October 2023).

³ WHO eTB Guidelines (<https://who.tuberculosis.recmap.org/>, accessed 27 October 2023).

⁴ The 30 countries are: Angola, Bangladesh, Brazil, Central African Republic, China, Congo, Democratic People's Republic of Korea, Democratic Republic of the Congo, Ethiopia, Gabon, India, Indonesia, Kenya, Lesotho, Liberia, Mozambique, Mongolia, Myanmar, Namibia, Nigeria, Pakistan, Papua New Guinea, Philippines, Sierra Leone, South Africa, Thailand, Viet Nam, Uganda, United Republic of Tanzania and Zambia.

18. Use of digital surveillance mechanisms is expanding, with 135 countries and areas applying a case-based surveillance system (up from 123 in 2019) that covered all people diagnosed with tuberculosis in 2022. Data on tuberculosis mortality from national or sample vital registration systems are available for 124 countries and areas for the period 2010–2019. New national surveys of tuberculosis disease and up-to-date cause-of-death data from national or sample vital registration systems of high quality and coverage are needed for more accurate estimation of tuberculosis disease burden.

19. **Pillar 3: Intensified research and innovation.** Research and innovation are essential to achieve the 2030 and 2035 milestones of the End TB Strategy. Progress in this area is summarized in the following section.

IMPLEMENTATION OF THE GLOBAL STRATEGY FOR TUBERCULOSIS RESEARCH AND INNOVATION

20. The Global Strategy for tuberculosis research and innovation supports efforts to accelerate the development and rapid uptake of technological breakthroughs and innovations.

21. To shape research and innovation towards public health impact, WHO recently launched a prioritized research agenda for antimicrobial resistance in human health, target regimen profiles for tuberculosis treatment, and target product profiles of tests for monitoring and optimization of tuberculosis treatment. A publicly accessible global platform that contains individual patient data for tuberculosis treatment was recently made available to inform policy and stimulate research.¹

22. WHO research tracker was launched in 2023 to provide an accessible and user-friendly platform to monitor the pipeline of new tuberculosis drugs, treatment regimens and vaccines, as well as operational research projects. According to the tracker there were at least 28 medicines, 16 vaccines and several diagnostics in clinical development by mid-2023 (an increase from 22 medicines and 14 vaccines in 2020).

23. Recognizing the critical role of tuberculosis vaccines in achieving rapid reductions in tuberculosis incidence and mortality, WHO published an investment case that sets out the economic and health impact arguments for tuberculosis vaccine development and uptake. The Director-General launched a “tuberculosis vaccine accelerator council” in September 2023 to boost the tuberculosis vaccine pipeline and facilitate the licensing and use of safe tuberculosis vaccines.

24. Research partnerships are essential to foster collaboration and amplify financing. Two public-private partnerships, UNITE4TB and PAN-TB collaborations have been established to accelerate the development of new tuberculosis drugs and regimens.^{2,3} WHO, in collaboration with partners including development agencies, foundations and the UNICEF/UNDP/WHO/World Bank Special Programme for Research and Training in Tropical Diseases, continues to support implementation

¹ See <https://www.who.int/news/item/31-01-2023-launch-of-global-individual-patient-data-platform-for-tuberculosis-treatment> (accessed 27 October 2023).

² See <https://www.unite4tb.org/> (accessed 27 October 2023).

³ See <https://fnih.org/our-programs/project-accelerate-new-treatments-tuberculosis-pan-tb> (accessed 27 October 2023).

research projects and capacity-building. WHO is providing support to the secretariat of the tuberculosis research network of the BRICS countries.¹

25. Overall, the development of novel tuberculosis vaccines, diagnostics and medicines and critical research projects is advancing slowly mainly due to inadequate funding. The Treatment Action Group reported tuberculosis research and development investment of US\$ 1 billion in 2021,² far below the United Nations global target of US\$ 5 billion per year by 2027.

CONCLUSION

26. The COVID-19 pandemic disrupted the tuberculosis response in several countries, but access to, and provision of, tuberculosis services is showing signs of recovery. The central message of this report is that already at the mid-point of the path towards the Sustainable Development Goals, global progress towards agreed milestones for ending tuberculosis remains off target. However, if the commitments made in the 2023 Political Declaration of the High-Level Meeting of the General Assembly on the Fight Against Tuberculosis are rapidly translated into actions, the tuberculosis epidemic can be ended. WHO will continue to support Member States in building a resilient response to tuberculosis, through normative guidance, technical and strategic support, and global monitoring, reporting and review.

ACTION BY THE EXECUTIVE BOARD

27. The Board is invited to note the report and to provide guidance on how the WHO Secretariat can:

- support high-level country leadership to drive investment and the multisectoral action required to ensure full recovery of essential tuberculosis services, as well as close gaps in access to care;
- accelerate the development of better tools to prevent, detect and treat tuberculosis, particularly new tuberculosis vaccines;
- support implementation of the 2023 Political Declaration of the High-Level Meeting of the General Assembly on the Fight Against Tuberculosis.

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¹ Health Ministers' joint communiqué to the 72nd World Health Assembly, Geneva, May 2019.

² Treatment Action Group. Tuberculosis Research Funding Trends 2005–2021.

(<https://www.treatmentactiongroup.org/resources/tbrd-report/tbrd-report-2022/>, accessed 27 October 2023).