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Progress towards the achievement of global tuberculosis targets and implementation of the political declaration of the high-level meeting of the General Assembly on the fight against tuberculosis

Report of the Secretary-General

Summary

The present report is submitted pursuant to General Assembly resolution 73/3 on the political declaration of the high-level meeting of the Assembly on the fight against tuberculosis, which was adopted on 10 October 2018 following its approval on 26 September. The report has been developed with the support of the Director General of the World Health Organization as requested in the declaration. It provides a review of progress towards global tuberculosis targets and on the implementation of the declaration. Overall, the report shows that high-level commitments and targets have galvanized global and national progress towards ending tuberculosis, but that urgent and more ambitious investments and actions are required to put the world on track to reach targets, especially in the context of the coronavirus disease (COVID-19) pandemic.

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I. Introduction

1. Tuberculosis (TB) is a severe global threat that disproportionally affects the poorest and most vulnerable. In 2019, some 10 million people fell sick with the disease and 1.4 million died, making TB the leading infectious killer worldwide and one of the top 10 causes of death overall. One third of deaths among people living with HIV are due to TB. With close to half a million people developing drug-resistant TB annually, it is also a major contributor to antimicrobial resistance. A quarter of the world's population is infected with *Mycobacterium tuberculosis*. This is an enormous human and societal toll for a curable and preventable disease.

2. In 2014 and 2015, all Member States committed to ending the TB epidemic by 2030, through their adoption of the End TB Strategy of the World Health Organization (WHO) and the United Nations Sustainable Development Goals. Efforts to further galvanize political commitment to the fight against TB intensified in 2017 and 2018.

3. The first WHO global ministerial conference on TB was held in 2017. The resulting Moscow Declaration to End TB included commitments to address key drivers of faster progress, which were subsequently endorsed at the World Health Assembly in 2018: universal access to health care, multisectoral action and accountability, financing and research.

4. With universal access to health care, almost everyone who develops TB can be successfully treated and preventive treatment can be offered to those most at risk. Since 2000, TB treatment has averted more than 60 million deaths, but many people still do not receive a diagnosis or care. Multisectoral action is needed to eliminate the economic distress, vulnerability, marginalization, stigma and discrimination often faced by those affected by TB, and to drive down the number of people developing TB infection and disease, by addressing determinants such as poverty, undernutrition and the prevalence of HIV infection, diabetes, mental health and smoking. Research breakthroughs such as a new vaccine are needed to rapidly reduce TB incidence worldwide to the levels already achieved in countries that have a low burden of TB incidence.

5. The General Assembly held its first high-level meeting on the fight against TB, entitled "United to end tuberculosis: an urgent global response to a global epidemic", on 26 September 2018. The meeting brought together Heads of State and Government as well as other leaders and was preceded by a civil-society hearing. The political declaration (see resolution 73/3) reaffirmed commitments to the Sustainable Development Goals and the End TB Strategy and established new global targets and commitments to action.

6. As requested in the political declaration, the present progress report was developed with the support of the Director General of WHO.[1] It covers:

(a) Progress towards global TB targets;

(b) Progress in translating commitments into action;

(c) The impact of the coronavirus disease (COVID-19) pandemic and TB and its implications;

(d) Recommendations.

7. In the report, the Secretary-General shows that high-level commitments and targets have galvanized global and national progress towards ending TB, but that urgent and more ambitious investments and actions are required to put the world on

[1] Further details about the topics covered in the present report, including country case studies, are provided in the annual *Global Tuberculosis Report* of WHO. The 2020 edition will be published in October.

track to reach targets, especially in the context of the COVID-19 pandemic. The report will inform a comprehensive review at a high-level meeting on TB in 2023.

II. Progress towards global tuberculosis targets

8. Global TB targets set out in the Sustainable Development Goals and the End TB Strategy call for reductions in TB disease burden, which is measured as TB incidence (new cases per 100,000 people per year),[2] the number of TB deaths and the number of TB-affected households facing catastrophic costs. The political declaration reaffirmed these targets and set new targets for TB treatment, TB preventive treatment and funding (see table).[3]

Global tuberculosis targets set out in the Sustainable Development Goals, the End TB Strategy and the political declaration of the high-level meeting of the General Assembly on the fight against tuberculosis

Plan of action	*Targets*
Sustainable Development Goal target 3.3	By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
End TB Strategy	80 per cent reduction in TB incidence by 2030, compared with 2015 2020 milestone: 20 per cent reduction 90 per cent reduction in the number of TB deaths by 2030, compared with 2015 2020 milestone: 35 per cent reduction No TB-affected households face catastrophic costs by 2020
High-level meeting of the General Assembly on the fight against tuberculosis	40 million people treated for TB from 2018–2022, including: • 3.5 million children • 1.5 million people with drug-resistant TB, including 115,000 children At least 30 million people provided with preventive treatment for TB from 2018–2022, including: • 6 million people living with HIV • 4 million children under 5 years of age and 20 million people in other age groups who are household contacts of people affected by TB Funding of at least $13 billion per year for universal access to TB prevention, diagnosis, treatment and care by 2022 Funding of at least $2 billion per year for TB research from 2018–2022

9. The section below provides an overview of progress towards global TB targets by the end of 2019, based primarily on data compiled by the WHO Global TB

[2] The indicator of TB incidence for Sustainable Development Goal target 3.3, measured as the number of new cases per 100,000 people per year. See https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202020%20review_Eng.pdf.

[3] The funding targets were based on Stop TB Partnership, *The Paradigm Shift: Global Plan to End TB* (Geneva, 2019).

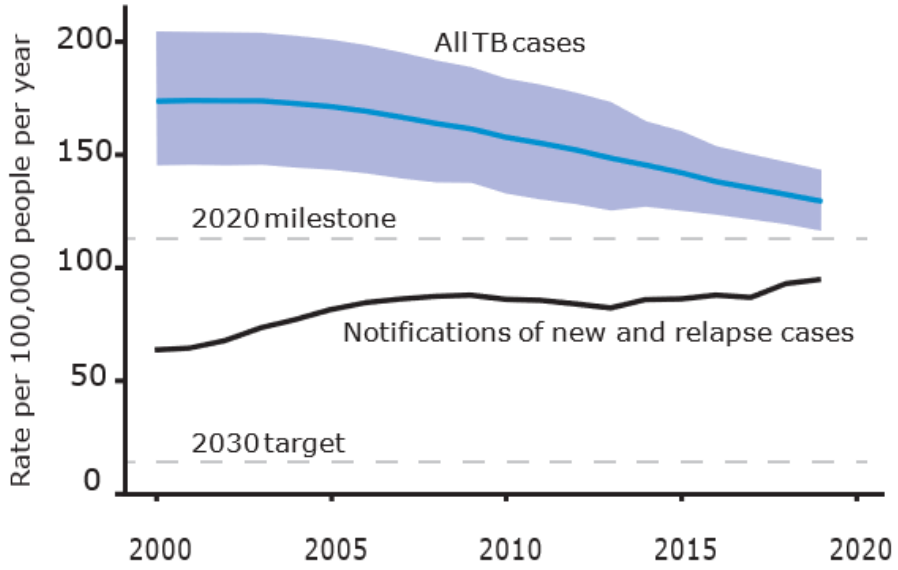
Programme from all Member States in annual rounds of data collection (the most recent from April to June 2020), complemented by data from national surveys and databases managed by other WHO programmes and global agencies. The Sustainable Development Goal and End TB Strategy targets are covered first, followed by the new targets set out in the political declaration.

A. Incidence of tuberculosis is falling, but not fast enough

10. Globally, TB incidence is falling, but not fast enough to reach the first milestone of the End TB Strategy (a 20 per cent reduction from 2015 to 2020) (see figure I), and not fast enough to reach the target of an 80 per cent reduction from 2015 to 2030. Worldwide, the cumulative reduction from 2015 to 2019 was 9 per cent (from 142 to 130 new cases per 100,000 people), including 2.3 per cent from 2018 to 2019.

11. More positively, the WHO European Region has almost reached the 2020 milestone, with a reduction of 19 per cent from 2015 to 2019, and the WHO African Region has made very good progress, with a reduction of 16 per cent. Reductions in other regions were 3.5 per cent in the Eastern Mediterranean, 8.7 per cent in South-East Asia and 6.1 per cent in the Western Pacific. In the WHO Region of the Americas, incidence is slowly increasing.

Figure I
Global tuberculosis incidence over time, 2000–2019



Note: For comparison, the solid black line shows the number of people with TB who were notified (officially reported) to national authorities, per 100,000 people.

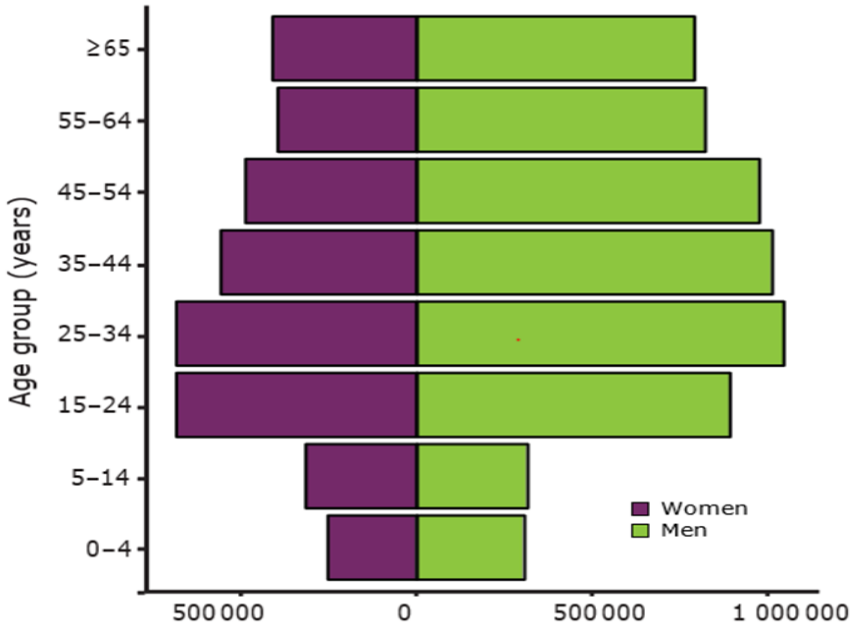
12. A total of 78 countries are on track to reach the 2020 milestone. This includes seven countries with high TB burdens[4] that have already reached it (Cambodia, Ethiopia, Kenya, Namibia, Russian Federation, South Africa and United Republic of Tanzania) and three other countries with high TB burdens that are on track (Lesotho, Myanmar and Zimbabwe).

[4] In 2015, WHO defined a list of 30 countries with high TB burdens for the period 2016–2020. It also defined lists of countries that had high multidrug-resistant TB (MDR-TB) burdens and high TB/HIV burdens, specifically.

13. In 2019, 54 countries had a low incidence of TB (<10 cases per 100,000 people per year), mostly in the WHO Region of the Americas and the European Region in addition to a few countries in the Eastern Mediterranean and Western Pacific. These countries are well placed to target TB elimination.

14. In absolute numbers, roughly 10.0 million people fell ill with TB in 2019. The 30 countries with high TB burdens accounted for 87 per cent of those affected, some two thirds of them in eight countries.[5] TB affects people in all age groups (see figure II). In 2019, 56 per cent of people who developed TB were men, 32 per cent were women and 12 per cent were children. Some 8.2 per cent of the total TB incidence was among people living with HIV.

Figure II
Global number of people with tuberculosis in 2019, by gender



B. Tuberculosis deaths are falling, but the disease is still the world's top infectious killer

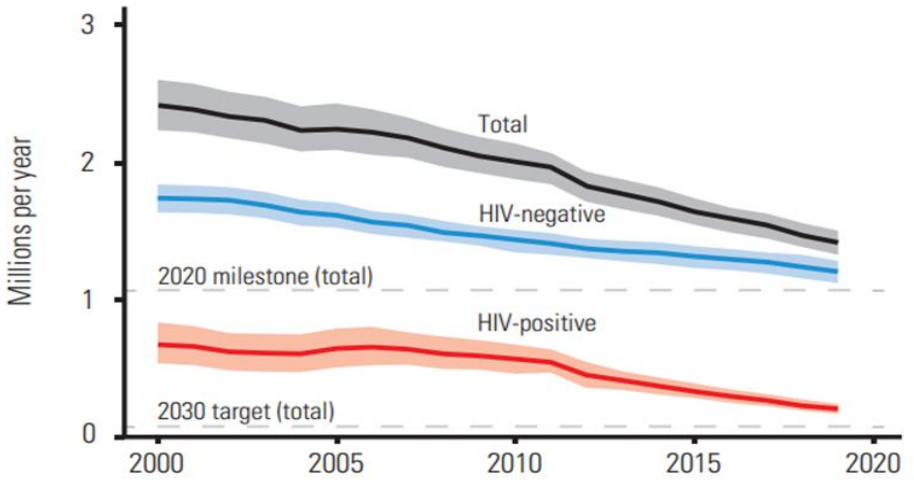
15. Worldwide, TB is the leading infectious disease killer and one of the top 10 causes of death overall. In 2019, it caused 1.4 million deaths, including 208,000 among HIV-positive people.[6]

16. The number of TB deaths is falling globally, but not fast enough to reach the first milestone of the End TB Strategy (a 35 per cent reduction from 2015 to 2020) (see figure III), and not fast enough to reach the target of a 90 per cent reduction in deaths by 2030. The cumulative reduction between 2015 and 2019 was only 14 per cent, less than halfway to the milestone for 2020.

[5] For further details, please see the annual WHO *Global Tuberculosis Reports*. Available at www.who.int/tb/publications/en/.

[6] When an HIV-positive person dies from TB, the underlying cause is coded as HIV in the International Classification of Diseases system.

Figure III
Global tuberculosis deaths over time, 2000–2019



17. The WHO European Region is on track to reach the 2020 milestone, with a 31 per cent reduction from 2015 to 2019, and the African Region has made good progress, achieving a 19 per cent reduction. Reductions in other regions included 6.1 per cent in the Region of the Americas, 11 per cent in the Eastern Mediterranean, 10 per cent in South-East Asia and 17 per cent in the Western Pacific.

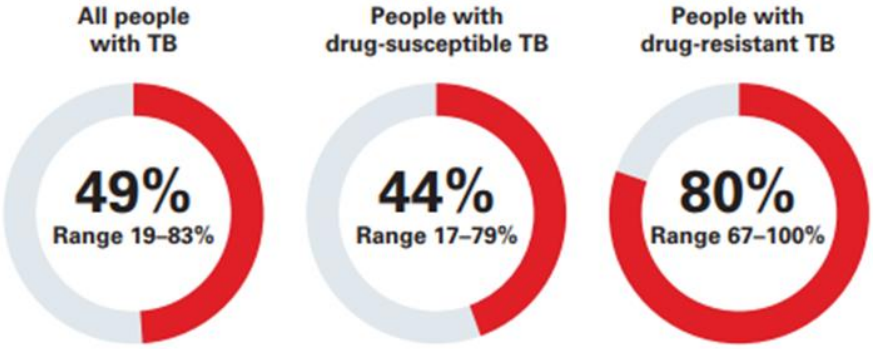
18. A total of 46 countries are on track to reach the 2020 milestone. This includes seven countries with a high TB burden that have already reached it (Bangladesh, Kenya, Mozambique, Myanmar, Russian Federation, Sierra Leone and United Republic of Tanzania), and one other country with a high TB burden that is on track (Viet Nam).

C. Half of people who have tuberculosis, and their households, face catastrophic costs

19. National surveys since 2015 have found that roughly 50 per cent of people who have TB, and their households, face catastrophic costs (defined as total costs[7] equivalent to 20 per cent or more of annual household income) (see figure IV). The figure is 80 per cent for those with drug-resistant TB. No country has yet demonstrated that it has met the target that no TB-affected households face catastrophic costs. Urgent action is required to reduce this financial and economic burden.

[7] Calculated as the sum of direct medical expenditures, non-medical expenditures and income losses.

Figure IV
Proportion of people with tuberculosis and their households facing catastrophic costs

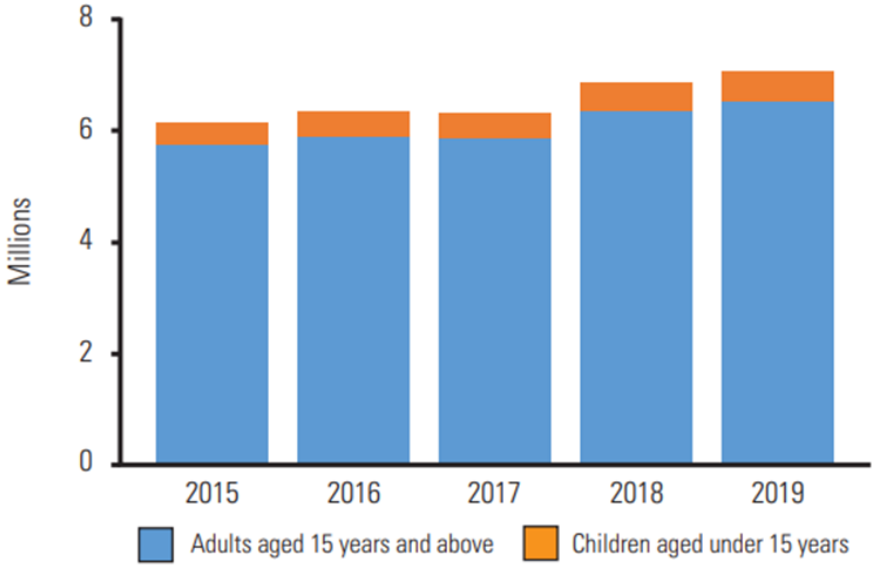


Note: The number in the centre of each circle is the average percentage of people with TB who faced catastrophic costs from 2015 to 2020 in 17 countries; the range is the minimum and maximum average in these countries.

D. The number of people provided with treatment for tuberculosis is increasing, but not by enough to reach 40 million by 2022

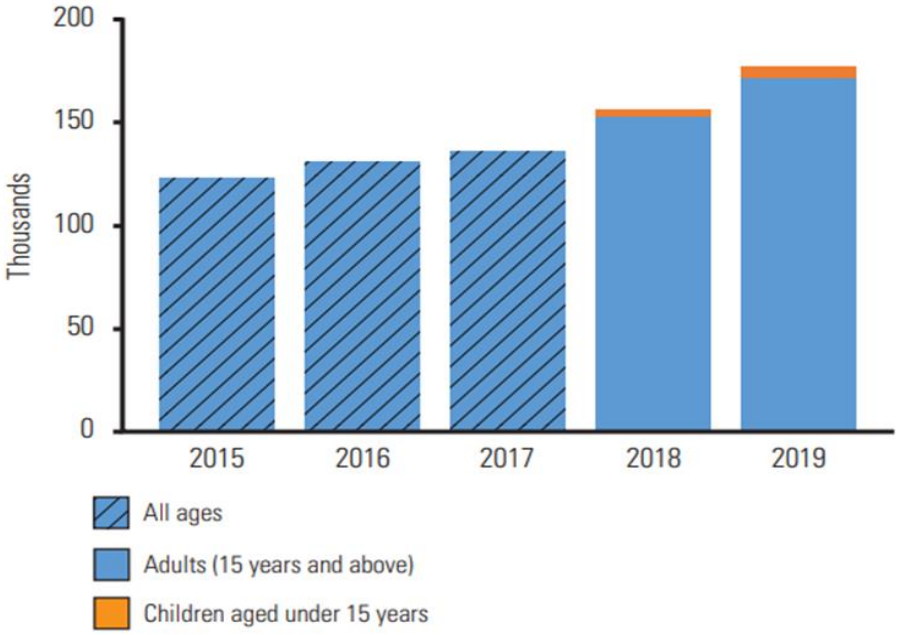
20. The global number of people treated for TB[8] has grown in recent years. The number of people reported to have accessed TB treatment has grown from some 6 million in 2015 to 7.1 million in 2018 and to 7.2 million in 2019 (see figure V), while the number of people enrolled in treatment for multidrug- or rifampicin-resistant TB (MDR/RR-TB) has grown in recent years from 123,000 in 2015 to 156,000 in 2018 and to 177,000 in 2019 (see figure VI).

Figure V
Global number of people reported to have accessed treatment for tuberculosis, 2015-2019



[8] On the assumption that all cases officially notified by countries to WHO were treated.

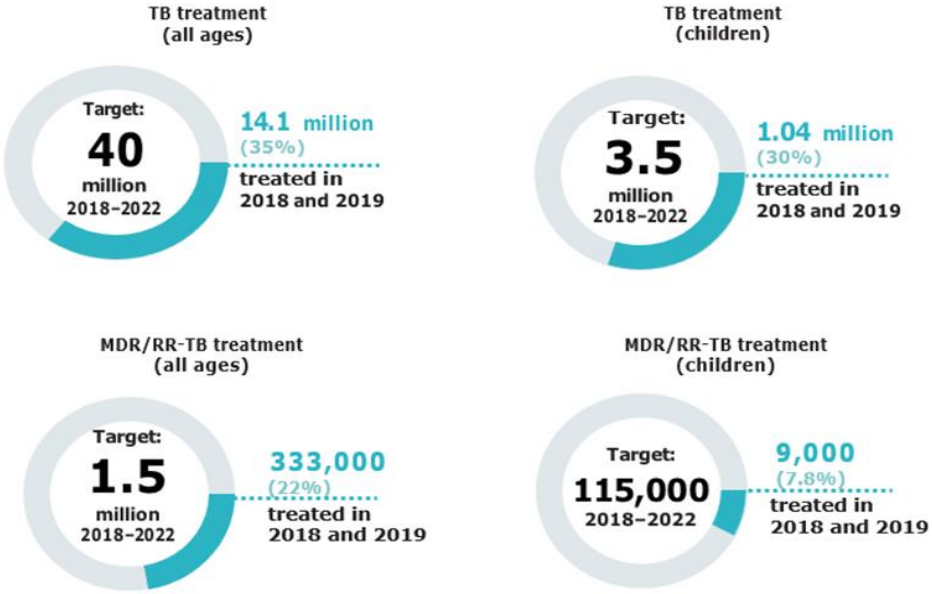
Figure VI
Global number of people enrolled in treatment for multidrug- or rifampicin-resistant tuberculosis, 2015–2019



Note: Global data disaggregated by age were not available prior to 2018.

21. The cumulative total of 14.1 million people treated for TB in 2018 and 2019 was 35 per cent of the cumulative five-year (2018–2022) target of 40 million (see figure VII), but global progress in the number of people treated for TB in 2018 and 2019 lags behind what is need to reach the United Nations global targets, especially for drug-resistant TB. For children, the combined total was 1.04 million, 30 per cent of the cumulative five-year target of 3.5 million.

Figure VII
Global progress in the number of people treated for TB, 2018 and 2019



22. A total of 42 countries reported an increase in the number of people treated for TB by 10 per cent or more from 2017 to 2019, while TB incidence is estimated to have slowly declined. Of those, increases in the number of people being treated in absolute terms were particularly large in India and Indonesia, at 513,000 people (+31 per cent) and 120,000 people (+27 per cent) respectively. Among the other 30 countries with high TB burdens, high levels of treatment coverage[9] (>80 per cent) have already been achieved in Brazil, China and the Russian Federation.

23. The total number of people treated for MDR/RR-TB in 2018 and 2019, at 333,000, accounts for 22 per cent of the five-year (2018–2022) target of 1.5 million (see figure VII). For children, the total was 9,000, less than 10 per cent of the five-year target of 115,000.

24. A total of 70 countries reported an increase in the number of people enrolled in treatment for MDR/RR-TB by 10 per cent or more from 2017 to 2019. The five countries with the biggest increases in absolute numbers were (from largest to smallest) India, China, the Russian Federation, Indonesia and Angola. Of the 30 countries with a high multidrug-resistant (MDR-TB) burden, those that had the smallest gaps between the estimated number of cases of MDR/RR-TB and the number of people enrolled in treatment in 2019 included Azerbaijan, Belarus, Kazakhstan, Peru, the Republic of Moldova, the Russian Federation, South Africa and Ukraine.

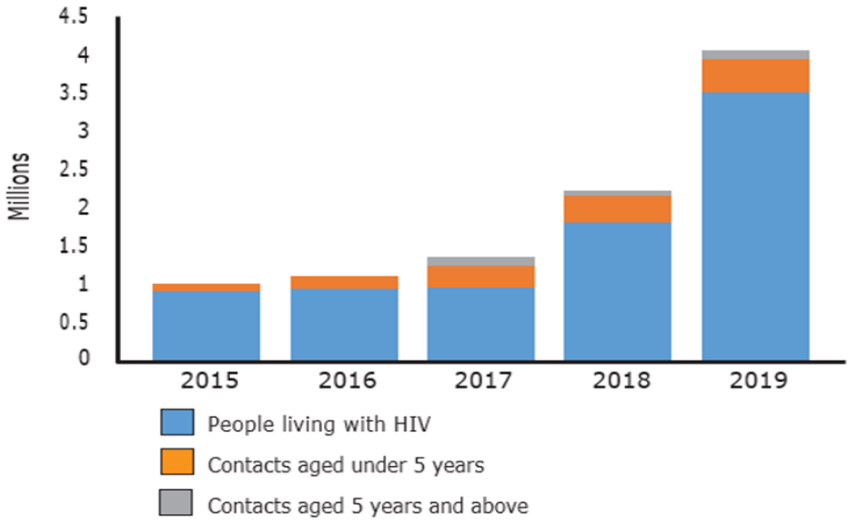
E. Number of people provided with preventive treatment for tuberculosis is increasing, but too slowly to reach 30 million by 2022

25. WHO recommends preventive treatment for TB for people living with HIV, the household contacts of those who have bacteriologically confirmed pulmonary TB, and clinical risk groups (e.g., people who receive dialysis), and gathers data for people living with HIV and the household contacts of those who have bacteriologically confirmed pulmonary TB.

26. The number of people provided with preventive treatment for TB has increased in recent years, from 1 million in 2015 to 2.2 million in 2018 and to 4.1 million in 2019 (see figure VIII).

[9] Defined as the number of people started on treatment divided by the estimated number of cases in the same year.

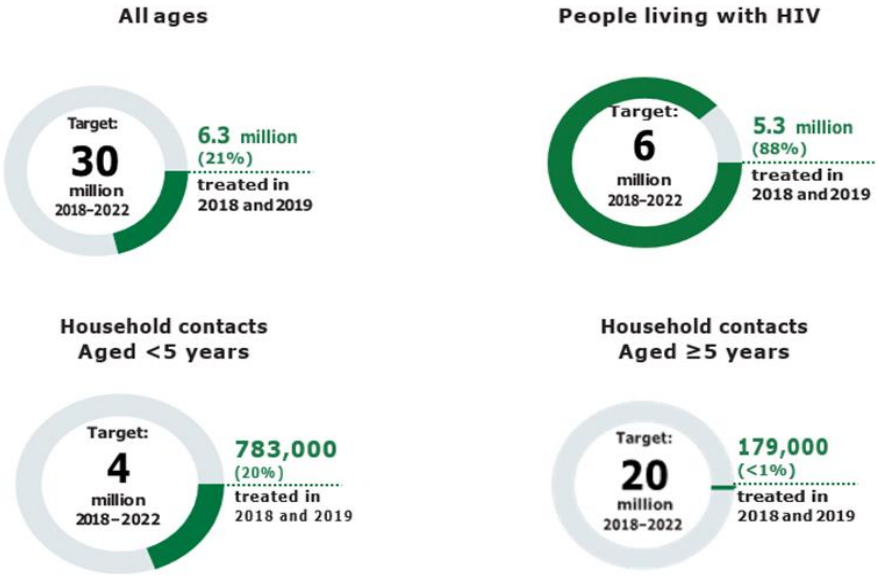
Figure VIII
Global number of people provided with preventive treatment for tuberculosis, 2015–2019



27. Most of those provided with preventive treatment were people living with HIV: 1.8 million in 2018 and 3.5 million in 2019. India and South Africa accounted for 25 per cent and 18 per cent of the combined total for 2018–2019, respectively. Numbers for household contacts have been much smaller: 350,000 in 2018 and 433,000 in 2019 for children under the age of 5, and 74,000 in 2018 and 105,000 in 2019 for people in older age groups. The WHO Region of the Americas and the European Region had the highest coverage of preventive treatment for household contacts.

28. The 6.3 million people started on preventive treatment for TB in 2018 and 2019 means that only 21 per cent of the five-year target (2018–2022) of 30 million has been achieved (see figure IX), while progress for household contacts lags far behind. For people living with HIV, the target of 6 million is on track to be achieved in 2020.

Figure IX
Global progress in provision of preventive treatment for tuberculosis, 2018 and 2019



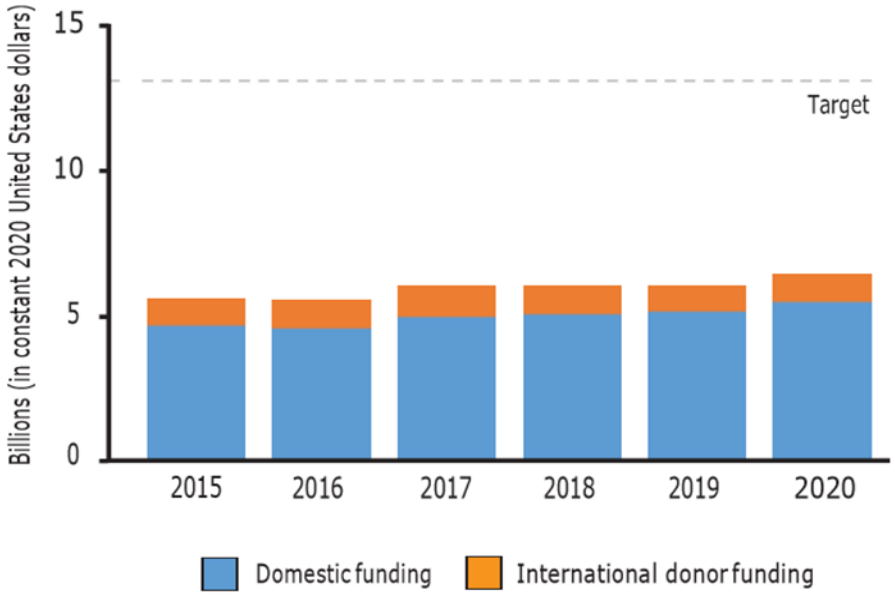
F. Funding for universal access to tuberculosis prevention, diagnosis, treatment and care needs to double to reach the global target

29. Funding for TB prevention, diagnosis, treatment and care in 121 low- and middle-income countries has reached $6.5 billion in 2020, up from $6.1 billion in 2017 and $5.6 billion in 2015 (see figure X). Even allowing for the fact that there will have been additional funding in the remaining 14 low- and middle-income countries and in high-income countries, funding falls far short of the target set at the high-level meeting of the General Assembly on the fight against tuberculosis of at least $13 billion per year by 2022.

30. Overall, most funding is from domestic sources. However, aggregate figures are strongly influenced by Brazil, the Russian Federation, India, China and South Africa (the BRICS countries). They account for 57 per cent of available funding in 2020, 97 per cent of which is from domestic sources. In other low- and middle-income countries, international donor funding remains crucial, accounting for 44 per cent of the funding available in the 25 countries with a high TB burden outside the BRICS countries and 57 per cent of funding in low-income countries in 2020.

31. Since 2015, funding from international donors has been around $1 billion per year, with approximately 70 per cent of this total coming from the Global Fund to Fight AIDS, Tuberculosis and Malaria. The recent commitment to replenish the Global Fund means that more than 110 countries will continue to receive critical financial support, although the share of resources allocated for TB is currently fixed at 18 per cent. The largest bilateral donor is the Government of the United States of America. Annual funding for low- and middle-income countries needs to double to reach the United Nations global target of $13 billion per year.

Figure X
Funding for tuberculosis prevention, diagnosis, treatment and care in low- and middle-income countries, 2015–2020

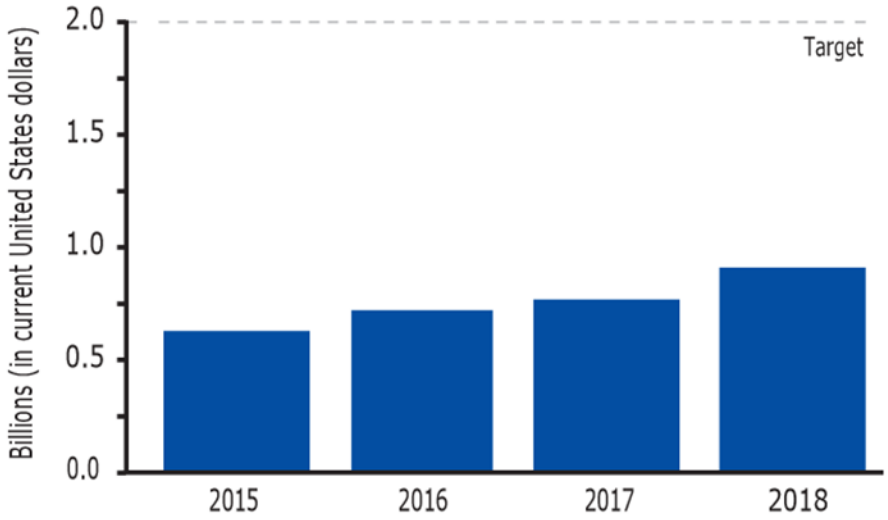


Note: Data refer to 121 low- and middle-income countries that have 98 per cent of the world's officially reported cases of TB.

G. Funding for tuberculosis research needs to more than double

32. Funding for TB research has grown in recent years, reaching $906 million in 2018, up from $772 million in 2017 (see figure XI).[10] However, this amount was less than half of the target set at the high-level meeting of the General Assembly of $2 billion per year. Annual funding for TB research needs to more than double to reach this global target.

Figure XI
Funding for tuberculosis research, 2015–2018



Source: Treatment Action Group and Stop TB Partnership, *Tuberculosis Research Funding Trends 2005–2018* (New York, 2019).

33. The two largest investors in 2018 were the Government of the United States and the Bill and Melinda Gates Foundation, which in combination accounted for 56 per cent of total funding. The 30 largest funders accounted for 90 per cent of the total. Approximately one third of TB research funding was for drug research, followed by 20 per cent for basic science, 13 per cent for operational research, 12 per cent for vaccines and 9 per cent each for diagnostics and infrastructure/unspecified research.

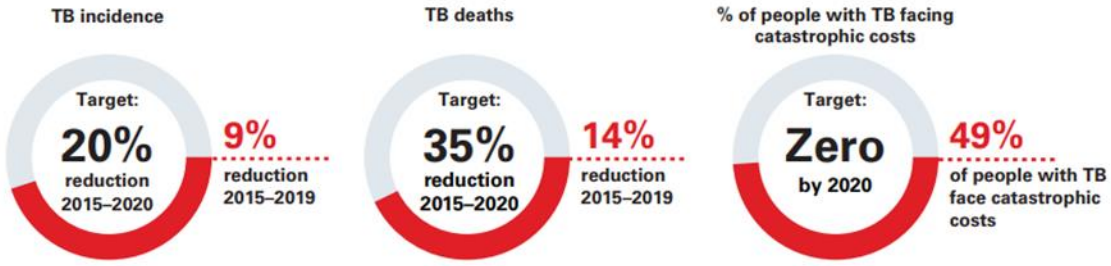
H. Summary

34. Global and national progress towards TB targets has been made, but, worldwide, none of the targets is on track to be met (see figure XII). Of great concern is the fact that progress made by the end of 2019 could be reversed by the COVID-19 pandemic (see sect. IV). The urgent actions required for faster progress are set out in section V.

[10] Treatment Action Group and Stop TB Partnership, *Tuberculosis Research Funding Trends 2005–2018* (New York, 2019).

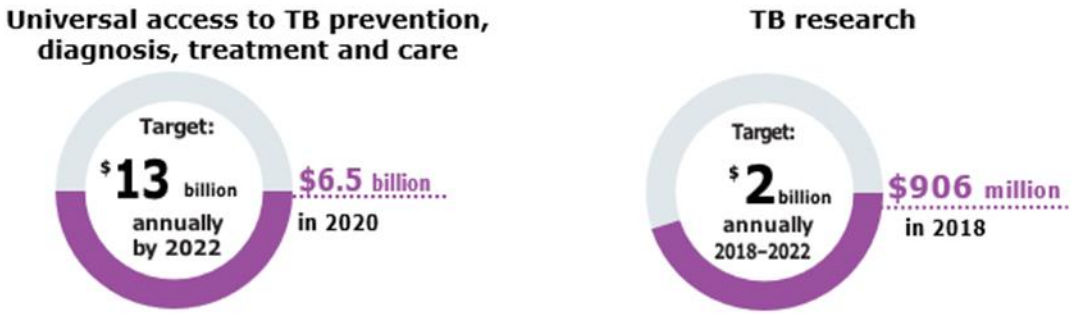
Figure XII
Overview of progress towards global tuberculosis targets

(a) Sustainable Development Goals and End TB Strategy: targets



(b) High-level meeting of the General Assembly on the fight against tuberculosis: targets for treatment

(c) High-level meeting of the General Assembly on the fight against tuberculosis: targets for increased funding



III. Progress in translating commitments into action

35. The political declaration of the high-level meeting of the General Assembly on the fight against tuberculosis set out important commitments to urgent actions needed to reach global TB targets. These can be grouped under three themes, which align with the principles and pillars of the End TB Strategy of WHO:[11]

(a) Accelerating progress towards universal access to people-centred care and prevention;

[11] WHO, document WHO/CDS/TB/2018.29.

(b) Transforming the TB response with a focus on human rights, equity, multisectoral engagement and accountability;

(c) Driving research and innovation.

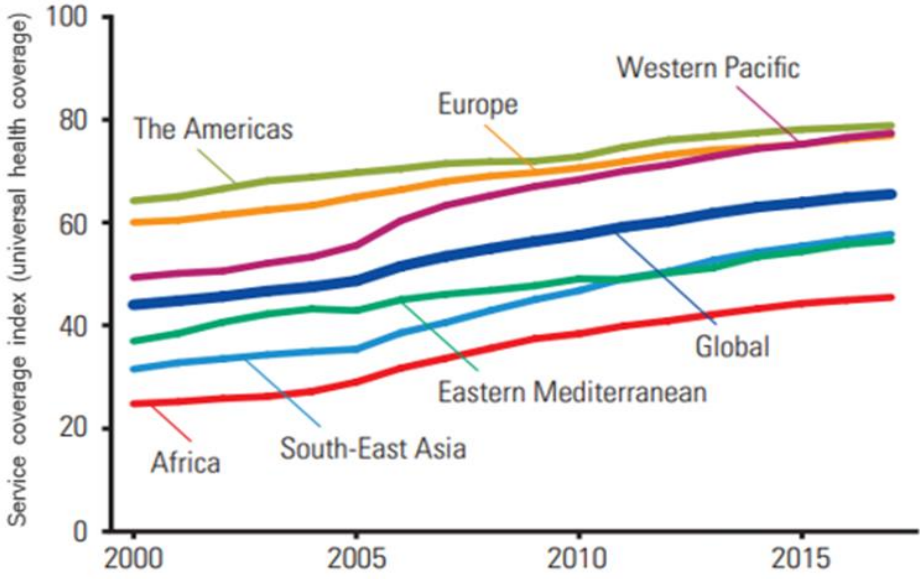
36. Section III provides an overview of the status of progress, using data compiled by the WHO Global TB Programme from all Member States from annual rounds of data collection, WHO reports and contributions from the Stop TB Partnership and the WHO Civil Society Task Force on TB.

A. Accelerating progress towards universal access to people-centred tuberculosis care and prevention

37. Universal health coverage means that everyone can obtain the health services they need without suffering financial hardship,[12] and Sustainable Development Goal target 3.8 is to achieve universal health coverage by 2030. Progress towards such coverage is necessary to achieve the global target for reducing TB deaths, since the target is only feasible if everyone who develops TB can access high-quality treatment.

38. Member States reaffirmed their commitment to progress towards universal health coverage at a high-level meeting in 2019 and set a new target aimed at providing an additional 1 billion people with access to quality essential health services by 2023.[13] A WHO report published alongside the meeting demonstrated the progress made since 2000, but that falls far short of universal access (see figure XIII).[14]

Figure XIII
Percentage of people with access to essential health services, 2000–2017



39. Globally, the service coverage index (Sustainable Development Goal indicator 3.8.1) increased from 45 (out of 100) in 2000 to 66 in 2017 and was mostly in the range of between 40 and 60 in the 30 countries with high TB burdens. At least 930 million people (13 per cent of the world's population) faced catastrophic expenditures

[12] Ibid., *Primary Health Care on the Road to Universal Health Coverage: 2019 Monitoring Report* (Geneva, 2019).
[13] See resolution 74/2.
[14] WHO, *Primary Health Care on the Road to Universal Health Coverage.*

on health care (Sustainable Development Goal indicator 3.8.2) in 2015, up from 9.4 per cent in 2010.[15] The high percentage of people with TB and their households facing catastrophic costs (see figure IV above) is a clear illustration of the urgent need to improve financial protection. Examples of countries with high TB burdens that have recently embarked on efforts to improve insurance coverage among people with TB include Indonesia, the Philippines, Thailand and Viet Nam.

40. Among countries with a high TB burden, Thailand stands out as having a high service coverage index of 80 as well as a low level of catastrophic health expenditures (2 per cent of households).

41. There has been encouraging progress in "finding the missing people with TB" (see sects. II.A and II.D above). However, there was still a gap of approximately 3 million between the annual number of people who developed TB (about 10 million) and the number who were officially notified (reported) to national authorities (see figure I above). There are two main reasons for this. The first is underdiagnosis, either because people with TB do not reach health facilities (e.g., due to legal, social or economic barriers) or because they are not diagnosed when they do. The second is underreporting of people diagnosed with TB, particularly in countries in which many private or public care providers are not closely linked to the national TB programme.

42. A road map to scale up public-private health provider engagement developed by WHO and partners in 2018 is being widely implemented across more than 20 countries with high TB burdens.[16] Between 2017 and 2019, policies for mandatory notification, intensified engagement with public and private care providers and electronic systems to facilitate reporting have contributed to large increases in the number of people known to have accessed treatment (see figure I above). India and Indonesia are notable examples of countries that made a major contribution to global progress (see sect. II.D above).

43. Community-based services can help to improve access to TB diagnosis, treatment and care, especially among the most vulnerable populations. In 59 countries that reported data for 2019, community referrals accounted on average for 20 per cent of newly reported people with TB. In 42 countries, the treatment success rate among people provided with community-based treatment support averaged 83 per cent, similar to the global average of 84 per cent.

44. Two major global initiatives being implemented by WHO, the Global Fund to Fight AIDS, Tuberculosis and Malaria and the Stop TB Partnership, are contributing to "finding the missing people with TB": a flagship initiative of the WHO Director General known as "FIND.TREAT.ALL. #EndTB";[17] and a strategic initiative of the Global Fund, focused on 13 countries that account for some 75 per cent of missing people with TB.[18] The United States Agency for International Development is another major contributor to reach the missing millions in priority countries.

45. Global mechanisms continue to facilitate access to high-quality affordable diagnostics and treatment. In 2019, the Global Drug Facility of the Stop TB Partnership supported the procurement of TB medicines and/or diagnostics in 100 countries, and 49 countries were assisted with regard to adopting all-oral regimens for drug-resistant TB.

[15] Catastrophic expenditures are defined as direct medical expenditures equivalent to 10 per cent or more of annual household expenditure or income.

[16] WHO, "Public-private mix for TB prevention and care: a roadmap", 2018.

[17] See www.who.int/tb/joint-initiative/en/.

[18] WHO, "WHO and Global Fund sign cooperation agreement: strategic initiative to reach missed TB cases a critical component of grant", 1 December 2017.

46. Bilateral and multilateral agreements are helping to make new drugs and diagnostics more affordable. Examples over the past two years include those negotiated by UNITAID and the Global Fund to reduce the price of a medicine for the preventive treatment of TB,[19] and by the Stop TB Partnership and the Global Fund to reduce the price of a medicine for drug-resistant TB (bedaquiline). These successes illustrate the effectiveness of joint efforts by key stakeholders.

47. Progress in TB prevention, diagnosis, treatment and care for children lags behind that of other age groups for treatment coverage and uptake of TB preventive treatment (see sects. II.D and II.E above). Nonetheless, major examples of progress since 2018, when a road map for ending TB in children and adolescents was launched,[20] include the roll-out of shorter regimens for TB preventive treatment and, due to the joint efforts of UNITAID, the TB Alliance and the Stop TB Partnership's Global Drug Facility, child-friendly treatment formulations. In 2019, 1.1 million treatment courses for children with drug-susceptible TB were provided by the Facility, up from 450,000 in 2017, and child-friendly formulations for drug-resistant TB were provided to 56 countries.

48. There was some global progress from 2018 to 2019 in overcoming the public health crisis of MDR-TB (see sect. II.D above). Since detection relies upon bacteriological confirmation of TB and testing for drug resistance, further improvements require an increase in the percentage of people diagnosed with TB whose infections have been bacteriologically confirmed and, among them, an increase in the coverage of testing for drug resistance. Globally, in 2019, 57 per cent of people diagnosed with TB had their infections bacteriologically confirmed,[21] up from 55 per cent in 2018, but that number is still far lower than the 80 per cent achieved in high-income countries where there is widespread access to the most sensitive diagnostic tests. The global percentage of people with bacteriologically confirmed TB tested for rifampicin resistance was 61 per cent in 2019, up from 51 per cent in 2018, but is still far short of the 100 per cent that is theoretically achievable.

49. Treatment success rates for drug-resistant TB remain low, at 57 per cent globally. The treatment success rate is much higher for drug-susceptible TB, at 85 per cent; such high levels help to prevent the development of drug-resistant TB among those treated with first-line regimens.

50. The Global Fund and WHO have a successful model (the Green Light Committee mechanism) that supports more than 90 countries in scaling up new diagnostics and all-oral shorter treatment regimens for people with drug-resistant TB.

51. With the development of national strategies for responses to antimicrobial resistance, there is scope for increased synergies with efforts related to drug-resistant TB, for example, to improve laboratory infrastructure and capacity, infection prevention and control, and surveillance and antibiotic stewardship.

52. To ensure coordination and collaboration between TB and HIV programmes, WHO has recommended a set of collaborative TB/HIV activities since 2004. The latest data, for 2019, show high coverage of the key interventions and continued improvements: 69 per cent of people diagnosed with TB had a documented HIV test result (up from 64 per cent in 2018), with even higher coverage of 86 per cent in the WHO African Region, where the burden of HIV-associated TB is highest; 88 per cent of people diagnosed with TB who were also living with HIV were on antiretroviral treatment, up from 87 per cent in 2018; and 5.3 million people living with HIV were provided with

[19] UNITAID, "Landmark deal secures significant discount on price of medicine to prevent TB", 31 October 2019.

[20] WHO, *Roadmap Towards Ending TB in Children and Adolescents*, 2nd ed. (Geneva, 2018).

[21] The numbers cited are for pulmonary TB only (i.e., they exclude people with extrapulmonary TB).

preventive treatment for TB in 2018 and 2019, with the United Nations global target of 6 million people living with HIV provided with preventive treatment for TB by 2022 on track to be met (see sect. II.E above). To date, antiretroviral therapy for people living with HIV who are diagnosed with TB has averted about 10 million deaths.

53. Strengthening cross-cutting public health functions, including infection prevention and control, laboratory services and surveillance systems, are key components of progress towards ending TB.

54. Infection prevention and control is necessary to limit TB transmission. One of the indicators of the status of TB infection control and prevention is the ratio of TB cases per 100,000 health care workers to TB cases per 100,000 adults in the general adult population. In 69 of the 74 countries for which this indicator could be assessed in 2019, the ratio was ≥1, suggesting a need for improvement in many countries (if effective measures are in place in health facilities, the ratio should be around 1).

55. Strong laboratory networks are needed for early diagnosis of TB and testing for drug resistance. WHO coordinates the Supranational Reference Laboratory Network, a key technical resource to support the strengthening of national laboratory capacity. As a first step, a WHO framework of indicators and targets for laboratory strengthening recommends using a WHO-recommended rapid diagnostic as the initial test for all people with signs or symptoms of TB. For the 48 countries included in the WHO lists of countries with high TB, TB/HIV and MDR-TB burdens, 37 had policies that included such a diagnostic by the end of 2019. However, the proportion of people diagnosed with TB who were initially tested with a WHO-recommended rapid diagnostic was only 22 per cent globally in 2019, down from 27 per cent in 2018.

56. Robust monitoring of the status of the TB epidemic (in terms of the number of people with TB and the number of deaths caused by TB) and reliable, timely data about diagnosis and treatment are needed to track progress and inform action. Case-based electronic surveillance systems for the recording and reporting of data for people with TB and cause-of-death data from national vital registration systems of high quality and coverage are the reference standards.

57. In 2019, 123 countries had a case-based surveillance system that covered all people diagnosed with TB, accounting for 66 per cent of those officially reported. Data on TB mortality from national vital registrations systems were available for 127 countries, which accounted for 57 per cent of the estimated number of TB deaths. The biggest gaps in both case-based surveillance and national vital registration systems are in countries in Africa and South-East Asia. Since 2018, WHO has developed digital packages for the collection, analysis and use of both aggregated and case-based TB data and has supported assessments of the performance of TB surveillance in more than 50 countries.

58. Widespread use of mobile phones and the Internet has expanded opportunities to use digital technologies as part of people-centred TB care. In 2018 and 2019, WHO released new guidance and implementation aids.[22,23] In 2019, 72 countries were using digital technologies to support people with TB during treatment. The COVID-19 pandemic has highlighted the key role that digital technologies can play in enabling care delivery and capacity-building.

59. The uptake and implementation of WHO guidance and policies on TB can significantly improve treatment outcomes and quality of life for people affected by TB. WHO has issued guidance on all core aspects of TB prevention and care; this

[22] WHO, *WHO Guideline: Recommendations on Digital Interventions for Health System Strengthening* (Geneva, 2019).

[23] Ibid., *Handbook for the Use of Digital Technologies to Support Tuberculosis Medication Adherence* (Geneva, 2017).

includes important updates for the diagnosis and treatment of drug-resistant TB and preventive treatment for TB from 2018 to 2020. The former strongly recommends all-oral shorter regimens for the first time using newer anti-TB drugs,[24] and the latter recommends treatment for people living with HIV, household contacts of people with bacteriologically confirmed TB, including children under the age of 5, and clinical risk groups.[25]

60. WHO guidance on the treatment of drug-susceptible TB and patient care[26] as well as TB/HIV collaborative activities has been widely adopted. A recent survey of 37 countries with a high burden of TB, TB/HIV or MDR-TB conducted by the Stop TB Partnership and Médecins sans frontières found that 81 per cent had rapidly adopted 17 key WHO recommendations issued during the period 2017–2019.[27] Nonetheless, the number of household contacts treated in 2019 (see sect. II.E above) shows that implementation of the WHO guidance on preventive treatment so far is limited. Use of rapid molecular diagnostics as the initial test for TB also remains limited, despite being recommended by WHO. Expanded uptake and implementation of WHO guidance, especially in countries with high TB burdens, will contribute to better outcomes for people affected by TB.

B. Transforming the tuberculosis response with a focus on human rights, equity, multisectoral engagement and accountability

61. Promotion and protection of human rights and equity for people affected by TB and vulnerable populations is a legal, ethical and moral imperative. People affected by TB continue to be subjected to human rights violations, which together with stigma and discrimination impede access to care and add to the suffering caused by the disease. Laws, health policies and programmes to combat inequalities and discriminatory practices in the TB response need to be reviewed and updated, so that no one is left behind.

62. Since 2018, major examples of progress include:

(a) The release of a Declaration of the rights of people affected by tuberculosis in 2019,[28] and a related technical brief on TB and human rights launched by the Global Coalition of TB Activists in 2020;

(b) Parliamentarians in many high TB burden countries have been working with civil society and government ministries to promote laws that protect the rights of people with TB;

(c) National assessments of barriers to quality TB care associated with human rights, gender, stigma and discrimination and specific key populations have been conducted in more than 20 countries, using guidance and tools developed by the Stop TB Partnership and the KNCV Tuberculosis Foundation. These assessments have led to new government-issued guidance in some countries.

63. United Nations entities working to address the special risks of TB in vulnerable populations include the Permanent Forum on Indigenous Peoples of the Economic

[24] Ibid., *WHO Consolidated Guidelines on Tuberculosis, Module 4: Treatment – Drug Resistant Tuberculosis Treatment* (Geneva, 2020).

[25] Ibid., *WHO Consolidated Guidelines on Tuberculosis, Module 1: Prevention –Tuberculosis Preventive Treatment* (Geneva, 2020).

[26] Ibid., *Guidelines for Treatment of Drug-Susceptible Tuberculosis and Patient Care: 2017 Update* (Geneva, 2017).

[27] Stop TB Partnership and Médecins sans frontières, *Step Up for TB, 2020* (forthcoming).

[28] Stop TB Partnership and TB People, “Declaration of the rights of people affected by tuberculosis”, May 2019.

and Social Council, the Office of the United Nations High Commissioner for Refugees, WHO and the International Organization for Migration. The International Federation of Red Cross and Red Crescent Societies, Médecins sans frontières and many other non-governmental partners are helping to address TB among indigenous peoples,[29] refugees and internally displaced persons, migrants and communities affected by humanitarian emergencies and other crises. The Global Fund to Fight AIDS, Tuberculosis and Malaria has a financing mechanism for challenging operating environments and strategic initiatives that include specific attention to community, rights and gender. The World Bank supports focused efforts in several countries.

64. Engagement of civil society and communities affected by TB is vital for an effective TB response. This has grown since the high-level meeting of the General Assembly on the fight against tuberculosis, but more extensive and meaningful engagement is still needed.

65. In 2019 and early 2020, 25 of 30 countries with high TB burdens conducted reviews of their national TB programmes and national strategic plans. Civil society and communities affected by TB were part of those processes in nearly all countries. The recommendations of many reviews called for greater and more organized engagement of civil society, including in policymaking forums and with regard to capacity-building.

66. Global and regional networks of people affected by TB have been strengthened or newly established. They are driving national advocacy campaigns on human rights and the elimination of stigma, treatment literacy and psychosocial support.[30]

67. In at least 10 countries (Azerbaijan, Belarus, Cambodia, Democratic Republic of the Congo, Indonesia, Kyrgyzstan, Mozambique, Tajikistan, Ukraine and United Republic of Tanzania), national networks of communities affected by TB and civil society have begun monitoring the availability, accessibility, acceptability and quality of TB care and support services.[31] Some countries have formed national TB community advisory boards to inform research policies or advise research projects and/or created national networks of advocates to monitor commitments, policies and/or services.

68. The WHO Civil Society Task Force on TB established in 2018 is another example of the meaningful engagement of civil society.[32] Its aim is to mainstream civil society and affected community perspectives of the TB response at all levels. Task Force members are helping to guide and coordinate stakeholder efforts to facilitate the rapid adoption of and access to newly recommended treatments and the formalization of mechanisms for civil society engagement, with a focus on social protection, parliamentarian engagement, amplification of the voices of TB survivors, advocacy for increased domestic funding, the sharpening of focus on and attention to the marginalized and most vulnerable, TB research, the addressing of social, legal and gender barriers to care, and strengthened accountability.

69. The Stop TB Partnership,[33] WHO, the Global Fund and bilateral donors such as the United States Agency for International Development are funding civil society efforts at the country level. More investment is needed in independent networks of people affected by TB, particularly TB survivors and those who are most marginalized and vulnerable.

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[29] A national example is the development of a TB elimination framework of the Inuit Tapiriit Kanatami in Canada. See www.itk.ca/inuittbeliminationframework/.

[30] See www.stoptb.org/communities/.

[31] See https://stoptbpartnershiponeimpact.org/.

[32] WHO, *WHO Civil Society Task Force on TB: Engagement with Civil Society as the Driver for Change* (Geneva, 2020).

[33] For example, through TB REACH and the Challenge Facility for Civil Society.

70. The engagement of tens of thousands of young people in the fight to end TB is taking shape through the WHO 1+1 youth initiative and the WHO Youth declaration to end TB.[34]

71. To strengthen multisectoral engagement and accountability, as requested in the political declaration of the high-level meeting of the General Assembly on the fight against tuberculosis, WHO finalized and published a multisectoral accountability framework for TB in 2019. WHO is supporting countries in adapting and using the framework to translate commitments into actions and to monitor, report and review progress, with the engagement of high-level leadership, all relevant sectors, civil society and other stakeholders.

72. Examples of high-level leadership on multisectoral accountability include Presidential or Head of State End TB initiatives and formalized mechanisms for the engagement and accountability of stakeholders in India, Indonesia, Pakistan, the Philippines and Viet Nam as well as national campaigns to drive progress, such as the "Race to End TB" initiative in the Philippines. The Russian Federation is supporting the implementation of the multisectoral accountability framework at global and national levels. In 2020, 86 countries reported that a national multisectoral accountability mechanism under high-level leadership was in place, and that 62 of those mechanisms included representatives of civil society and TB-affected communities. A total of 133 countries reported that they had produced a publicly available annual report about the status of the TB epidemic and progress in response efforts. The African Union, in collaboration with the WHO Regional Office for Africa and the Stop TB Partnership, is undertaking high-level reviews based on the results of national "TB scorecards" produced by the African Union and the Stop TB Partnership.

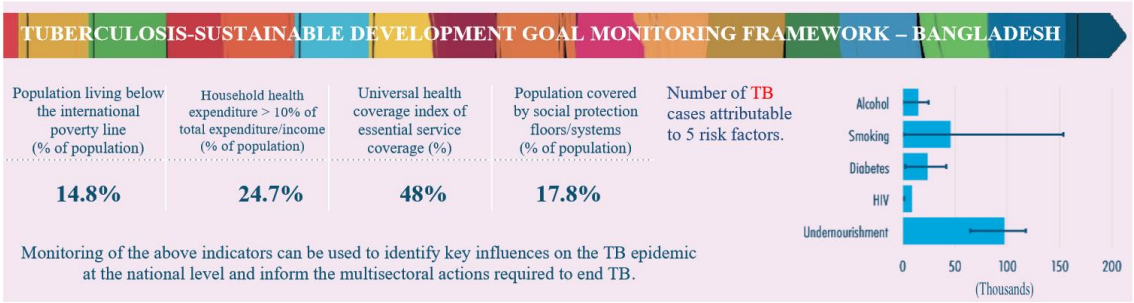
73. Since the high-level meeting of the General Assembly, 97 countries, including 25 of the 30 countries with high TB burdens, have updated their national TB strategic plans, including by setting more ambitious targets based on the 2018–2022 global targets for TB treatment and prevention. The Stop TB Partnership made available indicative country-specific targets[35] to help countries align their targets with the global targets, and also updated its *Global Plan to End TB* (from 2016–2020 to 2018–2022). Among the greatest challenges is insufficient funding for national plans.

74. Achieving global TB targets requires multisectoral action to address the broader determinants that influence TB epidemics (e.g., poverty, undernourishment, HIV, smoking, diabetes, mental health) and to mitigate their socioeconomic impact (e.g., through social protection). Millions of TB cases each year are attributable to undernutrition and health-related risk factors including HIV infection, diabetes and smoking. WHO provides national profiles showing the status of Sustainable Development Goal-related indicators that are determinants of TB incidence in its annual *Global Tuberculosis Report* (see figure XIV).

[34] WHO, "Youth declaration to end TB", July 2019.

[35] See www.stoptb.org/resources/countrytargets/.

Figure XIV
Sample country profile from Bangladesh on the monitoring of Sustainable Development Goal indicators associated with tuberculosis incidence



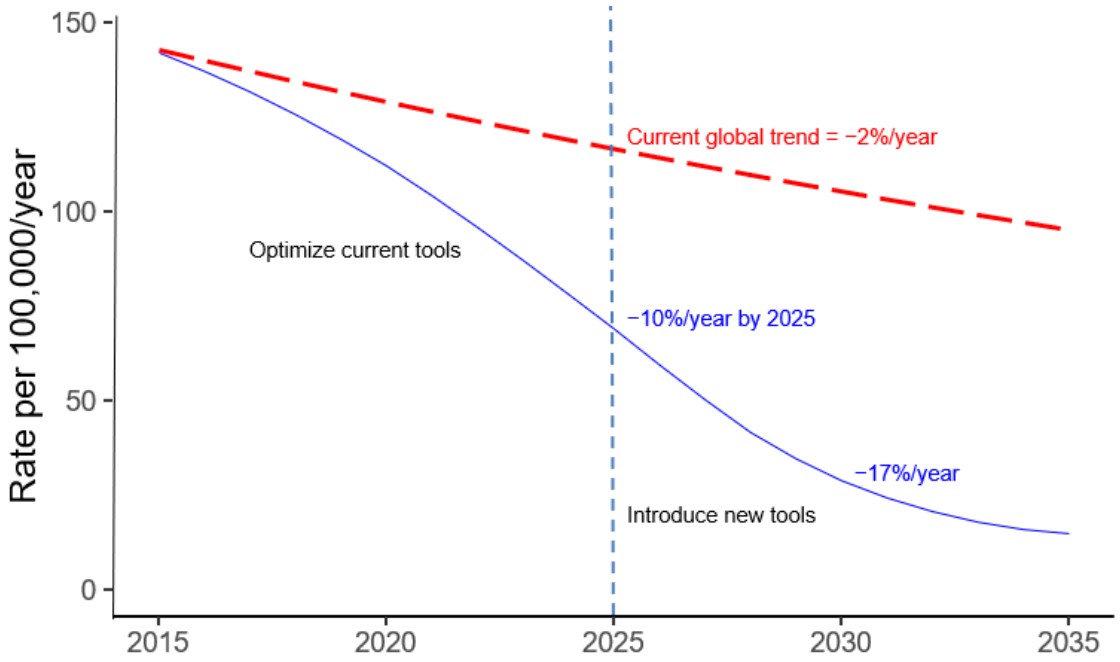
75. There is growing recognition of the importance of social protection for people with TB.[36] A recent example is India, where a cash-transfer programme for people with TB has been massively expanded since 2018. The Global Fund is providing financing for social support for people with MDR/RR-TB in many countries. The World Food Programme has provided nutritional or livelihood support to people with TB in more than 15 low-income countries.

C. Driving research and innovation

76. Reaching the 2030 global TB targets requires technological breakthroughs by 2025, so that the annual decline in global TB incidence can be accelerated to an average of 17 per cent per year (see figure XV), and research and development is critical to achieving that goal. The world needs affordable and accessible rapid point-of-care tests for diagnosing TB infection and TB disease and for detecting drug resistance; shorter, safer regimens for treating TB infection and TB disease, especially drug-resistant TB; a TB vaccine that is effective before and after exposure across a range of age groups and geographical settings; and innovative strategies to implement recommended interventions.

[36] The Social Protection Action Research and Knowledge-Sharing Network (SPARKS) fosters research on TB and social protection and related health issues. See https://sparksnetwork.ki.se/.

Figure XV
Projected acceleration of tuberculosis incidence required to reach targets, 2015–2035



77. The funding target for TB research set at the high-level meeting of the General Assembly on the fight against tuberculosis is $2 billion per year; to date, annual funding has reached only $906 million (see sect. II.G.).

78. In 2018, there were at least 20 medicines, 12 vaccines and several diagnostics in clinical development. By mid-2020, the number of medicines and vaccines had increased to 22 and 14, respectively. The diagnostics pipeline was robust in terms of the number of technologies used, but progressed slowly. A major development in 2018 related to results from a phase IIb trial of the TB vaccine candidate M72/AS01$_E$, which was reported to protect against TB disease with an efficacy of 50 per cent (with a 90 per cent confidence interval ranging from 12–71 per cent after approximately 3 years of follow-up.[37] If these findings are confirmed in a larger study, it could transform TB prevention approaches. Nonetheless, ending TB will likely require more than one type of vaccine and the current portfolio of new TB vaccine candidates is not sufficiently diverse.

79. Strong government leadership is required to mobilize domestic resources, foster public-private partnerships and incentivize the engagement of pharmaceutical companies, biotechnology firms and other health product developers. Insufficient investment, weak research infrastructure, low numbers of academic researchers and poor links between national programmes and research institutes have slowed the pace of innovation. The complexity and variability of regulatory processes related to sharing scientific data, patent information, the review of new health products and research protocols also constrain the pace of research.

80. In 2018, Member States requested WHO to develop a global strategy for TB research and innovation to set out key steps that Governments and non-State actors could undertake to overcome these challenges. The strategy was considered by the

[37] Dereck R. Tait and others, “Final analysis of a trial of M72/AS01$_E$ vaccine to prevent tuberculosis”, *New England Journal of Medicine*, vol. 381, No. 25 (19 December 2019).

Executive Board of WHO in January 2020 and will be considered at the next World Health Assembly in 2020.[38]

81. An essential element of the strategy is multi-country partnerships to foster collaboration, improve efficiency and amplify financing. A recent example is the BRICS TB Research Network, a collaboration of five countries with high TB burdens that have scientific prowess and are increasing their investments in TB research. WHO supports the Network's secretariat.[39] In 2018, the Group of 20 launched a hub for global antimicrobial resistance research and development (including on drug-resistant TB).[40]

82. Overall, achieving equitable access to new TB medicines and technologies remains a major challenge. Contributing factors include: complex legal and regulatory mechanisms; the failure of manufacturers to register products in countries with high TB burdens or to include TB indications for medicines; clinician preferences and/or resistance to changing practices; inadequate health care budgets; weak health care system infrastructure and social care; local costs that drive up prices (e.g., taxes and tariffs on health products); and gaps in procurement and supply chain frameworks. Implementation research can help to enhance delivery and scale up efforts, but insufficient investment remains a constraint.

D. Strengthening collaboration among all stakeholders with Member States under the leadership of the Secretary-General and the Director General of the World Health Organization

83. WHO is leading a multisectoral platform of 12 multilateral health, development and humanitarian agencies that builds on Sustainable Development Goal 3 (Ensure healthy lives and promote well-being for all at all ages), including the TB-related target. WHO works closely with many agencies and entities, including the Bill and Melinda Gates Foundation; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Global TB Caucus; the KNCV Tuberculosis Foundation; the Stop TB Partnership; the International Union Against Tuberculosis and Lung Disease (the Union); UNITAID; the United States Agency for International Development; and the World Bank. Several Member States continue to actively support WHO in its work on TB, including the Government of the United States through its Agency for International Development and its Centers for Disease Control and Prevention, the Netherlands, the Russian Federation, China, Luxembourg, the Republic of Korea and Japan.

84. There is accelerated action in all WHO regions towards ending TB. Recent examples include partnerships between the African Union and the WHO Regional Office for Africa with countries and partners to create a continental accountability platform; the creation of a United Nations common position on ending HIV, TB and viral hepatitis through intersectoral collaboration, under the leadership of the WHO Regional Office for Europe; the organization of a meeting of Heads of State and Government on TB by the WHO Regional Office for South-East Asia in 2018, with a follow-up meeting in 2019; subregional mechanisms to support the United Nations global TB targets in the Americas, including the Council of Central American Ministers of Health and the Dominican Republic; discussion of TB elimination strategies by the Gulf Cooperation Council in the Eastern Mediterranean Region; and high-level missions to countries with high TB burdens in the Western Pacific Region,

[38] See World Health Assembly, document EB146.R7.

[39] Health Ministers from Brazil, the Russian Federation, India, China and South Africa (BRICS), joint communiqué presented at the 72nd World Health Assembly, Geneva, May 2019.

[40] See www.gesundheitsforschung-bmbf.de/en/GlobalAMRHub.php.

including the launch of initiatives called “Race to End TB” in the Philippines and Viet Nam. There is a regional platform for TB advocacy in every region.

Global monitoring, reporting and review

85. Regular reports and reviews of progress towards ending TB by the General Assembly and World Health Assembly are essential to global and national accountability. The World Health Assembly has reviewed progress on TB in both 2019 and 2020 in follow-up to the high-level meeting of the General Assembly, examining data collected by WHO global monitoring and reporting on the status of the TB epidemic and progress in responding to it, which includes an annual round of data collection from all Member States and the publication of an annual WHO *Global Tuberculosis Report*. The World Health Assembly will next address progress in 2022, in advance of the comprehensive review at a high-level meeting of the General Assembly in 2023.

IV. COVID-19 pandemic and tuberculosis: impact and implications

86. Since the end of 2019, the COVID-19 pandemic has caused enormous health, social and economic impacts. Even after some of these are mitigated or contained, there will be medium- and longer-term consequences. In the context of the global TB epidemic, COVID-19 threatens to reverse recent progress towards global TB targets.

A. Annual number of tuberculosis deaths could revert to levels seen in 2015 or even in 2012

87. Two modelling analyses have reached similar conclusions about the potential impact of the COVID-19 pandemic on TB deaths.[41, 42]

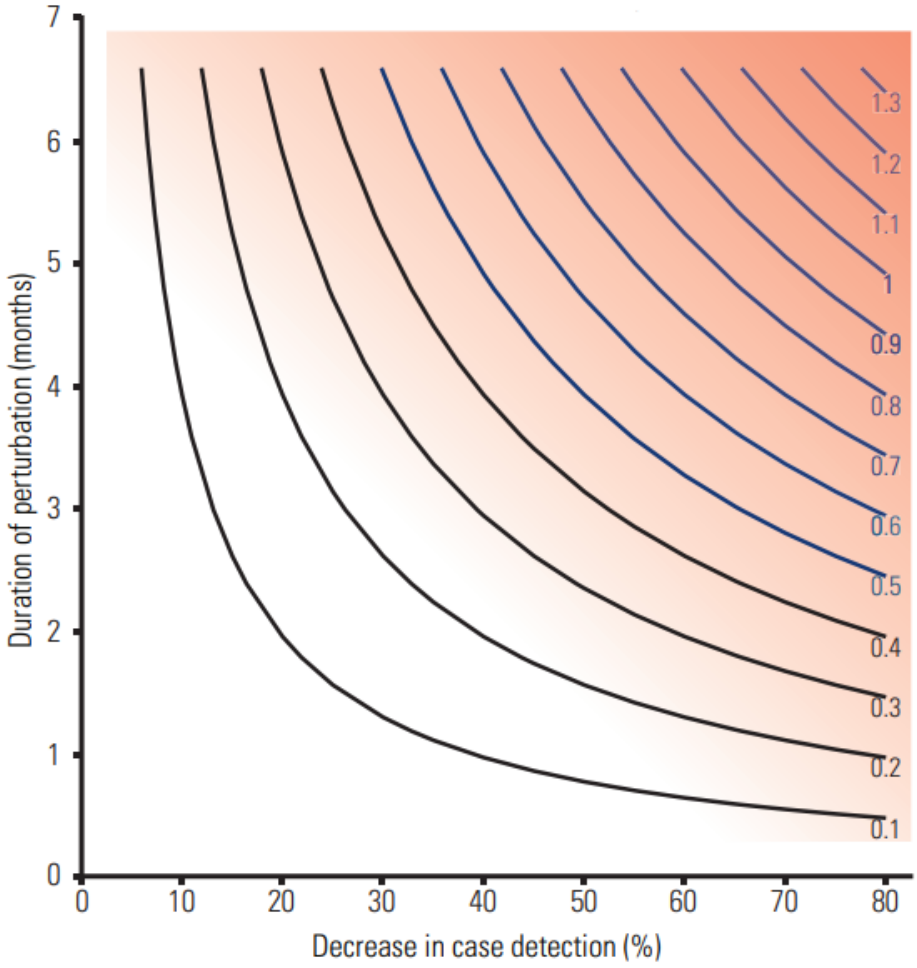
88. A WHO analysis assessed the additional number of TB deaths that could occur globally in 2020 for different combinations of a decrease in case detection (compared with levels prior to the pandemic) and the number of months for which this decrease occurs (see figure XVI). If the number of people with TB detected and treated falls by 25 to 50 per cent over a period of three months, a range considered plausible based on data from several countries with high TB burdens, including India and Indonesia, there could be approximately 200,000 to 400,000 excess TB deaths in 2020, raising the total number of deaths to some 1.6 million to 1.8 million. An increase of 200,000 would take the world back to 2015 levels, while an increase of 400,000 would bring the world back to 2012 levels.[43]

[41] Philippe Glaziou, “Predicted impact of the COVID-19 pandemic on global tuberculosis deaths in 2020”, MedRxiv, May 2020.

[42] Stop TB Partnership, “The potential impact of the COVID-19 response on tuberculosis in high-burden countries: a modelling analysis”, 1 May 2020.

[43] It is also possible that TB could worsen outcomes related to COVID-19.

Figure XVI
Range of possible excess deaths from tuberculosis resulting from potential reductions in the detection of tuberculosis cases in 2020
(Millions)



89. A study by the Stop TB Partnership suggested that a 3-month lockdown combined with a protracted (10-month) restoration of services could cause an additional 1.4 million TB deaths between 2020 and 2025.

B. Tuberculosis incidence could increase

90. The COVID-19 pandemic is likely to have a medium-term impact on TB incidence. Social distancing policies may contribute to reduced TB transmission, but this could be offset by longer durations of infectiousness, worsening treatment outcomes and increasing levels of poverty and household exposure to TB infection. In the absence of effective mitigation strategies such as social protection and health insurance, severe economic contractions and loss of income (particularly among the most vulnerable populations) are likely to worsen some of the factors that determine TB epidemics, especially the prevalence of undernutrition. The Stop TB Partnership model suggested that the COVID-19 pandemic could cause an additional 6.3 million people to fall ill with TB between 2020 and 2025.

C. Access to tuberculosis treatment and preventive treatment has already been affected

91. Extra pressure on health services resulting from the COVID-19 pandemic combined with negative impacts on care-seeking behaviour could slow or reverse progress towards TB treatment and prevention targets, especially in countries with high TB burdens. There is already evidence from several countries of large reductions (>50 per cent) in the number of cases of TB detected and officially reported each month in 2020. Tracing the household contacts of people with TB has been suspended in some countries.

D. Economic impacts resulting from the COVID-19 pandemic will make it harder to increase the amount of funding available for tuberculosis and the impact on livelihoods could increase the proportion of people with tuberculosis who face catastrophic costs

92. The International Monetary Fund forecasts suggest global output will fall by about 3 per cent; more severe economic contractions are already occurring or forecast in many countries.[44] This will put major pressure on the financial resources that national Governments can make available, including for the TB response. There is already evidence from several countries that resources originally allocated for TB (for example, staff and diagnostic equipment) have been diverted to the COVID-19 response. Negative impacts on employment opportunities threaten the livelihoods of many millions of people, and those most at risk of developing TB are among the most vulnerable. Without strong mitigation measures, an even higher proportion of people with TB and their households will be at risk of facing catastrophic costs.

93. The COVID-19 Response Mechanism of the Global Fund to Fight AIDS, Tuberculosis and Malaria has allocated $1 billion to help mitigate impacts on TB, HIV and malaria. Countries have begun using this funding, including to strengthen laboratory networks and procure additional diagnostics.

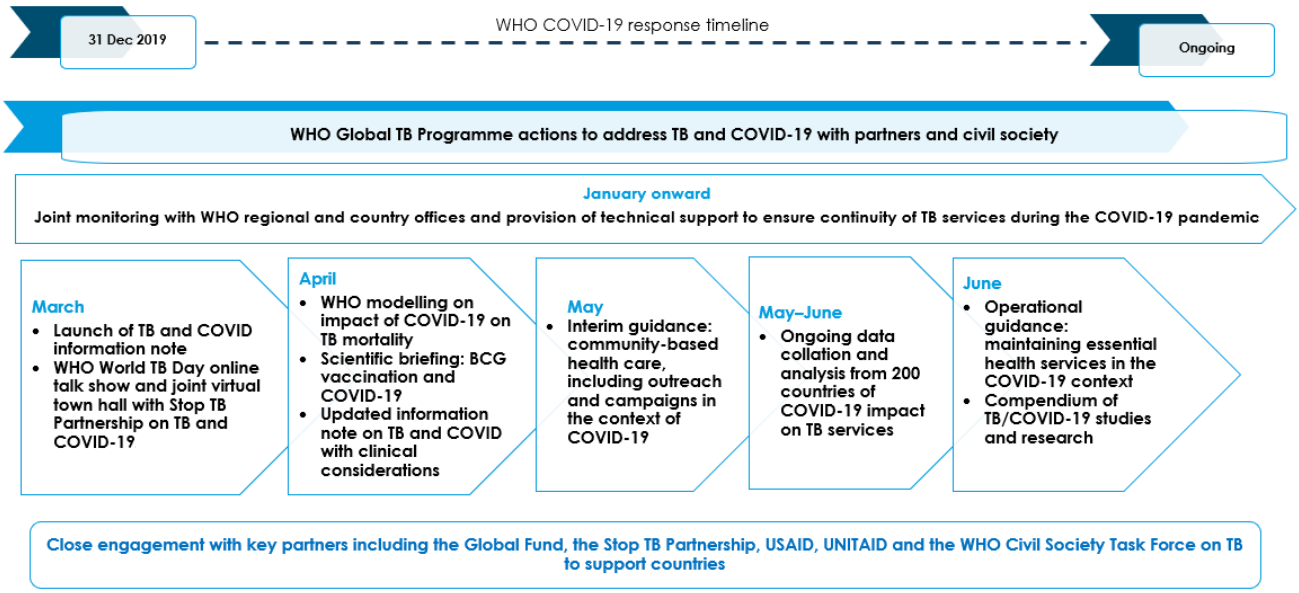
E. World Health Organization has taken urgent action to guide and support Member States

94. Since WHO declared COVID-19 a public health emergency of international concern in January 2020, the WHO Global TB Programme has been monitoring the impact and providing guidance[45] and support to Member States, in close collaboration with regional and country offices, civil society and partners, including the Stop TB Partnership and the Global Fund (see figure XVII).

[44] International Monetary Fund, *World Economic Outlook: The Great Lockdown* (Washington, D.C., 2020).

[45] WHO, “Updated WHO information note: ensuring continuity of TB services during the COVID-19 pandemic”, 12 May 2020.

Figure XVII
Actions taken by the Global TB Programme of the World Health Organization in the context of tuberculosis and the COVID-19 pandemic since January 2020



Abbreviations: BCG vaccine, bacille Calmette-Guérin vaccine; USAID, United States Agency for International Development.

95. WHO recommends that TB services be maintained and strengthened as essential during the current pandemic and other outbreaks. This includes ensuring access to people-centred prevention and care services; ensuring effective infection prevention and control measures; planning proactively for procurement, supply and risk management; and leveraging the expertise and experience of national TB programmes, especially in rapid testing and contact tracing, for the COVID-19 response.

V. Recommendations

96. The present report has highlighted that, although high-level commitments and targets have galvanized global and national progress towards ending TB, urgent and more ambitious investments and actions are required to end TB. These are especially critical in the context of the COVID-19 pandemic, which has already had an impact on the TB response and threatens to reverse recent progress.

97. Member States are urged to implement the following 10 priority recommendations to put the world on track to reach agreed targets by 2022 and beyond, and to reduce the enormous human and societal toll caused by TB.

Recommendation 1. Fully activate high-level leadership to urgently reduce tuberculosis deaths and drive multisectoral action to end tuberculosis

98. Given that TB is the world's top infectious killer and is a preventable and curable disease, and that progress is too slow to reach global targets; that TB incidence is declining far too slowly and the key drivers of the TB epidemic include social and economic determinants such as poverty and undernutrition, as well as health-related risk factors, and half of people with TB and their households face catastrophic costs; and that the COVID-19 pandemic poses a major risk that TB deaths, TB incidence and the number of people with TB facing catastrophic costs will significantly increase, Member States are urged to:

(a) Ensure that high-level multisectoral collaboration and accountability under the leadership of Heads of State and Government, including regular reviews of progress, is in place in all countries – especially those with a high TB burden;

(b) Ensure that progress towards national targets for reductions in TB deaths and TB incidence is regularly monitored and reviewed at the highest level, and findings are acted upon, especially in countries with a high TB burden;

(c) Strengthen national notification and vital registration systems so that they meet quality and coverage standards to ensure robust measurement of trends in TB incidence and deaths;

(d) Ensure that social protection measures, including essential benefit packages and subsidization schemes, are fit-for-purpose, so that no one affected by TB faces catastrophic costs.

Recommendation 2. Urgently increase funding for essential tuberculosis services, including the health workforce

99. Given that funding for universal access to TB prevention, diagnosis, treatment and care is vital to achieving a substantial reduction in TB deaths, that funding needs to double to reach the global target of at least $13 billion per year by 2022 and that spending on TB offers one of the best returns on investment in health and development, Member States are urged to:

(a) Increase domestic funding to combat TB, especially in middle-income countries with a high TB burden, while also building synergies in the response to both TB and COVID-19;

(b) Increase international donor funding for the TB response, from both existing and new innovative funding mechanisms, so that funding levels are commensurate with the burden of disease.

Recommendation 3. Advance universal health coverage to ensure all people with tuberculosis have access to affordable quality care, and resolve underreporting challenges

100. Given that Member States have committed to reach an additional 1 billion people with essential health services by 2023, that access to TB treatment is increasing but not yet enough to reach the target of treating 40 million people from 2018 to 2022 and that there is an annual gap of about 3 million people, including half a million children, who miss out on access to care or are not reported as having TB, Member States are urged to:

(a) Ensure that TB services are maintained and strengthened as an essential component of sustainable health systems and progress towards universal health coverage. This includes, as recommended by WHO, expanded access to:

(i) Rapid molecular diagnostics as the initial test to diagnose TB, and its resistance to key drugs;

(ii) Treatment with new effective drugs and regimens;

(iii) Psychosocial, nutritional and other support;

(iv) Systematic screening for TB and preventive treatment for TB;

(b) Improve financial protection for people affected by TB and drug-resistant TB through relevant mechanisms, such as national health insurance systems or other pooled prepayment schemes, across public and private health sectors;

(c) Scale up engagement and leverage the capacity of private and other public health-care providers that are not linked to national TB programmes to deliver TB prevention, diagnosis and care services to reach the missing people with TB, including children, especially in countries with a large private sector;

(d) Ensure mandatory notification of all people diagnosed with TB, covering public, private and community-based providers, facilitated by the expanded use of electronic case-based reporting and digital technologies.

Recommendation 4. Address the drug-resistant tuberculosis crisis to close persistent gaps in care

101. Given that drug-resistant TB is a major contributor to antimicrobial resistance and is a threat to global health security; that close to half a million people develop drug-resistant TB every year, of which less than half are diagnosed and only around 100,000 successfully treated; and that progress towards the target of treating 1.5 million people with drug-resistant TB, including 115,000 children, from 2018 to 2022 is therefore far too slow, Member States are urged to:

(a) Expand the use of rapid molecular TB diagnostics and test all those diagnosed with TB and rifampicin resistance for susceptibility to the fluoroquinolone class of drugs;

(b) Expand access to WHO-recommended all-oral treatments for adults and children diagnosed with drug-resistant TB;

(c) Increase access to affordable high-quality drugs and diagnostics for populations in need, using effective mechanisms such as the Global Drug Facility of the Stop TB Partnership;

(d) Include actions to address drug-resistant TB explicitly within national antimicrobial resistance strategies and plans.

Recommendation 5. Dramatically scale up provision of preventive treatment for tuberculosis

102. Given that access to preventive treatment for TB is increasing far too slowly to reach the target of providing 30 million people with preventive treatment from 2018 to 2022, due to very low coverage among household contacts of people diagnosed with TB, Member States are urged to:

(a) Massively expand household contact investigation, including for children and people with drug-resistant TB, by updating national policies and strategies for preventive treatment for TB in line with WHO recommendations, increasing investments and building synergies with the contact-tracing efforts of the COVID-19 response;

(b) Promote and expand access to testing for TB infection and preventive treatment with new medicines and shorter regimens, and provide support to encourage adherence to the treatment;

(c) Continue to expand the coverage of preventive treatment for TB alongside antiretroviral treatment for people living with HIV.

Recommendation 6. Promote human rights and combat stigma and discrimination

103. Given that the promotion and protection of the human rights of people affected by TB is a legal, ethical and moral imperative, and that people affected by TB continue to be subjected to human rights violations which, together with stigma and discrimination, impede access to care and add to the suffering caused by the disease, Member States are urged to:

(a) Review and update laws, policies and programmes to combat inequalities and eliminate stigma and discriminatory practices in the TB response, working together with civil society and affected communities and paying particular attention to vulnerable populations;

(b) Ensure that national TB strategies, plans, policies and other documentation avoid stigmatizing language.

Recommendation 7. Ensure meaningful engagement of civil society, communities and people affected by tuberculosis

104. Given that engagement of civil society, communities and people affected by TB is essential to the TB response, and that, while this has grown since the high-level meeting of the General Assembly on the fight against tuberculosis, accelerated efforts are needed to ensure more extensive engagement, Member States are urged to actively invest in building the capacity of civil society and representatives of affected communities, including TB survivors, to ensure their meaningful engagement in all aspects of the TB response, including with regard to policymaking forums, planning, care delivery, monitoring and review.

Recommendation 8. Substantially increase investments in tuberculosis research to drive technological breakthroughs and the rapid uptake of innovations

105. Given that global funding for TB research needs to more than double to reach the annual target of $2 billion, that chronic underfunding of TB research means there are still no point-of-care tests, treatments remain long, the only licensed vaccine is more than 100 years old and provides limited protection and that ending TB depends on the development and rapid uptake of new tools and innovation, Member States are urged to:

(a) Increase investment in TB research and innovation to at least $2 billion per year from national Governments and bilateral and multilateral financing sources, as well as development and private sector institutions;

(b) Develop and implement actionable, fully funded and well-resourced national strategies for TB research and innovation, building on the global strategy for TB research and innovation developed by WHO, in collaboration with research networks, relevant non-State actors, international agencies and TB community advisory boards;

(c) As a matter of urgency, support the implementation of phase II and phase III trials for the most promising TB vaccine and drug candidates;

(d) Ensure that TB diagnostics and drugs are prioritized for fast-tracked review by national regulatory authorities and considered for inclusion in essential lists;

(e) Rapidly adopt and implement innovations, including digital technologies, related to the different aspects of TB prevention and care.

Recommendation 9. Ensure that tuberculosis prevention and care are safeguarded in the context of COVID-19 and other emerging threats

106. Given the enormous health, social and economic impact of the COVID-19 pandemic, which in 2020 alone may cause hundreds of thousands of excess TB deaths due to disruptions to essential TB services and access to care, and given that national TB programmes are already heavily engaged in the COVID-19 response and that there are obvious similarities in the responses needed for both TB and COVID-19, Member States are urged to:

(a) Ensure that TB prevention, diagnosis and treatment are maintained as essential health services in the context of health emergencies, with infection prevention and control measures in place for health facilities and affected households;

(b) Monitor and review the impact of the COVID-19 pandemic on the TB response, including with the engagement of civil society and affected communities, to inform timely action;

(c) Build back stronger by learning lessons from the COVID-19 pandemic, including by enhancing the resilience of TB programmes during emergencies, implementing catch-up recovery plans to reach targets and harnessing innovations such as digital technologies.

Recommendation 10: Request the World Health Organization to continue to provide global leadership for the tuberculosis response, working in close collaboration with Member States and other stakeholders, including to prepare for a high-level meeting on tuberculosis in 2023 that aligns with the high-level meeting of the General Assembly on universal health coverage also to be held in 2023

107. Given that WHO, as the United Nations specialized agency for health, provides global leadership and coordination for the TB response, in collaboration with stakeholders such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, the Stop TB Partnership, UNITAID, civil society and other entities, and that, as requested in the political declaration of the high-level meeting of the General Assembly on the fight against tuberculosis, WHO has finalized the multisectoral accountability framework for TB and is supporting its adaptation and use, Member States are urged to:

(a) Request that WHO continue to provide leadership and coordination to accelerate progress, including through political dialogue and multisectoral engagement, the provision of normative guidance and technical support to Member States, monitoring, reporting and review, and the shaping of the TB research and innovation agenda;

(b) Request that WHO continue to support Member States in the adaptation and use of the multisectoral accountability framework for TB in collaboration with partners, civil society and affected communities, and lead periodic global reviews of the TB response;

(c) Request that WHO support preparations for a comprehensive review by Heads of State and Government at a high-level meeting on TB in 2023 that aligns with the high-level meeting of the General Assembly on universal health coverage also to be held in 2023, informed by the present progress report and the *Global Tuberculosis Report* of WHO and global, regional and national high-level reviews, and preceded by an interactive civil society hearing.