To mark World TB Day 2019, the World Health Organization (WHO) has presented a package of critical accelerators that will help countries increase the pace of progress to end the TB epidemic by 2030 and meet the targets of the WHO End TB Strategy, the Sustainable Development Goals and the UN high-level meeting political declaration. Key tools that have been recently issued by WHO include:

### Targets and Commitments

1. Providing diagnosis and treatment with the aim of successfully treating 40 million people with TB from 2018 to 2022, including 3.5 million children, and 1.5 million people with drug-resistant TB;

2. Preventing TB for those most at risk of falling ill, through the rapid scaling up of access to testing and the provision of preventive treatment, so that at least 30 million people receive preventive treatment by 2022, with specific targets for children, household contacts and people living with HIV;

3. Mobilizing sufficient and sustainable financing, with the aim of increasing overall global investments for ending TB, and reaching at least US$ 13 billion a year by 2022, with an additional US$ 2 billion a year for TB research;

4. Overcoming the global public health crisis of multidrug-resistant TB through actions for prevention, diagnosis, treatment and care;

5. Improving policies and systems on each country’s path towards achieving and sustaining universal health coverage;

6. Enabling and pursuing multisectoral collaboration at the global, regional, national and local levels;

7. Addressing the economic and social determinants of the disease; promoting an end to stigma and all forms of discrimination, including through the protection and promotion of human rights and dignity; and providing special attention to the poor, vulnerable and communities especially at risk;

8. Advancing research and innovation through global collaboration including through WHO mechanisms, and networks;

9. Requesting the Director-General of WHO to continue to develop the multisectoral accountability framework and ensure its timely implementation no later than 2019;

10. Requesting the Secretary-General of the UN, with the support of WHO, to provide a progress report in 2020 on global and national progress, which will serve to inform preparations for a comprehensive review by Heads of State and Government at a high-level meeting in 2023.

### Accelerators

**WHO Consolidated Guidelines on:**
- Drug-resistant tuberculosis treatment
- Programmatic management of latent TB infection
- TB infection prevention and control

**Roadmaps**
- Ending TB in children and adolescents
- Scaling up public–private engagement for TB prevention and care

**Planning and Prioritization Tool**
- People-Centred Framework for TB programme planning & prioritization

**Joint Initiative**
- FIND. TREAT. ALL. #ENDTB Joint Initiative of the World Health Organization, Stop TB Partnership, the Global Fund, countries and Partners

**WHO Engagement Mechanism**
- Civil society taskforce

**WHO Global Research Strategy**

**WHO Multisectoral Accountability Framework**

**END TB Dashboard**
- New digital platform for timely analysis and use of TB data

**Global TB Report**
Drug-resistant tuberculosis (DR-TB) is more difficult to treat than forms of disease that are still responsive to the antimicrobials used to treat TB. DR-TB threatens global progress towards the targets set by the End TB Strategy of the World Health Organization (WHO). There is thus a critical need for evidence-based policy recommendations on the treatment and care of patients with DR-TB, based on the most recent and comprehensive evidence available. The WHO consolidated guidelines on drug-resistant tuberculosis treatment fulfill the mandate of WHO to inform health professionals in Member States on how to improve treatment and care for patients with DR-TB.

Between 2011 and 2018, WHO developed several evidence-based policy recommendations on the treatment and care of patients with DR-TB. These policy recommendations were released as part of eight WHO guidelines with their associated annexes (see Box 1), the latest being the updated WHO guidelines for the treatment of multidrug- and rifampicin-resistant TB (MDR/RR-TB) issued in December 2018. These guidelines have been developed by WHO-convened Guideline Development Groups (GDGs), using the GRADE (Grading of Recommendations, Assessment, Development and Evaluation) approach to summarize the evidence, and formulate policy recommendations and accompanying remarks. GDGs are composed of multidisciplinary groups of external experts with experience in different aspects of the programmatic and clinical management of DR-TB, as well as affected individuals. The methods used to develop the recommendations complied with the requirements of WHO’s Guideline Review Committee (GRC), and the GRC has overseen the development of each of these guidelines.

Most anti-TB medicines have been used for decades, and resistance to them is widespread. TB strains that are resistant to at least one anti-TB medicine have been documented in every country surveyed.

Isoniazid-resistant TB (Hr-TB), is caused by bacteria that do not respond to isoniazid but in which rifampicin remains effective. Isoniazid and rifampicin are some of the most important anti-TB medicine and patients with Hr-TB need different regimens from those with drug-susceptible disease.

Rifampicin-resistant tuberculosis (RR-TB) is caused by bacteria that do not respond to rifampicin, one of the most powerful anti-TB medicines. These patients require MDR-TB treatment.

Multidrug-resistant tuberculosis (MDR-TB) is caused by bacteria that do not respond to, at least, isoniazid and rifampicin, the two most powerful anti-TB medicines. Patients with multidrug-resistant or rifampicin-resistant tuberculosis (MDR/RR-TB) require treatment with second-line treatment regimens, which are more complex than those used to treat patients without drug-resistant TB.

Extensively drug-resistant TB (XDR-TB) is a form of MDR-TB which is also resistant to two groups of second-line anti-TB medicines, making it more difficult to treat.
In patients with confirmed rifampicin-susceptible and isoniazid-resistant tuberculosis, treatment with rifampicin, ethambutol, pyrazinamide and levofloxacin is recommended for a duration of 6 months.

In patients with confirmed rifampicin-susceptible and isoniazid-resistant tuberculosis, it is not recommended to add streptomycin or other injectable agents to the treatment regimen.

The composition of longer MDR-TB regimens

In MDR/RR-TB patients on longer regimens, all three Group A agents and at least one Group B agent should be included to ensure that treatment starts with at least four TB agents likely to be effective, and that at least three agents are included for the rest of the treatment after bedaquiline is stopped. If only one or two Group A agents are used, both Group B agents are to be included. If the regimen cannot be composed with agents from Groups A and B alone, Group C agents are added to complete it.

Kanamycin and capreomycin are not to be included in the treatment of MDR/RR-TB patients on longer regimens.

Levofoxacin or moxifloxacin should be included in the treatment of MDR/RR-TB patients on longer regimens.

Bedaquiline should be included in longer MDR-TB regimens for patients aged 18 years or more. Bedaquiline may also be included in longer MDR-TB regimens for patients aged 6–17 years.

Linezolid should be included in the treatment of MDR/RR-TB patients on longer regimens.

Clofazimine and cycloserine or terizidone may be included in the treatment of MDR/RR-TB patients on longer regimens.

Ethambutol may be included in the treatment of MDR/RR-TB patients on longer regimens.

Delamanid may be included in the treatment of MDR/RR-TB patients aged 3 years or more on longer regimens.

Pyrazinamide may be included in the treatment of MDR/RR-TB patients on longer regimens.

Imipenem–cilastatin or meropenem may be included in the treatment of MDR/RR-TB patients on longer regimens. Amikacin may be included in the treatment of MDR/RR-TB patients aged 18 years or more on longer regimens when susceptibility has been demonstrated and adequate measures to monitor for adverse reactions can be ensured. If amikacin is not available, streptomycin may replace amikacin under the same conditions.

Ethionamide or prothionamide may be included in the treatment of MDR/RR-TB patients on longer regimens only if bedaquiline, linezolid, clofazimine or delamanid are not used or if better options to compose a regimen are not possible.

*p*-aminosalicylic acid may be included in the treatment of MDR/RR-TB patients on longer regimens only if bedaquiline, linezolid, clofazimine or delamanid are not used or if better options to compose a regimen are not possible.

Clavulanic acid should not be included in the treatment of MDR/RR-TB patients on longer regimens.

The duration of longer MDR-TB regimens

In MDR/RR-TB patients on longer regimens, a total treatment duration of 18–20 months is suggested for most patients; the duration may be modified according to the patient’s response to therapy.

In MDR/RR-TB patients on longer regimens, a treatment duration of 15–17 months after culture conversion is suggested for most patients; the duration may be modified according to the patient’s response to therapy.

In MDR/RR-TB patients on longer regimens that contain amikacin or streptomycin, an intensive phase of 6–7 months is suggested for most patients; the duration may be modified according to the patient’s response to therapy.

1 Group A = levofloxacin/moxifloxacin, bedaquiline, linezolid; Group B = clofazmine, cycloserine/terizidone; Group C = ethambutol, delamanid, pyrazinamide, imipenem–cilastatin, meropenem, amikacin (streptomycin), ethionamide/prothionamide, p-aminosalicylic acid.

2 Imipenem–cilastatin and meropenem are administered with clavulanic acid, which is available only in formulations combined with amoxicillin (amoxicillin–clavulanic acid). When included, clavulanic acid is not counted as an additional effective TB agent and should not be used without imipenem–cilastatin or meropenem.
USE OF THE STANDARDIZED, SHORTER MDR-TB REGIMEN

- In MDR/RR-TB patients who have not been previously treated for more than 1 month with second-line medicines used in the shorter MDR-TB regimen or in whom resistance to fluoroquinolones and second-line injectable agents has been excluded, a shorter MDR-TB regimen of 9–12 months may be used instead of the longer regimens.

MONITORING PATIENT RESPONSE TO MDR-TB TREATMENT USING CULTURE

- In MDR/RR-TB patients on longer regimens, the performance of sputum culture in addition to sputum smear microscopy is recommended to monitor treatment response. It is desirable for sputum culture to be repeated at monthly intervals.

START OF ANTIRETROVIRALS IN PATIENTS ON SECOND-LINE ANTITUBERCULOSIS REGIMENS

- Antiretroviral therapy is recommended for all patients with HIV and DR-TB requiring second-line antituberculosis drugs, irrespective of CD4 cell count, as early as possible (within the first 8 weeks) following initiation of antituberculosis treatment.

SURGERY FOR PATIENTS ON MDR-TB TREATMENT

- In patients with RR-TB or MDR-TB, elective partial lung resection (lobectomy or wedge resection) may be used alongside a recommended MDR-TB regimen.

CARE AND SUPPORT FOR PATIENTS WITH MDR/RR-TB

- Health education and counselling on the disease and treatment adherence should be provided to patients on TB treatment.
- A package of treatment adherence interventions may be offered to patients on TB treatment in conjunction with the selection of a suitable treatment administration option.
- One or more of the following treatment adherence interventions (complementary and not mutually exclusive) may be offered to patients on TB treatment or to health-care providers:
  a. Tracers and/or digital medication monitor;
  b. Material support to the patient;
  c. Psychological support to the patient;
  d. Staff education.
- The following treatment adherence interventions may be offered to patients on TB treatment:
  a. Community- or home-based directly-observed treatment (DOT) is recommended over health facility-based DOT or unsupervised treatment.
  b. DOT administered by trained lay providers or health-care workers is recommended over DOT administered by family members or unsupervised treatment.
  c. Video-observed treatment (VOT) may replace DOT when video communication technology is available, and it can be appropriately organized and operated by health-care providers and patients.
- Patients with MDR-TB should be treated using mainly ambulatory care rather than models of care based principally on hospitalization.
- A decentralized model of care is recommended over a centralized model for patients on MDR-TB treatment.

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Latent tuberculosis infection (LTBI) is a state of persistent immune response to stimulation by Mycobacterium tuberculosis antigens without evidence of clinically manifested active TB.

Someone has latent TB if they are infected with the TB mycobacteria but do not have signs of active TB disease. Although individuals with LTBI do not have active TB disease, they may develop disease in the future, making the person ill and putting them at risk of passing the infection to other people.

A quarter of the world’s population is estimated to have LTBI. Systematically providing TB preventive treatment to those at highest risk of developing active TB will prevent the development of disease and also reduce the risk of transmission in the population; this is critical to end TB locally and worldwide.

In 2017, around 1 million people living with HIV (PLHIV) and around 300,000 child household contacts < 5 were provided with preventive treatment.

TB preventive treatment is a key component of the End TB strategy, and TB preventive treatment coverage among those eligible is one of the top 10 indicators to monitor progress. Implementation is currently suboptimal but opportunities for scale-up abound. WHO estimates that approximately 30 million people*, including people living with HIV and all household contacts of TB patients, regardless of age, would need to be provided TB preventive treatment between 2018-2022.

WHO RECOMMENDATIONS FOR THE MANAGEMENT OF LTBI

AT-RISK POPULATIONS

**LTBI testing and treatment should be considered for the following groups:**

- People living with HIV (PLHIV):
  - All adults and adolescents living with HIV
  - All infants and children living with HIV
- Contacts:
  - Children < 5, regardless of HIV
  - Adults and child contacts* in low burden settings (LBC)
- HIV-negative clinical risk groups: patients on anti-TNF, receiving dialysis, preparing for transplantation, and those with silicosis

**LTBI testing and treatment may be considered for the following groups:**

- HIV-negative children ≥ 5, adolescents, and adults who are contacts* in high-burden settings (HBC)
- Contacts of patients with multidrug-resistant TB
- HIV-negative prisoners, health workers, immigrants from HBCs, homeless persons, people who use illicit drugs, living in LBCs
- Children living with HIV who have successfully completed treatment for TB

RULING OUT TB

Exclude active TB using clinical algorithms and TB investigations (according to national or WHO guidelines).

*Methodology in Global TB report 2018
**Household contacts of bacteriologically confirmed active TB cases
TESTING FOR LTBI
- Either TST or IGRA can be used to diagnose LTBI
- An LTBI test is not required prior to LTBI treatment in PLHIV and children < 5

TREATING LTBI
- Daily 6 or 9 months isoniazid***
- Daily rifampicin plus isoniazid for 3 to 4 months
- Weekly rifapentine plus isoniazid for 3 months
- Daily rifampicin for 3 to 4 months

CONSIDERATIONS FOR SCALING UP

ADVERSE EVENTS MONITORING
- Mechanisms for monitoring of adverse events are encouraged, including for monitoring drug-drug interactions.

ADHERENCE AND TREATMENT COMPLETION
- Interventions to improve adherence and treatment for LTBI are encouraged.
- These should be tailored to the specific needs of the risk groups and to the local context.

MONITORING AND EVALUATION
- IM & E systems should align with national patient monitoring and surveillance systems.
- Use of standardised indicators is encouraged (see below).
- Appropriate tools to support scale-up and M & E are to be considered. For example, the WHO M & E module for mobile-phones applications is available for adaptation.
- National surveillance systems for resistance to drugs used to treat LTBI should be developed.

WHO-RECOMMENDED INDICATORS FOR PROGRAMMATIC MANAGEMENT OF LTBI

CORE GLOBAL AND NATIONAL
1. Proportion of children < 5 who are household TB contacts (according to national guidelines) who have completed TB investigations.
2. Proportion of children < 5 who are household TB contacts (according to national guidelines) who are eligible for starting on TB preventive therapy that have started treatment.
3. Proportion of eligible PLHIV newly enrolled in HIV care, started on TB preventive therapy.

CORE NATIONAL INDICATORS
4. Proportion of eligible individuals from at risk populations (according to national guidelines) tested for latent TB infection.
5. Proportion of individuals from at risk populations (according to national guidelines) with a positive latent TB test who are eligible for starting TB preventive therapy that have started treatment.
6. Proportion of individuals from at risk populations (according to national guidelines) with a positive latent TB test who have started on TB preventive therapy that have completed the course.
7. Proportion of eligible PLHIV who completed a course of TB preventive therapy.
8. Proportion of children < 5 who are household contacts (according to national guidelines) who have completed a course of TB preventive therapy.

OPTIONAL
- TB incidence rate among risk populations (as defined by national guidelines).

LTBI REPRESENT THE TB RESERVOIR

Latent TB infection

MTB

5% ACTIVE DISEASE

95% LATENT INFECTION

5-15% REACTIVATION

*** May be ≥ 36 months in eligible PLHIV
Tuberculosis (TB) is the world’s leading killer amongst infectious diseases. Every year, 10 million people develop active TB and approximately 1.6 million people die to it.

Interrupting the cycle of *Mycobacterium tuberculosis* transmission is crucial to achieving global targets to end the TB epidemic. Thus, there is a need to implement interventions to rapidly identify source cases, and impede person-to-person transmission by reducing the concentration of infectious particles in the air and the exposure time of susceptible individuals. These principles form the basis for effective infection prevention and control (IPC).

IPC consists of evidence-based measures intended to prevent exposure and reduce the risk of transmission of infectious agents such as TB.

The updated WHO guidelines on TB infection prevention and control bring up a new evidence-based framework that promotes the interdependence of administrative, engineering, and respiratory protection controls, stressing on the need to implement this three-level hierarchy of IPC controls as an integrated package of IPC interventions.

The updated guidelines are intended to inform and contextualize TB-specific IPC interventions and activities within national-level and local-level IPC policies and protocols.

The target audience for these guidelines includes national and subnational policymakers; frontline health workers; health system managers for TB, HIV and highly prevalent noncommunicable disease programmes; managers of IPC services in inpatient and outpatient facilities; managers of congregate settings and penitentiary facilities; occupational health officials; and other key TB stakeholders.

The updated recommendations listed in the 2019 guidelines focus on the spectrum of measures as a “package” of interventions, drawing further attention to the core components of IPC as a set of essential elements (i.e. core components) or minimum IPC standards that should be implemented across settings and across the various levels of care, for the effective and efficient functioning of IPC activities and practices.

The adoption of these guidelines goes beyond national TB programmes. It requires an interdisciplinary, multisectoral and multilevel approach to ensure the proper implementation of the recommendations in settings where transmission of *M. tuberculosis* is likely to occur.
GUIDING PRINCIPLES OF INFECTION PREVENTION AND CONTROL

- Effective IPC measures are a critical part of the quality of health service delivery to achieve people-centred, integrated universal health coverage.
- These guidelines are based on a public health approach to strengthening the adoption and implementation of evidence-based interventions for IPC, including transmission-based precautions, and the recommendations given here should be considered as the minimum IPC standard.
- Implementing these guidelines requires an understanding of the interdependence of the three-level hierarchy of IPC, giving prominence to the implementation of administrative controls as the basis for reducing the risk of transmission of M. tuberculosis.
- The implementation of these recommendations needs to be accompanied by efforts to promote and protect the human rights of all patients, their communities and care providers.

For additional information and resources on this topic, programmatic management of latent TB and other IPC resources be sure to consult the following:


IT’S TIME FOR ACTION
ENDING TUBERCULOSIS IN CHILDREN

QUICK FACTS

✓ Over 1 million children (aged 0-14 years) fall ill with tuberculosis (TB) each year. In 2017, at least 530 000 boys and 470 000 girls. Children represent about 10% of all TB cases.*
✓ In 2017, 233 000 children died of TB, including 39 000 TB deaths among children who were HIV positive. 80% of these children had not reached their fifth birthday.*
✓ Researchers estimate that 67 million children are infected with TB (latent TB) and are therefore at risk of developing disease in the future**,
✓ Researchers estimate that 25 000 children develop multidrug-resistant TB (MDR-TB) every year. **

*R Global TB Report 2018; ** Dodd et al., 2016

RISK FACTORS

✓ Any child living in a setting where there are people with infectious TB can become ill with TB, even if they are vaccinated.
✓ Children with vulnerable immune systems, such as the very young, HIV-infected or severely malnourished, are most at risk of falling ill or dying from TB. Risks are very high for HIV-infected mothers and children.
✓ Infants and young children are at increased risk of developing severe disseminated disease associated with high mortality, such as TB meningitis or miliary TB.
✓ Adolescents are at particular risk of developing adult type disease, i.e. often sputum smear-positive and highly infectious.
✓ Children with TB are often poor and live in vulnerable communities where there may be a lack of access to health care.
✓ Children develop TB disease usually within 1 year following infection. TB in children is an indicator of recent and ongoing transmission of M. tuberculosis in the community.
✓ Children with a known contact with drug-resistant TB are at high risk of developing drug-resistant TB.

KEY CHALLENGES

✓ More than half of children with TB are missed (not diagnosed and/or not reported). TB illness in children is often missed or overlooked due to non-specific symptoms and lack of a sensitive and child-friendly diagnostic test (not based on sputum).
✓ Only 23% of eligible children under 5 years of age received TB preventive treatment in 2017.
✓ Less than 10% of children with MDR-TB were diagnosed and had access to treatment.
✓ Health workers in TB programmes and other health services often lack sufficient knowledge and capacity for prevention, diagnosis and management of childhood TB.
✓ Children who die from TB are often young and/or never accessed treatment despite availability of child-friendly fixed-dose combinations (FDCs).
✓ There is not enough advocacy, political leadership and engagement of key stakeholders.
✓ There are policy-practice gaps in evidence-based programmatic approaches to prevent TB disease and find the missing children with TB.
✓ Implementation of integrated, family and community-centred strategies is weak.
✓ The current TB vaccine (BCG) protects young children against the most severe forms of TB, but does not prevent the transmission of TB from an infectious contact.

Ending tuberculosis in children

END TB ACCELERATOR PACKAGE
The updated roadmap sets the agenda to scale up the response to childhood TB and end child and adolescent TB was launched by WHO, UNICEF, the Stop TB Partnership and partners just prior to the UN High Level Meeting on TB in September 2018. Achieving the goal of ending TB in children and adolescents requires sustained advocacy, greater leadership and accountability, functional partnerships and increased funding. It also requires bridging of the policy-practice gap, implementation and expansion of interventions for prevention, scale up of TB case finding and treatment, implementation of integrated family- and community-centred strategies, improvements in data collection, reporting and use and more child and adolescent TB research.

Examples of best practices in child and adolescent TB care: 
Research priorities for paediatric tuberculosis: 

> **Selected milestones in the implementation of the key actions of the revised Roadmap, in line with UN High Level Meeting targets:**

**Between 2018 and 2022:**

- Successfully treat 3.5 million children with TB and 115 000 children with drug-resistant TB
- Provide preventive therapy to at least 30 million people, including 4 million children under 5 years of age, 20 million other household contacts and 6 million people (including children and adolescents) living with HIV

For more information please visit: https://www.who.int/tb/areas-of-work/children/en/
Public-Private Mix (PPM) for TB care and prevention represents a comprehensive approach for systematic involvement of all relevant health care providers in TB care to promote the delivery of quality care in line with the International Standards for TB Care.

PPM encompasses diverse collaborative strategies such as public-private (between the national TB Programme (NTP) and the private sector), public-public (between NTP and other public sector care providers), and private-private (e.g. between an NGO or a private hospital and the neighborhood private providers) collaboration.

PPM for TB care and control is a feasible and cost-effective approach to increase case detection and cure rates, to reach the poor and to reduce the financial burden on patients. This benefits all - the sick patient, the community, the health care provider, the TB programme, and ultimately, the health of the whole nation.

Engaging all relevant health care providers in TB care through PPM approaches is an essential component of the WHO’s End TB Strategy.

There is no “one size fits all” PPM approach. The health care providers and their roles and interactions with NTPs depend on what works best in the local context. Countries are encouraged to adopt the approach that best suits their setting.

### QUALITY CARE FOR ALL PATIENTS
PPM reduces malpractice by fostering evidence-based TB diagnosis and treatment in line with the International Standards for TB Care. This limits misdiagnosis, improves cure rates (over 85%) and reduces risks of drug resistance.

### EARLY AND INCREASED CASE DETECTION
PPM helps increase TB case detection (by 10-60%) and reduces diagnostic delays by involving all health care providers in timely referral and diagnosis of TB.

### IMPROVED AND EQUITABLE ACCESS
PPM improves access to treatment by involving health care providers from whom the poor, marginalized and most vulnerable seek care.

### REDUCED FINANCIAL BURDEN
PPM reduces costs to patients by ensuring that TB medicines are free of charge and all other costs are kept to a minimum. PPM can also reduce indirect costs for patients by providing services closer to their homes or workplace.

### BETTER SURVEILLANCE
PPM contributes to better TB surveillance when all health care providers who provide TB care follow TB recording and reporting routines linked to national information systems.

### IMPROVED MANAGEMENT CAPACITY
PPM improves the management capacity of both the public and the private sectors and can contribute to health systems strengthening in general.
The World Health Organization (WHO), the Public-Private Mix Working Group of the Stop TB Partnership, USAID, the Global Fund, and global partners launched a Roadmap in 2018 to scale up the engagement of public and private health care providers in efforts to end TB. The Roadmap is a critical tool to help countries close gaps in care and reach the UN High Level Meeting on TB political declaration target of reaching 40 million people with TB with quality care by 2022.

The Roadmap recommends ten actions at national and global levels to scale up the engagement of all care providers towards universal access to care:

- **Build** understanding about patient preferences, private sector dynamics and the rationale for engaging all providers
- **Establish** a supportive policy and regulatory framework
- **Set** appropriately ambitious PPM targets
- **Adapt** flexible models of engagement applicable to local contexts
- **Advocate** for political commitment, action and investment in PPM
- **Harness** the power of digital technologies
- **Allocate** adequate funding for engaging all providers, including by capitalizing on financing reforms for universal health coverage
- **Deliver** a range of financial and nonfinancial incentives and enablers
- **Partner** with and build the capacity of intermediaries and key stakeholders
- **Monitor** progress and build accountability

The roadmap also contains a timeline with targets for 2020, 2022, 2025 and 2030, to showcase contribution to global End TB targets.

To end the TB epidemic and meet the targets in the new UN High Level Meeting political declaration, we must scale up the engagement of private and unlinked public health care providers. WHO, the Stop TB PPM Working Group, USAID, Global Fund, and partners are working together with countries to adopt and implement the PPM roadmap to scale up the engagement of all care providers in efforts to end TB. This is a critical step towards the vision of “Leave No one Behind” of the UN Sustainable Development Goals.
In recent years, there has been substantial progress in improving the availability of quality data to track the TB epidemic and progress in response efforts, at national and global levels. This follows major investments in national surveys, improvements in surveillance and programmatic data, and other studies. Analysis and use of these data is essential for national TB planning and prioritization.

To date, the greater availability of data has not always resulted in systematic analysis and use of data for national strategic and operational planning for TB, and associated prioritization for programmatic impact. In addition, evidence generation has sometimes been driven by top-down planning rather than by key programmatic priorities and questions.

The People-Centred Framework has been developed to facilitate a systematic approach to country-led, data-driven and people-centred planning, prioritization and decision-making.

The framework has three main elements.

1. **IT USES THE CARE CONTINUUM**

   Data are mapped along the care continuum to provide evidence for planning and prioritization. The care continuum is divided into three parts (Figure 1):

   1) **people not accessing the health care system**;
   2) **people with TB who seek health care but are either not diagnosed or not notified**;
   3) **people with TB who are notified, but not successfully treated**.

   ![Figure 1](Mapping three types of evidence along the care continuum)

<table>
<thead>
<tr>
<th>People not accessing the health system</th>
<th>People with TB seeking care but either not diagnosed or not notified</th>
<th>People notified as a TB case but not successfully treated</th>
</tr>
</thead>
<tbody>
<tr>
<td>People with TB infection, high-risk for disease</td>
<td>Asymptomatic disease, not seeking care</td>
<td>Presenting to health facilities, not diagnosed</td>
</tr>
<tr>
<td>Symptomatic disease, not seeking care</td>
<td>Diagnosed by non-NTP, not notified</td>
<td>Diagnosed, not started on treatment</td>
</tr>
<tr>
<td></td>
<td>Diagnosed by NTP, not notified</td>
<td>Notified, not successfully treated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Successfully treated (not relapse free)</td>
</tr>
</tbody>
</table>
WHEN SHOULD THE PEOPLE-CENTRED FRAMEWORK BE USED?

The framework is most effectively applied during the development of a country’s National Strategic Plan (NSP). It can also be applied at other points in the country’s planning and policy cycle.

APPLYING THE FRAMEWORK IN PRACTICE – THE EXAMPLE OF KENYA

Mapping of data and evidence to the three elements of the framework

The national TB programme in Kenya applied the framework to initiate the development process for a new NSP (2019-2023). Country-based data and evidence were consolidated along the care continuum prior to a workshop. An example of consolidated data and evidence for the second block of the framework is shown in figure 2.

Figure 2  Example of consolidated data and evidence for the second block of the framework “People with TB who seek health care but are either not diagnosed or not notified”

This executive summary is based on a consultation draft. Latest draft of publication is posted at www.who.int/tb

For more information please contact: parwatic@who.int
Joint Initiative of the World Health Organization, Stop TB Partnership, the Global Fund, countries and partners 2018-2022

40 million people with TB reached with care
30 million people reached with TB preventive treatment

✓ Commitments
✓ Accountable actions to accelerate access
✓ Measurable Progress

The World Health Organization, the Stop TB Partnership, and The Global Fund to Fight AIDS, Tuberculosis and Malaria are working together as part of a joint initiative titled "FIND. TREAT. ALL. #ENDTB", to scale up the End TB response towards universal access to TB prevention and care. Countries and partners, including civil society, affected communities and development financing partners, are invited to join in the effort with concrete commitments.

In the short-term, the initiative will prioritize enabling access to prevention and care for the millions who miss out on quality TB care each year. Only by strengthening and accelerating a joint response, can the world meet the commitments set forth in the WHO End TB Strategy, Stop TB Global Plan to End TB and Sustainable Development Goals (SDGs).

BACKGROUND

Despite significant progress, including a decline in TB deaths, incidence and achieving the MDG targets, TB is the top infectious killer worldwide, claiming over 1.6 million lives per year. Heads of State and Governments have already committed to ending the TB epidemic by 2030 under the United Nations (UN) Sustainable Development Goals and the WHO End TB Strategy, as well as with recent commitments at the first-ever UN High Level Meeting on TB in 2018. Furthermore, under the political declaration of the 2016 UN High-Level Meeting on HIV, countries committed to reach 90% TB treatment coverage and TB treatment success targets, including for vulnerable and marginalized groups, as targeted under the Stop TB Global Plan to End TB, 2016-2020. WHO’s 13th General Programme of Work (GPW), which sets the organization’s leadership priorities for 2019-2023, sets the targets on ending TB, achieving Universal Health Coverage, and other SDGs.

The initiative follows the past two years that have seen a significant rise in interest, commitments, and calls to action at the global, regional and country levels. WHO and the Russian Federation organized the Global Ministerial Conference on Ending TB in the Sustainable Development Era in November 2017, with 120 Ministers of Health adopting an ambitious Moscow Declaration. G20, G7, BRICS, and APEC leaders spoke out formally in their communiques in 2017 on the need for action on TB, on multidrug-resistant TB (MDR-TB), and antimicrobial resistance (AMR). During the Delhi TB Summit, Ministers of the South-East Asia Region adopted a regional call to action and the Prime Minister made bold commitments to end TB in India by 2025. In September 2018, Heads of State came together at the UN in New York and made bold commitments with targets to accelerate the response to end TB.
To urgently translate commitments into action, WHO, the Stop TB Partnership and The Global Fund have launched a new joint initiative called ‘FIND. TREAT. ALL. #ENDTB’.

The initiative calls for actions to rapidly close gaps and scale up access to care.

In 2017, 10 million people fell ill with TB, of these, only two thirds were officially notified to national authorities and reported to WHO. This means 3.6 million people with TB were missed by official case notification systems. The reasons are manifold including: poor access to health services, weak health systems without capacity to provide timely diagnosis; insufficient community engagement and insufficient linkages with health providers who treat people but fail to report to national authorities. For people with drug-resistant TB (DR-TB), the situation is worse with only one in four people with DR-TB being reported as diagnosed and treated.

The WHO GPW 13 sets three strategic priorities and ties them to ambitious global targets for progress: Health coverage - 1 billion more people with health coverage; Health emergencies – 1 billion more people made safer; and Health priorities – 1 billion lives improved.

30 high TB burden countries: Angola, Bangladesh, Brazil, Cambodia, China, Congo, Central African Republic, DPR Korea, DR Congo, Ethiopia, India, Indonesia, Kenya, Lesotho, Liberia, Mozambique, Myanmar, Namibia, Nigeria, Pakistan, Papua New Guinea, Philippines, Russian Federation, Sierra Leone, South Africa, Thailand, the United Republic of Tanzania, Viet Nam, Zambia and Zimbabwe.

The 13 countries that are part of the TB Catalytic Investment initiative are Bangladesh, Democratic Republic of Congo, Indonesia, Myanmar, Nigeria, Pakistan, Philippines, South Africa, Tanzania, Ukraine, Kenya, Mozambique and India.

The Find. Treat. All. initiative calls on country leaders, stakeholders and partners to join WHO, the Stop TB Partnership, and the Global Fund to increase the number of people reported as diagnosed and treated. It aims to diagnose, treat and report 40 million people with TB, including 3.5 million children and 1.5 million people with DR-TB. It aims to reach 30 million people with TB preventive care. Achieving these targets will contribute to fulfilling the commitments for reduction in TB incidence and deaths, set forth in the End TB Strategy, the Stop TB Global Plan to End TB, SDGs and the “triple billion” target for 2023 of the 13th GPW.

Reaching the 40 million target will require finding all the missing people with TB, as well as maintaining progress in the TB response. This includes action to close gaps in reaching those missed by care, as well as maintaining gains already made in countries in diagnosing and treating people with TB.

While the initiative will cover all countries, focused action will be prioritized in at least the 30 highest TB burden countries2 (HBCs) between 2018 and 2022, as well as the top countries with highest burden of missing people with TB that are not on the HBC list. Priority countries being supported by donors such as the US Agency for International Development (USAID), Global Fund, KNCV, etc. will also be included.

The initiative builds upon recent innovative efforts, including the Global Fund, WHO and Stop TB Partnership Strategic Initiative on finding the missing people with TB, the U.S. Government Global TB Strategy and the National Action Plan for Combating MDR-TB, Stop TB/ TB REACH, the Zero TB Initiative and others. The Strategic Initiative of 13 high TB burden countries3 with The Global Fund, WHO and Stop TB Partnership, under the Catalytic Investment of The Global Fund and the related Strategic Initiative on data, targets reaching an additional 1.5 million missing people with TB by 2019.

The Find. Treat. All. Initiative also complements other comprehensive interventions being undertaken by countries in scaling up access and prevention. These include: expanding access to preventive treatment, addressing determinants of TB, alleviating the financial impact of the diseases, boosting community engagement, collaborating in health systems strengthening, and pursuing research and innovation.

1 The WHO GPW 13 sets three strategic priorities and ties them to ambitious global targets for progress: Health coverage - 1 billion more people with health coverage; Health emergencies - 1 billion more people made safer; and Health priorities - 1 billion lives improved.
2 30 high TB burden countries: Angola, Bangladesh, Brazil, Cambodia, China, Congo, Central African Republic, DPR Korea, DR Congo, Ethiopia, India, Indonesia, Kenya, Lesotho, Liberia, Mozambique, Myanmar, Namibia, Nigeria, Pakistan, Papua New Guinea, Philippines, Russian Federation, Sierra Leone, South Africa, Thailand, the United Republic of Tanzania, Viet Nam, Zambia and Zimbabwe.
3 The 13 countries that are part of the TB Catalytic Investment initiative are Bangladesh, Democratic Republic of Congo, Indonesia, Myanmar, Nigeria, Pakistan, Philippines, South Africa, Tanzania, Ukraine, Kenya, Mozambique and India.
TRANSFORMING THE TB RESPONSE WITH THE FIND. TREAT. ALL. INITIATIVE

Through the Find. Treat. All. Initiative, WHO, the Stop TB Partnership and the Global Fund are calling for a paradigm shift and strategic transformation of the global and national TB responses on three fronts:

**Commitments**

✓ World leaders, Heads of States, and Ministers of Health and other ministries, Members of Parliament, working with country programmes, civil society, communities and technical partners are called upon to:
  - Jointly define and endorse concrete and measurable country-specific targets, and ensure that their National Health Strategies, National TB Strategic Plans include tangible, measurable actions to reach the above targets and announce them from March to September 2018, leading up to the UNHLM.
  - Increase resources to achieve country specific targets including human and financial resources. At the same time, increased financing and innovative financing collaborations, through enlarged budgets to accompany the national strategic and operational plans including partnerships with international, multilateral, bilateral, private and innovative finance stakeholders.
  - Increase investment in TB research through funding of research networks, specific initiatives, new drugs, diagnostics and vaccines.
  - Elevate the profile of the TB programme and response by the establishment of time-bound high-level national TB commissions or panels to help oversee ambitious accelerated response that includes civil society and multisectoral partners, and/or national or local declarations of emergencies due to high levels of DR-TB and treatment gaps, backed by action and investments.

**Harmonized and Accountable actions to accelerate access**

✓ Ensure all people with TB are reported to the national authorities through a real time notification system.
✓ Promote community leadership in the TB response through community-led, people-centered, rights-based and gender-transformative interventions in line with the national and global targets in order to leave no one behind.
✓ Innovate for improved access and delivery of TB diagnostic and treatment services and rapid uptake of new tools through new/renewed National and sub-national Strategic Plans linked to universal health coverage (UHC).
✓ Scale up the number of people tested for TB with early diagnosis of tuberculosis including drug susceptibility testing, systematic screening of contacts and high-risk groups, active case finding in vulnerable population groups (based on country context) with community participation, and engagement of the private healthcare sector and other non-governmental health care delivery systems.

**Measurable Progress**

✓ Develop core indicators at all levels (sub national, national, regional and global) to measure progress with the involvement of all relevant partners.
✓ Monitor progress through real-time national, electronic, case-based, TB surveillance systems for cases and deaths to enable prompt action at all levels. This will require regular reporting of national TB notification data. In all countries, these data are already compiled on a regular basis, ranging from “real-time” where there is national coverage of a web and case-based surveillance system to quarterly reporting in countries that still rely on traditional paper-based systems.
✓ Country high-level taskforce to review data on a quarterly basis and identify areas for increased technical assistance or support, with support from Joint Initiative core team (WHO, Stop TB, GF, and other partners).

**IMMEDIATE NEXT STEPS**

✓ WHO, the Stop TB Partnership, and The Global Fund are calling all partners and stakeholders to join the initiative.
✓ WHO, the Stop TB Partnership, and The Global Fund are welcoming the 30 high burden TB countries to make concrete commitments towards the UN High Level meeting targets.
✓ WHO, the Stop TB Partnership, and The Global Fund will develop an annual implementation plan for the Find. Treat. All. Initiative, in collaboration with countries and other key partners.
✓ Priority countries will be encouraged and supported to set up high level national taskforces, or leverage existing mechanisms, to ensure effective implementation and monitoring of the Joint Initiative. The taskforce/existing mechanism will be useful for tracking progress as well as act as an advocacy forum/platform to learn best practices and innovations, by bringing together implementers and stakeholders.
WHO Civil Society Taskforce: Our close partners in the fight to end TB

As countries are beginning to ramp up efforts to end TB following commitments made by Heads of State at the first-ever UN High Level Meeting on TB (UNHLM) in September 2018, the role of civil society in driving action and accountability is more important than ever. The UNHLM political declaration and WHO End TB Strategy both call for prioritizing strong and meaningful engagement of civil society and affected communities in all aspects of the TB response.

WHO has revamped its Civil Society Task Force on TB to strengthen collaboration for accelerating progress towards ending TB. Joint action between civil society and WHO is key to reach WHO triple billion goals set in our 13th General Programme of Work. These include 1 billion more people benefitting from universal health coverage (UHC), 1 billion people more people better protected from health emergencies, and 1 billion more people enjoying better health and well-being.

ABOUT THE CIVIL SOCIETY TASKFORCE

The revamped Task Force was launched on 12 December 2018. It is a platform for discussion and exchange with WHO with emphasis on:

- Translating WHO TB policies including End TB Strategy into practice through mainstreaming of voices of communities affected by TB and their networks at global, regional and country levels;
- Catalyzing greater collaboration between civil society organizations, national TB programmes and WHO at all levels in all activities and projects for improved TB outcomes including meaningful engagement of civil society and affected communities in policy development;
- Contributing to the implementation of WHO TB policies with particular focus on multisectoral action for social protection and universal health coverage and advocating their inclusion in national TB strategies and plans, national social programmes and political platforms (e.g. parliaments) and regional and global platforms of policy dialogue.
The revamped Task Force is a culmination of the commitments made by WHO’s Director-General Dr Tedros Adhanom Ghebreyesus to strengthen civil society engagement with WHO, as discussed at several consultations with civil society representatives, starting from the first WHO Global Ministerial Conference on Ending TB which took place in Moscow in November 2017 (report is available here), the 15-16 January 2018 WHO consultation between civil society representatives and WHO Director-General and leadership, followed by a meeting at the Delhi End TB Summit in March 2018. This was followed by the UN interactive civil society hearing and the UN high-level meeting on TB in 2018.

The 15 members of the Task Force bring a wealth of expertise, experience and geographic diversity, representing different areas of interest of civil society. The members represent all regions of the world, including four members from the African Region, two from the Americas, one from the Eastern Mediterranean, two from European Region, four from South-East Asia and two from the Western Pacific. Out of 15 members, 14 are from a TB High Burden Country. It includes persons who have had TB, advocates, leaders of national implementing organizations and networks, research experts, and experts in TB among vulnerable populations such as migrants.

Selection process
Members selected with inputs from an independent Selection Panel, consisting of representatives from USAID, RESULTS, and Community Delegation to the Unitaid Board. Selection was based on assessments of individual competencies and experiences and the process aimed to balance geography, gender, and the diversity of communities and civil society representatives.
Towards a Global Strategy for TB Research and Innovation: Accelerating progress in ending the TB epidemic

Intensified research and innovation is the third Pillar of the End TB Strategy. It is needed to increase the effectiveness of existing tools and develop revolutionary new technologies to transform the way TB is diagnosed, treated and prevented.

The Moscow Declaration to End TB, adopted by almost 120 national delegations, on 17 November 2017, called upon WHO, working in close cooperation with partners, to develop Global Strategy for TB Research and Innovation. Ministers of health and other high-level participants committed to support its development.

As part of discussions on the preparation for the United Nations General Assembly high-level meeting on TB, the World Health Assembly at its 71st session in May 2018 requested the WHO Director-General to develop, working in close collaboration with all relevant partners, a Global Strategy for TB Research and Innovation, “to make further progress in enhancing cooperation and coordination in respect of tuberculosis research and development.”

The Global strategy for TB research and innovation aims to support efforts by Member States to accelerate research and innovation, by setting clear objectives and priorities for advancing the science required to end TB.

In response to these requests, WHO has prepared a draft Global Strategy drawing on consultation with scientists, national TB programme managers and other officials from within and beyond ministries of health, including ministries of science and technology, and representatives of civil society and affected communities, research funding institutions and other TB research and innovation stakeholders.

The draft Strategy is currently on the web for comments from all stakeholders through 8 May 2019. https://www.who.int/tb/areas-of-work/research/en/

Based on the comments received on this draft, WHO will prepare and present a second draft of the Global Strategy for WHO regional offices, before it is submitted for consideration by the Executive Board at its 146th session in January 2020.
In November 2017, 117 national delegations adopted the Moscow Declaration to End TB at the first WHO Global Ministerial Conference on Ending TB: A Multisectoral Response. They committed to “supporting the development of a multisectoral accountability framework” to accelerate progress to end TB. They called on WHO to develop the framework, working in close cooperation with relevant partners.

At the 71st World Health Assembly (WHA) in May 2018, Member States welcomed the WHO draft multisectoral accountability framework (hereafter referred to as the MAF-TB). The WHA also requested the Director-General to continue to develop the MAF-TB, in consultation with Member States, and working in close collaboration with partners, as well as to provide technical support for national adaptation and use of the MAF-TB.

In the Political Declaration of the UN General Assembly High-Level Meeting on the fight against TB in September 2018, Member States committed to and called for the Director-General of WHO to finalize the MAF-TB and ensure its timely implementation in 2019.

WHO finalized the MAF-TB, building on contributions from Member States, partners, including from civil society. It was released in May 2019.

The MAF-TB aims to guide the strengthening of accountability by Member States, as well as multisectoral partners and stakeholders, at national, regional and global levels in order to accelerate progress to end the TB epidemic by 2030, including the meeting of commitments and targets set for 2022 and 2030 in the UN Sustainable Development Goals, the WHO End TB Strategy and in the Political Declaration of the 2018 UN General Assembly High-Level Meeting on the fight against TB.

The MAF-TB can help support the process of defining who is accountable, what they are accountable for, and how they will be held accountable, at country and local levels, as well as at regional and global levels. The four essential components of the MAF-TB are shown below in a cycle. These components are consistent with frameworks and measures in many other fields across sectors.

The next pages provide an overview of proposed accountability measures and mechanisms at Country (including local) Level and at Global/Regional Levels. These proposed elements are subject to adaptation, given national constitutional, legal and regulatory frameworks, and may be informed by political, social, professional, moral and ethical codes of conduct and uncodified traditions and conventions.
MONITORING AND REPORTING
Routine recording and reporting of tuberculosis cases, treatment outcomes and other End TB Strategy indicators via national information system consistent with WHO guidance and that meets WHO quality and coverage standards for tuberculosis surveillance
Routine death registration, with coding of causes of death according to international standards, in national vital registration system that meets WHO quality and coverage standards
National surveys and other special studies
National tuberculosis report (annual), and associated products customized for particular audiences
Annual reporting to WHO
Civil society and nongovernmental organization reports, and associated products

COMMITMENTS
Sustainable Development Goals for 2030 (adopted in 2015)
- Target 3.3 to end the tuberculosis epidemic, and other relevant targets
WHO’s End TB Strategy (adopted in 2014) and associated WHA resolutions
- Targets (2030, 2035) and milestones (2020, 2025), adapted to national level; pillars and principles
Political Declaration of the United Nations General Assembly high-level meeting on Ending AIDS (2016)
Moscow Declaration at WHO Global Ministerial Conference on ending tuberculosis (2017)
Political Declaration of the United Nations General Assembly high-level meeting on tuberculosis (2018)
Other national, regional, country group/bloc or global commitments relevant to tuberculosis.

REVIEW
Periodic (e.g. annual) review of the tuberculosis response using a national-level review mechanism (e.g. inter-ministerial commission), with:
- high-level leadership – preferably under the direction of the head of government or head of state, especially in countries with a high tuberculosis burden
- a multisectoral perspective
- engagement of key stakeholders such as civil society and tuberculosis-affected communities, parliamentarians, local governments, the private sector, universities, research institutes, professional associations and other constituencies, as appropriate
Periodic review of the national tuberculosis programme (or equivalent) including independent experts, either specific to tuberculosis or as part of health sector reviews
Other reviews, such as those on specific topics

ACTIONS (examples)
National (and local) strategic and operational plans to end (or eliminate) tuberculosis, with a multisectoral perspective and covering government and partners, consistent with End TB Strategy and other WHO guidance: development, funding and implementation
Development and use of a national MAF-TB
Establishment, strengthening or maintenance of a national multisectoral mechanism (e.g. inter-ministerial commission) tasked with providing oversight, coordination and periodic review of the national tuberculosis response
Revisions to plans and policies, and associated activities, based on monitoring, reporting and recommendations from reviews
Engagement with private sector, professional societies, civil society and tuberculosis-affected communities and patient groups
Activities undertaken by civil society, tuberculosis-affected communities and patient groups, parliamentarians and the private sector
Delivery of tuberculosis prevention, diagnosis, treatment and care services
Development and enforcement of relevant legislation
Universal health coverage policy – development and implementation
Multisectoral actions on social determinants of tuberculosis
Maintenance or strengthening of national health information and vital registration systems
Media campaigns and social mobilization

Fig. 2a. Multisectoral accountability framework for tuberculosis (MAF-TB):
National (including local) level – for individual countries, with adaptation according to national constitutional, legal and regulatory frameworks and other relevant factors
Italicized text indicates elements that do not yet exist or are not yet in place in many countries, including those with a high burden of tuberculosis. Other elements (especially those listed under actions) also need strengthening in many countries.

a Targets, milestones, pillars and principles are explained in the main text.
b Examples include political declarations of the United Nations General Assembly on antimicrobial resistance and noncommunicable diseases, and the Delhi Call to Action (signed by Member States in the WHO South-East Asia Region).
c It is not possible to list all relevant actions here, but major examples are provided.
**COMMITMENTS**

- **Sustainable Development Goals for 2030 (adopted in 2015)**
  - Target 3.3 to end the tuberculosis epidemic, and other relevant targets

- **WHO’s End TB Strategy (adopted in 2014) and associated WHA resolutions**
  - Targets (2030, 2035), milestones (2020, 2025), pillars, principles

- **Political Declaration of the United Nations General Assembly high-level meeting on Ending AIDS (2016)**

- **Moscow Declaration at WHO Global Ministerial Conference on ending tuberculosis (2017)**

- **Political Declaration of the United Nations General Assembly high-level meeting on tuberculosis (2018)**

- **Other global or regional commitments relevant to tuberculosis**

**REVIEW**

Periodic high-level reviews of the tuberculosis response at global and/or regional level, with multisectoral perspective and engagement of key stakeholders, including civil society and tuberculosis-affected communities, the private sector, and others. Existing examples are:

- **United Nations General Assembly high-level meetings on tuberculosis (2018, 2023)**

- **United Nations General Assembly high-level political forum for Sustainable Development Goal review**

- **United Nations General Assembly reviews of Sustainable Development Goals (next in 2023)**

- **WHO Executive Board and World Health Assembly review of progress reports on tuberculosis (including 2018, 2019, 2020) and WHO Regional Committee review of progress reports on tuberculosis**

High-level reviews by regional entities and country blocs (or equivalent)

Other reviews requested and approved by countries collectively, at either global or regional level

**ACTIONS (examples)**

- Development, funding and implementation of the strategic and operational plans of global agencies and regional entities, including joint initiatives across agencies, strategic alliances across sectors, linkages with other global health priorities and initiatives, engagement of civil society and tuberculosis-affected communities, and regional targets and milestones as appropriate

- Resource mobilization and allocation of funding by global financing agencies

- WHO global tuberculosis strategy and associated WHO guidance, norms and standards – development, dissemination and implementation support

- Global and regional advocacy and communication, including for financing, engagement of multiple sectors, civil society and tuberculosis-affected communities, and human rights

- Strategic and technical support to countries by global and regional agencies

- Global strategy for tuberculosis research and innovation, and related convening of international tuberculosis research networks

**MONITORING AND REPORTING**

- **WHO framework for tuberculosis recording and reporting (cases, treatment outcomes)**

- **WHO tuberculosis-Sustainable Development Goal monitoring framework**

- **WHO global tuberculosis data collection (annual) and online database**

- **WHO Global tuberculosis report (annual) and associated products**

- **WHO progress reports on End TB Strategy and actions in follow-up to high-level meetings, to Executive Board and World Health Assembly**

- **Report in 2020 on global and national progress in the tuberculosis response, prepared by the United Nations Secretary-General with WHO support**

- **WHO Regional reports and associated products**

- **United Nations data collection and reports on Sustainable Development Goals**

- **Treatment Action Group/Stop TB Partnership and G-Finder annual reports on trends in funding for tuberculosis research and product development, and periodic Médecins Sans Frontières/Stop TB Partnership reports on uptake of WHO policies**

- **Other civil society and nongovernmental organization audits and reports, and associated products (e.g. scorecards)**

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*a Targets, milestones, pillars and principles are explained in the main text.

*b Examples include political declarations of the United Nations General Assembly high-level meetings on antimicrobial resistance and noncommunicable diseases, and the Delhi Call to Action (signed by WHO Member States in the South-East Asia Region).

*c It is not possible to list all relevant actions, but major examples are provided.

*d For example, with agencies working on poverty alleviation, social protection, housing, labour, justice, and migration.
MEMBER STATE ACTIONS: ADAPT, ADOPT, AND IMPLEMENT THE MAF-TB

- **ASSESS** the baseline status of elements under each component. There will be differences among countries in the extent to which elements already exist, need strengthening or are relevant, and how they are put into practice. There may also be elements not shown in here that should be added.

- **RECOGNIZE** that country MAF-TB will vary given factors such as: the level and characteristics of the TB burden, existing constitutional, legal, regulatory and administrative frameworks and systems, the nature of nongovernmental, civil society and private sector institutions and engagement, and the status of social and economic development.

- **INVOLVE** officials across government sectors, nongovernmental organizations, civil society and tuberculosis-affected communities, United Nations and other multilateral and bilateral agencies operating at country level, parliamentarians, professional associations, public-private partnerships and the private sector.

- **ADOPT AND IMPLEMENT A NATIONAL MAF-TB IN 2019**, including new/strengthened commitments, actions, monitoring and reporting, and review mechanisms.

- **MONITOR AND REVIEW** the MAF-TB itself for robust accountability.

WHO ROLES AND ACTIONS

To ensure the effective implementation of the MAF-TB at national and global and regional level, WHO will build on its mission and core functions. WHO has a unique status as a science- and evidence-based organization that sets globally-applicable norms and standards, and provides other global public goods that help to ensure health for all people. WHO’s ongoing efforts in fostering partnerships with global, regional and national stakeholders in supporting Member States and promoting engagement of civil society and other non-State actors also will be essential. Specifically, WHO will:

- **PROMOTE COLLABORATION**, in close collaboration with the UN Secretary-General, among all stakeholders to end the tuberculosis epidemic and to implement the political declaration of the UN high-level meeting, with Member States and relevant entities, as requested in the Political Declaration of the UN high-level meeting on the fight against TB.

- **GUIDE AND SUPPORT** Member States and partners, as appropriate, for national adaptation and use of the MAF-TB, as requested by the WHA.

- **COORDINATE AND SUPPORT** adaptation and use at regional/global level, working with Member States, partners, including civil society and affected communities, and multisectoral stakeholders.

In 2018, WHO began its work with Member States, and partners, for the adaptation and use of the MAF-TB, through country-based work and through consultations at regional and global levels.
A NEW DIGITAL PLATFORM
for timely analysis and use of TB data

The WHO Global TB Programme has developed and is supporting country implementation of a new digital platform to store, analyse and visualize national and subnational TB surveillance data. The platform will facilitate planning and programmatic action in real-time.

The data platform is based on the free and open-source District Health Information System 2 (DHIS2) and designed upon WHO standards for service delivery and programme implementation. It stores aggregated data of core TB surveillance indicators, based on the WHO case definitions and reporting framework for TB. Accompanying standard dashboards are designed according to best practice analyses and visualization of results (in the form of graphs, tables and GIS maps).

From 2016-2018, the platform was promoted and used in a series of regional and national workshops for TB data analysis and use in Africa and Asia, as well as to facilitate the conduct of national TB epidemiological reviews during this period (see Map 1). By the end of 2018, time series of subnational (primarily provincial but for some countries also district level) historical data had been uploaded to the platform by about 50 countries.

The platform has evolved as part of GTB’s collaboration with other departments in WHO. These include Health Information Systems, HIV and Hepatitis, Immunization, Malaria, Neglected Tropical Diseases, and Reproductive, Maternal, Neonatal, Child and Adolescent Health and the Special Programme for Research & Training in Tropical Diseases. GTB has also collaborated with partners outside WHO such as the US Centers for Disease Control and Prevention, KNCV Tuberculosis Foundation, Public Health England, University of Oslo, USAID and the Global Fund, under the auspices of the Health Data Collaborative.

Map 1: Countries covered by regional or national workshops on analysis and use of TB data held since 2016 or planned within the next year
Comprehensive country packages for routine analysis and use of data: cross-cutting and programme-specific (including TB, HIV, malaria) [https://www.who.int/healthinfo/tools_data_analysis_routine_facility/en/]

Each package includes a DHIS2 configuration package (data entry forms, indicators, meta-data, dashboards), as well as accompanying curriculum (facility analysis guide and exercise book).

For a full demo of the TB DHIS2 package for aggregate data see: [https://tbhistoric.org/]

There are dashboards for indicators such as TB case notifications (numbers), TB case notification (rates), treatment outcomes, internal consistency indicators, TB/HIV and DR-TB, with a mixture of tables, graphs and maps. Subnational level comparisons are possible both within and across countries (see Map 2).

WHO is working towards expanding the number of indicators being used for the analysis and in supporting countries in installing and using the digital platform.
TB SITUATION AND RESPONSE

Tuberculosis (TB) is contagious and airborne. TB was one of the top 10 causes of death worldwide in 2017. It is also the leading killer of people with HIV and a major cause of antimicrobial resistance related deaths.

THE BURDEN

In 2017, there were an estimated 10 million new (incident) TB cases worldwide, of which 5.8 million were men, 3.2 million were women and 1 million were children. People living with HIV accounted for 9% of the total. Eight countries accounted for 66% of the new cases: India, China, Indonesia, the Philippines, Pakistan, Nigeria, Bangladesh, and South Africa. In 2017, 1.6 million people died from TB, including 0.3 million among people with HIV. Globally, the TB mortality rate fell by 42% between 2000 and 2017. The severity of national epidemics varies widely among countries. In 2017, there were fewer than 10 new cases per 100,000 population in most high-income countries, 150-400 in most of the 30 high TB burden countries, and above 500 in a few countries including Mozambique, the Philippines and South Africa.

TB CARE AND PREVENTION

TB treatment saved 54 million lives globally between 2000 and 2017. In 2017, 6.4 million new TB cases were notified to national authorities and reported to WHO. This reflects a 3.6 million gap between incident and notified cases. Ten countries accounted for 80% of this gap; the top three were India, Indonesia and Nigeria, accounting for almost half (46%).

Globally, the treatment success rate for people newly diagnosed with TB was 82% in 2016.

DRUG-RESISTANT TB

Globally in 2017, 558,000 people developed TB that was resistant to rifampicin (RR-TB), the most effective first-line drug, and of these, 82% had multidrug-resistant TB (MDR-TB). 160,000 cases of MDR/RR-TB were detected and notified in 2017. Of these, a total of 140,000 people were enrolled and started on treatment with a second-line regimen.

Treatment success rate at 55%, remains low globally. Among cases of MDR-TB in 2017, 8.5% were estimated to have extensively drug-resistant TB (XDR-TB).
ADDRESSING THE CO-EPIDEMICS OF TB AND HIV

In 2017, there were 465,000 reported cases of TB among people living with HIV, of whom 84% were on antiretroviral therapy. Most of the gaps in detection and treatment were in the WHO African Region, where the burden of HIV-associated TB is highest.

TB PREVENTIVE TREATMENT

WHO recommends preventive treatment for people living with HIV and all contacts living in households with TB.

A total of 960,000 people who were newly enrolled in HIV care were started on TB preventive treatment in 2017 (only 36% of people newly enrolled in HIV care).

In addition, the number of children aged under 5 years who were started on TB preventive treatment reached 280,000 in 2017—a three-fold increase from 2015 but still only around one in five of the 1.3 million estimated to be eligible.

UPTAKE OF DIAGNOSTICS, NEW DRUGS AND REGIMENS

The WHO-recommended rapid diagnostic test (WRD) for detection of TB and rifampicin resistance currently available is the Xpert MTB/RIF® assay. Of the 48 countries in at least one of the lists of high burden countries, 32 had adopted national algorithms positioning the WRD as the initial diagnostic test for all people suspected of having pulmonary TB by the end of 2017.

By the end of 2017, 68 countries reported having imported or started using bedaquiline, and 42 countries had used delamanid.

RESEARCH AND DEVELOPMENT

A small number of technologies emerged in 2017–2018 and several have not demonstrated adequate performance in field evaluation studies. There is still no single rapid, accurate and robust TB diagnostic test suitable for use at the point of care.

Twelve vaccine candidates are in clinical trials: four in Phase I, six in Phase II and two in Phase III. They include candidates to prevent the development of TB infection and disease, and candidates to help improve the outcomes of treatment for TB disease.

There are 20 drugs, several treatment regimens and 12 vaccine candidates in clinical trials. Funding for TB research and development has increased and reached a peak of US$ 724 million in 2016. However, this is only 36% of the estimated requirement of US$ 2 billion per year.

UNIVERSAL HEALTH COVERAGE AND SOCIAL PROTECTION

All of the 30 high TB burden countries need to increase service coverage and reduce levels of catastrophic expenditures to reach Universal Health Coverage, consistent with findings from surveys of costs faced by TB patients and their households.

The Global TB Report features a TB-SDG monitoring framework that focuses attention on 14 indicators that are associated with TB incidence. Monitoring of these indicators can be used to identify key influences on the TB epidemic at national level and inform the multisectoral actions required to end it.

Many new cases of TB are attributable to undernourishment, HIV infection, smoking, diabetes and alcohol use.

TB FINANCING

The funding required for a full response to the global TB epidemic in low- and middle-income countries is estimated at US$ 10.4 billion in 2018, excluding research and development.

US$ 6.9 billion was available for TB prevention, diagnosis and treatment in 2018, leaving a funding gap of almost US$ 3.5 billion.

86% of the funding available in 2018 is from domestic sources. However, this global aggregate figure is strongly influenced by BRICS countries.

International donor funding accounts for 39% of funding in the 25 high TB burden countries outside BRICS and 57% of funding in low-income countries.

For research and development, at least an extra US$ 1.3 billion per year is needed to accelerate the development of new tools.

The WHO GLOBAL TB PROGRAMME together with WHO regional and country offices: develops policies, strategies and standards; supports the efforts of WHO Member States; measures progress towards TB targets and assesses national programme performance, financing and impact; promotes research; and facilitates partnerships, advocacy and communication. More information: www.who.int/tb.

END TB ACCELERATOR PACKAGE