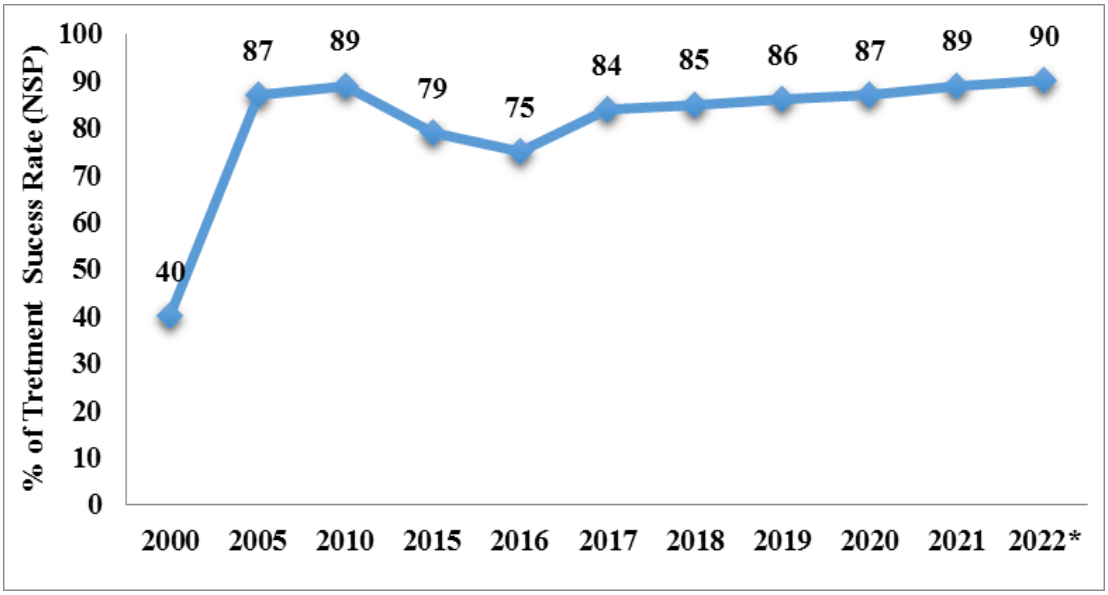
SAARC EPIDEMIOLOGICAL RESPONSE ON TUBERCULOSIS 2024



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FOREWORD

Tuberculosis (TB) is an infectious disease caused by bacteria Mycobacterium tuberculosis that most often affects the lungs. It spreads through the air when people with TB cough, sneeze or spit. TB is a preventable and curable disease. It is the leading cause of deaths of people with HIV/AIDS. About 5-10 % of people infected with TB will eventually get symptoms and develop TB disease. Diabetes, weakened immune system, malnourishment, tobacco use, harmful use of alcohol can increase a person's risk for TB disease.

Three countries in the SAARC region viz, Bangladesh, India and Pakistan are enlisted in WHO high TB and high MDR-TB countries list with Nepal also included in the high MDR-TB countries since year 2020.

Globally, an estimated 10.8 million people fell ill with TB (134 per 100 000 Population) and a total of 8.4 million cases were notified in 2023.There was a 2.4 million gap between incident and notified cases and an estimated 1.25 million TB deaths in 2023. The latest treatment outcome data shows treatment success rates of 88% for TB (2022 cohort).The new WHO "End TB" strategy targets 90% reduction in incidence and 95% reduction in mortality by 2035 compared to 2015 baseline. However, WHO End TB Strategy: 2025 milestones have set the target of reducing TB incidence rate by 50%, TB deaths by 75% and Zero Percentage of People with TB facing catastrophic costs.

The SAARC region, with an estimated annual incidence of 4.0 million TB cases equivalent to 206 cases per 100,000 carried 37% of the global burden of TB incidence in the year 2023. The region in the same year had a total of 0.46 million estimates of TB burden in children (0-14). Among them 0.24 million were males and 0.22 million were females. A total of 3.39 million TB cases were notified in 2023. The latest treatment outcome data shows treatment success rates of 90% for TB (2022 cohort).

This report is a review of the current status and future plans for the control of TB in the SAARC region. It includes information on burden of tuberculosis in region, including incidence, mortality along with MDR-TB and TB/HIV co-infection *etcetera*.

This is the twenty second report on Tuberculosis (TB) situation of the SAARC region published by SAARC Tuberculosis and HIV/AIDS Centre (STAC) in a series which started in 2003. The main purpose of this report is to provide a comprehensive and up-to-date assessment of the TB epidemic and progress made in TB care and control globally, in the SAARC region and at Member States level.

We appreciate our partners' continued collaboration in our joint efforts to eliminate Tuberculosis in the SAARC region.

Dr. Anuj Bhattachan
Director

ABBREVIATIONS

AIDS	:	Acquired Immune - Deficiency Syndrome
ART	:	Antiretroviral Treatment
B	:	Bedaquiline
BCG	:	Bacillus Calmette-Guérin
BSL III	:	Biosafety Level III
C-DST	:	Culture and Drug Susceptibility Testing
CI	:	Confidence Interval
COVID-19	:	Coronavirus disease
CTB	:	Child TB
DMCs	:	Designated Microscopic Centres
DST	:	Drug Susceptibility Testing
E	:	Ethambutol
EQA	:	External quality assurance
GF	:	Global Fund
GX	:	Gene xpert
H	:	Isoniazid
HBC	:	High Burden Country
HIV	:	Human Immunodeficiency Virus
IRLs	:	Intermediate Reference Laboratories
L	:	Linezolid
LPA	:	Line Probe Assay
M	:	Moxifloxacin
MDR-TB	:	Multi Drug Resistant Tuberculosis
MoPH	:	Ministry of Public Health
NACP	:	National AIDS Control Programme
NPTCCD	:	National Programme for Tuberculosis Control and Chest Diseases
NRL	:	National Reference Laboratories
NTBRL	:	National TB Reference Laboratory
NTP	:	National Tuberculosis Programme
NTRL	:	National TB Reference laboratory
Pa	:	Pretomanid
R	:	Rifampicin
RCDC	:	Royal Center for Disease Control
RR-TB	:	Rifampicin-resistant Tuberculosis
RTRL	:	Regional TB Reference Laboratory
SAARC	:	South Asian Association for Regional Cooperation
SDGs	:	Sustainable Development Goals
STAC	:	SAARC TB and HIV/AIDS Centre

TB	:	Tuberculosis
UI	:	Uncertainty Interval
UN	:	United Nations
WHO	:	World Health Organization
XDR-TB	:	Extensively Drug-Resistant Tuberculosis
Z	:	Pyrazinamide

EXECUTIVE SUMMARY

This is the twenty second report on tuberculosis (TB) situation of SAARC Region published by SAARC Tuberculosis and HIV/AIDS Centre (STAC) in a series which started in 2003. Earlier it was published as "Tuberculosis Control SAARC Region update". However, the name of report has been changed to "SAARC Epidemiological Response on Tuberculosis" from the year 2014. The main purpose of this report is to provide a comprehensive and up-to-date assessment of the TB epidemic and progress made in TB care and control globally, SAARC region and at the Member States.

Globally, an estimated 10.8 million (range, 10.1-11.7 million) people fell ill with TB (134 per 100 000 Population) and a total of 8.4 million cases were notified in 2023.There was a 2.4 million gap between incident and notified cases and an estimated 1.25 million TB deaths in 2023. The latest treatment outcome data shows treatment success rates of 88% for TB (2022 cohort).

In SAARC region, an estimated 4.0 million (206 per 100 000 Population) people fell ill with TB; and carries 37% of the Global burden of TB. A total of 3.39 million cases were notified in 2023. Regionally, there was a 0.6 million gap between the incident and the notified cases. There were an estimated 0.44 million TB deaths in 2023. The latest treatment outcome data shows treatment success rates of 90% for TB (2022 cohort). Bangladesh, India and Pakistan together notified 97% of the total cases in the region in 2023 while India alone accounted for 74% of all the total notifications.

In the year 2023, there were 59,669 drug resistant TB and 13,852 pre-XDR-TB or XDR-TB bacteriologically confirmed cases. However, 53,755 drug resistant TB and 11,998 Pre XDR-TB or XDR-TB patients were started on treatment. A total of 35,969 TB patients with known HIV status were HIV positive. Among them 35,319 patients were put on ART. The proportion of known HIV-positive TB patients on antiretroviral therapy (ART) was 98%.

1. INTRODUCTION

1.1 Introduction of SAARC

SAARC is an organization of eight countries located in the South Asia. It stands for the South Asian Association for Regional Cooperation (SAARC). This is an economic and geopolitical organization, established to promote socio-economic development, stability, welfare economics and collective self-reliance within the region. The first summit was held in Dhaka, Bangladesh on 7th–8th December, 1985 and was attended by the Government Representatives and Presidents from Bangladesh, Maldives, Pakistan and Sri Lanka, the Kings of Bhutan and Nepal, and the Prime Minister of India. The dignitaries signed the SAARC Charter on 8th December 1985, thereby establishing regional association and to carry out different important activities required for development of the region. The summit also agreed to establish a SAARC secretariat in Kathmandu, Nepal and adopted an official SAARC emblem. SAARC respects the principles of sovereign equality, territorial integrity, and national independence as it strives to attain sustainable economic growth.

1.2 SAARC TB and HIV/AIDS Centre (STAC)

A decision was taken by the Heads of State or Government of Member Countries of SAARC at their Fifth Summit held in Male from 22-23 November 1990 to establish SAARC Tuberculosis Centre in Nepal. The Centre was established in 1992 and started functioning from 1994. The Centre has been supporting National Tuberculosis Control Programmes of the SAARC Member States. The 31st session of Standing Committee of SAARC held in Dhaka on 09th – 10th November, 2005, appreciating the efforts of the Centre on TB/HIV co-infection and other works related to HIV/AIDS discipline, approved the renaming of the Centre as SAARC Tuberculosis and HIV/AIDS Centre (STAC) with additional mandate to support SAARC Member States for control and prevention of HIV/AIDS. Since then, with its efforts and effective networking with the Member States, the Centre is significantly contributing to control both TB and HIV/AIDS in the region.

Vision, Mission, Goal and Objective of STAC

SAARC TB and HIV/AIDS Centre (STAC) plays a key role as a leading institute to support and guide SAARC member states to make the region free of TB and HIV/AIDS. The mission of the Centre is to support efforts of National TB and HIV/AIDS Control Programmes through

evidence-based policy guidance, coordination and technical support.

The goal of the Centre is to bring an end to morbidity and mortality due to TB and HIV/AIDS and end the transmission of both infections until TB and HIV/AIDS cases to be major public health problems in the SAARC Region. The objective of the Centre is to eliminate TB and end HIV/AIDS epidemic in the region by coordinating with the efforts of the National TB Programmes and National HIV/AIDS programmes of the SAARC member states.

Role of STAC

- To act as a Regional Co-ordination Centre for NTPs and NACPs in the Region.
- To promote and coordinate- action for the prevention of TB/HIV co-infection in the Region.
- To collect, collate, analyze and disseminate all relevant information regarding the latest development and findings in the field of TB and HIV/AIDS in the Region and elsewhere.
- To establish a networking arrangement among the NTPs and NACPs of Member States and to conduct surveys, researches etcetera.
- To initiate, undertake and co-ordinate Research and Training in Technical, Bio-medical, operational and other aspects related to control and prevention of Tuberculosis and HIV/AIDS in the Region.
- To monitor epidemiological trends of all forms of TB and HIV/AIDS in the Region.
- To assist Member States for harmonization of policies and strategies on TB, HIV/AIDS and TB/HIV co-infection.
- To assist and support National TB Reference Laboratories in the Region in quality assurance of sputum microscopy, culture and drug sensitivity testing and implementation of bio-safety measures.
- To carry-out other important works identified by the Programming Committees/Governing Board.

2. GLOBAL BURDEN OF TUBERCULOSIS

2.1 Basic facts about TB

Tuberculosis (TB) is an old disease. Studies of human skeletons show that it has affected humans for thousands of years. The cause of the diseases remained unknown until 24th March 1882, when Dr. Robert Koch announced his discovery of the bacillus responsible, subsequently named Mycobacterium tuberculosis. The disease is spread when people who are sick with TB expel bacteria into the air (e.g., by coughing). TB typically affects the lungs (pulmonary TB) but can also affect other sites (extra pulmonary TB). Most people who develop the disease (about 90%) are adults and there are more cases among men than women.

A global modelling study published in 2016 estimated that about a quarter of the world's population had been infected with *M. tuberculosis*. More recent analyses and commentary suggest that the number of those currently infected is lower, given that some people will clear the infection. Following infection, the risk of developing TB disease is highest in the first 2 years (approximately 5%), after which it is much lower. The probability of developing TB disease is much higher among people living with HIV, and among people affected by risk factors such as under nutrition, diabetes, smoking and alcohol consumption.

Diagnostic tests for TB disease have improved substantially in recent years. There are now several rapid molecular tests recommended by WHO as the initial diagnostic test for TB, some of which can detect drug resistance simultaneously. These tests can be used at the lower levels of the health system. A point-of-care lateral-flow test performed on urine is also recommended by WHO; its main use is to assist with diagnosis of TB in people with advanced HIV disease, in combination with rapid molecular tests. There are additional rapid molecular tests specifically for the detection of resistance to a variety of first- and second-line anti-TB drugs, while sequencing technologies can be used to provide a comprehensive individual profile of drug resistance. The older method of sputum smear microscopy (developed >100 years ago) is still widely used for TB diagnosis in low and middle-income countries but is increasingly being replaced with rapid tests.

Without treatment, the death rate from TB is high. Studies of natural history of TB disease in the absence of treatment with anti-TB drugs (conducted before drug treatments became available) found that about 70% of individuals with sputum smear-positive pulmonary TB died within 10 years of being diagnosed, as did about 20% of people with culture-positive (but smear-negative) pulmonary TB.

Effective drug treatments were first developed in the 1940s. The latest WHO guidelines include a strong recommendation for a 6-month regimen of isoniazid (H), rifampicin (R), ethambutol (E) and pyrazinamide (Z) for people with drug-susceptible TB (both pulmonary and extrapulmonary): all four drugs for the first two months, followed by H and R for the remaining 4 months. They also include newer recommendations that people aged 12 years and older with drug-susceptible pulmonary TB may be treated with a 4-month regimen of rifapentine (P), H, Z and moxifloxacin (M), and that children and adolescents between 3 months and 16 years of age with non-severe TB (and without suspicion or evidence of resistance to R and H) may be treated with a 4-month regimen (2 months of H, R, Z and sometimes also E, followed by 2 months of H and R). Treatment success rates of at least 85% for people enrolled on the 6-month regimen are regularly reported to WHO by its 194 Member States. Treatment for people diagnosed with R-resistant TB (RR -TB) and multidrug-resistant TB (MDR-TB, defined as resistance to H and R) requires other regimens.

The latest WHO recommendations prioritize two 6-month regimens. Nationally, treatment success rates for RR-TB reported to date have typically been in the range of 50‑75%; the global average has been improving in recent years, reaching 68% in the most recent annual cohort of people enrolled on treatment for which data are available (2022). This may further improve with expanded use of the two 6-month regimens; for example, clinical trial data showed a treatment success rate of 89% for one of these regimens. Treatment for extensively drug-resistant TB (XDR-TB) defined as resistance to R, any fluoroquinolone and at least one of bedaquiline or linezolid) remains much more difficult and treatment success rates are typically low.

Preventive treatment is available for people with TB infection. Recommended options include: a weekly dose of rifapentine and isoniazid for three months (3HP), a daily dose of rifampicin plus isoniazid for three months (3HR), a daily dose of rifapentine plus isoniazid for one month (1HP), a daily dose of rifampicin for four months (4R), and a daily dose of isoniazid for six months (6H) or longer.

The only licensed vaccine for prevention of TB disease is the Bacillus Calmette-Guerin (BCG) vaccine. The BCG vaccine was developed almost 100 years ago, prevents severe forms of TB in children and is widely used. There is currently no licensed vaccine that is effective in preventing TB disease in adults, either before or after exposure to TB infection; however, results from a Phase II trial of the M72/AS01E candidate are promising. This vaccine is now in a Phase III trial, along with five other vaccine candidates.

2.2 Global and SAARC Regional TB commitments, Strategy, and targets

SDG Target 3.3	By 2030, end the epidemics of AIDS, TB, malaria and neglected tropical diseases, and combat hepatitis, water-borne diseases and other communicable diseases
WHO End TB Strategy	80% reduction in the TB incidence rate (new and relapse cases per 100 000 population per year) by 2030, compared with 2015 *2025 milestone:* 50% reduction
	90% reduction in the annual number of TB deaths by 2030, compared with 2015 *2025 milestone:* 75% reduction
	No households affected by TB face catastrophic costs by 2020
SAARC TB Elimination Strategy	50% reduction in the TB incidence rate (new and relapse cases per 100 000 population per year) by 2025, compared with 2015
	75% reduction in the annual number of TB deaths by 2025, compared with 2015
	By 2025: reduction of catastrophic cost due to TB to the TB-affected families to 0%.
	By 2027: elimination of TB epidemic from the SAARC Region

2.3 Global targets set in 2023 at the second UN high-level meeting on TB

INDICATOR	GLOBAL TARGET
TB treatment coverage (percentage of the estimated number of people who develop TB disease each year who are provided with quality-assured diagnosis and treatment)	90% by 2027 (equivalent to up to 45 million people globally in the 5-year period 2023–2027, including up to 4.5 million children and up to 1.5 million people with drug-resistant TB)
Coverage of TB preventive treatment (percentage of people at high risk of developing TB disease who are provided with TB preventive treatment)	90% by 2027 (equivalent to up to 45 million people globally in the 5-year period 2023–2027, including 30 million household contacts of people with TB and 15 million people living with HIV)
Coverage of rapid diagnostic testing for TB (percentage of those diagnosed with TB who were initially tested with a WHO-recommended rapid molecular test)	100% by 2027
Coverage of health and social benefits package for people with TB	100% by 2027
Availability of new TB vaccines that are safe and effective	Rollout initiated, preferably within 5 years

2.4 The End TB Strategy at a glance

<table>
<tr><td>VISION</td><td colspan="4">A WORLD FREE OF TB
- zero deaths, disease and suffering due to TB</td></tr>
<tr><td>GOAL</td><td colspan="4">END THE GLOBAL TB EPIDEMIC</td></tr>
<tr><td rowspan="2">INDICATORS</td><td colspan="2">MILESTONES</td><td colspan="2">TARGETS</td></tr>
<tr><td>2020</td><td>2025</td><td>SDG 2030[a]</td><td>End TB 2035</td></tr>
<tr><td>Reduction in number of TB deaths compared with 2015 (%)</td><td>35%</td><td>75%</td><td>90%</td><td>95%</td></tr>
<tr><td>Reduction in TB incidence rate compared with 2015 (%)</td><td>20%</td><td>50%</td><td>80%</td><td>90%</td></tr>
</table>

TB-affected families facing catastrophic costs due to TB (%)	0	0	0	0

PRINCIPLES
1. Government stewardship and accountability, with monitoring and evaluation 2. Strong coalition with civil society organizations and communities 3. Protection and promotion of human rights, ethics and equity 4. Adaptation of the strategy and targets at country level, with global collaboration
PILLARS AND COMPONENTS
1. INTEGRATED, PATIENT-CENTRED CARE AND PREVENTION A. Early diagnosis of TB including universal drug-susceptibility testing, and systematic screening of contacts and high-risk groups B. Treatment of all people with TB including drug-resistant TB, and patient support C. Collaborative TB/HIV activities, and management of co-morbidities D. Preventive treatment of persons at high risk, and vaccination against TB
2. BOLD POLICIES AND SUPPORTIVE SYSTEMS A. Political commitment with adequate resources for TB care and prevention B. Engagement of communities, civil society organizations, and public and private care providers C. Universal health coverage policy, and regulatory frameworks for case notification, vital registration, quality and rational use of medicines, and infection control D. Social protection, poverty alleviation and actions on other determinants of TB
3. INTENSIFIED RESEARCH AND INNOVATION A. Discovery, development and rapid uptake of new tools, interventions and strategies B. Research to optimize implementation and impact, and promote innovations

[a] Targets linked to the Sustainable Development Goals (SDGs)

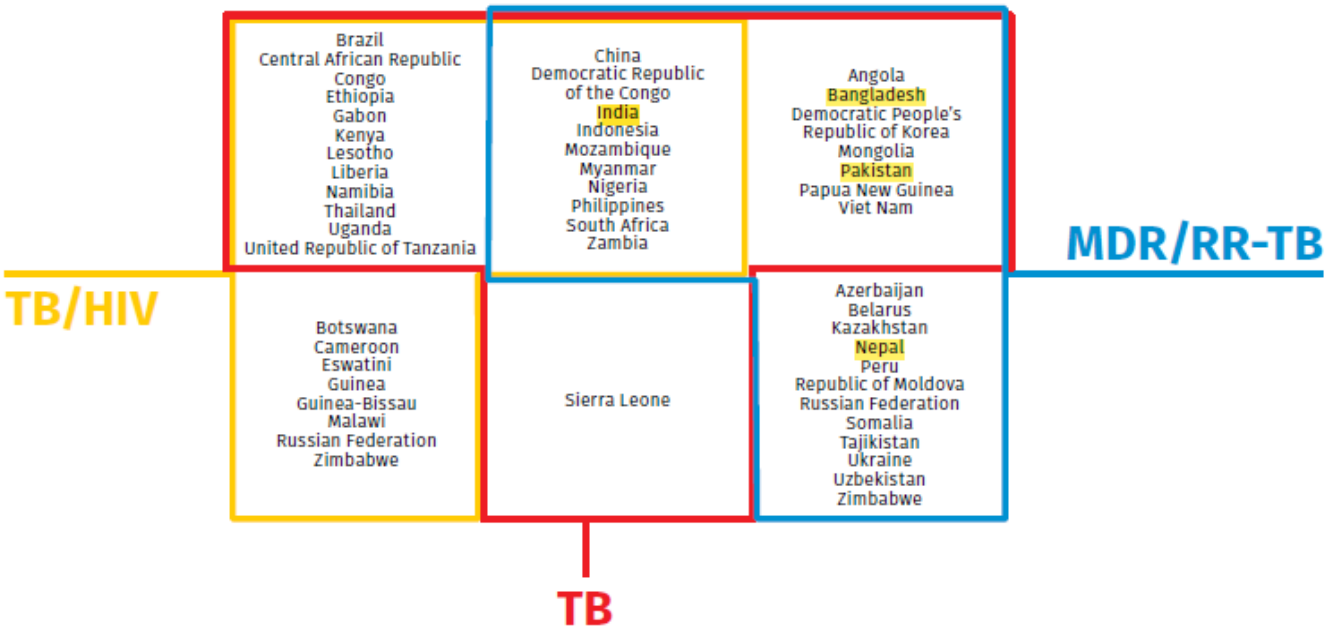
2.5 SAARC Regional Strategy for Elimination of Tuberculosis at a Glance

Vision: TB Free SAARC Region with zero deaths, disease, and suffering due to TB

Goal: To achieve decline in burden of TB, morbidity and mortality while working towards Elimination of TB in the SAARC Region by 2027
Objectives:
1. To diagnose TB patients early. This includes universal drug-susceptibility testing, and systematic screening of contacts and high-risk groups
2. To provide optimal treatment for all people with TB including drug-resistant TB, and patient support
3. To enhance TB/HIV Collaborative activities and proper management of co-morbidities like DM.
4. To provide preventive treatment of persons at high risk (e.g., Children and HIV positive people living with TB patients)
5. To intensify research and innovation related to TB
6. To reduce human suffering and socio-economic burden associated with TB. This includes social protection, poverty alleviation and actions on other determinants of TB like malnutrition, indoor air pollution *etcetera*.
7. To strengthen engagement of communities, civil society organizations, and public and private health care providers.
8. To enhance political commitment with adequate resources for TB care and prevention
Targets for SAARC Region SAARC Region Targets for scaling-up of interventions for TB care and control set in line with Global Plan to End TB.
• By 2025: Reduction in number of deaths to 75%, compared with their levels in 2015
• By 2025: Reduction in TB incidence rate to 50%, compared with their level in 2015
• By 2025: Reduction of catastrophic cost due to TB to the TB-affected families to 0%
• By 2027: Elimination of TB epidemic from the SAARC Region

Three global High Burden Country (HBC) lists for 2021–2025 have been established: one for TB, one for HIV-associated TB and one for MDR/rifampicin-resistant TB (MDR/RR-TB). Three of eight Member States in the SAARC Region Bangladesh, India and Pakistan are among 30 high TB burden countries and four countries Bangladesh, India, Nepal and Pakistan in the SAARC Region are among 30 high MDR-TB burden countries (**Figure 01**).

Figure 01: Three global lists of high-burden countries for TB, HIV-associated TB and MDR/RR-TB to be used by WHO in the period 2021–2025, and their overlapping areas



Source: WHO Global Tuberculosis Report-2024

2.6 Global Epidemiology

Worldwide, TB has probably returned to being the world's leading cause of death from a single infectious agent, following three years in which it was replaced by coronavirus disease (COVID-19). It was also the leading killer of people with HIV and a major cause of deaths related to antimicrobial resistance.

An estimated 10.8 million people fell ill with tuberculosis (TB) worldwide in 2023. TB can affect anyone, regardless of age or sex. The highest burden is in adult men, who accounted for 55% of all TB cases in 2023; by comparison, adult women accounted for 33% and children 12% of cases. The higher share of TB cases among men is consistent with evidence from national TB prevalence surveys, which show that TB disease affects men more than women and that gap in case detection and reporting are higher among men. A total of 1.25 million people died from TB (including 161 000 people with HIV) in the same year.

In 2023, most of the people who develop TB disease each year are in 30 high TB burden countries, which accounted for 87% of the global total in 2023. Five countries accounted for 56% of the worldwide total: India (26%), Indonesia (10%), China (6.8%), the Philippines (6.8%) and Pakistan (6.3%).

Table 01: Global Epidemiological Burden of TB (2023)

(Best Estimates)

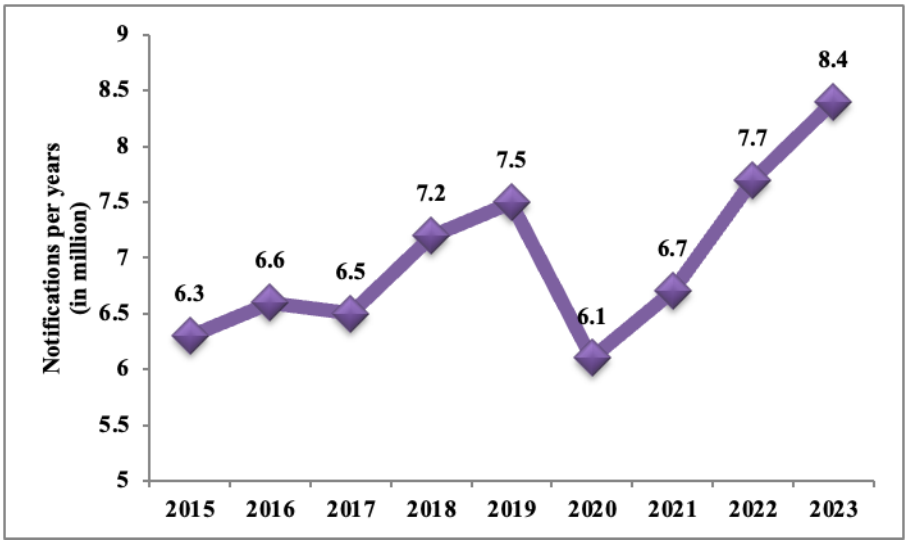
TB Control Indicators	Global
Estimated Population	8063 million
Estimated Incidence	10.8million
	(134 cases/100,000)
Estimated Deaths Due to TB	1.25 million
	(15 cases/100,000)
Total cases notified	8.4 million
New and relapse notified cases	8.1 million
Treatment Success Rate (2022 cohort)	88%
Patients with Known HIV Status who are HIV Positive	0.43 million
Patients with Known HIV Status who are HIV Positive on ART	0.38 million (90%)

Source: WHO Global Tuberculosis Report-2024

2.6.1 TB case notifications

Globally in 2023, 8.2 million people were newly diagnosed with TB and officially notified as a TB case. This is the highest number for a single year since WHO started to compile data from all countries and areas in the mid-1990s, up from the previous record of 7.5 million in 2022 and 15% higher than the pre-pandemic level of 7.1 million in 2019.

Figure 02: Global trend in case notifications of people newly diagnosed with TB, 2015–2023



Source: www.who.int/tb/data

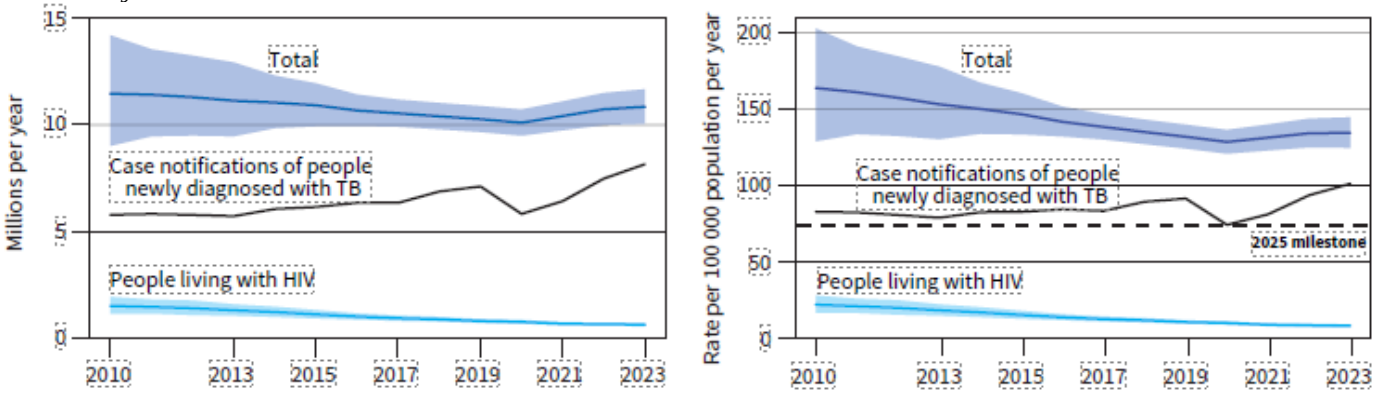
2.6.2 Estimates of TB incidence

Globally in 2023, an estimated 10.8 million people (95% uncertainty interval [UI]: 10.1–11.7 million) fell ill with TB (incident cases), a further increase from 10.7 million (95% UI: 10.0–11.5 million) in 2022, 10.4 million (95% UI: 9.7–11.1 million) in 2021 and 10.1 million (95% UI: 9.5–10.7 million) in 2020 (**Figure 03**). The continued rise reflects the ongoing after-effects of disruptions to TB services during the worst years of the COVID-19 pandemic (2020 and 2021). These persist because of the lag time between more people being infected with TB during disruptions to services and the development (among a small proportion of those infected) of TB disease.

The global TB incidence rate (new cases per 100 000 population per year) is estimated to have increased by 4.6% between 2020 and 2023, from 129 (95% UI: 121–136) in 2020 to 134 (95% UI: 125–145) in 2023, following declines of about 2% per year between 2010 and 2020 (**Figure 3, right panel**).

Figure 03: Global trends in the estimated number of incident TB cases (left) and the incidence rate (right), 2010–2023

The horizontal dashed line shows the 2025 milestone of the End TB strategy, which is a 50% reduction in the TB incidence rate between 2015 and 2025. Shaded areas represent 95% uncertainty intervals.



Source: WHO Global Tuberculosis Report-2024

2.6.3 TB Mortality

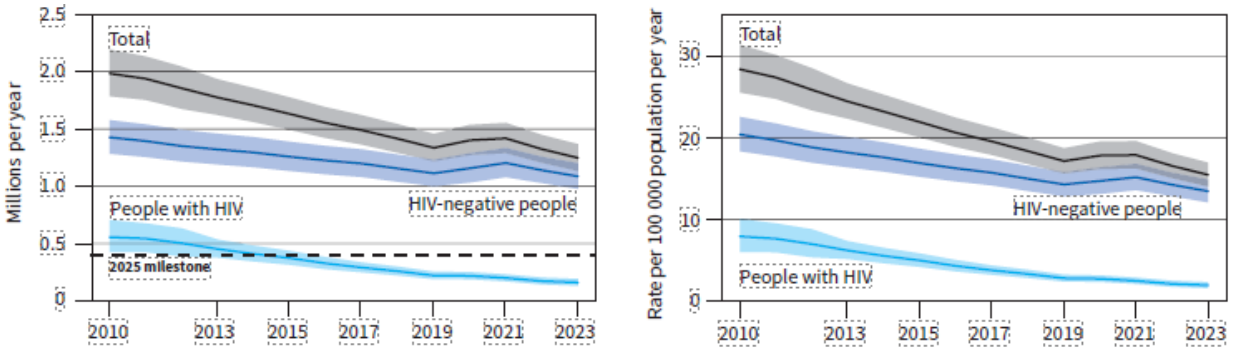
The estimated global number of deaths caused by TB fell for a second consecutive year in 2023, continuing the reversal of increases that occurred during the worst period of COVID-related disruptions to TB diagnosis and treatment in 2020 and 2021 (**Figure 04**).

Globally in 2023, TB caused an estimated 1.25 million deaths (95% UI: 1.13–1.37 million), including 1.09 million among HIV-negative people (95% UI: 0.98–1.20 million) and 161 000

among people with HIV (95% UI: 132 000– 193 000).18 This total was down from estimates of 1.32 million (95% UI: 1.21–1.45 million) in 2022, 1.42 million (95% UI: 1.29–1.55 million) in 2021 and 1.40 million (95% UI: 1.27–1.54 million) in 2020; it was also below the pre-pandemic level of 1.34 million (95% UI: 1.22–1.46 million) in 2019.

Figure 04: Global trends in the estimated number of deaths caused by TB (left) and the TB mortality rate (right), [a] 2010‑2023

The horizontal dashed line shows the 2025 milestone of the End TB strategy, which is a 75% reduction in the total number of TB deaths between 2015 and 2025. Shaded areas represent 95% uncertainty intervals.



[a] *Deaths from TB among people with HIV are officially classified as deaths caused by HIV/AIDS, with TB as a contributory cause.*

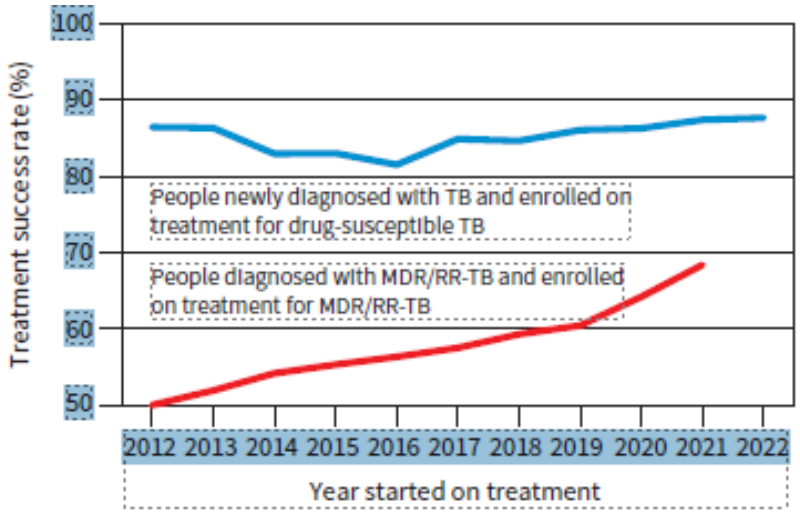
Source: WHO Global Tuberculosis Report-2024

2.6.4 Treatment Success Rate

The treatment success rate for people enrolled on treatment for drug-susceptible TB has been sustained at high levels in recent years. Globally, it improved further in 2022, to 88%; this was an increase from 87% in 2021 and 86% in both 2019 and 2020 (**Figure 05**).

Treatment success rates remain lower among people living with HIV (79% globally in 2022), although there have been steady improvements over time. The treatment success rate for children and young adolescents aged (0–14 years) was 90% in 2022, similar to levels achieved in previous years. Among 27 high burden countries42 that reported treatment outcome data disaggregated by sex, the treatment success rate in 2022 was slightly higher among females (89%) than males (86%).

Figure 05: Global success rates for people treated for TB, 2012–2022[a]



[a] *2012 is the first year for which WHO collected data about treatment outcomes for MDR/RR-TB.*

Source: WHO Global Tuberculosis Report -2024

3. BURDEN OF TUBERCULOSIS IN SAARC REGION

3.1 SAARC Epidemiology

The SAARC region, with an estimated annual incidence of 4.0 million TB cases equivalent to 206 cases per 100,000 accounted for 37% of the global burden of TB incidence in 2023. Three of eight Member States in the SAARC Region are high TB burden countries and four of eight member States are high MDR-TB burden countries among 30 high burden countries. India accounted for 26%, Pakistan 6 % and Bangladesh 3.5% of the world's TB Cases. An estimated 0.44 million (23 cases per 100,000) TB deaths occurred in the region in 2023.

Table 02: Estimates of TB Incidence in the SAARC Region 2023

Country	Population ('000)	Number		Rate*	
		Best Estimate	Uncertainty interval	Best Estimate	Uncertainty interval
Afghanistan	41000	75000	47000-109000	180	112-263
Bangladesh	171000	379000	276000-499000	221	161-291
Bhutan	790	1300	990-1600	164	126-208
India	1438000	2800000	2360000-3280000	195	164-228
Maldives	530	210	160-260	40	31-50
Nepal	30000	68000	37000-106000	229	126-355
Pakistan	248000	686000	465000-911000	277	188-368
Sri Lanka	23000	14000	10000-19000	62	45-82
Total	**1952320**	**4023510**	-	**206**	-

Source: WHO Global Tuberculosis Report 2024
** Per 100 000 population*

Table 03: Estimates of TB Mortality in the SAARC Region 2023

Country	Population ('000)	HIV - negative TB mortality		HIV-positive TB mortality		Total TB mortality	
		Number	Rate *	Number	Rate *	Number	Rate *
Afghanistan	41000	10000	24	1	0.00	10001	24
Bangladesh	171000	44000	26	170	0.10	44170	26
Bhutan	790	220	28	3	0.38	223	28
India	1438000	315000	22	8200	0.57	323200	22
Maldives	530	8	1.6	0	0.00	8	2
Nepal	30000	16000	54	200	0.69	16200	54
Pakistan	248000	47000	19	1500	0.62	48500	20
Sri Lanka	23000	800	3.5	25	0.11	825	4
Total	**1952320**	**433028**	**22**	**10099**	**0.52**	**443127**	**23**

Source: WHO Global Tuberculosis Report 2024
** Rates are per 100 000 population*

In 2023, the SAARC region had 0.46 million estimated TB burden in children (0-14). Among them 0.24 million were males and 0.22 million were females. The region has 11.4 % of children in total TB incidence.

Table 04: Estimates of TB Burden in children (0-14) by age and sex in the SAARC Region, 2023

Country	Male	Female	Total	% of children in total TB incidence	Total cases (including children)
Afghanistan	7600	6900	14500	19	75000
Bangladesh	18000	17000	35000	9	379000
Bhutan	22	12	34	3	1300
India	161000	149000	310000	11	2800000
Maldives	0	4	4	2	210
Nepal	2800	2500	5300	8	68000
Pakistan	49000	45000	94000	14	686000
Sri Lanka	380	340	720	5	14000
Regional	**238802**	**220756**	**459558**	**11.4**	**4023510**

Source: https://www.who.int/teams/global-tuberculosis-programme/data
Download WHO TB incidence estimates disaggregated by age, sex and risk factor [0.6Mb]

3.2 Notifications and Treatment Success

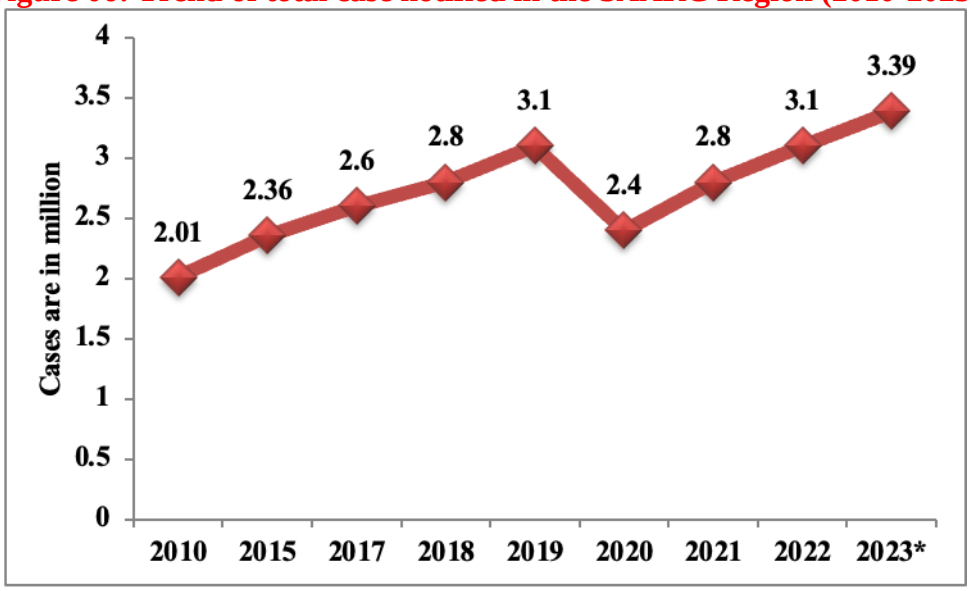
A total of 3.39 million TB cases were notified in 2023 in the SAARC region (**Table 05**). This is the highest number since 2010. However, there were 2.4 million in 2020 and 2.8 million in year 2021, these reductions in case notifications due to COVID. Again, after COVID the total case notification has been in increasing trend (**Figure 06**). The treatment success rate for new smear positive cases was 90 % (2022 cohort) (**Figure 07**).

Table 05: TB Case notifications (2023) and Treatment Success Rate (2022 Cohort) in SAARC Region

Country	Population ('000)	Total Case notified	Total (New and relapse cases)	Treatment Success (%)
Afghanistan	41000	49679	49533	95
Bangladesh	171000	303686	302813	95
Bhutan	790	864	840	90
India	1438000	2517810	2382714	89
Maldives	530	118	117	69
Nepal	30000	37447	36881	93
Pakistan	248000	480136	475761	95
Sri Lanka	23000	9538	9271	79
Total	**1952320**	**3399278**	**3257930**	**90**

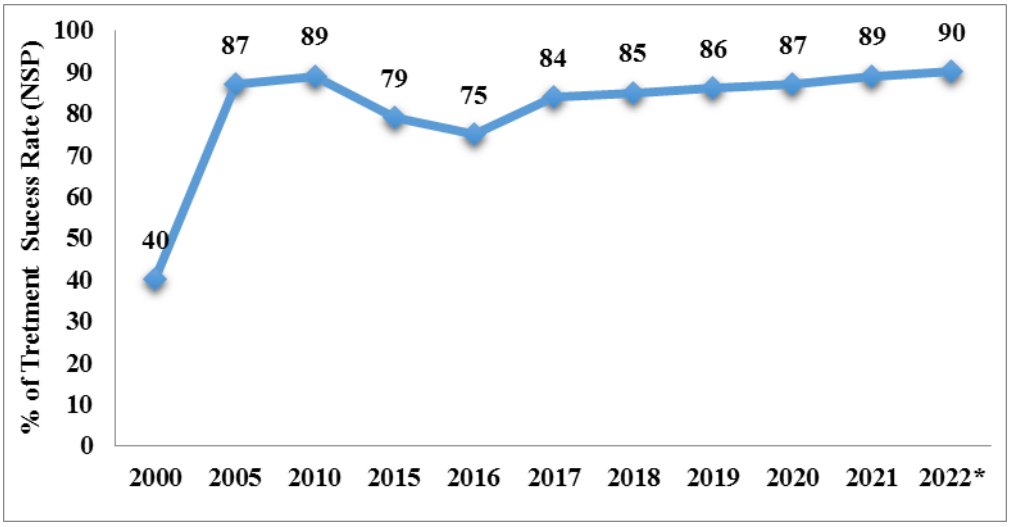
Source: WHO Global Tuberculosis Report 2024

Figure 06: Trend of total case notified in the SAARC Region (2010-2023)



*Source: *WHO Global Tuberculosis Report-2024*
SAARC Epidemiological response on Tubreculosis-2023

Figure 07: Trend of Treatment success rate for all new cases including relapse cases (2000-2022)



*Source: *https://www.who.int/teams/global-tuberculosis-programme/data, , Epidemiological Response on Tuberculosis 2023*

3.3 Drug Resistant TB

In the year 2023, there were 59,669 drug resistant TB and 13,852 Pre XDR-TB or XDR-TB laboratory confirmed cases. However, 53,755 drug resistant and 11,998 Pre XDR-TB or XDR-TB patients were started on treatment (**Table 06**).

Table 06: TB care services for Drug-resistant TB in the SAARC Region, 2023

Country	People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance		People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		Total number of People with TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment Drug Resistant TB
	Drug Resistant TB	Pre XDR-TB or XDR-TB	Drug Resistant TB	XDR-TB	
Afghanistan	512	36	458	36	464
Bangladesh	2743	99	2062	94	2062
Bhutan	59	4	59	4	59
India	52015	12580	48107	9158	49622
Maldives	0	0	0	0	0
Nepal	693	150	454	92	454
Pakistan	3619	982	2588	2613	977
Sri Lanka	28	1	27	1	27
Regional	**59669**	**13852**	**53755**	**11998**	**53665**

Source: https://www.who.int/tb/country/data/download/en/

3.4 TB/HIV Co-infection

In 2023, there were 35,969 TB Patients with known HIV status, among them 35,319 (98%) were on Antiretroviral Therapy. India accounts for 34,476 TB patients with known HIV status and 34,297 (99%) patients were on ART, however, Afghanistan and Bhutan had provided 100% ART to TB patients with Known HIV status in the region. (**Table 07**)

Table 07: TB/HIV care in new and relapse TB patients, 2023

Country	Patients with known HIV status who are HIV positive		Patients on Antiretroviral Therapy (ART)	
	Number	%	Number	%
Afghanistan	11	0.026	11	100
Bangladesh	61	0.054	48	79
Bhutan	6	0.69	6	100
India	34476	1.5	34297	99
Maldives	0	0	0	NA
Nepal	208	0.63	205	99
Pakistan	1164	0.39	714	61
Sri Lanka	43	0.48	38	88
Regional	**35969**		**35319**	**98**

Source: WHO Global Tuberculosis Report 2024
NA: Not available

The estimated Population of SAARC region in 2023 was 1952 million which accounts for 24%

of the global population. **Table 08** shows the comparison between TB indicators for Global and SAARC Region respectively for the year 2023.

Table 08: Global vs. SAARC Region on TB Indicators, 2023

TB Control Indicators	Global	SAARC	% of Global
Estimated Population	8063 million	1952 million	24
Estimated Incidence	10.8 million	4.0 million	37
	(134 cases/100 000)	(206 cases/100 000)	
Estimated Deaths Due to TB	1.25 million	0.44 million	35
	(15 cases/100 000)	(23 cases/100 000)	
Total cases notified	8.4 million	3.39 million	40
New and relapse notified cases	8.1 million	3.25 million	40
Treatment Success Rate (2019 cohort)	88%	90%	-
Patients with Known HIV Status who are HIV Positive	0.43 million	0.035 million	8
Patients with Known HIV Status who are HIV Positive on ART	0.38 million (90%)	0.035 million (98%)	9

Source: www.who.int/tb data/TB country, regional and global profiles

4. PROGRESSES ON TB CONTROL IN SAARC MEMBER STATES

AFGHANISTAN

BANGLADESH

BHUTAN

INDIA

MALDIVES

NEPAL

PAKISTAN

SRI LANKA

AFGHANISTAN

Islamic Republic of Afghanistan is one of the eight countries of the SAARC Region. Afghanistan officially the Islamic Republic of Afghanistan, is a landlocked country located within South Asia and Central Asia. It has a population of approximately 41 million (WHO Global Tuberculosis Report-2024). It is bordered by Pakistan in the south and east; Iran in the west; Turkmenistan, Uzbekistan, and Tajikistan in the north and China in the far northeast.

TB Epidemiology:

In Afghanistan, estimated annual incidence was 75,000 (CI: 47,000-109,000) TB cases equivalent to a rate of 180 cases per 100,000 population and 10,000 TB deaths equivalent to a rate of 24 deaths per 100,000 population in 2023. The TB case notification in the year 2023 was 49,679 with 95% treatment success rate registered for 2022 cohort. In year 2023, there were estimated 1700 MDR/RR- TB incidence cases with laboratory confirmed cases for MDR/RR-TB and XDR-TB 512 and 36 cases respectively. There were 11 TB patients with known HIV status who are HIV positive among them 11 patients (100%) were on ART. There were 872 TB diagnostic centers till the end of 2023 and 48 GX machines placed at public 48 sites (30 CTB, 5 GF, 1 ACROD, 2 MSF and 10 MOPH), in 25 provinces and three in privates clinics/facilities in Kabul till June 2019.

TB Epidemiology 2023, Afghanistan

Population (2023)				41 million
Estimates of TB burden * 2023	**Best estimate**	**Uncertainty Interval Range**	**Rate (per 100 000 population)**	**Uncertainty Interval Range (Rate per 100 000 population)**
Total TB Incidence	75000	47000-109000	180	112-263
TB incidence in people living with HIV	19	8-36	0.05	0.02-0.09
Multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB incidence)	1700	1000-2500	4.20	2.4-6.0
TB Deaths in HIV-negative People	10000	6100-15000	24	15-36
TB Deaths in people with HIV	1	1-2	0	0-0.01

Changes in TB incidence rate and total TB deaths	
The 2025 milestones of the End TB Strategy are a 50% reduction in the TB incidence rate and a 75% reduction in the total number of TB deaths compared with 2015	
Change in the TB incidence rate 2015–2023	Reduction of 4.5%
Change in the total number of TB deaths 2015–2023	Reduction of 25%

Estimated TB incidence by age and sex, 2022 [B]			
Gender	**0-14 years**	**>14 years**	**Total**
Females	6900	30400	37300
Males	7600	29900	37500
Total	14500	60300	74800

TB case notifications, 2023	
People diagnosed with new or relapse cases of TB	49533
-% tested with rapid diagnostics at time of diagnosis	45%
-% with known HIV status	86%
- % pulmonary	73%
- % of pulmonary cases that are bacteriologically confirmed	69%
- % women aged ≥ 15 years	44%
-% men aged ≥ 15 years	34%
- % children aged 0-14 years	22%
Total cases notified	49679

Universal Health Coverage and Social protection	
TB treatment coverage (notified new and relapse cases/estimated incidence), 2023	66% (46-110)
TB cases fatality ratio (estimated mortality/estimated incidence), 2023	14% (7-23)
TB-affected households facing catastrophic total costs (modelled estimate**), 2021	94 % (89-98)

TB/HIV Care in new and relapse TB patients, 2023	**Number**	**%**
People with a new or relapse cases of TB who are living HIV	11	0.026%
People with a new or relapse cases of TB who are living HIV and who are on antiretroviral therapy	11	100%

Drug- resistant TB care, 2023		
% of people with a new case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		86%
% of people previously treated for TB with a case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		100%
% of people with bacteriologically-confirmed pulmonary TB that is resistant to rifampicin tested for susceptibility to fluoroquinolones		100%
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance		512
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		458
Total number of people with TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		464
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB)		36
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones started on treatment		36
Treatment success rate and cohort size	**Success**	**Cohort**
People with a new or relapse case of TB started on treatment for TB 2022	95%	50976
People with a previously treated case of TB (but not a relapse case) started on treatment for TB 2022	N/A	0
People with a new or relapse case of TB who are living with HIV started on treatment for TB 2022	83%	12
People started on treatment for TB that is resistant to rifampicin (MDR/RR-TB) 2021	68%	393
People started on treatment for TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB/XDR-TB) 2021	60%	20
TB Preventive treatment, 2023		
% of people living with HIV newly enrolled in care on preventive treatment		N/A
% of estimated number of household contacts of bacteriologically- confirmed TB cases on preventive treatment		19%(19-19)

N/A: Not Available

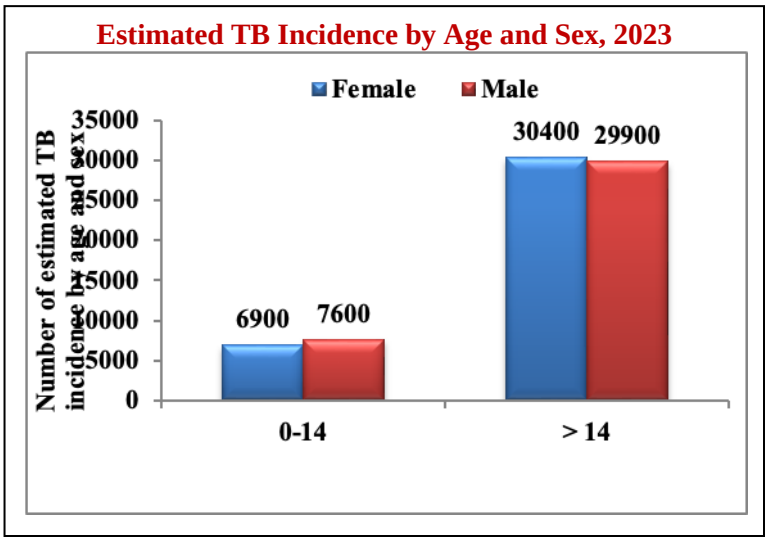
* Ranges represent uncertainty intervals

** *Lancet 2023: https://doi.org/10.1016/S2214-109X(23)00369-8*

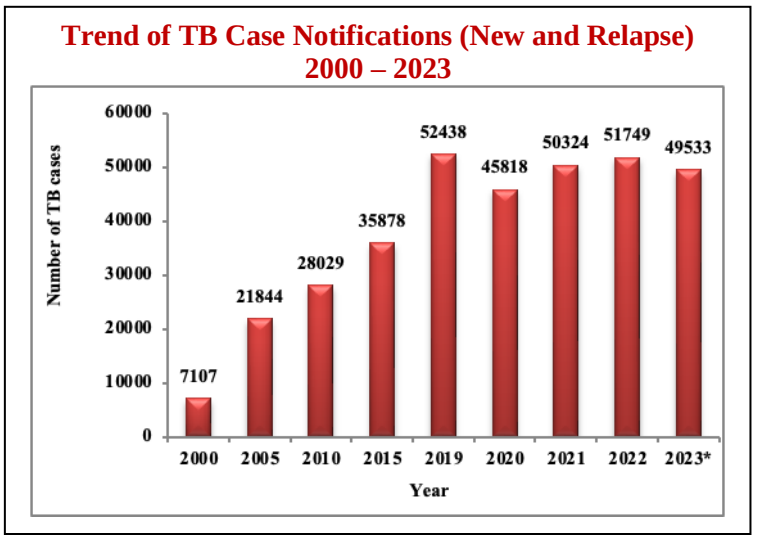
[B] *https://www.who.int/teams/global-tuberculosis-programme/data*

Source: WHO Global Tuberculosis Report-2024

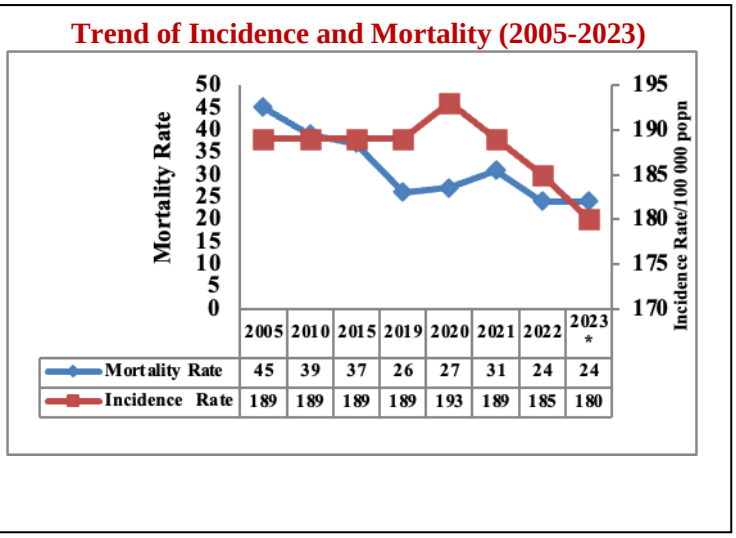
Graphical Presentation, Afghanistan



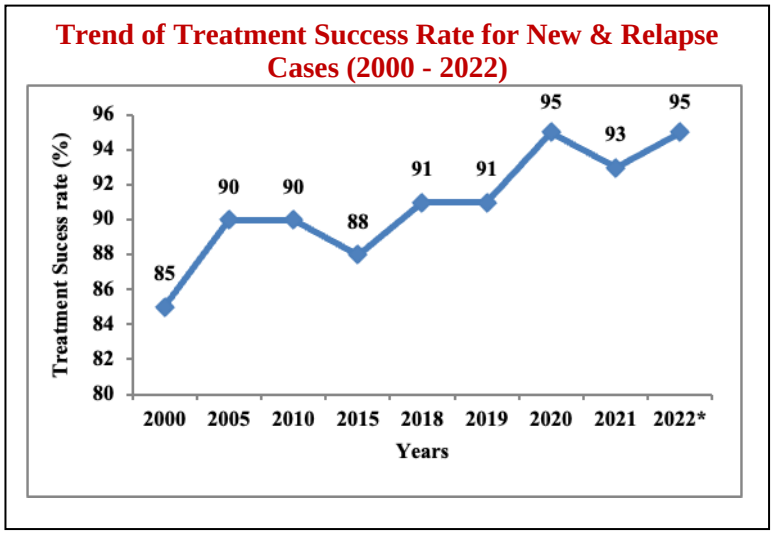
Source: https://www.who.int/teams/global-tuberculosis-programme/data



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*

BANGLADESH

People's Republic of Bangladesh is one of the countries in South Asia. It is bordered by India to its west, north and east; Myanmar (Burma) to its southeast; and is separated from Nepal and Bhutan by the Chicken's Neck corridor. It faces Bay of Bengal to its south. The total area of Bangladesh is 147,570 km^2. Bangladesh is one of the densely populated countries in the world. It has a population of 171 million (WHO Global Tuberculosis Report-2024).

TB Epidemiology:

In Bangladesh, estimated annual incidence was 379,000 (CI: 276,000-499,000) TB cases equivalent to a rate of 221 cases per 100,000 population and 44,000 TB deaths equivalent to a rate of 26 deaths per 100,000 population in 2023. The TB case notification in the year 2023 was 303,686 with 95% treatment success rate registered for 2022 cohort. In year 2023, there were 5000 estimated multidrug-resistant or rifampicin-resistant TB (MDR/RR) incidence cases and people with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB were 99 cases. There were 61 TB patients with known HIV status who are HIV positive. There were four types of laboratory network in Bangladesh; they are National TB Reference Laboratory (NTRL), Regional TB Reference Laboratory (RTRL), Intermediate Laboratory and Peripheral Laboratory. There were 1182 TB diagnostic Centres till the end of 2023.

Bangladesh is one of the High TB and High MDR-TB burden countries among 30 High burden countries in the SAARC region.

TB Epidemiology 2023, Bangladesh

Population (2023)				171 million
Estimates of TB burden* 2023	**Best estimate**	**Uncertainty Interval (Range)**	**Rate (per 100 000 population)**	
			Best estimate	**Uncertainty Interval (Range)**
Total TB Incidence	379000	276000-499000	221	161-291
TB incidence in people living with HIV	740	380-1200	0.43	0.22-.71
Multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB incidence)	5000	1400-8600	2.9	0.84-5
TB Deaths in HIV-negative People	44000	26000-66000	26	15-38
TB Deaths in people with HIV	170	100-250	0.1	0.06-0.15

Changes in TB incidence rate and total TB deaths	
The 2025 milestones of the End TB Strategy are a 50% reduction in the TB incidence rate and a 75% reduction in the total number of TB deaths compared with 2015	
Change in the TB incidence rate 2015–2023	0%
Change in the total number of TB deaths 2015–2023	Reduction of 35%

Estimated TB incidence by age and sex, 2023 [B]			
Gender	**0-14 years**	**>14 years**	**Total**
Females	17000	147000	164000
Males	18000	198000	216000
Total	35000	345000	380000

TB case notifications, 2023	
People diagnosed with new or relapse cases of TB	302813
-% tested with rapid diagnostics at time of diagnosis	29%
-% with known HIV status	37%
- % pulmonary	77%
- % of pulmonary cases that are bacteriologically confirmed	74%
- % women aged ≥ 15 years	41%
-% men aged ≥ 15 years	55%
- % children aged 0-14 years	4%
Total cases notified	303686
Universal Health Coverage and Social protection	
TB treatment coverage (notified new and relapse cases/estimated incidence), 2023	80% (61-110)
TB cases fatality ratio (estimated mortality/estimated incidence), 2023	12% (6-19)
TB-affected households facing catastrophic total costs (modelled estimate**), 2021	43% (37-50)

TB/HIV Care, 2023	**Number**	**%**

People with a new or relapse cases of TB who are living HIV	61	0.054%
People with a new or relapse cases of TB who are living HIV and who are on antiretroviral therapy	48	79%
Drug- resistant TB care, 2023		
% of people with a new case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		65%
% of people previously treated for TB with a case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		85%
% of people with bacteriologically-confirmed pulmonary TB that is resistant to rifampicin tested for susceptibility to fluoroquinolones		54%
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance		2743
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		2062
Total number of people with TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		2062
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB)		99
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones started on treatment		94
Treatment success rate and cohort size	**Success**	**Cohort**
People with a new or relapse case of TB started on treatment for TB 2022	95%	262044
People with a previously treated case of TB (but not a relapse case) started on treatment for TB 2022	90%	780
People with a new or relapse case of TB who are living with HIV started on treatment for TB 2022	N/A	N/A
People started on treatment for TB that is resistant to rifampicin (MDR/RR-TB) 2021	77%	1384
People started on treatment for TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB/XDR-TB) 2021	74%	100
TB Preventive treatment, 2023		
% of people living with HIV newly enrolled in care on preventive treatment		8%
% of estimated number of household contacts of bacteriologically- confirmed TB cases on preventive treatment		32% (31-33)

N/A : Not Available

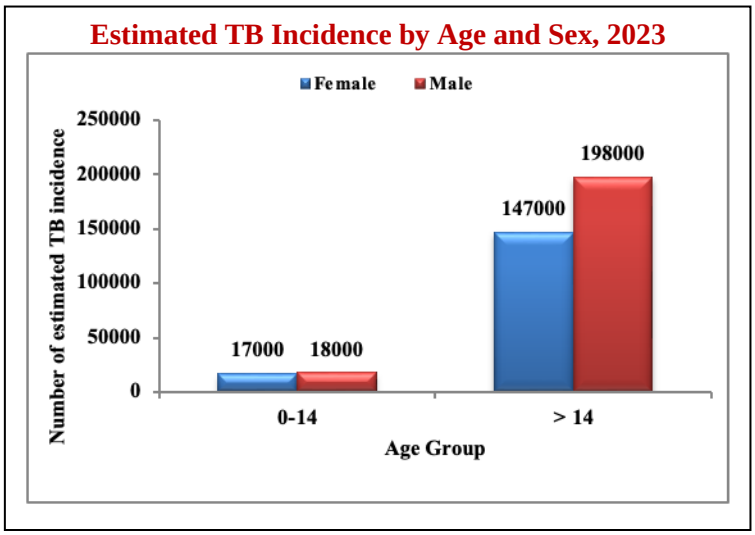
* Ranges represent uncertainty intervals

** *Lancet 2023: https://doi.org/10.1016/S2214-109X(23)00369-8*

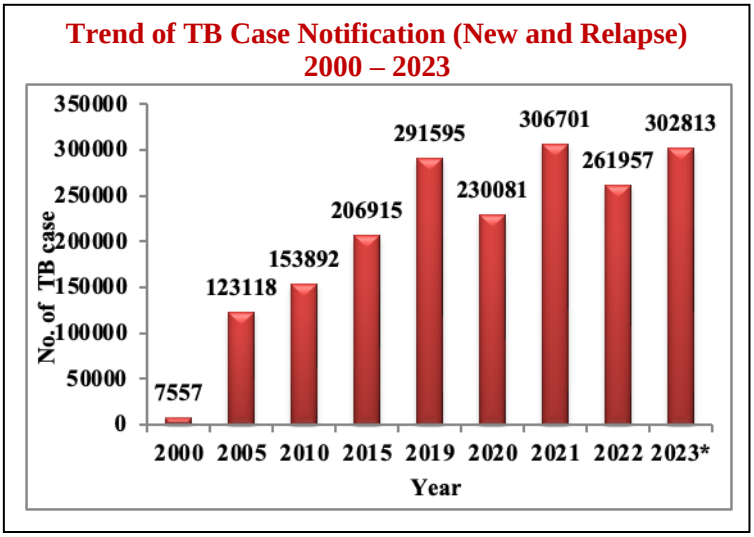
[B] *https://www.who.int/teams/global-tuberculosis-programme/data*

Source: WHO Global Tuberculosis Report-2024

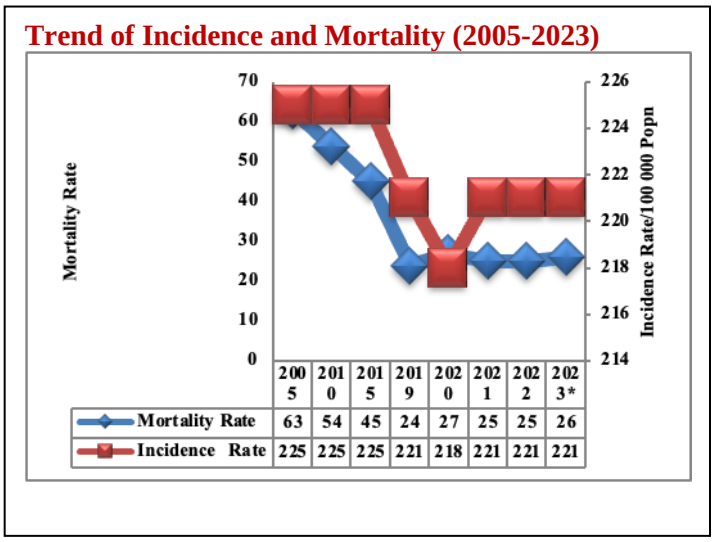
Graphical Presentations, Bangladesh



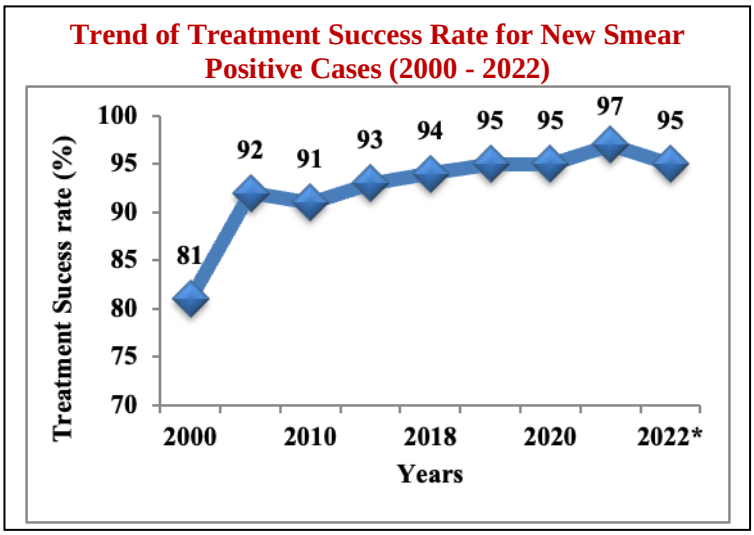
Source:https://www.who.int/teams/global-tuberculosis-programme/data



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*

BHUTAN

The Kingdom of Bhutan is a landlocked country in South Asia situated at the eastern end of the Himalayas. It is bordered to the north by China and India to the south, east and west. To the west, it is separated from Nepal by the Indian state of Sikkim, while on farther south it is separated from Bangladesh by the Indian states, Assam and West Bengal. Bhutan's capital and largest city is Thimphu. It has a land area of 38,394 square kilometers and the altitude varying from 180 m to 7,550 m above sea level. The total population of Bhutan was estimated to be 790,000 (WHO Global Tuberculosis Report-2024) at the end of the year 2023.

TB Epidemiology:

In Bhutan, estimated annual incidence was 1,300 (CI: 990-1,600) TB cases equivalent to a rate of 164 cases per 100,000 population and 220 TB deaths equivalent to a rate of 28 deaths per 100,000 population in 2023. TB case notifications in year 2023 were 864 with 90% treatment success rate registered for 2022 cohort. In year 2023, there were 160 estimated multidrug-resistant or rifampicin-resistant TB (MDR/RR) incidence cases and people with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre XDR-TB or XDR-TB were 4 cases. There were 6 TB patients with known HIV status who are HIV positive among them all patients (100%) were on ART. The National TB Reference Laboratory (NTRL) has a well-equipped and maintained biosafety level III (BSL III) laboratory functioning in the premises of the Royal Center for Disease Control (RCDC). There were 46 TB diagnostic Centres till end of 2023.

TB Epidemiology 2023, Bhutan

Population (2023)				790000
Estimates of TB burden * 2023	Best estimate	Uncertainty Interval (Range)	Rate (per 100 000 population)	
			Best estimate	Uncertainty Interval (Range)
Total TB Incidence	1300	990-1600	164	126-208
TB incidence in people living with HIV	9	3-19	1.1	0.32-2.5
Multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB incidence)	160	110-200	20	14-26
TB Deaths in HIV-negative People	220	150-310	28	18-39
TB Deaths in people with HIV	3	1-7	0.38	0.1-0.83
Changes in TB incidence rate and total TB deaths				
The 2025 milestones of the End TB Strategy are a 50% reduction in the TB incidence rate and a 75% reduction in the total number of TB deaths compared with 2015				
Change in the TB incidence rate 2015–2023				Increase of 1.1 %
Change in the total number of TB deaths 2015–2023				Increase of 63 %
Estimated TB incidence by age and sex, 2023 [B]				
Gender		**0-14 years**	**>14 years**	**Total**
Females		12	629	641
Males		22	629	651
Total		34	1258	1292
TB case notifications, 2023				
People diagnosed with new or relapse cases of TB				840
-% tested with rapid diagnostics at time of diagnosis				82%
-% with known HIV status				>100%
- % pulmonary				65%
- % of pulmonary cases that are bacteriologically confirmed				92%
- % women aged ≥ 15 years				49%
-% men aged ≥ 15 years				49%
- % children aged 0-14 years				2%
Total cases notified				864
Universal Health Coverage and Social protection				
TB treatment coverage (notified new and relapse cases/estimated incidence), 2023				65 %(51-85)
TB cases fatality ratio (estimated mortality/estimated incidence), 2023				17% (11-26)
TB-affected households facing catastrophic total costs (modelled estimate**), 2021				40% (29-53)
TB/HIV Care, 2023			**Number**	**%**
People with a new or relapse cases of TB who are living HIV			6	0.69%
People with a new or relapse cases of TB who are living HIV and who are on antiretroviral therapy			6	100%
Drug- resistant TB care, 2023				
% of people with a new case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin				100%

% of people previously treated for TB with a case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		100%
% of people with bacteriologically-confirmed pulmonary TB that is resistant to rifampicin tested for susceptibility to fluoroquinolones		65%
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance		59
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		59
Total number of people with TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		59
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB)		4
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones started on treatment		4
Treatment success rate and cohort size	**Success**	**Cohort**
People with a new or relapse case of TB started on treatment for TB 2022	90%	748
People with a previously treated case of TB (but not a relapse case) started on treatment for TB 2022	73%	15
People with a new or relapse case of TB who are living with HIV started on treatment for TB 2022	100%	3
People started on treatment for TB that is resistant to rifampicin (MDR/RR-TB) 2021	96%	52
People started on treatment for TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB/XDR-TB) 2021	100%	3
TB Preventive treatment, 2023		
% of people living with HIV newly enrolled in care on preventive treatment		N/A
% of estimated number of household contacts of bacteriologically- confirmed TB cases on preventive treatment		5.5% (5.4-5.7)

N/A: Not Available

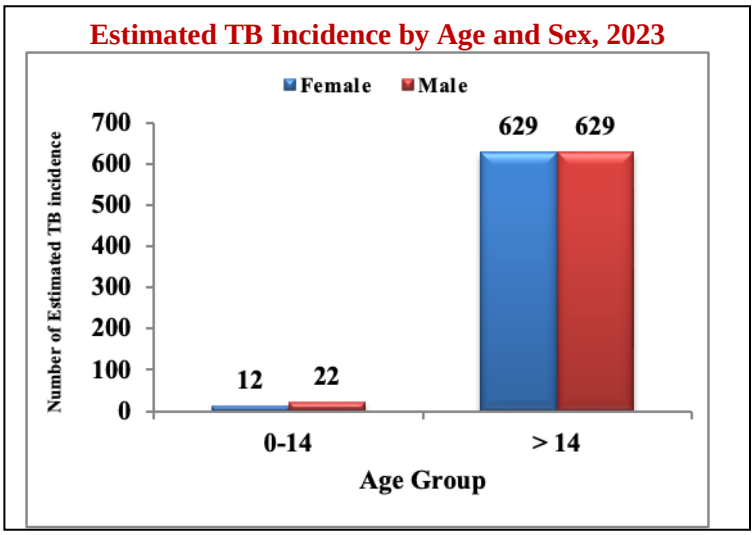
* Ranges represent uncertainty intervals

** *Lancet 2023: https://doi.org/10.1016/S2214-109X(23)00369-8*

[B] *https://www.who.int/teams/global-tuberculosis-programme/data*

Source: WHO Global Tuberculosis Report-2024

Graphical Presentations, Bhutan



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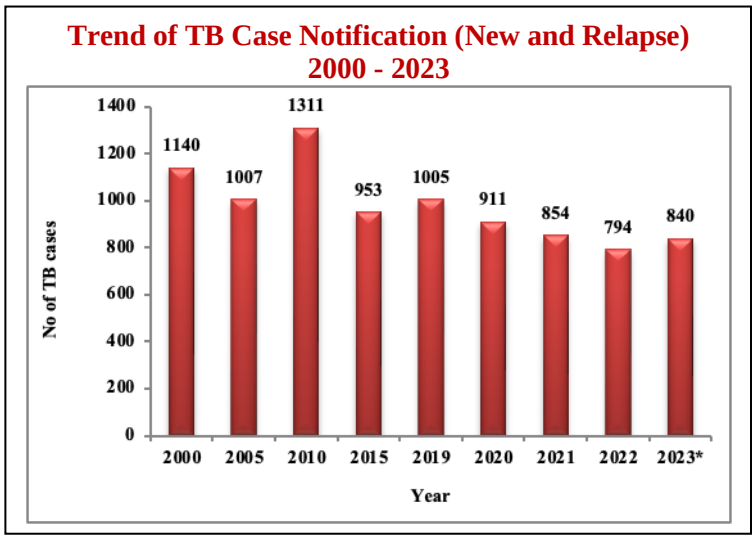
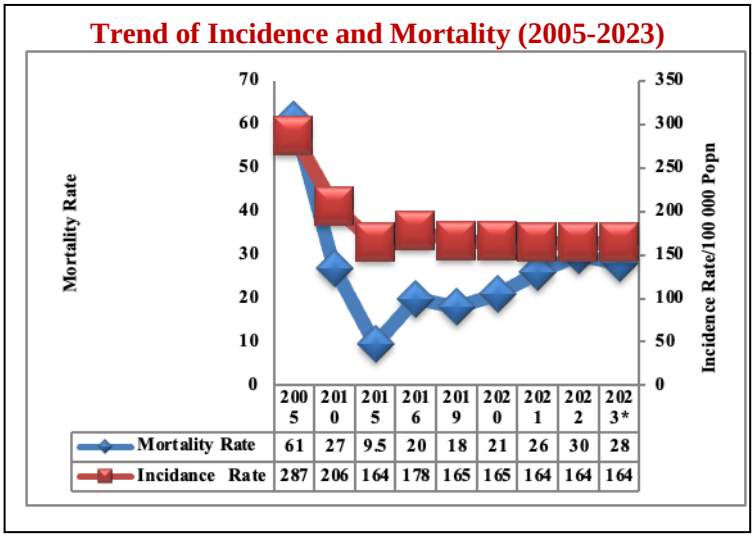
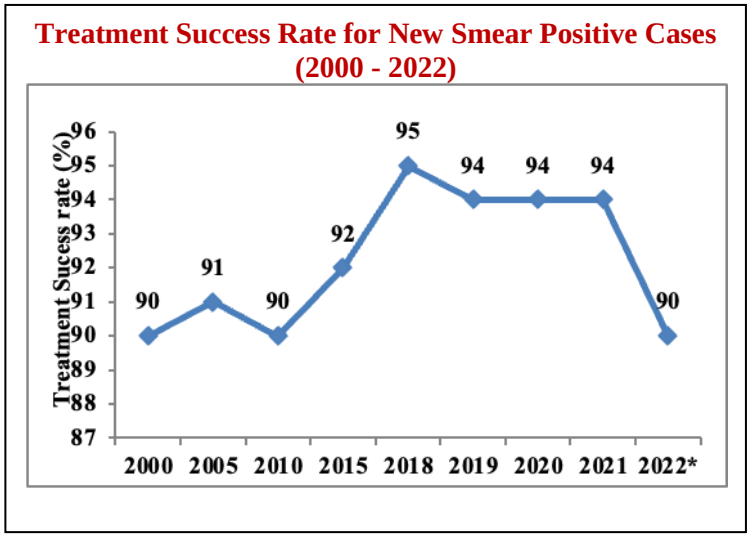


*Source: *WHO Global Tuberculosis Report 2024,*
SAARC Epidemiological Response on Tuberculosis -2023



*Source: *WHO Global Tuberculosis Report 2024,*
SAARC Epidemiological Response on Tuberculosis -2023



*Source: *WHO Global Tuberculosis Report 2024,*
SAARC Epidemiological Response on Tuberculosis -2023

INDIA

India, officially the Republic of India is a country in South Asia. It is the seventh-largest country by area, the second-most populous country with 1438 million people (WHO Global Tuberculosis Report-2024), and the most populous democracy in the world. The land area of India is 3,287,263 square kilometers. Bounded by the Indian Ocean on the south, the Arabian Sea on the south-west, and the Bay of Bengal on the south-east, it shares land borders with Pakistan to the west; China, Nepal, and Bhutan to the north-east; and Myanmar and Bangladesh to the east. In the Indian Ocean, India is in the vicinity of Sri Lanka and the Maldives; in addition, India's Andaman and Nicobar Islands share a maritime border with Thailand and Indonesia.

TB Epidemiology:

In India, an estimated annual incidence was 2800 000 (CI: 2360000-3280000), TB cases equivalent to a rate of 195 cases per 100,000 population and 315 000 TB deaths equivalent to a rate of 22 deaths per 100,000 population in 2023. The TB case notification in the year 2023 was 2 517 810 with 89% treatment success rate registered for 2022 cohort.

In year 2023, there were 110000 estimated multidrug-resistant or rifampicin-resistant TB (MDR/RR) incidence cases and people with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB were 12580 cases. There were 34476 TB patients with known HIV status who are HIV positive among them 34297 patients (99%) were on ART. The National TB Elimination Programme laboratory network is composed of a three-tier system with National level Reference Laboratories (NRLs), State level Intermediate Reference Laboratories (IRLs), Culture and Drug Susceptibility Testing (C-DST) laboratories in public and private sectors and peripheral level laboratories as Designated Microscopy Centres (DMCs). There were 31150 TB diagnostic Centres till end of 2023.

India is one of the High TB, High MDR-TB and High TB/HIV burden countries among 30 High burden countries in the world.

TB Epidemiology 2023, India

Population (2023)				1438 million
Estimates of TB burden * 2023	Best estimate	Uncertainty Interval (Range)	Rate (per 100 000 population)	
			Best estimate	Uncertainty Interval (Range)
Total TB Incidence	2800000	2360000-3280000	195	164-228
TB incidence in people living with HIV	42000	36000-50000	2.9	2.5-3.5
Multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB incidence)	110000	82000-130000	7.4	5.7-9.1
TB Deaths in HIV-negative People	331500	233000-428000	22	16-30
TB Deaths in people with HIV	8200	5900-11000	0.57	0.41-0.76
Changes in TB incidence rate and total TB deaths				
The 2025 milestones of the End TB Strategy are a 50% reduction in the TB incidence rate and a 75% reduction in the total number of TB deaths compared with 2015				
Change in the TB incidence rate 2015–2023			Reduction of 18%	
Change in the total number of TB deaths 2015–2023			Reduction of 24%	
Estimated TB incidence by age and sex, 2023[B]				
Gender		**0-14 years**	**>14 years**	**Total**
Females		149000	972000	1121000
Males		161000	1520000	1621000
Total		310000	2492000	2803000
TB case notifications, 2023				
People diagnosed with new or relapse cases of TB				2382714
-% tested with rapid diagnostics at time of diagnosis				32%
-% with known HIV status				96%
- % pulmonary				75%
- % of pulmonary cases that are bacteriologically confirmed				62%
- % women aged ≥ 15 years				37%
-% men aged ≥ 15 years				58%
- % children aged 0-14 years				5%
Total cases notified				2517810
Universal Health Coverage and Social protection				
TB treatment coverage (notified new and relapse cases/estimated incidence), 2023				85% (73-100)
TB cases fatality ratio (estimated mortality/estimated incidence), 2023				12% (8-16)
TB-affected households facing catastrophic total costs (modelled estimate**), 2021				N/A
TB/HIV Care, 2023			**Number**	**%**
People with a new or relapse cases of TB who are living HIV			34476	1.5%
People with a new or relapse cases of TB who are living HIV and who are on antiretroviral therapy			34297	99%
Drug- resistant TB care, 2023				

% of people with a new case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		82%
% of people previously treated for TB with a case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		86%
% of people with bacteriologically-confirmed pulmonary TB that is resistant to rifampicin tested for susceptibility to fluoroquinolones		42%
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance		52015
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		48107
Total number of people with TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		49622
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB)		12580
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones started on treatment		9158
Treatment success rate and cohort size	**Success**	**Cohort**
People with a new or relapse case of TB started on treatment for TB 2022	89%	2194723
People with a previously treated case of TB (but not a relapse case) started on treatment for TB 2022	85%	146377
People with a new or relapse case of TB who are living with HIV started on treatment for TB 2022	79%	35179
People started on treatment for TB that is resistant to rifampicin (MDR/RR-TB) 2021	73%	31506
People started on treatment for TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB/XDR-TB) 2021	69%	7029
TB Preventive treatment, 2023		
% of HIV+ people (newly enrolled in care) on preventive treatment		N/A
% of household contacts of bacteriologically- confirmed TB cases on preventive treatment		31% (30-32)

N/A: Not Available

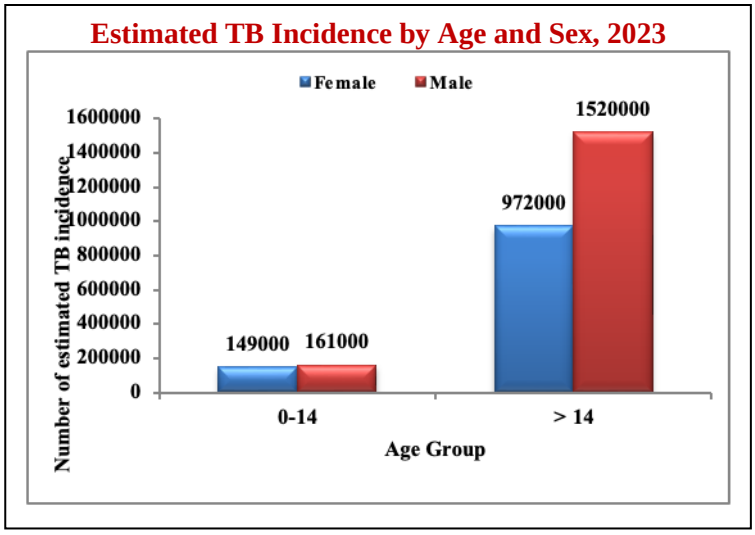
* Ranges represent uncertainty intervals

** *Lancet 2023: https://doi.org/10.1016/S2214-109X(23)00369-8*

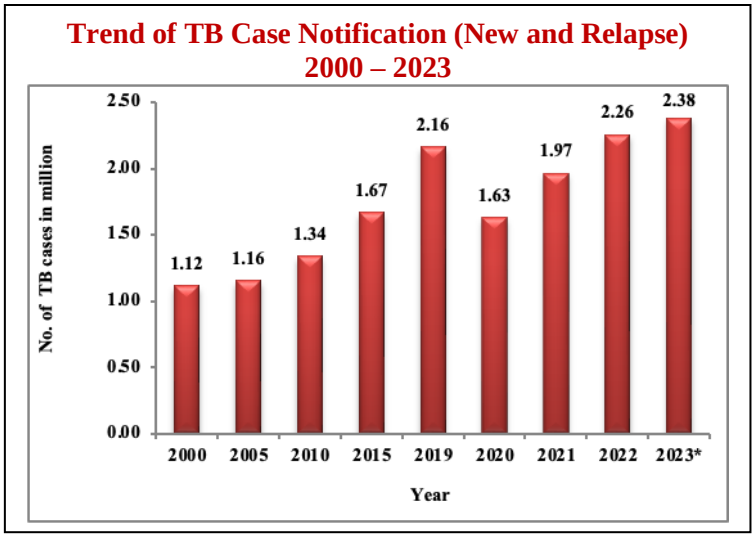
[B] *https://www.who.int/teams/global-tuberculosis-programme/data*

Source: WHO Global Tuberculosis Report-2024

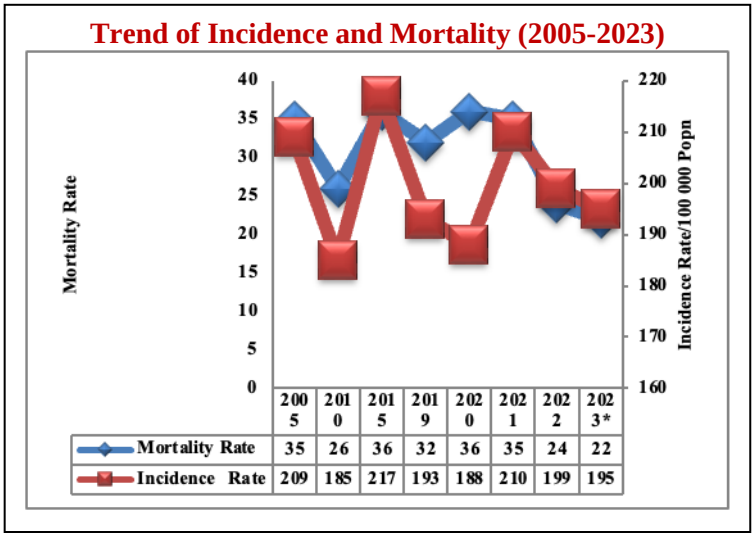
Graphical Presentation, India



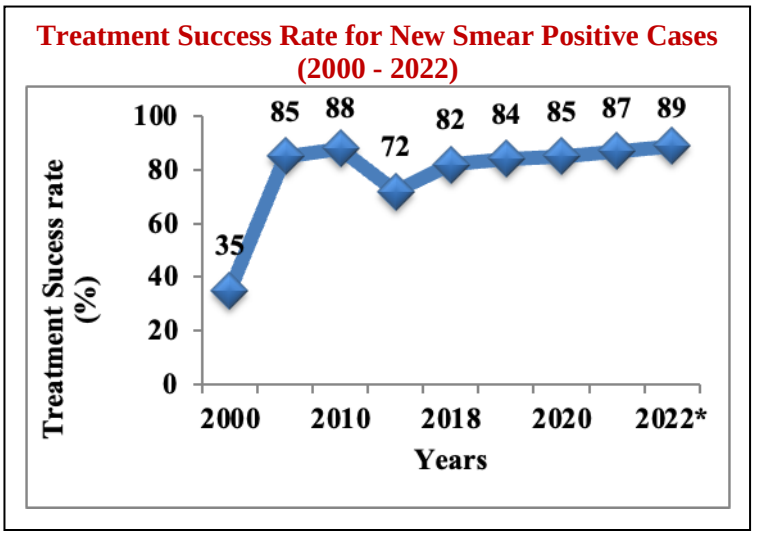
Source:https://www.who.int/teams/global-tuberculosis-programme/data



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*

MALDIVES

Republic of Maldives is an island country formed by a number of natural atolls and a few islands in the Indian Ocean consisting of a double chain of twenty-six atolls. The island nation is located southwest of the Indian subcontinent stretching 860 km north to south and 80 – 129 km east to west. The population of Maldives in year 2023 was 530,000 (WHO Global Tuberculosis report-2024). The economy of the Maldives depends mainly on tourism, fishing trade, shipping and construction. Resort islands and modern hotels in Male are main attractions for increasing numbers of tourists.

TB Epidemiology:

In Maldives, an estimated annual incidence was 210 (CI: 160-260) TB cases equivalent to a rate of 40 cases per 100,000 population and 8 TB deaths equivalent to a rate of around 2.0 deaths per 100,000 population in 2023. The TB case notification in the year 2023 was 118 with 69% treatment success rate registered for 2022 cohort.

In year 2023, there were 2 estimated multidrug-resistant or rifampicin-resistant TB (MDR/RR) incidence cases. There were no any TB patients with known HIV status who are HIV positive. There were 110 TB diagnostic Centres till end of 2023.

TB Epidemiology 2023, Maldives

Population (2023)				0.53 million
Estimates of TB burden * 2023	**Best estimate**	**Uncertainty Interval Range**	**Rate (per 100 000 population)**	**Uncertainty Interval Range (Rate per 100 000 population)**
Total TB Incidence	210	160-260	40	31-50
TB incidence in people living with HIV	0	0-3	0	0-0.66
Multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB incidence)	2	0-4	0.34	0-0.74
TB Deaths in HIV-negative People	8	7-9	1.6	1.4-1.8
TB Deaths in people with HIV	0	0-0	0	0-0
Changes in TB incidence rate and total TB deaths				
The 2025 milestones of the End TB Strategy are a 50% reduction in the TB incidence rate and a 75% reduction in the total number of TB deaths compared with 2015				
Change in the TB incidence rate 2015–2023			Reduction of 4.8%	
Change in the total number of TB deaths 2015–2023			Increase of 20%	
Estimated TB incidence by age and sex, 2023 [B]				
Gender	**0-14 years**		**>14 years**	**Total**
Females	4		56	60
Males	0		152	152
Total	4		208	212
TB case notifications, 2023				
People diagnosed with new or relapse cases of TB				117
-% tested with rapid diagnostics at time of diagnosis				99%
-% with known HIV status				59%
- % pulmonary				66%
- % of pulmonary cases that are bacteriologically confirmed				65%
- % women aged ≥ 15 years				26%
-% men aged ≥ 15 years				72%
- % children aged 0-14 years				2%
Total cases notified				118
Universal Health Coverage and Social protection				
TB treatment coverage (notified new and relapse cases/estimated incidence), 2023				56% (44-72)
TB cases fatality ratio (estimated mortality/estimated incidence), 2023				4% (3-5)
TB-affected households facing catastrophic total costs (modelled estimate**), 2021				74 % (63-84)
TB/HIV Care, 2023			**Number**	**%**
People with a new or relapse cases of TB who are living HIV			0	0%
People with a new or relapse cases of TB who are living HIV and who are on antiretroviral therapy			0	0%

Drug- resistant TB care, 2023		
% of people with a new case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		76%
% of people previously treated for TB with a case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		N/A
% of people with bacteriologically-confirmed pulmonary TB that is resistant to rifampicin tested for susceptibility to fluoroquinolones		N/A
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance		0
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		0
Total number of people with TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		0
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB)		0
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones started on treatment		0
Treatment success rate and cohort size	**Success**	**Cohort**
People with a new or relapse case of TB started on treatment for TB 2022	69%	111
People with a previously treated case of TB (but not a relapse case) started on treatment for TB 2022	N/A	0
People with a new or relapse case of TB who are living with HIV started on treatment for TB 2022	N/A	0
People started on treatment for TB that is resistant to rifampicin (MDR/RR-TB) 2021	N/A	0
People started on treatment for TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB/XDR-TB) 2021	N/A	0
TB Preventive treatment, 2023		
% of people living with HIV newly enrolled in care on preventive treatment		N/A
% of estimated number of household contacts of bacteriologically- confirmed TB cases on preventive treatment		N/A

N/A: Not Available

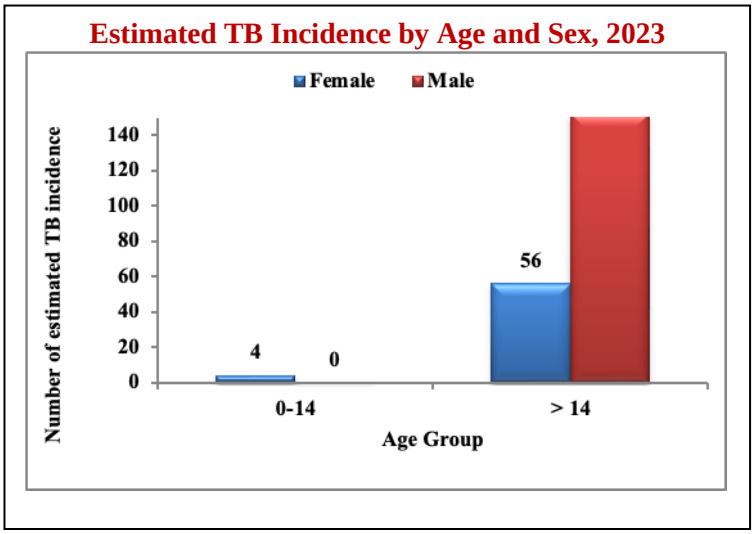
* Ranges represent uncertainty intervals

** *Lancet 2023: https://doi.org/10.1016/S2214-109X(23)00369-8*

[B] *https://www.who.int/teams/global-tuberculosis-programme/data*

Source: WHO Global Tuberculosis Report-2024

Graphical Presentations, Maldives



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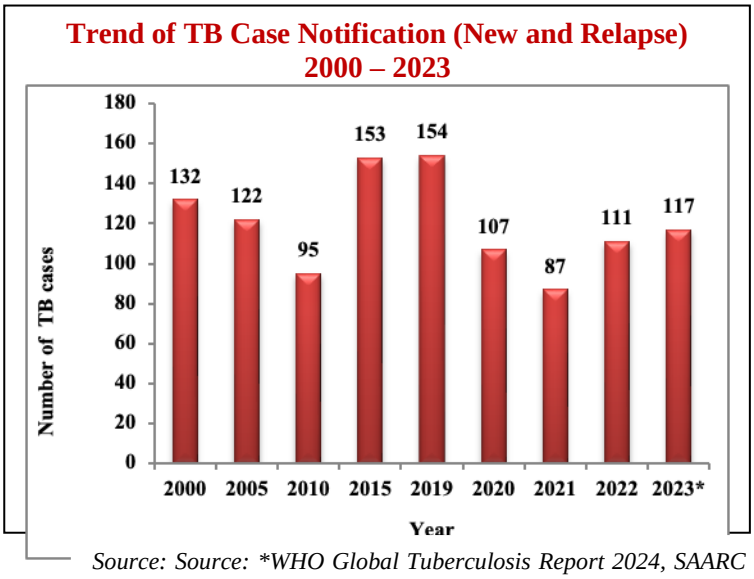
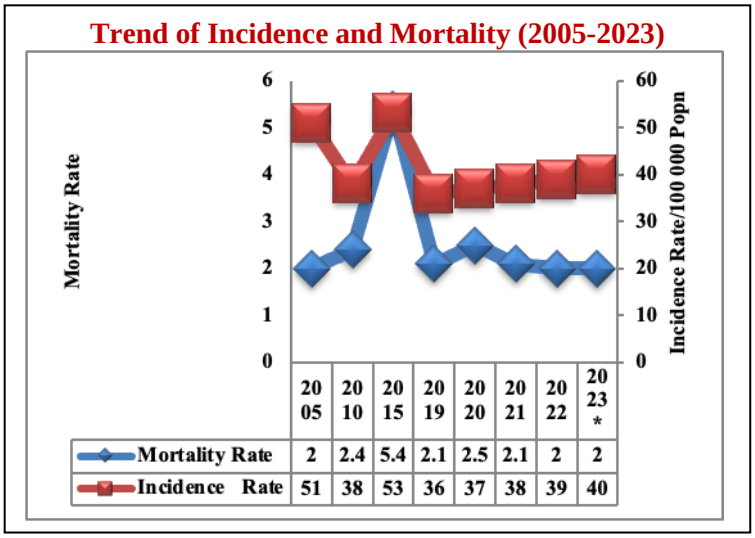
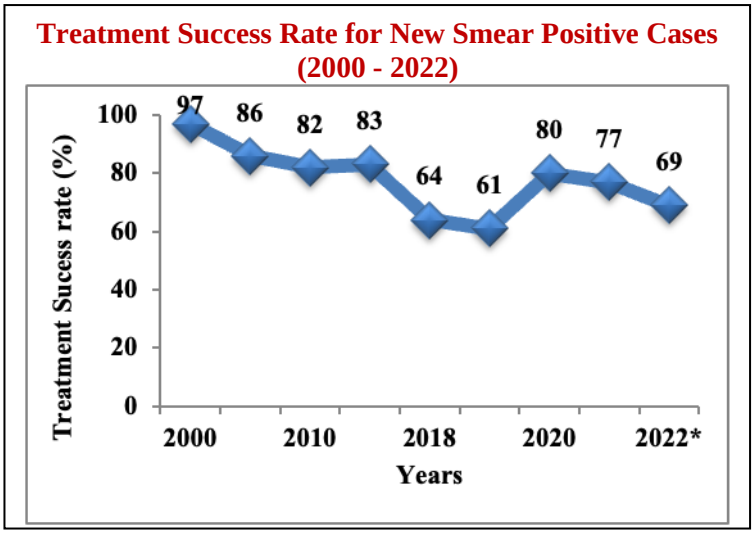


*Source: Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*



Source: WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*

NEPAL

Nepal, officially the Federal Democratic Republic of Nepal, is a landlocked country and is located in the Himalayas and bordered to the north by China and to the south, east, and west by India. Nepal is divided into seven states and 77 districts. It has an area of 147,181 square kilometers and Population of approximately 30 million (WHO Global Tuberculosis Report-2024). The urban population is largely concentrated in the Kathmandu valley.

TB Epidemiology:

In Nepal, an estimated annual incidence was 68,000 (CI: 37000-106000) TB cases equivalent to a rate of 229 cases per 100,000 population and 16,000 TB deaths equivalent to a rate of 54 deaths per 100,000 population in 2023. The TB case notification in the year 2023 was 37,447 with 93% treatment success rate registered for 2022 cohort.

In year 2023, there were 3000 estimated multidrug-resistant or rifampicin-resistant TB (MDR/RR) incidence cases and people with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre XDR-TB or XDR-TB were 150 cases. There were 208 TB patients with known HIV status who are HIV positive among them 205 patients (99%) were on ART.

In Nepal, there are seven TB quality assurance centers for microscopy in seven provinces which are responsible for external quality assurance (EQA), reagent supply, training and monitoring and supervision of microscopy centers. Currently, there are 786 centers registered as microscopy centers and total 903 sites providing laboratory diagnostic testing for TB at the end 2023. All patients with Rifampicin resistant TB identified by Xpert MTB/RIF should have specimens sent for TB culture and DST and LPA where applicable.

TB Epidemiology 2023, Nepal

Population (2023)				30 million
Estimates of TB burden * 2023	**Best estimate**	**Uncertainty Interval Range**	**Rate (per 100 000 population)**	**Uncertainty Interval Range (Rate per 100 000 population)**
Total TB Incidence	68000	37000-106000	229	126-355
TB incidence in people living with HIV	430	230-670	1.4	0.79-2.3
Multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB incidence)	3000	1300-4600	10	4.5-15
TB Deaths in HIV-negative People	16000	8900-26000	54	30-86
TB Deaths in people with HIV	200	110-320	0.69	0.38-1.1
Changes in TB incidence rate and total TB deaths				
The 2025 milestones of the End TB Strategy are a 50% reduction in the TB incidence rate and a 75% reduction in the total number of TB deaths compared with 2015				
Change in the TB incidence rate 2015–2023			Reduction of 15%	
Change in the total number of TB deaths 2015–2023			Reduction of 11%	
Estimated TB incidence by age and sex, 2023 [B]				
Gender	**0-14 years**		**>14 years**	**Total**
Females	2500		20900	23400
Males	2800		41400	44200
Total	5300		62300	67600
TB case notifications, 2023				
People diagnosed with new or relapse cases of TB				36881
-% tested with rapid diagnostics at time of diagnosis				52%
-% with known HIV status				90%
- % pulmonary				72%
- % of pulmonary cases that are bacteriologically confirmed				79%
- % women aged ≥ 15 years				34%
-% men aged ≥ 15 years				58%
- % children aged 0-14 years				8%
Total cases notified				37447
Universal Health Coverage and Social protection				
TB treatment coverage (notified new and relapse cases/estimated incidence), 2023				54% (35-99)
TB cases fatality ratio (estimated mortality/estimated incidence), 2023				26% (11-45)
TB-affected households facing catastrophic total costs (modelled estimate**), 2021				57% (51-62)
TB/HIV Care, 2023			**Number**	**%**
People with a new or relapse cases of TB who are living HIV			208	0.63%
People with a new or relapse cases of TB who are living HIV and who are on antiretroviral therapy			205	99%

Drug- resistant TB care, 2023		
% of people with a new case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		80%
% of people previously treated for TB with a case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		78%
% of people with bacteriologically-confirmed pulmonary TB that is resistant to rifampicin tested for susceptibility to fluoroquinolones		58%
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance		693
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		454
Total number of people with TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		454
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB)		150
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones started on treatment		92
Treatment success rate and cohort size	**Success**	**Cohort**
People with a new or relapse case of TB started on treatment for TB 2022	93%	37003
People with a previously treated case of TB (but not a relapse case) started on treatment for TB 2022	85%	540
People with a new or relapse case of TB who are living with HIV started on treatment for TB 2022	77%	217
People started on treatment for TB that is resistant to rifampicin (MDR/RR-TB) 2021	77%	396
People started on treatment for TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB/XDR-TB) 2021	88%	86
TB Preventive treatment, 2023		
% of people living with HIV newly enrolled in care on preventive treatment		0.21%
% of estimated number of household contacts of bacteriologically- confirmed TB cases on preventive treatment		5.8%(5.6-5.9)

n/a: Not Available

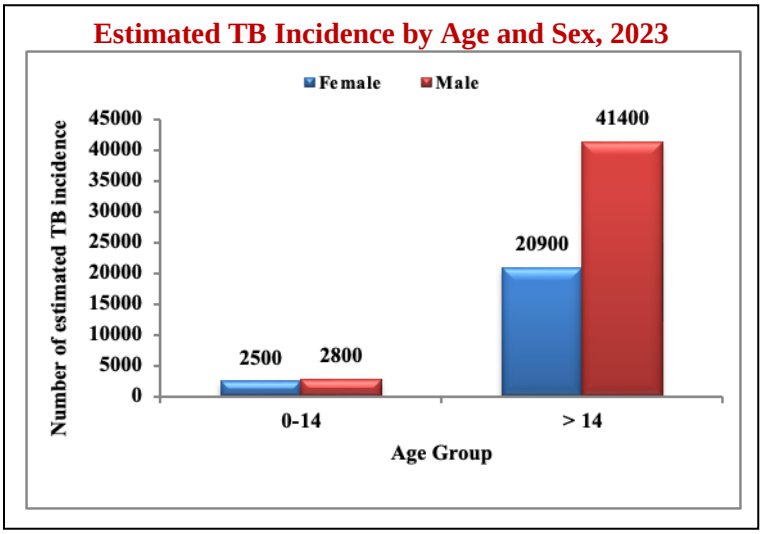
* Ranges represent uncertainty intervals

** *Lancet 2023: https://doi.org/10.1016/S2214-109X(23)00369-8*

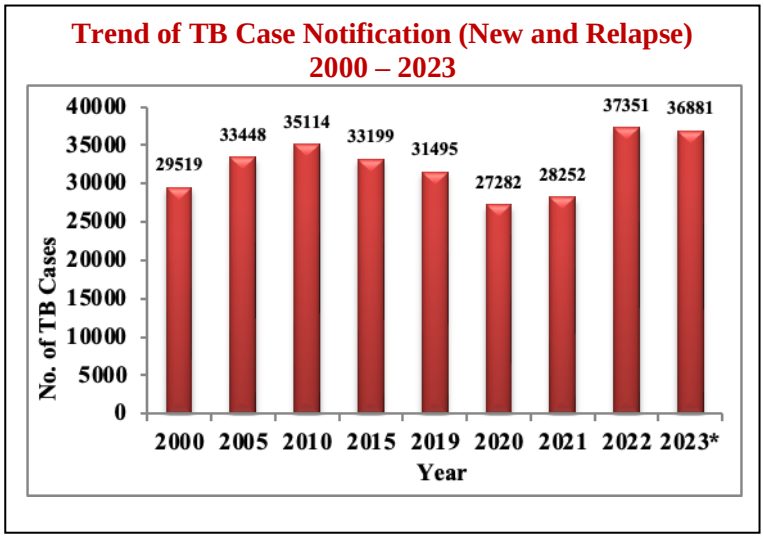
[B] *https://www.who.int/teams/global-tuberculosis-programme/data*

Source: WHO Global Tuberculosis Report-2024

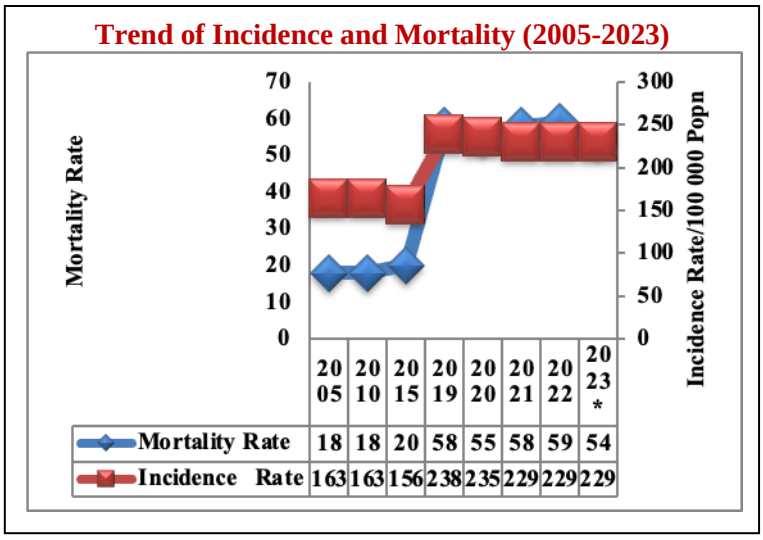
Graphical Presentations, Nepal



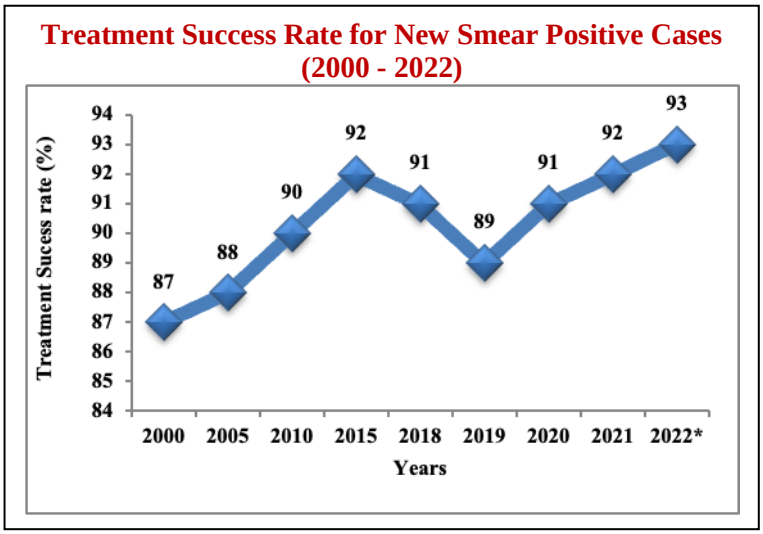
Source:https://www.who.int/teams/global-tuberculosis-programme/data



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*

PAKISTAN

Islamic Republic of Pakistan is the second largest country in South Asia. It is bordered by India to the east, China in the far northeast, Afghanistan to the west and north, Iran to the southwest and Arabian Sea in the south. The land area of the country is 796,095 square kilometers. Pakistan is the world's sixth most populous country with an estimated population of 248 million in 2023 (WHO Global Tuberculosis Report-2024).

TB Epidemiology:

In Pakistan, an estimated annual incidence was 686,000 (CI: 465,000-911,000) TB cases equivalent to a rate of 277 cases per 100,000 population and 47,000 TB deaths equivalent to a rate of 19 deaths per 100,000 population in 2023. The TB case notification in the year 2023 was 480,136 with 95% treatment success rate registered for 2022 cohort.

In year 2023, there were 15000 estimated multidrug-resistant or rifampicin-resistant TB (MDR/RR) incidence cases and people with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre XDR-TB or XDR-TB were 982 cases. There were 1164 TB patients with known HIV status who are HIV positive among them 714 patients (61%) were on ART.

The core functions of National TB Reference Laboratory (NTBRL) include Mycobacteriology testing services (routine and specialized), External Quality Assessment (EQA) of Drug Susceptibility Testing (DST) services, surveillance of drug resistance, human resource capacity development and technical assistance for quality assured services. A total of 1949 laboratories were reporting in 2023. Pakistan is one of the High TB, and High MDR-TB burden countries among 30 High burden countries in the SAARC region.

TB Epidemiology 2023, Pakistan

Population (2023)				248 million
Estimates of TB burden * 2023	**Best estimate**	**Uncertainty Interval Range**	**Rate (per 100 000 population)**	**Uncertainty Interval Range (Rate per 100 000 population)**
Total TB Incidence	686000	465000-911000	277	188-368
TB incidence in people living with HIV	2700	1700-3800	1.1	0.7-1.5
Multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB incidence)	15000	9800-21000	6.1	4-8.3
TB Deaths in HIV-negative People	47000	37000-58000	19	15-23
TB Deaths in people with HIV	1500	1200-1900	0.62	0.48-0.79
Changes in TB incidence rate and total TB deaths				
The 2025 milestones of the End TB Strategy are a 50% reduction in the TB incidence rate and a 75% reduction in the total number of TB deaths compared with 2015				
Change in the TB incidence rate 2015–2023			Increase of 2.7%	
Change in the total number of TB deaths 2015–2023			Reduction of 3.5%	
Estimated TB incidence by age and sex, 2023 [B]				
Gender		**0-14 years**	**>14 years**	**Total**
Females		45000	255000	300000
Males		49000	337000	386000
Total		94000	592000	686000
TB case notifications, 2023				
People diagnosed with new or relapse cases of TB				475761
-% tested with rapid diagnostics at time of diagnosis				48%
-% with known HIV status				63%
- % pulmonary				81%
- % of pulmonary cases that are bacteriologically confirmed				50%
- % women aged ≥ 15 years				41%
-% men aged ≥ 15 years				45%
- % children aged 0-14 years				14%
Total cases notified				480136
Universal Health Coverage and Social protection				
TB treatment coverage (notified new and relapse cases/estimated incidence), 2023				69% (52-100)
TB cases fatality ratio (estimated mortality/estimated incidence), 2023				7% (5-10)
TB-affected households facing catastrophic total costs (modelled estimate**), 2021				58 % (51-66)
TB/HIV Care, 2023			**Number**	**%**
People with a new or relapse cases of TB who are living HIV			1164	0.39%
People with a new or relapse cases of TB who are living HIV and who are on antiretroviral therapy			714	61%

Drug- resistant TB care, 2023		
% of people with a new case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		80%
% of people previously treated for TB with a case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		82%
% of people with bacteriologically-confirmed pulmonary TB that is resistant to rifampicin tested for susceptibility to fluoroquinolones		73%
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance		3619
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		2588
Total number of people with TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		2613
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB)		982
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones started on treatment		977
Treatment success rate and cohort size	**Success**	**Cohort**
People with a new or relapse case of TB started on treatment for TB 2022	95%	424601
People with a previously treated case of TB (but not a relapse case) started on treatment for TB 2022	86%	3997
People with a new or relapse case of TB who are living with HIV started on treatment for TB 2022	88%	949
People started on treatment for TB that is resistant to rifampicin (MDR/RR-TB) 2021	74%	2019
People started on treatment for TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB/XDR-TB) 2021	71%	838
TB Preventive treatment, 2023		
% of people living with HIV newly enrolled in care on preventive treatment		N/A
% of estimated number of household contacts of bacteriologically- confirmed TB cases on preventive treatment		3.2%(3.1-3.2)

N/A: Not Available

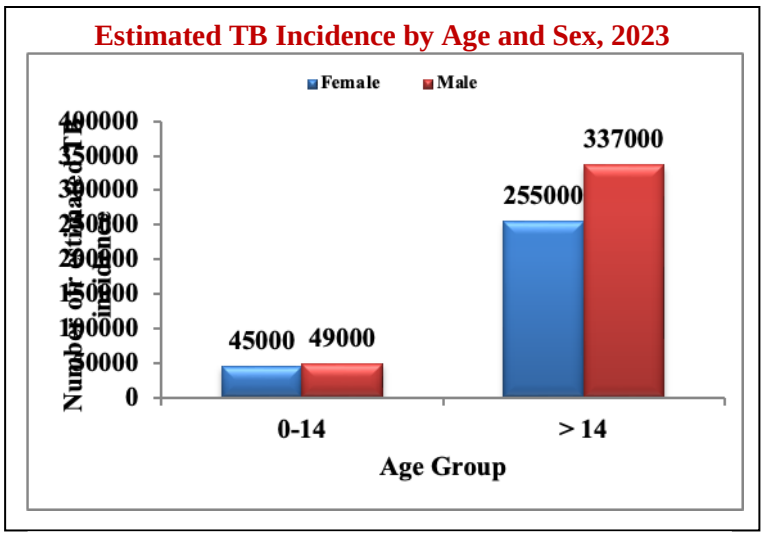
* Ranges represent uncertainty intervals

** *Lancet 2023: https://doi.org/10.1016/S2214-109X(23)00369-8*

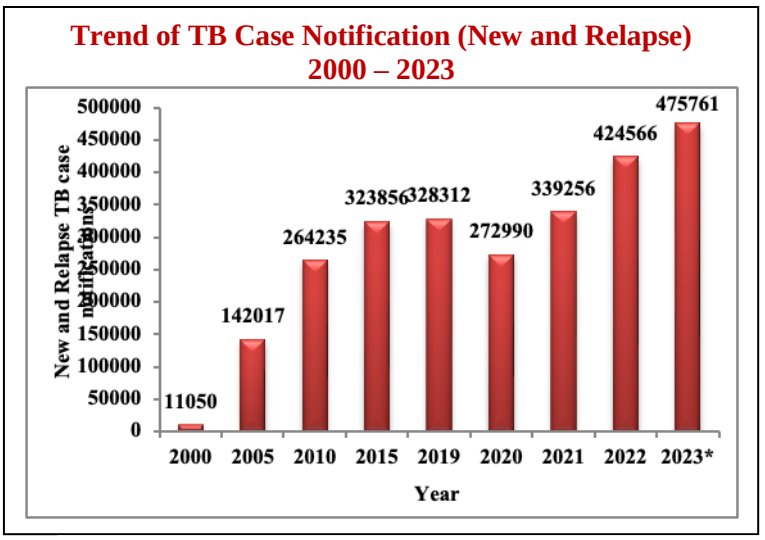
[B] *https://www.who.int/teams/global-tuberculosis-programme/data*

Source: WHO Global Tuberculosis Report-2024

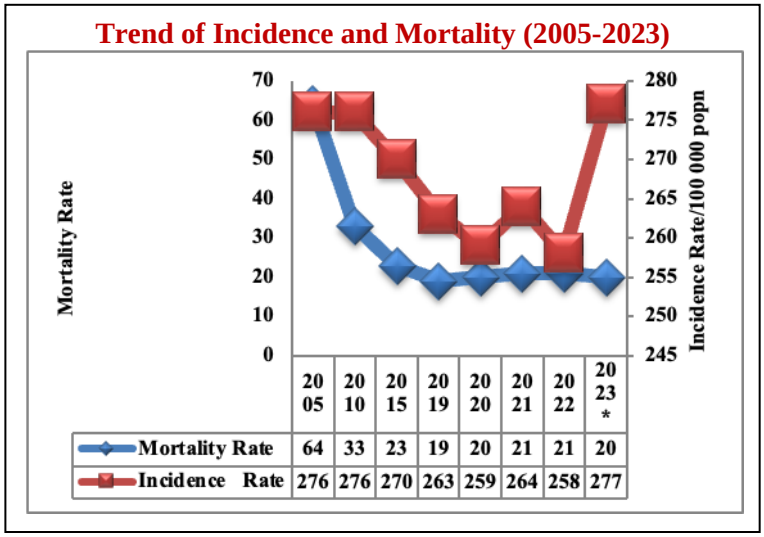
Graphical Presentations, Pakistan



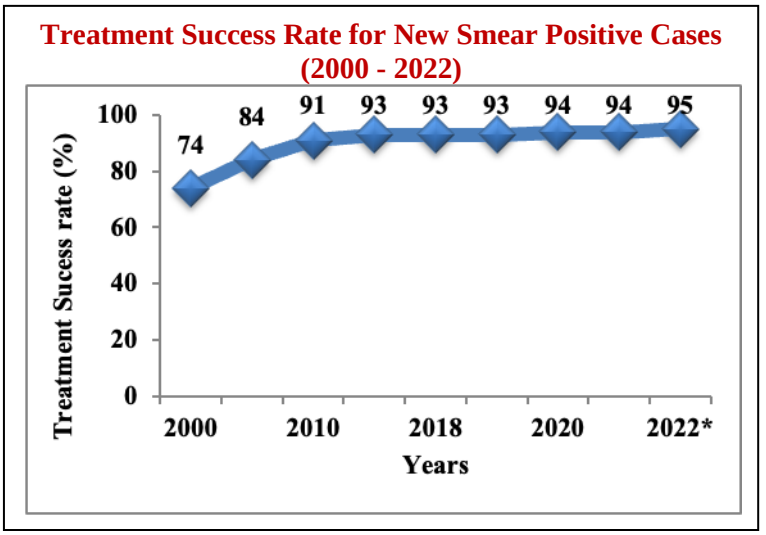
Source:https://www.who.int/teams/global-tuberculosis-programme/data



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Respone on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*

SRI LANKA

The Democratic Socialist Republic of Sri Lanka is an island nation in the Indian Ocean with an area of 65,610 square kilometers. Sri Lanka has maritime borders with India to the northwest and the Maldives to the southwest. Population in Sri-Lanka was 23 million in 2023 (WHO Global Tuberculosis Report-2024).

TB Epidemiology:

In Sri Lanka, estimated annual incidence was 14,000 (CI: 10000-19000) TB cases equivalent to a rate of 62 cases per 100,000 population and 800 TB deaths equivalent to a rate of 4 deaths per 100,000 population in 2023. The TB case notification in the year 2023 was 9538 with 79% treatment success rate registered for 2022 cohort.

In year 2023, there were 98 estimated multidrug-resistant or rifampicin-resistant TB (MDR/RR) incidence cases and people with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre XDR-TB or XDR-TB was 1 cases. There were 43 TB patients with known HIV status who are HIV positive among them 38 patients (88%) were on ART.

The NPTCCD is the national focal point for prevention and control of TB in the country. Diagnostic culture facilities are available at National TB Reference Laboratory (NTRL) and Intermediate TB Laboratories at Rathnapura, Kandy, Jaffna and Galle. There are 226 centers registered as microscopy centers and total 226 sites providing laboratory diagnostic testing for TB at the end 2023.

TB Epidemiology 2023, Sri Lanka

Population (2023)				23 million
Estimates of TB burden * 2023	**Best estimate**	**Uncertainty Interval Range**	**Rate (per 100 000 population)**	**Uncertainty Interval Range (Rate per 100 000 population)**
Total TB Incidence	14000	10000-19000	62	45-82
TB incidence in people living with HIV	68	42-100	0.3	0.18-0.44
Multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB incidence)	98	0-200	0.43	0-0.87
TB Deaths in HIV-negative People	800	720-880	3.5	3.1-3.8
TB Deaths in people with HIV	25	15-37	0.11	0.06-0.16
Changes in TB incidence rate and total TB deaths				
The 2025 milestones of the End TB Strategy are a 50% reduction in the TB incidence rate and a 75% reduction in the total number of TB deaths compared with 2015				
Change in the TB incidence rate 2015–2023			Reduction of 4.8%	
Change in the total number of TB deaths 2015–2023			Increase of 7 %	
Estimated TB incidence by age and sex, 2023 [B]				
Gender		**0-14 years**	**>14 years**	**Total**
Females		340	4330	4670
Males		380	9270	9650
Total		720	13600	14320
TB case notifications, 2023				
People diagnosed with new or relapse cases of TB				9271
-% tested with rapid diagnostics at time of diagnosis				27%
-% with known HIV status				97%
- % pulmonary				74%
- % of pulmonary cases that are bacteriologically confirmed				75%
- % women aged ≥ 15 years				34%
-% men aged ≥ 15 years				63%
- % children aged 0-14 years				3%
Total cases notified				9538
Universal Health Coverage and Social protection				
TB treatment coverage (notified new and relapse cases/estimated incidence), 2023				65% (49-90)
TB cases fatality ratio (estimated mortality/estimated incidence), 2023				6% (4-8)
TB-affected households facing catastrophic total costs (modelled estimate**), 2021				60 % (51-69)
TB/HIV Care, 2023			**Number**	**%**
People with a new or relapse cases of TB who are living HIV			43	0.48%
People with a new or relapse cases of TB who are living HIV and who are on antiretroviral therapy			38	88%

Drug- resistant TB care, 2023		
% of people with a new case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		56%
% of people previously treated for TB with a case of bacteriologically-confirmed pulmonary TB tested for susceptibility to rifampicin		56%
% of people with bacteriologically-confirmed pulmonary TB that is resistant to rifampicin tested for susceptibility to fluoroquinolones		96%
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance		28
People with bacteriologically-confirmed TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		27
Total number of people with TB that is resistant to rifampicin and with no known fluoroquinolone resistance started on treatment		27
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB or XDR-TB)		1
People with bacteriologically-confirmed TB that is resistant to both rifampicin and fluoroquinolones started on treatment		1
Treatment success rate and cohort size	**Success**	**Cohort**
People with a new or relapse case of TB started on treatment for TB 2022	79%	8109
People with a previously treated case of TB (but not a relapse case) started on treatment for TB 2022	61%	221
People with a new or relapse case of TB who are living with HIV started on treatment for TB 2022	65%	40
People started on treatment for TB that is resistant to rifampicin (MDR/RR-TB) 2021	56%	9
People started on treatment for TB that is resistant to both rifampicin and fluoroquinolones (pre-XDR-TB/XDR-TB) 2021	N/A	0
TB Preventive treatment, 2023		
% of people living with HIV newly enrolled in care on preventive treatment		N/A
% of estimated number of household contacts of bacteriologically- confirmed TB cases on preventive treatment		13% (13-13)

N/A: Not Available

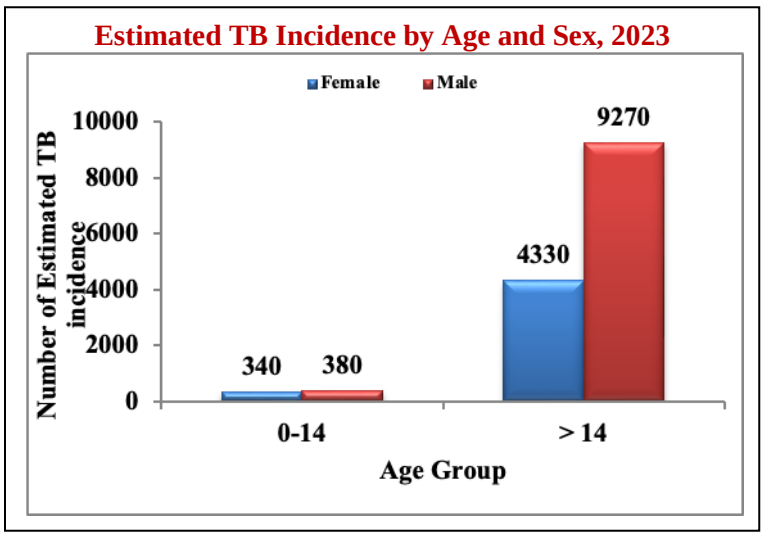
* Ranges represent uncertainty intervals

** *Lancet 2023: https://doi.org/10.1016/S2214-109X(23)00369-8*

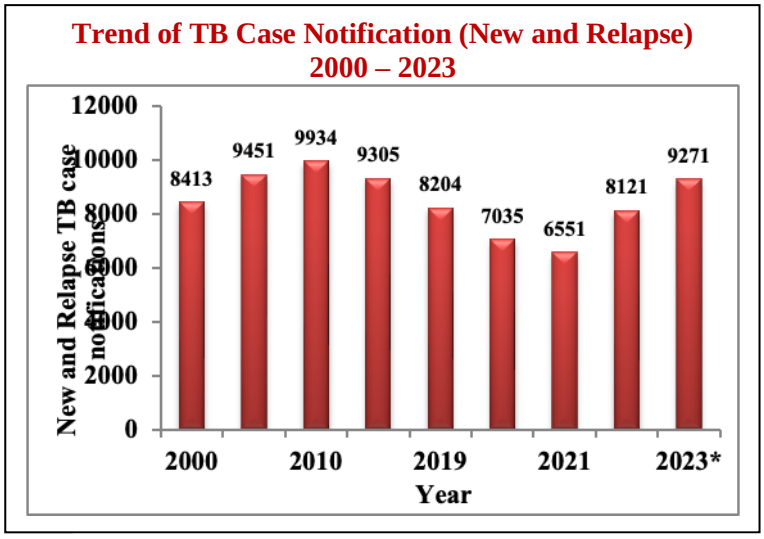
[B] *https://www.who.int/teams/global-tuberculosis-programme/data*

Source: WHO Global Tuberculosis Report-2024

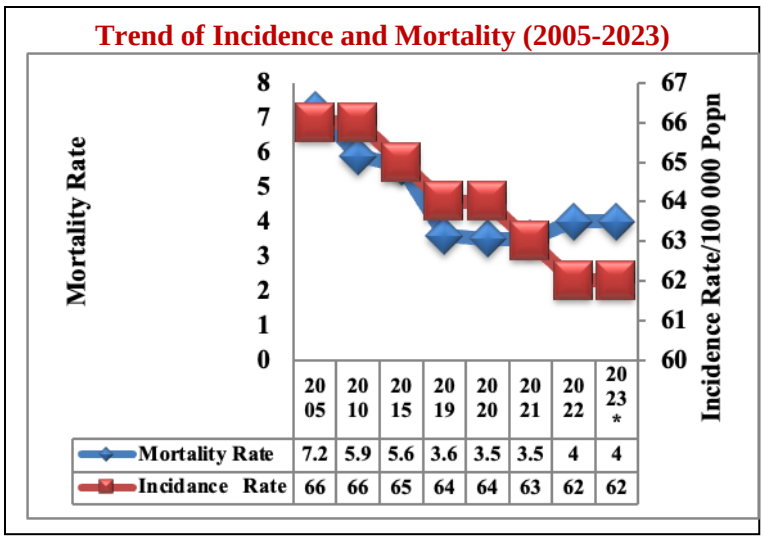
Graphical Presentations, Sri-Lanka



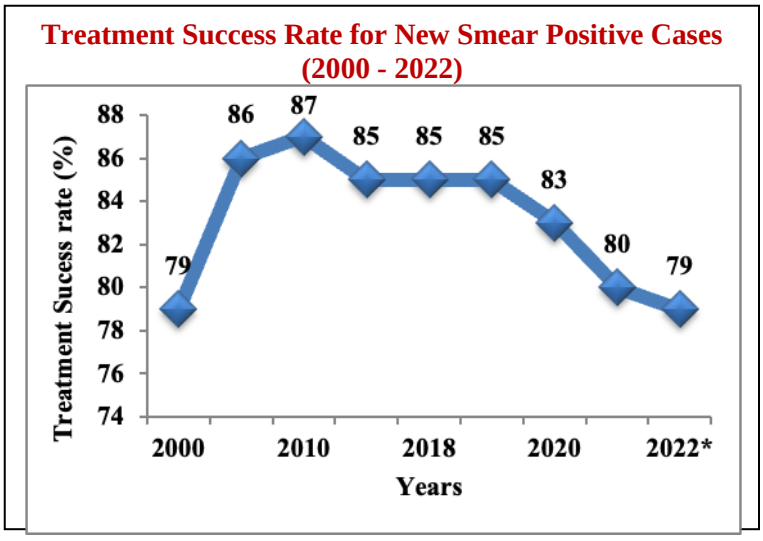
Source:https://www.who.int/teams/global-tuberculosis-programme/data



*Source: *WHO Global Tuberculosis Report 2024, SAARC Epidemiological Response on Tuberculosis -2023*



Source: WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*



*Source: *WHO Global Tuberculosis Report-2024, SAARC Epidemiological Response on Tuberculosis -2023*

5. TB/HIV CO-INFECTION

TB HIV Co-infection poses a critical challenge for the health-sector and for people living with HIV and TB. Starting in the 1980s, the HIV epidemic led to a major upsurge in TB cases and TB mortality in many countries. People living with HIV are 16 (uncertainty interval 14–18) times more likely to fall ill with TB disease than people without HIV. TB is the leading cause of death among people with HIV.

The global number of deaths officially classified as caused by TB in 2023 (1.09 million) and the number caused by HIV/AIDS (0.63 million), and TB mortality has been much more severely impacted by the COVID-19 pandemic than HIV/AIDS.

HIV and TB form a lethal combination, each speeding the other's progress. In 2023, about 161 000 people died of HIV-associated TB. The percentage of notified TB patients who had a documented HIV test result in 2023 was 80%, this was the same level as in 2022 but, up from 76% in 2021.

Table 09: Estimates of TB/HIV Care in New and Relapse TB Patients, 2023

Country	Patients with known HIV status who are HIV positive		Patients on Antiretroviral Therapy (ART)	
	Number	%	Number	%
Afghanistan	11	0.026	11	100
Bangladesh	61	0.064	48	79
Bhutan	6	0.69	6	100
India	34476	1.5	34297	99
Maldives	0	0	0	-
Nepal	208	0.63	205	99
Pakistan	1164	0.39	714	61
Sri Lanka	43	0.48	38	88
Regional	**35969**		**35319**	**98**

Source: WHO Global TB Report, 2024

A total of 35319 patients were on ART in the region which is around 98% of total TB patients with known HIV status who are HIV positive in SAARC region (**Table 09**).