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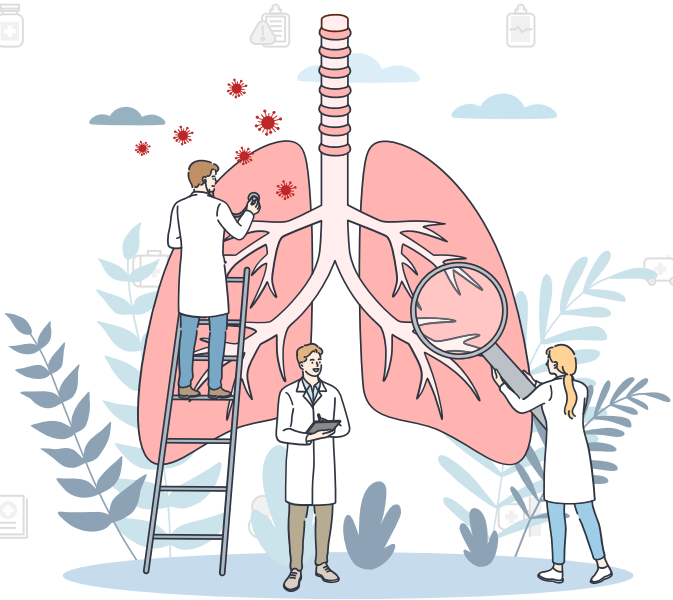
Third National Strategic Plan for TB Control in Republic of Korea, 2023~2027



Korea Disease Control and Prevention Agency

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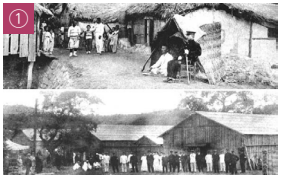
I

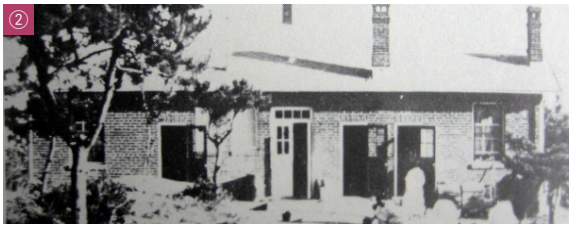
The History of TB Control in ROK

Pre-liberation period (1910~1945)

Managed by NGO and Medical missionaries



① Quarantine of TB patients (1918)
② Sherwood Hall(Haeju city)(1928): Korea's first The TB sanatorium
③ The first Christmas seal (1932)



After the Korean War (1950~1960)

TB Prevalence rate : 6.5%, TB mortality rate : 300~400 cases per 100,000 population

① TB patients isolated in shelters, including orphanages (1951)
② (L) Gwangju Jaejong Hospital, (R) Masan sanatorium(1951, 1955)
③ President Lee met with Christmas seal officials (1957)

The Miracle of the Han River : An Era of Rapid Economic Development

1960 1970

1990 2010

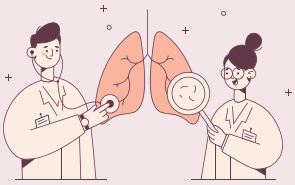
TB management mainly led by public health centers

① BCG vaccination (1962)
② The 1st National TB Prevalence Survey (1965)
③ Enacted the Tuberculosis Prevention Act (1968)
④ Implemented TB screening test (1970~1990)

After the 2000s (1995-present)

Establishment the Korea Tuberculosis Surveillance System (KTBS) (2000)

National TB Elimination Plan 2030 (2006)



PPM(Public-Private Mix) Project expanded as a formal national program (2011)

1st National Strategic Plan for TB Control: 2013-2017

- Operated the Central TB Epidemic Intelligence Service Team (2013)
- Assigned a TB specialized medical personnel to Public Health Centers (2013)
- Establishment of the "Tuberculosis Relief Belt Project" (TB Program for the socio-economically disadvantaged groups) (2014)
- Mandatory TB screening for high risk workers(e.g.,health care workers, long term care facilities, etc.) (2016)

2nd National Strategic Plan for TB Control: 2018-2022

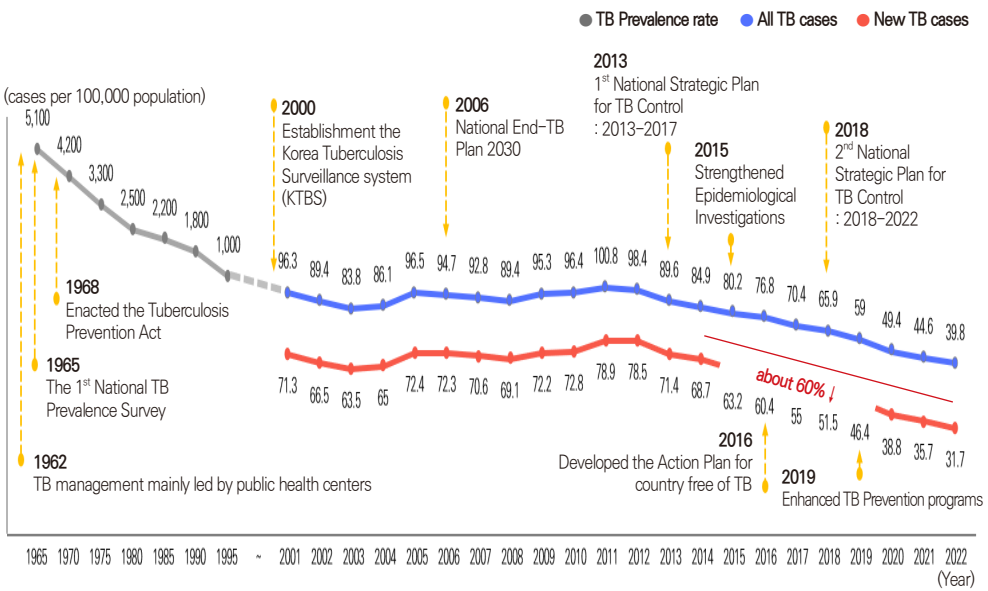
- Multidrug-resistant consortium Project (2020)
- Latent TB related care provided at no cast (2021)
- Patient-Centered Case Management Project (2022)

3rd National Strategic Plan for TB Control : 2023-2027

- Achieved the goal (2nd National Strategic Plan for TB Control: 2018-2022): TB incidence 40 cases per 100,000 population (2022)

Overview of the TB Control in ROK

- **2023** 3rd National Strategic Plan for TB Control : 2023–2027
- **2019** Enhanced TB Prevention programs
- **2018** 2nd National Strategic Plan for TB Control : 2018–2022
- **2016** Developed the Action Plan for country free of TB
- **2013** 1st National Strategic Plan for TB Control : 2013–2017
- **2006** National End-TB Plan 2030
- **2000** Establishment the Korea Tuberculosis Surveillance system (KTBS)
- **1962** TB control efforts mainly led in the public sector



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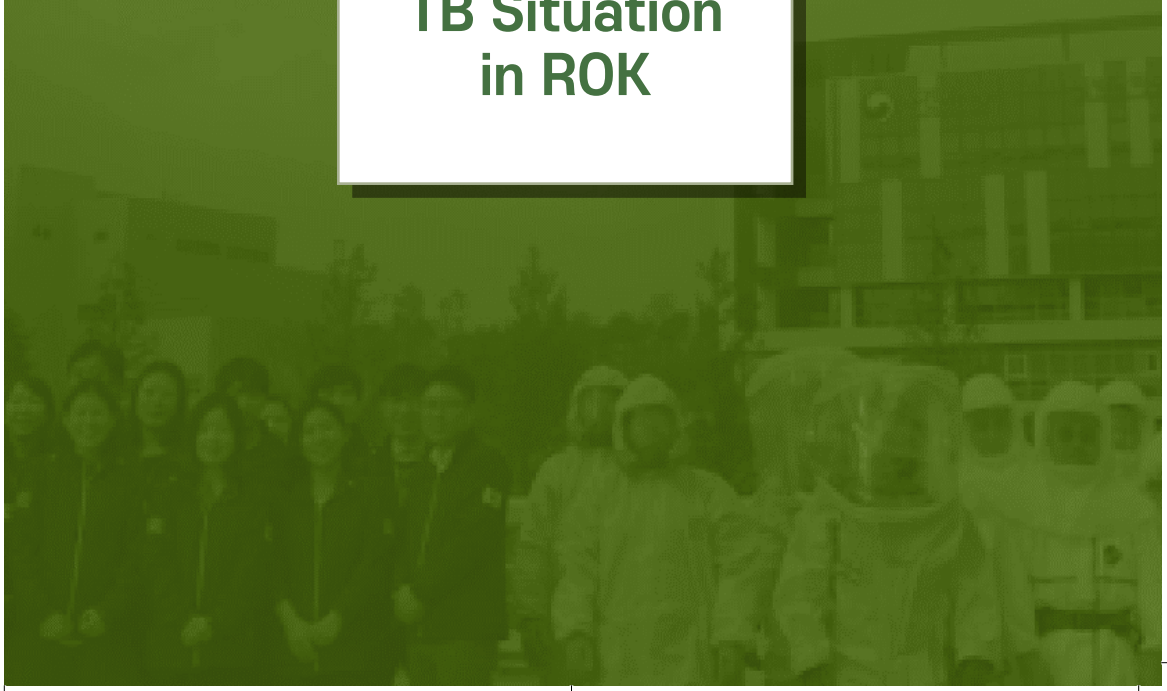
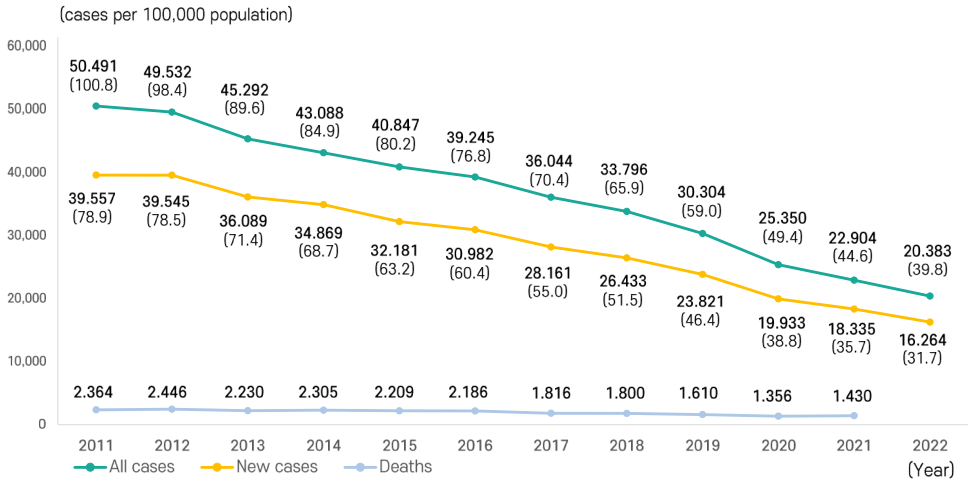
II

TB Situation in ROK



Trend in TB incidence and mortality in ROK (2011-2022)

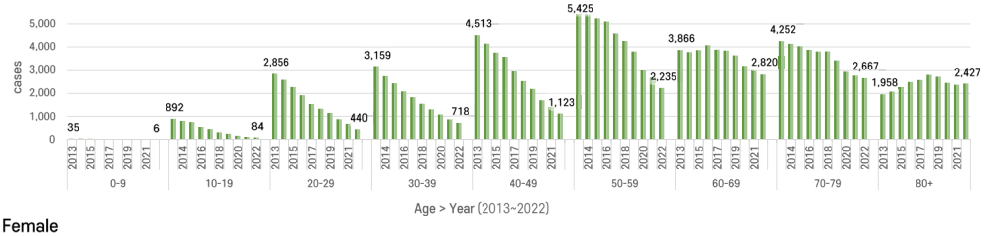


TB Mortality (2021)

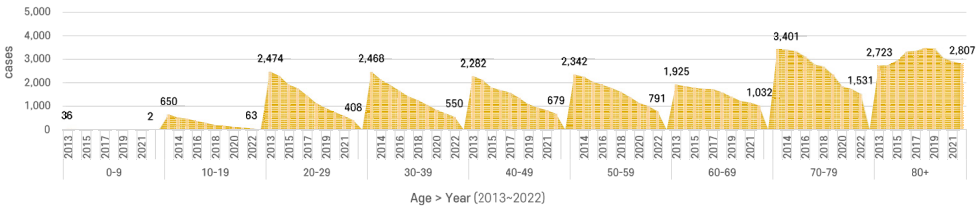
- Fatality rate of TB (9%) is more than 10 times higher than that of COVID-19 (0.88%)
- TB was the 15th leading cause of death in ROK

TB cases by Sex and Age Group in ROK (2013-2022)

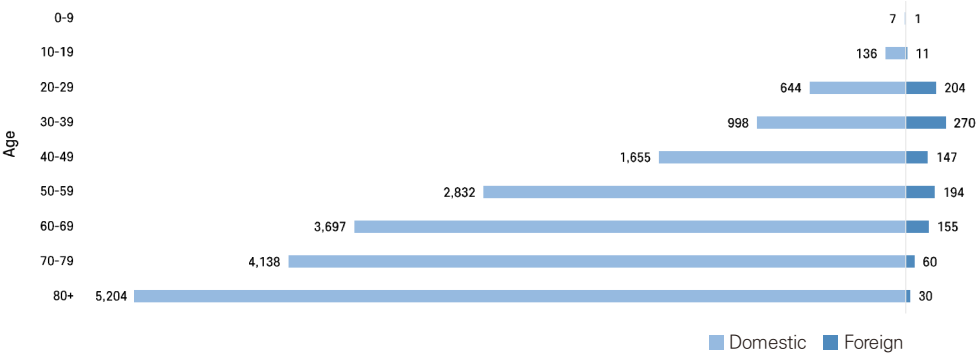
Male



Female

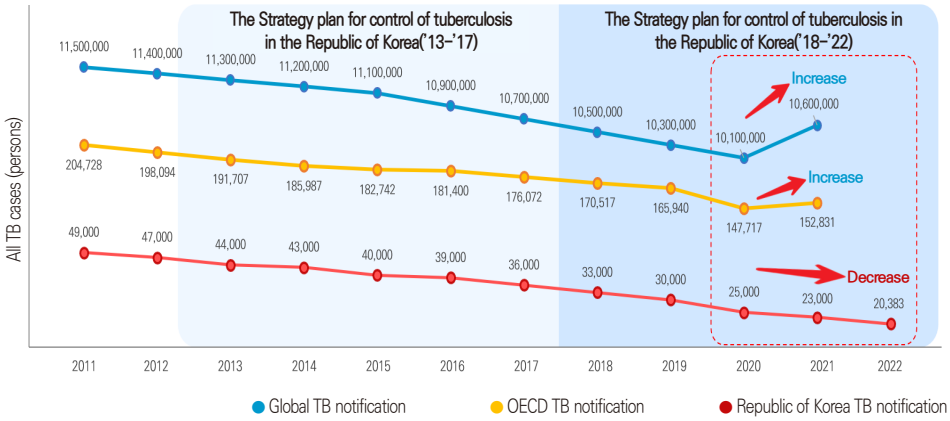


TB cases by Age Group and Nationality in ROK (2022)



Achievement in TB control efforts in the recent decade

Despite the COVID-19 Pandemic, the goal of the 2nd National Strategic Plan for TB Control was achieved in 2022 in ROK, reaching below 40 TB cases per 100,000 population



In 2021, TB cases relative to 2020

	TB incidence rate (per 100,000 population)	Number of TB cases		
	2021	2020	2021	% Change
Global	134	10,100,000	10,600,000	4.5 ↑
OECD	9.7	148,000	153,000	3.5 ↑
ROK	44	25,000	23,000	8.0 ↓

The incidence of TB has decreased during the COVID-19 Pandemic period in ROK

Progress in TB Control in ROK

Detection and management of undetected TB / Latent TB cases

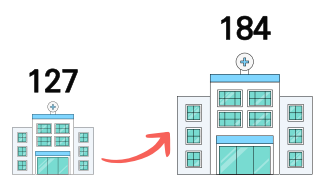
01

Since 2018, the KDCA has been implementing a "Mobile Tuberculosis Screening Project" for vulnerable populations, including medical aid recipients, bedridden seniors, and homeless individuals, to ensure comprehensive screening and prevent any overlooked TB or latent TB cases. These efforts have enabled the early detection of TB patients, accompanied by continuous follow-up measures.

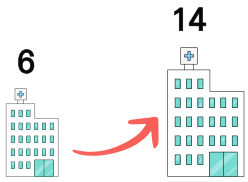
Strengthening management for TB cases

02

- Improved coverage of the Public-Private Mix (PPM) project: number of the institutions participating in the PPM program grew 184 (from 124)
- Establishment of the regional supervisory groups for the PPM program
- Institutions providing Latent TB Infection (LTBI) care were expanded: 358 to 655
- Establishment of the LTBI study cohorts.
- Increased coverage of the Tuberculosis Relief Belt Project: a total of 14 institutions participating in the referral system (from 6)
- 62 specialized medical institutions are dedicated for Multi-Drug Resistant TB (MDR-TB) management, along with the MDR-TB consortium for research and program management
- Specialized support for TB patients requiring hospitalization



Medical Institution for TB Belief Belt Project



Medical Institutions for PPM Project

Successful completion of Phase III clinical trial for BCG vaccine produced within Korea

03

- Multi-country trial of new BCG vaccine completed (750 infants under 4wks)
- Plans for the development of the self-sufficient BCG production and supply capacity in Korea.

Challenges in TB Control (Global)

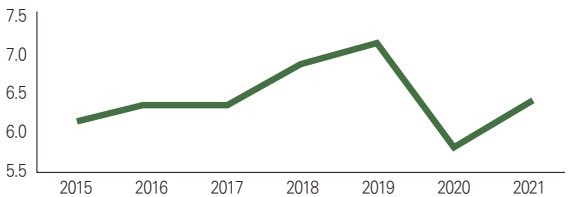
Post-Pandemic COVID-19 Era: Reversal of the past decade's of TB control efforts

WHO
The aftermath of COVID-19 may lead to approximately 500,000 additional TB deaths (March 2021)

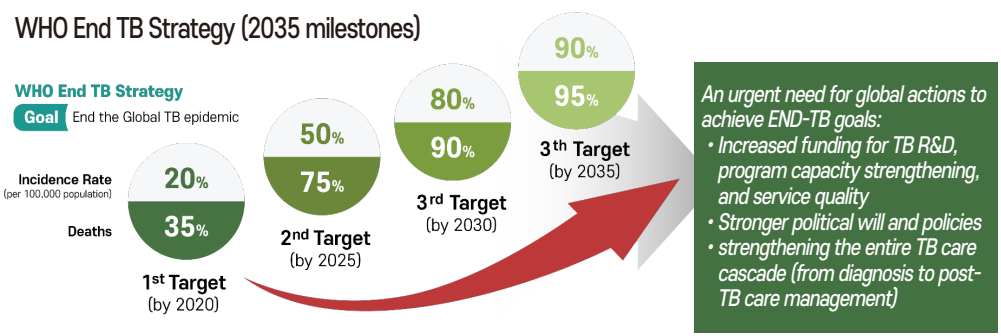
STOP TB Partnership
Predicts a 3-9% increase in new TB patients over the next 5 years (October 2020)

Lancet Global Health
Predicts a 20% increase in TB deaths over the next 5 years (July 2020)

Global trend in case notifications of people newly diagnosed with TB, 2015~2021



WHO End TB Strategy (2035 milestones)



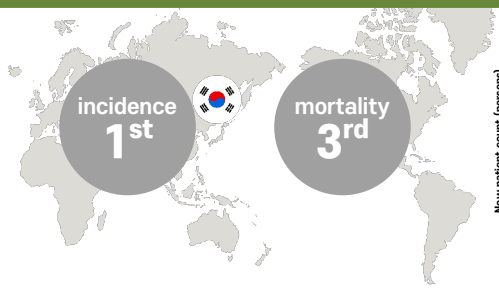
An urgent need for global actions to achieve END-TB goals:
- *Increased funding for TB R&D, program capacity strengthening, and service quality*
- *Stronger political will and policies*
- *strengthening the entire TB care cascade (from diagnosis to post-TB care management)*

Progress status of achieving the first target (as of 2021)

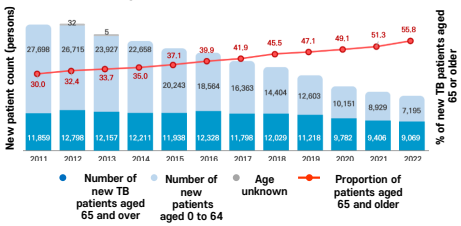
Indicator	Global	Republic of Korea
Incidence Rate	10% decline	**44.3% decline**
Deaths	5.9% decline	**25.9% decline**

Progress in TB Control in ROK

1st in TB incidence and 3rd in TB mortality among OECD



Number and proportion of new TB cases aged 65 and older in 2022



High incidence and mortality in high-risk groups

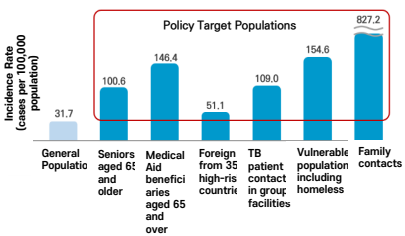
(Aging Korean Population)

There has become a ultra-aging society in ROK
(>20% of population is older than 65)
→ The majority of TB burden is in the elderly

(Socio-Economically Vulnerable Groups)

Higher TB burden remains in the most vulnerable populations (e.g. Medicaid, Homeless)

Comparison of TB incidence rates between the general population and high-risk groups (2022)



Lack of social awareness and continued stigma for TB

(Lack of Social Awareness)

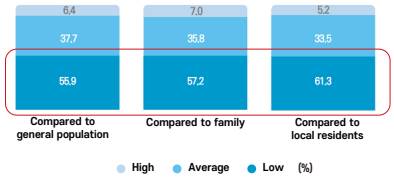
Optimistic biases in personal risk of contracting TB as ROK TB incidence declines

(The issue of stigma)

Stigma continues to be a major concern for patients' behavior for screening, diagnosis, and treatment for TB

Optimistic biases* in contracting TB
- Perceived likelihood of contracting TB compared to others (2022)-

* Optimistic Prejudice that the risk of contracting TB is lower than thant of people



Third National Strategic Plan for TB Control in Republic of Korea, 2023~2027

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III

Third National Strategic Plan for TB Control in ROK: 2023-2027

Policy Vision and Goal

Third National Strategic Plan for TB Control in ROK: 2023-2027

VISION	Healthier Country, Free of TB
GOAL	TB Incidence < 20 cases per 100,000 population by 2027

Pillars and Components

01. Strengthening Prevention and Early Detection

① Strengthening latent TB infection (LBTI) screening and treatment for high-risk groups
② Strengthening TB screening for high-risk groups
③ Ensuring comprehensive epidemiological investigation
④ Enhancing surveillance and screening of foreigner from high burden countries

02. Improving Patient Treatment and Management

① Strengthening management of the most needy patient groups
② Improving the delivery of quality care in medical institutions
③ Solidifying the PPM(public-private mix) program

03. Intensified technological innovation for prevention, diagnosis and treatment

① Achieving BCG vaccine supply self-sufficiency
② Enhancing TB diagnostic capacity
③ Innovating TB control's entire cycle with advanced technologies

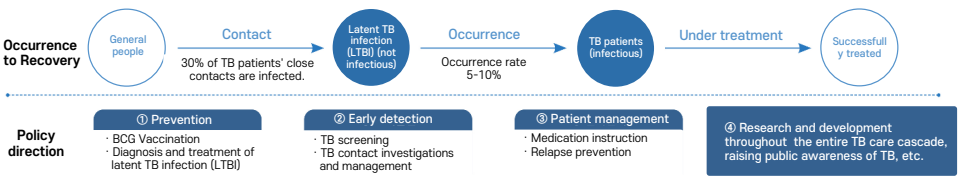
04. Enhanced infrastructure of policy

① Strengthening TB information management system and its analysis base
② Improving the operational efficiency of the national TB procurement systems
③ Improving the public awareness and minimizing TB stigma
④ Assuming the leadership in the Global TB control efforts

Policy Direction

Strengthening the support throughout the entire TB care cascade

Building upon the existing programmatic infrastructure: provide comprehensive support to close the gaps in policy and programs throughout the TB care cascade (from prevention to treatment)



Multi-sectoral engagement and comprehensive TB response: Improving early case detection and ensuring all individuals with TB successfully complete treatment through

- Focus on high-risk and vulnerable groups for early case detection (TB and LTBI)
- Improving treatment outcomes through patient-centered care through the seamless public-private sector collaboration

Accelerate progress to End TB through bold investments in TB R&D and public, social programs

Main content (1) Strengthening Prevention and Early Detection

❶ Strengthening latent TB infection (LBTI) screening and treatment for high-risk groups

- Develop a model for LTBI monitoring and control to prevent progress to active TB
- Expand TB screening among high-risk groups such as those in vulnerable facilities
- Enhance accessibility and awareness of TB screening among high-risk groups to increase TB screening rates
- Improve LTBI treatment environment

❷ Strengthening TB screening for high-risk groups

- Strengthening the TB screening programs for high-risk populations
- Fortify TB control in vulnerable facilities
- Reinforce TB screening and management of persons suspected for having active TB (i.e. abnormal chest x-ray)

❸ Ensuring comprehensive epidemiological investigation

- Improving identification of contacts of index TB patients
- Reinforcing the follow-up and management for early case detection through contact investigation
- Refining the scope and selection criteria for contact investigation
- Analysis of the transmission dynamics TB using innovative technologies (WGS, NGS)
- Improving the ascertainment of the cause of TB death
- Enhance local governments' capacity for TB control efforts (incl. TB patient management and contact investigation)

❹ Enhancing surveillance and screening of foreigner from high burden counturies

- Improving pre-arrival screening:
  TB screening performed at designated hospitals by diplomatic missions
- Expand the coverage of TB screening services for foreign residents in ROK
- Strengthening and promoting the support for foreign TB patients

Main content (2) Improved Patient Treatment and Management

❶ Strengthening management of the most needy patient groups

- Improved case management of multidrug-resistant TB (MDR-TB) and/or difficult-to-treat TB patients
- Strengthening outreach and support programs for the socio-economically vulnerable and non-compliant patients
- Reinforcement of the clinical support for patients at higher risk of transmission

❷ Improving the delivery of quality care in medical institutions

- Implementation of the improved Quality of TB Service Assessment (QTSA)
- Enhance healthcare facilities management by making QTSA results publicly available

❸ Solidifying the PPM (public-private mix) program

- Strengthening the existing collaborative platforms to facilitate local community stakeholders' engagement in TB care
- Increase medical institutions' more personalized TB-patient care capacity
- Develop a long-term strategic plan for PPM program in the era of low TB burden in ROK

Main content (3) Intensified technological innovation for prevention, diagnosis and treatment

❶ Achieving BCG vaccine supply self-sufficiency

- localizing the production of intradermal BCG vaccines (post FDA approval)
- Ensuring the production and supply capacities for BCG vaccines
- Inclusion of the locally-manufactured BCG vaccines in the National Immunization Program (NIP)

❷ Enhancing TB diagnostic capacity

- Improving the coverage and types of drug susceptibility testing
- Optimizing the analysis for tracing and transmission dynamics for incident TB patients
- Standardizing TB testing algorithms, guidelines, and the capacity for the national expertise

❸ Innovating TB control's entire cycle with advanced technologies

- Developing new TB vaccines
- Consistently investing in TB diagnostic technologies
- Consistently investing in TB treatment technologies
- Diversifying supportive systems to ensure intensified research on TB

Main content (4) Enhanced infrastructure of policy

❶ Strengthening TB information management system and its analysis base

- Improving the quality and data collected for TB and LTBI patients in the KNTSS
- Establishment of an open-source integrated longitudinal database for TB and LTBI patients for research purposes

❷ Improving the operational efficiency of the national TB procurement systems

- Improving the TB supply chains to ensure timely TB service delivery

❸ Improving the public awareness and minimizing TB stigma

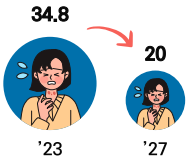
- Engaging the public to induce individual and public behavioral changes on the perception towards TB disease
- Promoting public campaigns and support programs to encourage TB screening
- Designing targeted and interactive campaigns to improve the public's awareness of TB and social equity

❹ Assuming the leadership in the Global TB control efforts

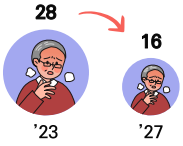
- Continuing investment in the global TB R&D and direct TB program support
- Reinforcing global collaboration for TB control and R&D

Key Achievement of 3rd National Strategic Plan

TB Incidence (key indicator)

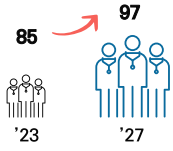


All notified TB cases
(per 100,000 population)
* New and relapse patients

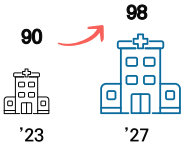


New TB cases
(per 100,000 population)

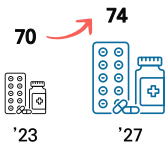
TB Prevention



Proportion of the workforce screened for latent TB infection (LTBI) working in the high risk target facilities (%)

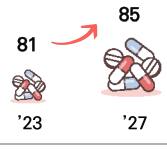


Proportion of populations screened for active TB amongst the vulnerable populations (%)

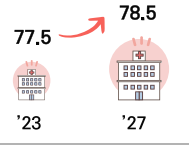


Percentage of the contacts of index TB patients initiated on TB preventive therapy (TPT)* (%)

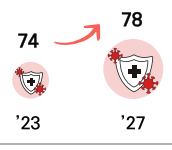
TB Treatment



Treatment success rate (TSR) for TB (%)

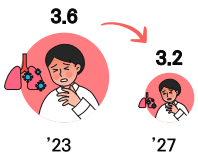


Treatment success rate (TSR) for new patients with positive AFB smear (%)



Treatment success rate (TSR) for multi-drug resistant TB cases (%)

TB Mortality



TB mortality
(cases per 100,000 population)
*The WHO official estimates

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