Achievement and Challenges of TB Control in South Korea

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Contents

- Historical Perspective of National TB Policy
- Introduction and Achievement of Private-Public Mix
- Future Perspective in line with End TB Strategy

1 Historical Perspective of National TB icy

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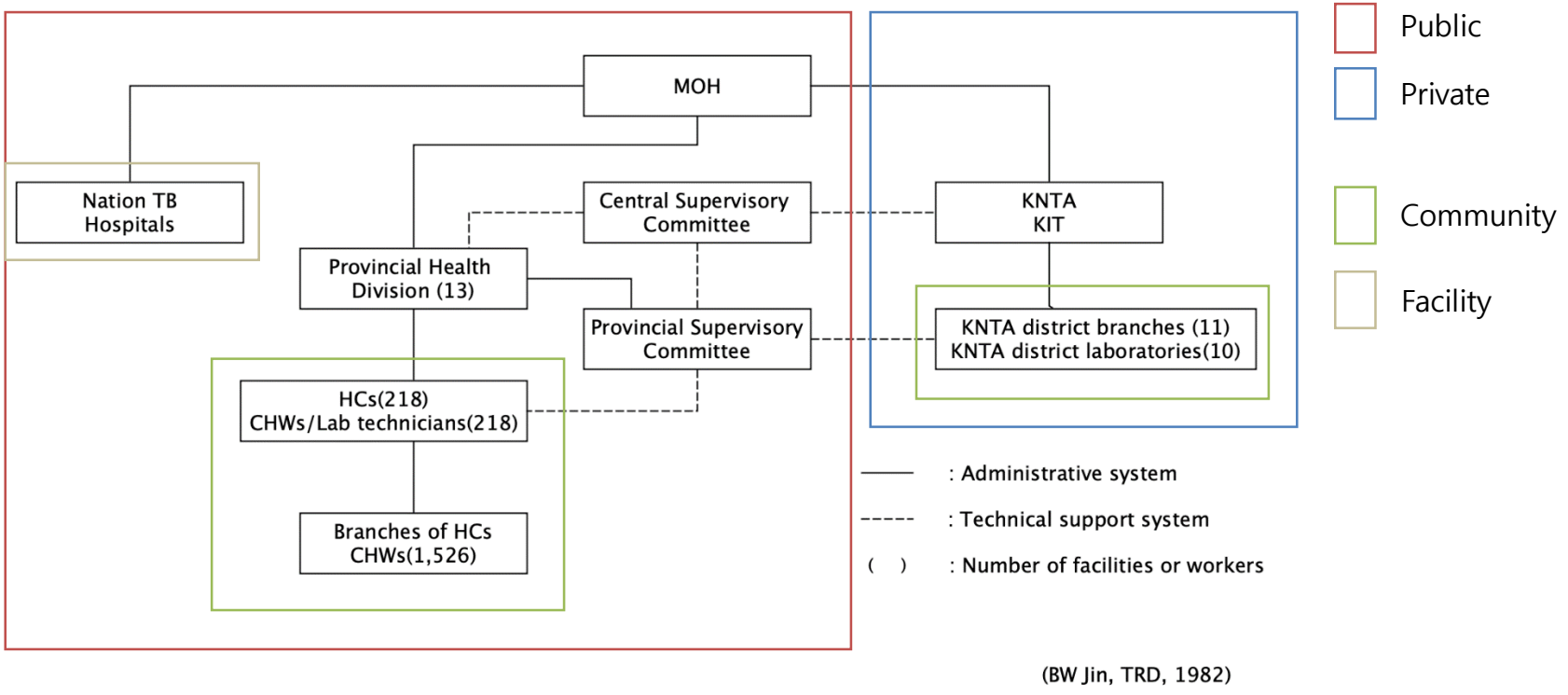
Lenses to review policy change

- **Public** vs. **Private** service providers

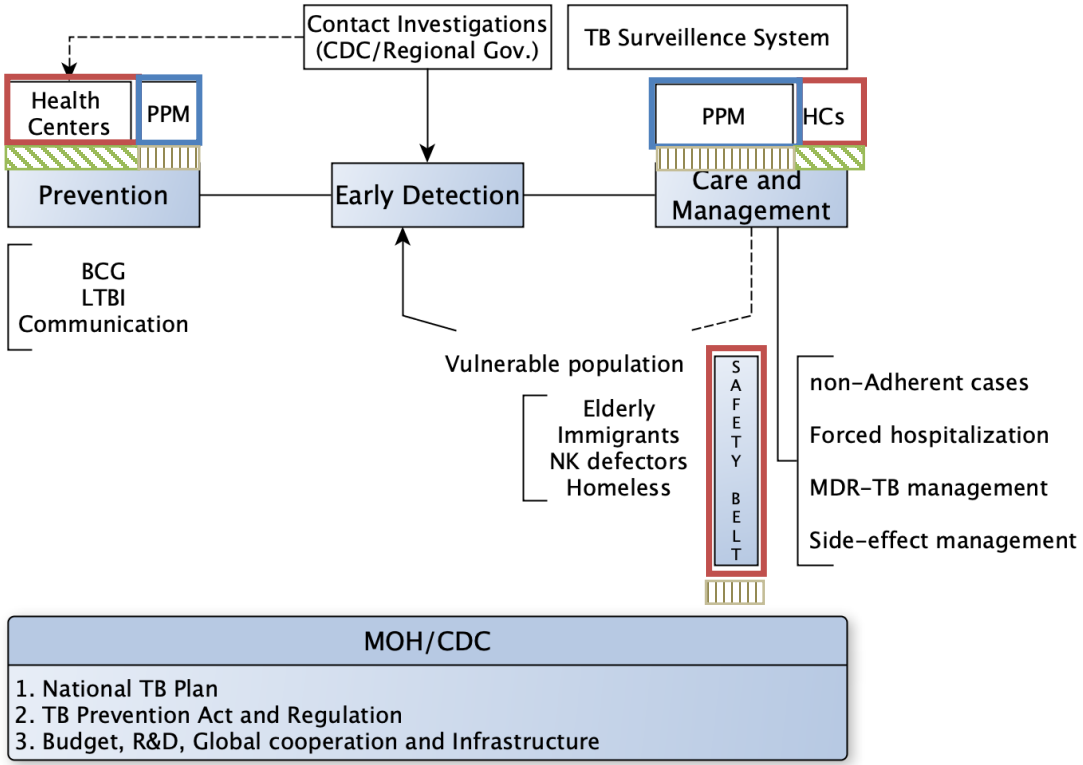
- **Community**-based vs. **Facility**-based health care

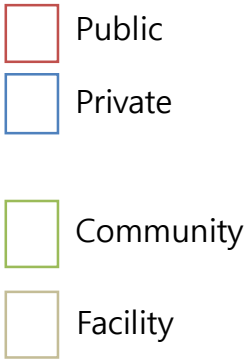
NTP in 1980s



(BW Jin, TRD, 1982)

Activities within NTP in 2017

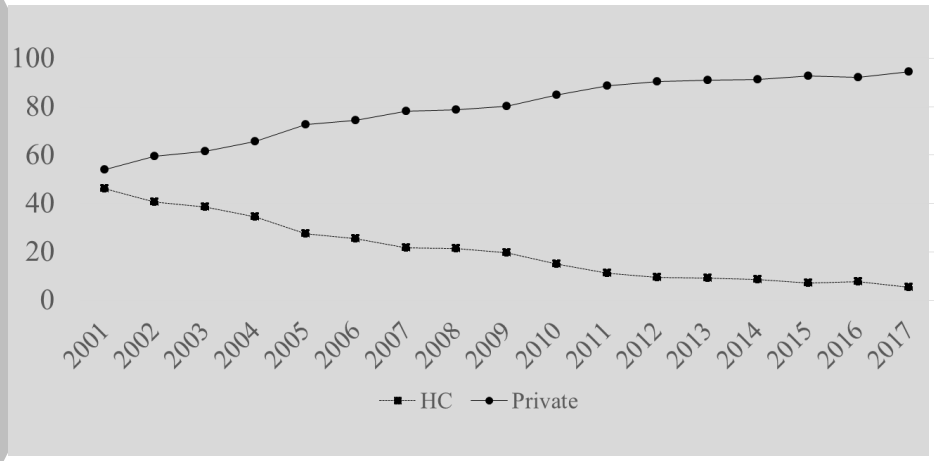




(Cho, 2017)

Changes between 1980 and 2017

- 1980s: Health Centers
- 1989: Introduction of NHI
- 2001: Public-Private share 50%: 50%
- 2011: 5% co-payment in private sector
- 2016: 0% co-payment in private sector
- 2018: 97% TB patients in private sector



Problems

High LTFU in Private sectors

INT J TUBERC LUNG DIS 3(8):695–702

Treatment of bacillary pulmonary tuberculosis at the chest clinics in the private sector in Korea, 1993

Y. P. Hong, S. J. Kim, E. G. Lee, W. J. Lew, J. Y. Bai

Korean Institute of Tuberculosis/Korean National Tuberculosis Association, Seoul, Korea

	1987		1993	
	Health centres[8]	Chest clinics[10]	Health centres[8]	Chest clinics
No. assessed	20 515	1119	14 473	960
Cure	73.7	43.2	79.7	51.8
Completed	2.5	6.0	0.6	10.9
Failure	4.2	8.8	2.7	4.5
Died	2.9	1.4	1.8	0.5
Default	5.6	33.6	3.5	27.0
Transfer out	4.9	6.5	4.2	5.3
Others	6.2	0.5	7.5	—

Under reporting

INT J TUBERC LUNG DIS 16(9):1221–1227

http://dx.doi.org/10.5588/ijtld.11.0782
E-published ahead of print 12 July 2012

Factors leading to under-reporting of tuberculosis in the private sector in Korea

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Historical perspective of NTP

- The main change
  - From public to private service provision
  - From community-based approach to facility-based approach
- NHI coverage: Extended to most population and including public and private health services
- Problems
  - Inappropriate reporting and patients` care in private sector

2 Introduction and Achievement of PPM

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Timeline of PPM

Conceptual framework of Korean PPM model

Pilot PPM project by KIT

Establishment of KCDC (NTP)

TB elimination Plan (KCDC)

Pilot PPM project by KCDC

PPM launched

PPM expansion

1997

2000-01

2003

2006

2007

2009

2011

Role sharing between Public and Private sectors

8 teaching hospitals (the highest number of TB notification)

- 91% vs. 75% (TSR)
(Kim et. al., 2009, TRD)

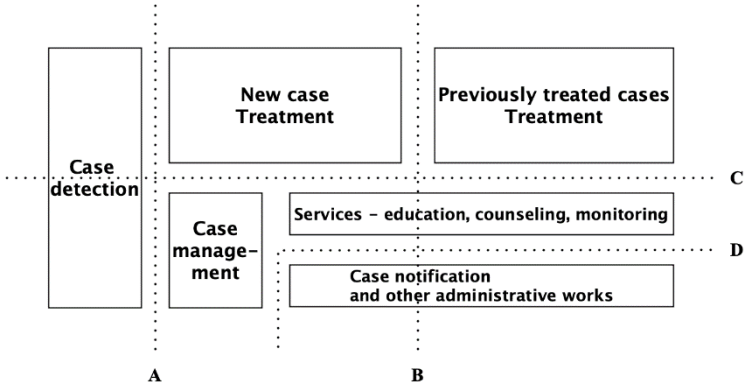
11 teaching hospitals (the highest number of TB notification)

- Hospitals at least 250 TB cases in a year
- Dispatching TB nurses

22 hospitals (250 TB cases in a year)

97 hospitals (100 TB cases in a year)

Incidence: <10/100K
CDR: 78-96%
TSR: 70-97%
BY 2030



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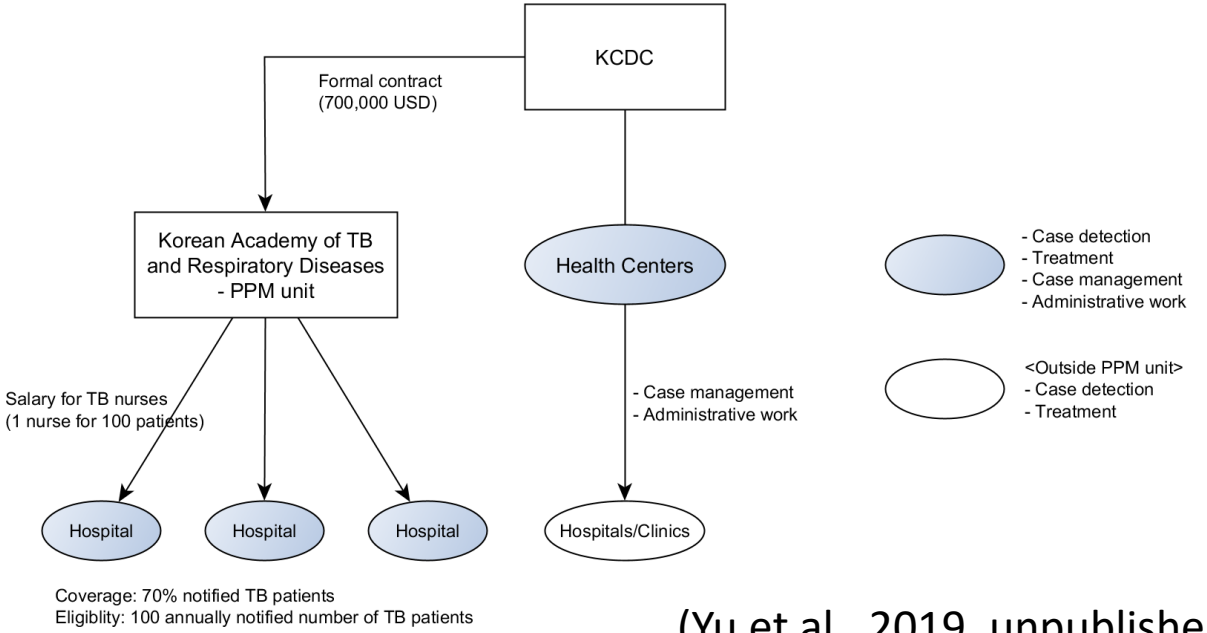
PPM mechanism



(Yu et al., 2019, unpublished)

- Training program for HCWs provided by KCDC/KIT
- Clinical guideline published by KCDC/KATRD

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Policy Impact Evaluation

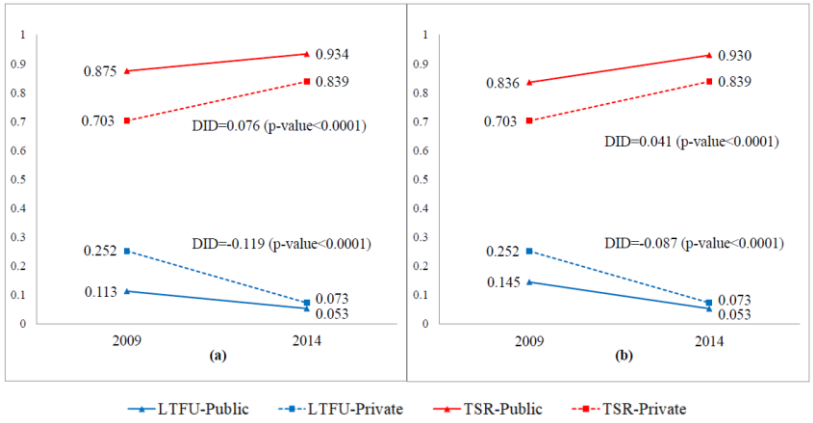
- Data Source: TB surveillance system in KCDC
- Study design: Two retrospective cohort
  - ✓ 2009 new TB cohort, and 2014 new TB cohort: 5 years interval
  - ✓ Exclusion of MDR-TB

Methods and Descriptive Results

- Independent variable: Treatment institutions (health centers vs. private hospitals)
- Outcome variables: TSR and LTFU rate
- Statistical analysis: Difference in difference (Crude and PSM analysis)
- Covariates for PSM: age, gender, nationality, transfer history, geography, diagnostic test results (chest X-ray, smear and culture)
- Descriptive results
  - ✓ Total 33,591 and 32,791 TB patients in 2009 and 2014 cohorts
  - ✓ Health centers: 6,195 and 2,803 TB patients in 2009 and 2014

Results

Single NTP perspective



(Yu et. al, 2019, in revision)

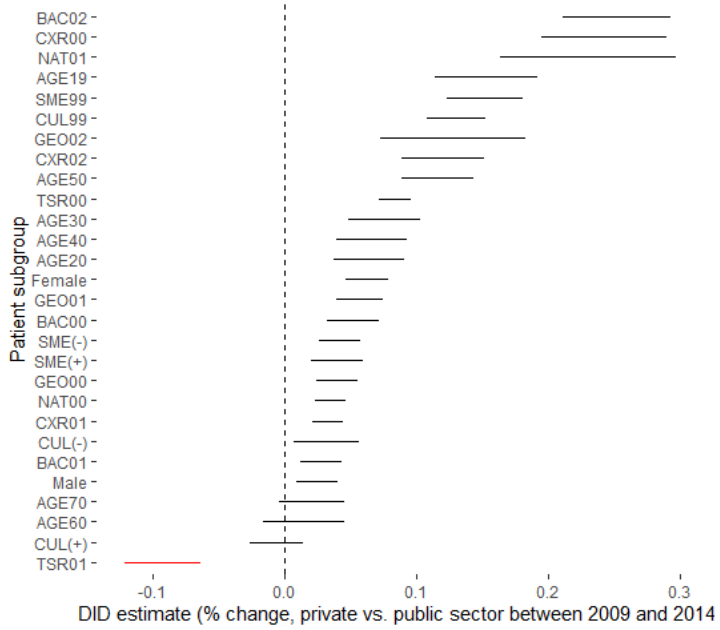
PPM and Non-PPM persp

	전체		치료결과							
			치료성공		치료중단		관리실패		사망	
			p<0.01¶		p<0.01¶		p<0.01¶		p<0.01¶	
전체	137,901	(100.0)	112,528	(81.6)	5,500	(4.0)	14,959	(10.8)	10,322	(7.5)
보건소	13,160	(100.0)	11,826	(89.9)	408	(3.1)	1,207	(9.2)	120	(0.9)
종합병원	106,372	(100.0)	87,728	(82.5)	4,078	(3.8)	10,147	(9.5)	8,435	(7.9)
			p<0.01†		p<0.01†		p<0.01†		p<0.01†	
PPM	89,298	(100.0)	74,761	(83.7)	3,292	(3.7)	7,882	(8.8)	6,598	(7.4)
Non-PPM	17,074	(100.0)	12,967	(75.9)	786	(4.6)	2,265	(13.3)	1,837	(10.8)
병원	13,709	100.0)	9,789	(71.4)	728	(5.3)	2,209	(16.1)	1,695	(12.4)
			p<0.01†		p<0.01†		p=0.36†		p<0.01†	
PPM	2,308	(100.0)	1,756	(76.1)	189	(8.2)	357	(15.5)	191	(8.3)
Non-PPM	11,401	(100.0)	8,033	(70.5)	539	(4.7)	1,852	(16.2)	1,504	(13.2)
의원	4,660	(100.0)	3,185	(68.3)	286	(6.1)	1,396	(30.0)	72	(1.5)
			p=0.14†		p=0.12†		p<0.05†		p<0.05†	
PPM	239	(100.0)	153	(64.0)	9	(3.8)	86	(36.0)	0	(0.0)
Non-PPM	4,421	(100.0)	3,032	(68.6)	277	(6.3)	1,310	(29.6)	72	(1.6)

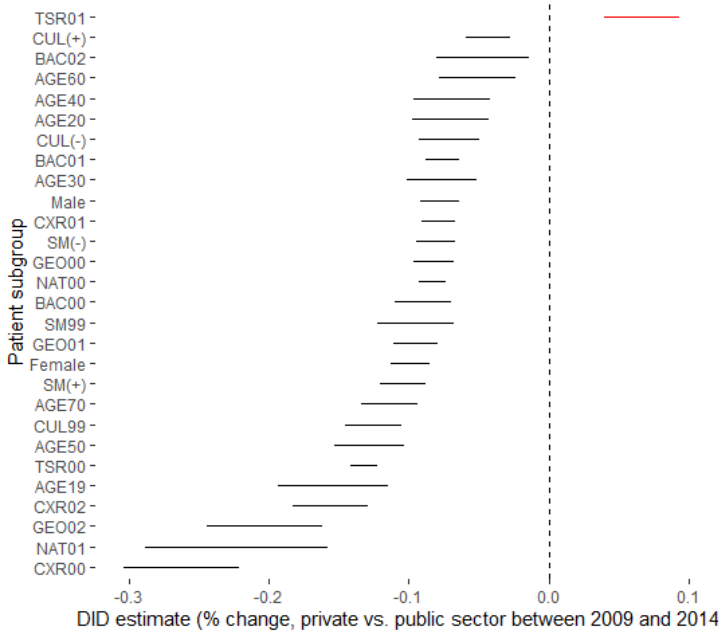
(김창훈 등, 2018, unpublished)

Finding Gaps

TSR



LTFU



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So,

- PPM achieved higher TSR and Lower LTFU
  - Most gaps between public and private sectors might be eliminated

- However,
  - Current PPM structures may not care and manage TB patients in between hospitals
  - People in between hospitals may be more vulnerable or socially marginalized group

3 Future Perspective in line with End TB Strategy

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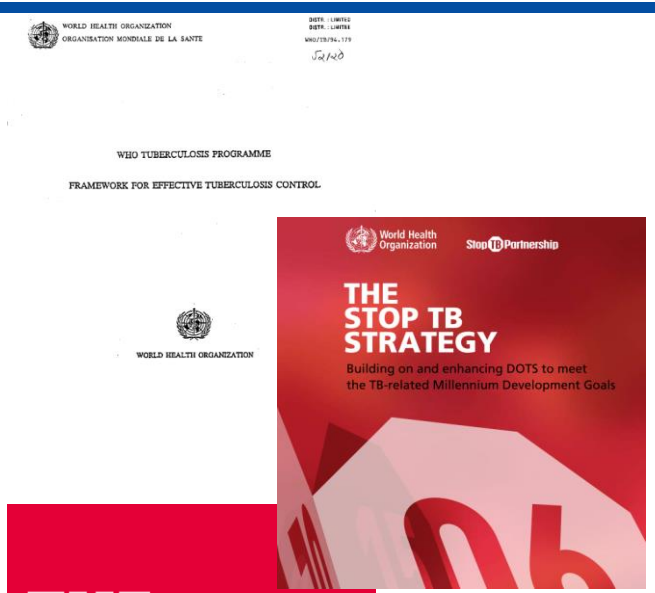
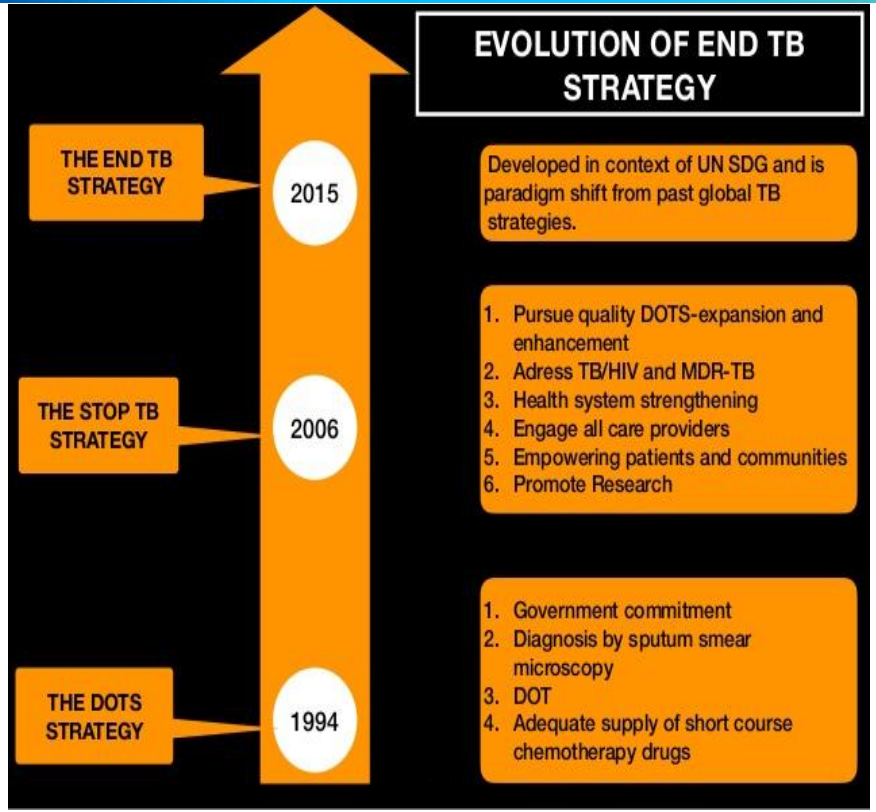
Global TB Policy



Global Plan to End TB



End TB Strategy

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

Vision:
A world free of TB
Zero TB deaths,
Zero TB disease, and
Zero TB suffering

Goal:
End the Global TB epidemic

	MILESTONES 2020	MILESTONES 2025	TARGETS SDG* 2030	TARGETS END TB 2035
Reduction in number of TB deaths compared with 2015 (%)	35%	75%	90%	95%
Reduction in TB incidence rate compared with 2015 (%)	20%	50%	80%	90%
TB-affected families facing catastrophic costs due to TB (%)	0%	0%	0%	0%

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Where we are and what we have

- Social suffering due to TB

  (The 3rd target of End TB Strategy)

RESEARCH ARTICLE

Social selection in historical time: The case of tuberculosis in South Korea after the East Asian financial crisis

Hongjo Choi[1], Haejoo Chung[2,3]*, Carles Muntaner[4,5]

1 Department of Research and Development, Korean Institute of Tuberculosis, Korean National Tuberculosis Association, Cheongju, Republic of Korea, **2** BK21PLUS Program in Embodiment: Health-Society Interaction, Department of Public Health Sciences, Graduate School, Korea University, Seoul, Republic of Korea, **3** School of Health Policy & Management, College of Health Science, Korea University, Seoul, Republic of Korea, **4** Bloomberg Faculty of Nursing, University of Toronto, Toronto, Ontario, Canada, **5** Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada

- Success story of TB care among vulnerable population
  - Multisectoral approach to tackle social determinants

Original Article

Asia Pacific Journal of Public Health
1–9

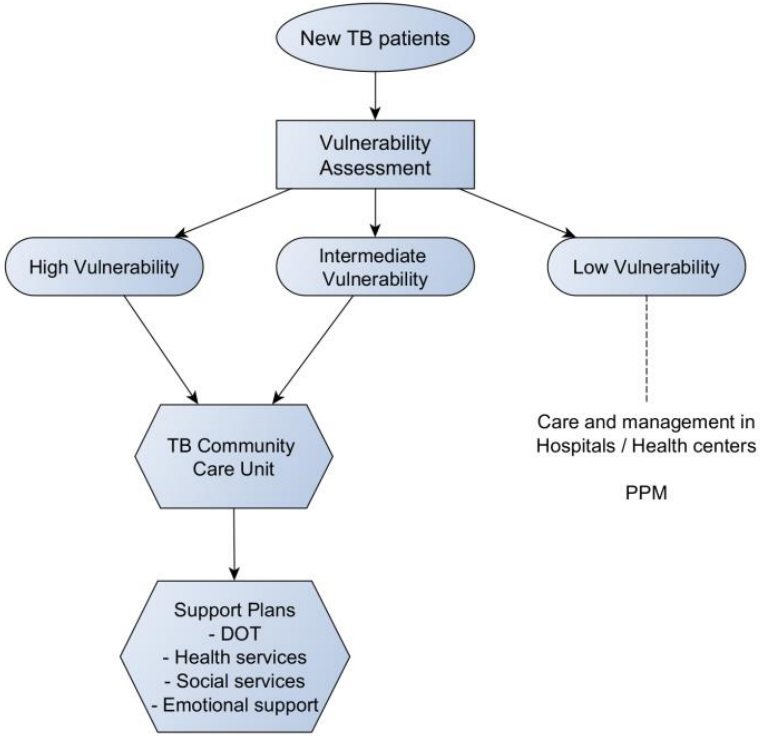
DOI: 10.1177/1010539519871779
journals.sagepub.com/home/aph
SAGE

Impact of Housing Provision Package on Treatment Outcome Among Homeless Tuberculosis Patients in South Korea

Hyunwoo Kim, MPH[1], Hongjo Choi, MD, PhD[1], Sarah Yu, MPH[1], An-Yeol Lee, MA[2], Hye-Ok Kim, MD[3], Joon-Sung Joh, MD, MPH[4], Eun Young Heo, MD[5], Kyung-Hyun Oh, MD, MPH[1], Hee Jin Kim, MD, MPH[1], and Haejoo Chung, RPh, MSc, PhD[6]

A new pilot project

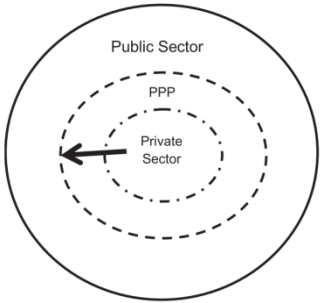
- Vulnerable population approach (Semenza, 2010)



- To close the gap
  - Reinvigorating public sectors and community-based approach in NTP

Public–private partnerships (ppps) in global health: the good, the bad and the ugly

Arne Ruckert & Ronald Labonté



4 Summary and Conclusion

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- Environment around NTP was changed
  - From public to private service provision
  - From community-based approach to facility-based approach
- To solve problems from private dominant system
  - PPM launched and expanded
  - TSR and LTFU were improved
  - However, there remain gaps
- Vulnerable population approach might provide a new solutions to close the gap

KIT/KNTA

Dr. Hee-Jin Kim

Dr. Kyung-Hyun Oh

Ms. Sarah Yu

Mr. Hyunwoo Kim

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Dr. Hae Young Kim

Dr. Haejoo Chung

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KCDC

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Dr. Hojoon Sohn

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