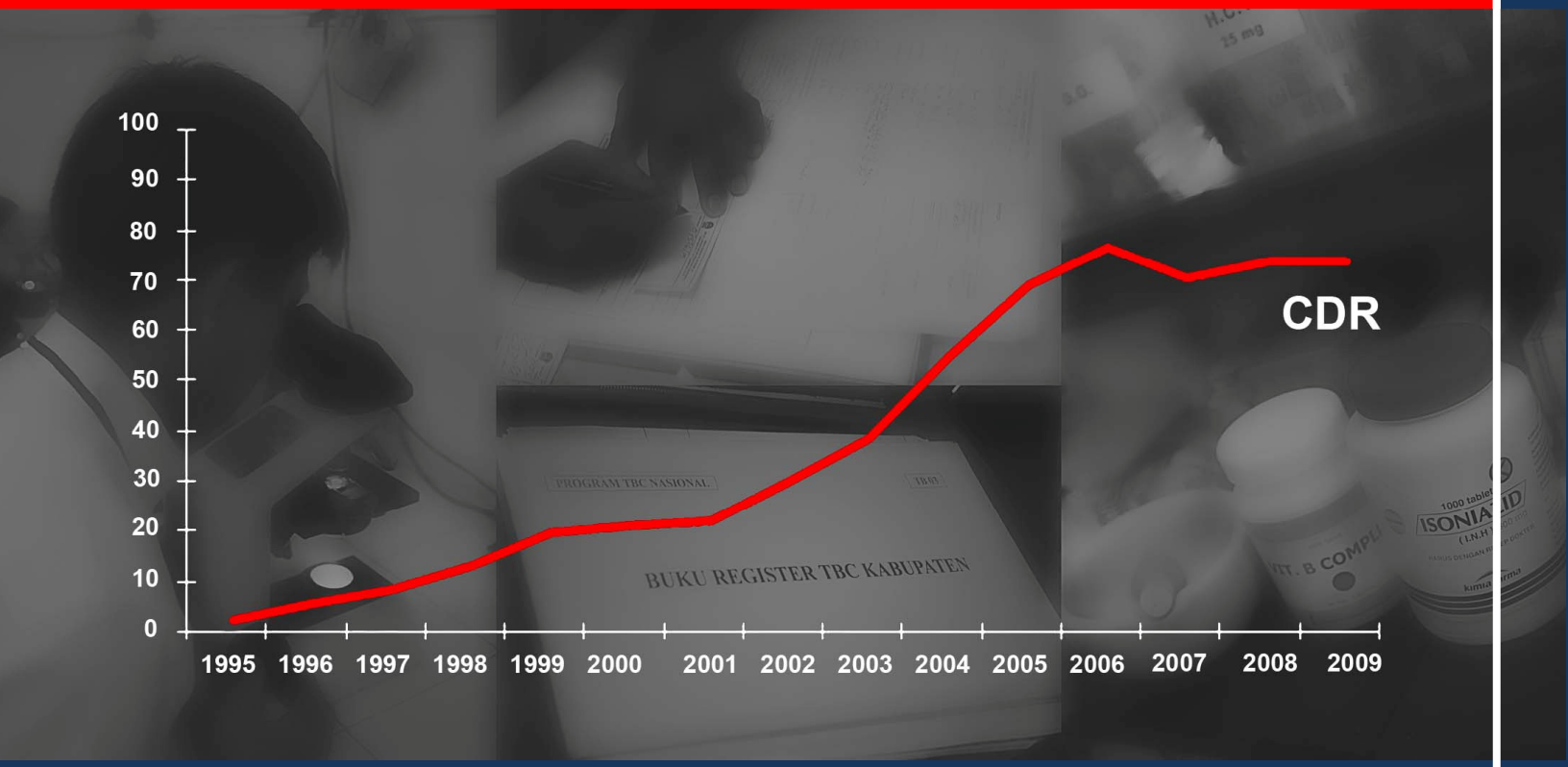
BREAKTHROUGH TOWARD UNIVERSAL ACCESS

TB control national strategy in Indonesia: 2010-2014



Ministry of Health
Republic of Indonesia

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ABBREVIATIONS

ACMS	Advocacy, Communication, Mobilization and Social
AIDS	Acquired Immuno Defficiency Syndrome
APBD	Anggaran Pendapatan Belanja Daerah (Local Revenue and Expenditure Budget)
APBN	Anggaran Pendapatan Belanja Negara (National Revenue and Expenditure Budget)
ARSADA	Asosiasi Rumah Sakit Daerah (District hospital association)
ARV	Anti Retro Viral
Askes	Asuransi Kesehatan (National health insurance company)
Balitbangkes	Badan Penelitian dan Pengembangan Kesehatan (National Instititute for Health Research and Development)
BPOM	Badan Pengawasan Obat dan Makanan (Food and Drug Administration)
BTA	Basil Tahan Asam (Acid Fast Bacilli)
CCM	Country Coordinating Mechanism
CDR	Case Detection Rate
CIDA	Canadian International Development Agency
CNR	Case Notification Rate
CSS	Community System Strengthening
DFID-UK	Department for International Development, United Kingdom
Dinkes	Dinas Kesehatan (Health office)
DIPA	Daftar Isian Pelaksanaan Anggaran (Budget Implementation Entry List)
DMIS	Drug Management Information System
DOT	Directly Observed Treatment
DOTS	Directly Observed Treatment Shortcourse
DPS	Dokter Praktek Swasta (Private physicians)
DST	Drug Surveillance Test
DRS	Drug Resistant Surveillance
EQA	European Quality Assurance
Fasyankes	Fasilitas Pelayanan Kesehatan (Health care facilities)
FDC	Fixed Dose Combination
FHI	Family Health International
GDF	Global Drug Facility

Gerdunas	Gerakan Terpadu Nasional (National Coalition against TB)
GFATM	The Global Fund to fight AIDS, Tuberculosis and Malaria
GLC	Green Light Committee
HDL	Hospital DOTS Linkage
HIV	Human Immunodeficiency Virus
HRD	Human Resources Development
ICF	Intensified Case Finding
IDI	Ikatan Dokter Indonesia (Indonesian Medical Association)
IDU	Injecting Drug Users
INH	Isoniazid
IPT	INH Preventive Therapy
ISTC	International Standard of Tuberculosis Care
Jamkesmas	Jaminan Kesehatan Masyarakat (community health insurance system)
Jamkesda	Jaminan Kesehatan Daerah (local government health insurance)
Jamsostek	Jaminan Sosial Tenaga Kerja (local security for workers/labours)
JEMM	Joint External Monitoring Mission
KAP	Knowledge, attitude and practice
Kemenkes	Kementerian Kesehatan (Ministry of Health)
KIA	Kesehatan Ibu Anak (Maternal and Child Health)
KIE	Konseling, Informasi, dan Edukasi (Information, Education, Communication)
KNCV	Koninklijke Nederlandse Centrale Vereniging tot Bestrijding der Tuberculose (Asosiasi TB Kerajaan Belanda)
Komli	Komite Ahli (Expert Committee)
KTI	Kawasan Timur Indonesia (Eastern Indonesia Region)
LQAS	Lot Quality Assurance Sampling
LSM	Lembaga Swadaya Masyarakat (Non-Governmental Organization)
MDG	Millennium Development Goals
MDR-TB	Multi Drug Resistant Tuberculosis
MICT	Management Internal Control Team
MSH	Management Science for Health
NTP	National TB Program
OAT	Obat Anti-Tuberculosis (Anti TT Drug)

ODHA	Orang dengan HIV-AIDS (People Living with HIV/AIDS)
OR	Operational Research
PAMALI TB	Persatuan Masyarakat Peduli (People Union for TB)
PEPFAR	President's Emergency Plan for AIDS Relief
PERSI	Persatuan Rumah sakit Seluruh Indonesia (National Hospital Association)
PHKP	Piagam Hak dan Kewajiban Pasien (Patient Charter)
PITC	Provider Initiated Testing and Counseling
PKK	Pemberdayaan Kesejahteraan Keluarga (Family Welfare Movement)
PMDT	Programatic Management Drug Resistant Tuberculosis
POLRI	Kepolisian Republik Indonesia (Indonesian Police Force)
PPM	Public Private Mix
PPNI	Persatuan Perawat Nasional Indonesia (National Nurse Association)
Pramuka	Praja Muda Karana (Indonesian Scout)
QA	Quality Assurance
SDA	Service Delivery Area
SDM	Sumber Daya Manusia (Human Resources)
SIKNAS	Sistem Informasi Kesehatan Nasional (national health information system)
SIKDA	Sistem Informasi Kesehatan Daerah (district health information system)
SPM	Standar Pelayanan Minimal (minimum standard of service)
TB	Tuberculosis
TBCAP	Tuberculosis Control Assistance Program
TBCTA	Tuberculosis Coalition for Technical Assistance
TNI	Tentara Nasional Indonesia (Indonesian Armed Forces)
TORG	Tuberculosis Operational Research Group
UKBM	Upaya Kesehatan Berbasis Masyarakat (Community Based Health Initiatives)
UNDOC	United Nations Office on Drugs and Crime
UNDP	United Nation Development Programme
USAID	United States Agency for International Development
VCT	Voluntary Consulting Testing
WHO	World Health Organzation
XDR-TB	Extremely Drug Resistant Tuberculosis

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Foreword

Tuberculosis or TB is still a major public health problem at a global level. Despite impressive progress in the achievement of TB control program worldwide, more than 9 million people still develop active TB each year and nearly 2 million die. Progress in TB control is apparently accompanied with new challenges faced by TB control program. This situation also occurs in Indonesia.

In 2006, Indonesia is the first country in WHO South-East Asian region that successfully achieved the MDG targets for TB, i.e. 70% case detection and 85% treatment success. Currently, this country ranks the fifth among the highest TB burden countries in the world. The estimated prevalence of all types of TB cases is 483,512 and the estimated incidence is 429,730 new cases per year. It is estimated that 62,246 deaths per year is due to TB.

DOTS strategy has been implemented since 1995 in Indonesia with remarkable progress of TB control program. Nonetheless, new challenges such as TB/HIV, MDR-TB, childhood TB and TB in other vulnerable population are emerging. This situation require the TB control program to continuously improve, accelerate and innovate.

The theme for the National Strategy for TB control in Indonesia TB 2010-2014 is “Breakthrough toward Universal Access”. This document is developed in reference to the national development policy 2010-2014, the national health system 2009, the strategic plan of the Ministry of Health 2010-2014, the Global Plan and the South East Asia Regional Plan, and progress on TB control in Indonesia. The process has involved intensive consultations with stakeholders and partners, i.e. from central government, local government, professional organization, TB program managers at district, provincial and central level, Gerdunas, TB expert committee, non-governmental organizations as well as international partners.

Envisioned by achieving "A free-TB, healthy, just and self-reliant society", seven strategies are determined in the national strategy of TB control. Continuity from the previous national strategy in 2006-2010 are maintained, but with further focusing on acceleration strategies, implementation of activities as well as piloting and implementing innovative activities. This document also has two additional chapters on implementation and monitoring-evaluation of the national strategy. As a strategic direction, it is expected that implementation of this national strategy will reflect high ownership and commitment toward TB control program in Indonesia in the path to achieve the MDG targets, taking into consideration the regional situational analysis in Indonesia.

Let us make breakthroughs in the fight against TB.

Jakarta, November 12, 2010

Ministry of Health, Republic of Indonesia
dr. Endang Rahayu Sedyaningsih MPH, DrPH

Executive Summary

New challenges for TB control in Indonesia have emerged along with progresses which have been achieved. The national strategy for TB control 2010-2014 have been developed based on intensive stakeholder consultation and in consideration of national policies, regional and global plans for TB control and evaluation of the current TB control program in Indonesia.

Seven strategies have been formulated to achieve the vision of "Toward a free-TB, healthy, just and self-reliant society." These strategies encompass four technical strategies and three functional strategies as follow:

1. Scaling-up and improving quality DOTS service
2. Addressing TB/HIV, MDR-TB, and the needs of poor and other vulnerable groups
3. Engaging all public and private providers in implementation of International Standards for TB Care.
4. Empowering TB patients and communities

supported by

5. Strengthening health system, including HRD and TB control program management
6. Increasing commitment of central and local government
7. Enhancing research, development and utilization of strategic information

The total cost needed for TB control program in 2010-2014 is USD 527,265,544.00. The largest budget is allocated for quality DOTS service, followed by health system strengthening, addressing special challenges of MDR-TB, TB/HIV, childhood TB and other vulnerable groups. Advocacy will be intensified to ensure political and financial commitment of central and local government for TB control. Advocacy to the private sector will also be intensified to enhance commitment and develop financing mechanism in the private sector through Public-Private Partnership (PPP) in forms of insurance schemes or direct provision of care.

This national strategy sets strategic directions for TB control at national level, taking into account variations across regions. Indonesia consists of seven regions: Sumatra, Java-Bali, Kalimantan, Sulawesi, Maluccu, Nusa Tenggara and Papua. Thus, the national strategy needs to be further translated into regional, provincial and district strategies and plans.

The national strategy is elaborated operationally in the national action plans 2010-2014 which encompass annual work plans of key TB control strategy components along with budget estimates for the five years timeframe. Regional translation of these action plans would also be required to support implementation of the national strategy and action plans.

Monitoring of the national strategy implementation will be developed as part of the routine national monitoring and evaluation exercise, with aim monitor process and development, identify problems and formulate solutions. Evaluation of the national strategy aims to analyze relevance, efficiency, effectiveness, impact and sustainability of the national strategy to set long term policy directions. Principles of public accountability, transparency, organizational learning, continuous improvement and TB control program ownership will be applied in the evaluation of the national strategy

A crucial initial step for success of the national strategy implementation would be effective communication of the strategy. The national strategy implementation would be coordinated by the Ministry of Health with involvement from the Ministry of Social Welfare, the National Planning bureau and other relevant ministries, supported by decree from the Ministry of Health.

BAB I

INTRODUCTION

Since 1993, WHO has declared TB as a global emergency. Although the DOTS strategy has been regarded as one of the most cost effective public health interventions, the burden of TB in the world is still alarming. In spite of good progress since 2003, it is estimated that, annually, there are 9.5 million new cases of TB, and 0.5 million people die due to this disease (WHO, 2009). Its interaction with HIV, drug resistance TB and other challenges further complicates the problem of TB. This TB control national strategy document, 2010-2014, was developed through intensive consultation with stakeholders at the national and provincial level, in reference to: (1) The national development policy 2010-2014; (2) The Global Plan and the South East Asia Regional Plan; and (3) Progress on TB control in Indonesia (chapter 2).

1.1. National Development Policy

1.1.1. Middle Term Development Plan 2010-2014

The strategic direction of national development for 2010-2014 is stipulated in the National Middle Term Development Plan (*Rencana Pembangunan Jangka Menengah Nasional or RPJMN*) 2010-2014. As stated in the document, the government missions are threefold: (1) Continuing development toward prosperous Indonesia, (2) Strengthening pillars of democracy, and (3) Strengthening the justice dimension in all sectors. The missions are further developed into the Five Main Agendas of National Development 2010-2014, which include: (1) Economic development and welfare improvement, (2) Good governance, (3) Strengthening the democratic pillars, (4) Law enforcement and combating corruption, and (5) Equitable and inclusive development.

Health development is the main component of the first mission, i.e. economic development and welfare improvement, and the fifth mission to achieve equitable health development. The four targets of health development, including TB control, are stated in the Middle Term Development Plan 2010-2014 (table 1) to include:

1. Lowering disparity in health and nutritional status between region, social strata, economic level and gender;
2. Increasing provision of health budget for health to reduce health induced financial risk for all people, especially the poor;
3. Improving clean and healthy lifestyle (PHBS) in the household, from 50% to 70%; and
4. Fulfilling strategic healthcare workers in the remote, poor, borderline region and islands.

The health and nutritional status as the first target mentioned in health development illustrate the important of this indicators as the highest priority to be achieved in health development. This target is further developed into more specific indicators, including the communicable disease targets. Table 1 describes the targets for TB.

Table 1. Targets for TB mortality and morbidity in the RPJMN 2010-2014

	Baseline status	Targets in 2014
No of TB cases per 100,000 people	235	224
Percentage of new smear positive TB cases (SS+)	73	90
Percentage of cured new smear positive TB cases (SS+)	85	88

The Presidential Instruction No 3, 2010 on the Millenium Development strengthens the Indonesian government's commitment to accelerate the achievement. This Presidential Instruction gives emphasis on concerted efforts to accelerate implementation of the national development priorities for the year 2010, as stated in the Presidential Instruction No 1, 2010. In line with the national efforts to combat with TB, the MDG report in 2010 demonstrated that the target for TB indicators as part of target 6C has been the only targets achieved within the MDG target indicators, as shown below. The above report demonstrates that TB control in Indonesia as part of the national health development has been well implemented to contribute to the national development.

Table 2. Achievement of TB control targets in MDGs in Indonesia (Ministry of National Planning and Development/Bappenas 2010)

Indicators		Baseline	Current status	MDGs 2015 target	Status	Source
OBJECTIVE 6: TO COMBAT HIV/AIDS, MALARIA AND OTHER COMMUNICABLE DISEASES						
Target 6C: To control transmission and reduce number of new Malaria cases and other priority diseases up to the year 2015						
6.9	Incidence, prevalence and mortality due to TB					
6.9.a.	Incidence of TB (all case/100,000 population/year)	343 (1990)	228 (2009)	Stopped, decreasing	Achieved	WHO Global TB report, 2009
6.9.b.	Prevalence of TB (per 100,000 population)	443 (1990)	244 (2009)		Achieved	
6.9.c.	Mortality due to TB (per 100,000 population)	92 (1990)	39 (2009)		Achieved	
6.10	Proportion of TB cases detected and treated with DOTS					
6.10.a.	Proportion of TB cases detected with DOTS	20,0% (2000)	73,1% (2009)	70,0%	Achieved	WHO Global TB report, 2009
6.10.b.	Proportion of TB cases treated and cured with DOTS	87,0% (2000)	91,0% (2009)	85,0%	Achieved	Ministry of Health report, 2009

1.1.2. The strategic plan of the Ministry of Health 2010-2014

In reference to the Middle Term of the Development Plan, the Ministry of Health stated four missions in their strategic plan document in 2010-2014 as the following:

1. Improving community health status through community involvement, including private sectors and civil societies.
2. Protecting public health by ensuring provision of complete, quality, equitable and equal health care
3. Secure the availability and equality of health resources, and
4. Creating good governance.

Based on the missions, the Ministry of Health has formulated six main strategies which includes:

1. Improve involvement of the community, private and civil society in health development through national and global partnership;
2. Increase equality, equity and quality of evidence based health care;
3. Increase health financing, particularly to provide a national social health insurance scheme;
4. Improve quality and distribution of human resource development and utilization;
5. Increase availability, distribution and affordability of drugs and medical devices, while maintaining safety, efficacy, effectiveness and quality of pharmacies products, medical equipments and food; and
6. Improve accountability, transparency, efficiency and effectiveness of health management to strengthen accountable health decentralization.

In addition to the main strategies, the Ministry of Health has highlighted the need for a healthcare reform which was further elaborated in the roadmap of healthcare reform document. The seven objectives outlined in this healthcare reform blueprint give emphasis toward strengthening health financing strategy, health resources (including supply of drugs and medical equipments for TB), and management of health as mentionned in the main strategies of the Ministry of Health strategic plan 2010-2014.

1.2. The global and regional plan to stop TB

1.2.1. The Global Plan to Stop TB 2006-2015 and the Global Plan to Stop TB 2011-2015

At the global level, the Stop TB Partnership (the Partnership) as the global partnership supports countries to improve TB control, accelerate decrease of morbidity and mortality due to TB, and to stop the spread of TB around the world. The Partnership has developed the Global Plan to Stop TB for 2011-2015, providing a coherent global agenda and setting the targets in the Millennium Development Goals (MDG) for TB.

The vision of the Partnership is a TB-free world. This vision will be accomplished through four missions:

1. To ensure that every TB patient has access to effective diagnosis, treatment and cure
2. To stop transmission of TB
3. To reduce the inequitable social and economic toll of TB
4. To develop and implement new preventive, diagnostic and therapeutic tools and strategies to stop TB

The Partnership has set the following targets as milestones:

- By 2015: the global burden of TB (disease prevalence and deaths) will be reduced by 50% relative to 1990 levels, with at least 70% of people with infectious TB diagnosed (i.e. under the DOTS strategy) and at least 85% of those cured
- By 2050: TB will be eliminated as a global public health problem.

The Partnership is committed to meeting the MDG relevant to TB (Goal 6, Target 8) “to have halted and begun to reverse the incident [of TB] by 2015”. To achieve the targets, the Partnership has twin strategies for the next ten years, i.e. to accelerate the development and use of better tools and to implement a new WHO-recommended Stop TB strategy, based on DOTS and including an International Standard for TB Care (ISTC).

The objectives of the Global Plan 2006-2015 are to:

1. Promote wider and wiser use of existing strategies to interrupt TB transmission by: increasing access to accurate diagnosis and effective treatment by accelerating DOTS implementation to achieve the global targets for TB control; and increasing the availability, affordability and quality of anti-TB drugs.
2. Derive strategies to address the challenges posed by emerging threats by adapting DOTS to prevent and manage multi-drug resistant TB (MDR-TB), and to reduce the impact of HIV-related TB.
3. Accelerate the elimination of TB, by: promoting research and development for new TB diagnostic tests, drugs and vaccines; and promoting adoption of new and improved tools by ensuring appropriate use, access and affordability.

An important milestone at a global plan was the “After Beijing” concensus on control of drug resistance TB. This high level Ministerial concensus identified 10 efforts to resolve the bottlenecks as the following:

1. Forecasting the control of MDR-TB epidemic
2. Addressing the gaps in TB control
3. Providing M/XDR-TB management and care
4. Addressing limitations in the health workforce
5. Responding to the bottlenecks in laboratory
6. Ensuring access to quality-assured anti-TB medicines
7. Restricting the availability of anti-TB medicines
8. Prioritizing TB infection control
9. Maximizing research opportunities to address M/XDR-TB
10. Financing M/XDR-TB control and care

The Global Plan 2011-2015 is a revised and updated version of the Global Plan 2006-2015. This plan further illuminates the way forward to 2015 by taking into account progress in TB control since 2006; policy and cost for antiretroviral treatment; progress on MDR-TB, updates of TB epidemiology; the importance of urgently giving a higher profile to laboratory strengthening; and the need to address the full spectrum of TB research, from biomedical to operational research. The Global Plan 2011-2015 outlines a clearer blueprint for action in order to achieve the targets by 2015 as stated in the MDG and the Stop TB Partnership. The first part of the Global Plan 2011-2015 describes concerted efforts to transform TB control through enlarged intervention on TB diagnosis and treatment and implementation of new approaches and technology (particularly, technology on TB diagnosis). In the second part of the document, actions and tools for diagnostic, new drugs and vaccine for TB prevention, diagnosis and treatment are fully presented as the basis for the elimination of TB in the coming decades.

1.2.2. Regional strategic plan in South East Asia

South East Asian Region has the highest burden of TB with one in every three cases of TB in the world originated from this region. The region also covers five of 22 high burden countries contributing to 35% of all TB cases globally. Progress in this region is convincing: Treatment success rate has also already reached beyond the target of 85%. However, some challenges remain, such as diversified health care system unlinked to DOTS program, HIV-epidemic, low coverage of drug resistance surveillance.

The Regional Strategic Plan for TB Control 2006-2010 is consistent with the global targets under the MDGs in all Member Countries, describing priorities most relevant to the region based on regional achievements and challenges. The regional level has urged member countries to focus the work on the following strategic approaches:

1. Sustaining and enhancing the DOTS to reach all TB patients, improve case detection and treatment success
2. Establishing interventions to address TB/HIV and MDR-TB
3. Forging partnerships to ensure equitable access to an essential standard of care to all TB patients, and
4. Contributing to health systems strengthening

In general, the rate of multidrug resistance TB in the region is still below 3%, however, considering the large numbers of TB patients in the SEA Region, it is an important information to prevent the rise of drug resistant TB. Therefore, progress of TB control in this region will affect the overall global progress in TB control.

BAB II

SITUATION ANALYSIS

2.1. National development achievements and challenges

The successes of national development over the last five years were reflected in several important indicators. The Human Development Report (HDR) 2009 revealed that the Indonesian Human Development Index (HDI) has increased from 0.711 in 2004 to 0.734 in 2007 (UNDP, 2009). However, HDI improvement did not lead to higher rank for Indonesia. In 2009, Indonesia was still ranked 111 out of 182 countries. The national income per capita has been growing from USD 1.186 in 2004 to USD 2.271 in the end of 2008 (Bappenas, 2010), which moved Indonesia to become part of the lower middle income countries group. Accelerating economic growth has further contributed to the declined in poverty level.

Based on the poverty line, poverty level has declined from 16.7% (36.1 million people) in 2004 to 14.1% (or 32.5 million people) in March 2009 (Bappenas, 2010). However, we can not rest content with merely applying the poverty indicator based on the national poverty line, which cover population of daily income under 1 USD. Some countries have established a national poverty line of daily income under 2 USD. Using higher poverty line, about 49% of population is still living with daily income under 2 USD per day in the year 2007 (UNDP, 2007). This fact shows that there is a high proportion of people who live near to the poverty line or close to the vulnerable group. These people are highly susceptible to any changes in their economic situation, i.e. catastrophic disease, that will pull them down into poverty with an average income of less than 1 USD per day. Therefore, the biggest challenge for Indonesia is how to reduce the number of poor people by referring to the average number of people with daily income of less than 2 USD per capita.

2.2. Achievements and challenges of the national health development

Health and nutritional status of a population are generally expressed in life expectancy, maternal mortality rate (MMR), infant mortality rate (IMR), and the prevalence of malnutrition among under five children which has shown improvement over the last few years (Bappenas 2010). Maternal health is indicated by a significant decrease of maternal mortality ratio in the last few years. However, to pursue the MDGs target to 102 maternal mortality ratio per 100,000 live birth by 2015, Indonesia still needs to pursue continued efforts to achieve it. Low access and quality of maternal health services remains the main cause of high maternal mortality, as shown by low proportion of deliveries assisted by skilled birth attendants. A high disparity in the proportion of deliveries assisted by skilled birth attendants was evident between provinces, with the highest proportion in Jakarta (amounting to 97.6%) and the lowest in North Maluku (38.0% per year) (Balitbangkes, 2007).

Child health indicators are marked by infant mortality rate (IMR), under five mortality rate, and neonatal mortality rate (age 0-28 days) which all show a decline in the progress rate. The Demographic and Health Surveillance data revealed a decline of IMR from 35 to 34 per 1000 live birth in 2007. However, this rate is still much higher than the MDGs target of infant mortality rate, which is 23 per 1,000 live births. Infectious disease remains an important part of public health problems, in addition to the increasing trend of non-infectious diseases. Several infectious diseases which still become public health problems are tuberculosis, dengue, diarrhea, malaria, and HIV/AIDS. Zoonotic diseases, such as Avian Influenza and the new influenza type A (H1N1 virus), are also emerging and potential to cause new pandemics in the country.

2.3. The Health System

Nationally, the number of healthcare facilities is continuously increasing, however, the accessibility to healthcare in the poor, remote and borderline areas and islands, especially among the poor population, is still limited. In 2007, the ratio of health center (Pusat Kesehatan Masyarakat or Puskesmas) to population is 3.6 per 100,000 population. The number of satellite health centers (Puskesmas Pembantu) and mobile health centers (Puskesmas Keliling) are increasing. Public access to reach basic health care facilities is reasonable with 94% of the people having good access to health care facilities within less than 5 kilometers (Riskesdas, 2007). In spite of good community access to healthcare facilities such as Puskesmas and its networks, quality of healthcare services still needs improvement, especially for preventive and promotive healthcare. In the remote areas of Eastern Indonesia, however, many people still faces barriers to access healthcare facilities, due to distance and time to reach the facilities. This problem is exacerbated by road condition, limited mode of transportations and limited availability of electricity. Ensuring adequate staffing in health care facilities in those areas remains a problem

The number of general hospital (RSU) has been increased from 625 (2004) to 667 (2007) and from 621 to 652 for public and private hospitals, respectively. In 2007, the ratio of hospital bed to population was 63.3 beds per 100,000 population (Profil Kesehatan, 2007). This ratio was still below the national target in 2009, which was 75 hospital beds per 100,000 population. Despite the increase in healthcare utilization, referral system is still not optimum.

The number, types and quality of healthcare workers are improving, but they are not equally distributed. The ratio of health workers per 100,000 population for medical doctor, specialist, nurse and midwives from 2004 to 2008 have increased. Compared to other countries in the South-East Asia region, the number and ratio of medical doctors per 100,000 population in Indonesia is relatively low. Their distribution is concentrated in Java-Bali islands. The gaps in number and ratio are even wider when comparing between urban and rural areas.

Availability and distribution of drugs and medical logistics improve, although accessibility, quality and drug utilization, as well as food and drug supervision are not optimum yet. Availability of essential drugs at the health center level is above 80%. Currently, there are more than 16,000 drugs registered and more than 400 types of drugs listed in the National Essential Drugs List (DOEN) of which, 220 are generics (Bappenas, 2010). In addition, Indonesia now has the capacity to supply vaccines for both domestic and export markets.

The health information management system has not achieved its optimum implementation (Bappenas, 2010). Data and information flow on epidemiological surveillance from the local to central governments and vice versa, are often interrupted since the implementation of decentralization. Lack of information will affect the planning process. Consequently, data are more available through surveys which often are not yet in line with the needs of and timing for program planning and evaluation.

Community involvement in health sectors are manifested in the form of health promotion activities and community based health unit, e.g. Integrated Health Post (Pos Pelayanan Terpadu/Posyandu) and Village Health Post (Pos Kesehatan Desa/Poskesdes), which are intended to empower individual, family, and community to provide basic health care. In 2006, the number of registered Posyandy was 270,000. Posyandu has a crucial role within the health system, particularly in the provision of immunization, nutrition, maternal and child health care, family planning, diarrhea control, and health promotion. Integration of Posyandu activities with other community-based activities, e.g. Pendidikan Anak Usia Dini (PAUD), Bina Keluarga Balita (BKB), and Tempat Penitipan Anak (TPA) need to be improved. In 2008, there were more than 43,000 Poskesdes as a part of the infrastructure of Desa Siaga (Alert Village).

Indonesia has built a strong foundation in the legal aspect toward Universal Coverage (World Bank, 2009). In year 2004 (Law on the National Social Insurance System or SJSN, 2004) the government made a commitment to provide a health insurance system to cover the total population of Indonesia through a mandatory national health insurance system. Funded through government budget, Indonesia has decided to cover 76.4 million population of the poor and nearly poor. However, half of the population is still uninsured, and the fiscal impact of this program has not been thoroughly analyzed. In addition, if significant weaknesses in the efficiency and equity of the current health system are not taken seriously, these may increase the cost and effectiveness of University Coverage policy, hence, improvement of the health status and the expected financial protection.

2.4. TB situation in Indonesia

2.4.1. Epidemiology

Indonesia is ranked fifth among the highest TB burden countries in the world. The estimated prevalence of all types of TB cases is 660,000(WHO, 2010) and the estimated incidence is 430,000 new cases per year. The estimated number of deaths due to TB is 61,000 deaths per year.

Among the Asia countries, Indonesia has the highest increase of number of HIV epidemic. The HIV epidemics is concentrated, except in Papua where the HIV prevalence has reached 2.5% (generalized epidemic). The national estimation of HIV prevalence among adult population was 0.2%. A total of 12 provinces have been declared as priority provinces for HIV intervention. It is estimated that there are 190,000 to 400,000 people living with HIV in the whole country. The estimated HIV prevalence among new TB cases is 2.8%. The estimated number of MDR-TB cases among new TB cases in Indonesia was 2%, which was lower than the regional estimate (4%) and 20% among retreatment cases. Every year, the estimated number of MDR-TB cases is 6,300.

Despite having the highest burden of TB cases, Indonesia was the first country among the high burden countries (HBC) in the WHO South-East Asian region which successfully reached the global TB targets for case detection and treatment success in 2006. In 2009, 294,732 TB cases were notified and treated (data as per May, 2010) and more than 169,213 cases were smear positive. Therefore, Case Notification Rate for smear positive TB was 73/100,000 (Case Detection Rate 73%). The averaged treatment success rate over the last four years was 90% and for the 2008 cohort, the treatment success rate was 91%. The achievement of this global target is a milestone in the national TB control program.

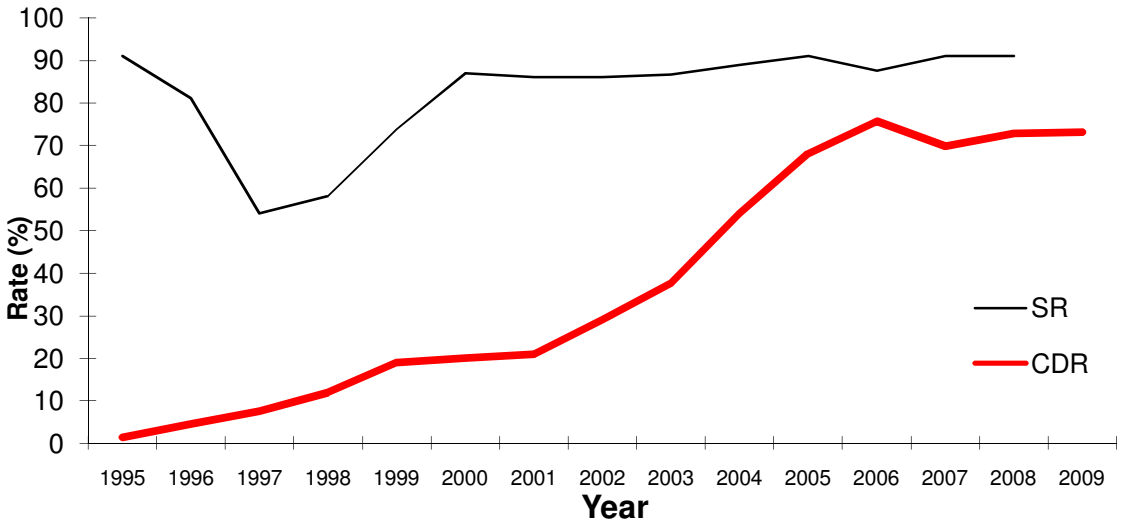

Figure 1. Achievement of the National TB Program, 1995-2009

Although the implementation of TB control program at the national level shows positive progress in case detection and treatment success, its achievement at the provincial level illustrates disparity among the regions (Table 2). Twenty eight provinces in Indonesia have not achieved 70% CDR and only 5 provinces are able to meet the targets of 70% CDR and 85% treatment success.

Table 3. Achievement of targets in TB control program by province in 2009

	Case Detection Rate ≥70%	Case Detection Rate < 70%
Success Rate ≥85%	West Java, North Sumatra, Maluku, DKI Jakarta, Banten (5)	Bali, West Sulawei, Bangka Belitung, West Sumatra, Central Kalimantan, East Java, South Sulawesi, Central Java, Lampung, West Nusa Tenggara, Jambi, Nangroe Aceh Darussalam, South Kalimantan, South Sumatra, North Sulawesi, Riau island, North Sumatra, Gorontalo, Bengkulu, West Kalimantan, East Nusa Tenggara, East Kalimantan, South-east Sulawesi (23)
Success Rate < 85%	None	West Papua, Papua, Yogyakarta Special Province, North Maluku, Riau (5)

The proportion of relapse and treatment failed was still below 2%, indicating that in general, the rate of TB drug resistance among patients treated at healthcare facilities is still low. However, these data were derived from Puskesmas, which has been implementing DOTS strategy accordingly over the last 15 years. The problem of drug resistance is probably higher in the hospital and private sectors which have not been fully engaged in TB control program. As a result, non-compliance to the DOTS strategy and high proportion of treatment drop out is higher than in Puskesmas. The national TB program surveillance system has not yet been able to capture data from private providers and hospitals at a national scale. Only 30% of hospitals implemented DOTS strategy and reported TB data on a routine basis.. The roportion of smear negative TB cases were slightly increase from 56% in 2008 to 59% in 2009, probably due to increase number of cases reported from hospitals involved in the national TB program.

Number of childhood TB cases in 2009 was 30,806, including 1,865 smear positive TB cases. Proportion of childhood TB among all TB cases was 10.45%. However, these figures were only partially representing the true burden of TB cases, due to overdiagnosis of childhood TB in health facilities and underreporting of cases to the national TB program.

2.4.2. Knowledge, Attitude and Practice

Findings from the knowledge, attitude and practice (KAP) as part of TB prevalence survey in 2004 showed that 96% of families were willing to take care of their family members who contracted TB and only 13% tried to hide the presence of TB disease in the family. Even though 76% of families surveyed have ever heard of TB disease before, only 85% of these knew that TB can be cured, and only 26% recognized two main signs and symptoms of TB. TB transmission known by 51% of families and only 19% knew that the drugs were available for free. TB related stigma is still present in the community. A study on TB patient pathways identified several community perspectives on non-infectious causes of TB, e.g. smoking, alcohol consumption, stress, tired, fried food, sleeping on the floor, and late night sleeping (Rintiswati *et al.,* 2009). Improving community knowledge and perception on TB, TB campaign to specific communities, and developing counseling materials that incorporated local believes are, therefore, of high priority.

The KAP survey in 2004 also revealed that 66% of families would choose health center as their first choice when they have TB symptoms, followed by private practitioners (49%), public hospitals (42%), private hospitals (14%) and private midwives or private nurses (11%). In urban areas, majority of respondents would choose private practitioners, followed by public and private hospitals, and the rests would use self-treatment. While those who live in rural areas would prefer to go to health centers,

midwives/nurses and traditional healer. Analysis on health seeking behaviour among respondents with a history of TB treatment showed that hospital, health center and private practitioners were their first choice for diagnosis. These preferences vary among the regions. Health center is the main health facilities selected for TB diagnosis in Eastern Indonesia, while for the other two regions, hospitals were their first choice. Delayed for TB diagnosis and treatment due to difficulty to access DOTS facilities is still the main challenge in Indonesia, a country with wide geographical area and variation.

2.5. The National TB Control

2.5.1. History of the National TB control

Initiatives for TB control in Indonesia can be traced back to the pre-independence period. Four important milestones in TB control in Indonesia that marked the implementation and achievement of TB control program are described below:

Table 4. Four milestones in the history of TB control program in Indonesia

Year	Milestones
Pre 1995	Pre-independence: TB control conducted by private sectors for a limited, specific community
	1969: Initiation of the National TB Program
	1987: Long-term chemotherapy for 1-2 years
	1992: Pilot project on DOTS strategy
1995	DOTS strategy was adopted as the national control strategy, with phased implementation
1995-1999	Phased DOTS expansion to all health centres
1999	National Integrated Movement on TB was established, and the policy of DOTS strategy to be implemented in all health care facilities
2000-2005	Quality DOTS strategy was intensified
2006-2010	DOTS strategy was consolidated and new innovations within DOTS strategy were implemented

Pre-DOTS phase (pre-1995)

Pre-DOTS phase was started at early 20 century and marked by development of TB diagnostic facilities and sanatorium in big cities. Supported by the Dutch government, TB diagnostic was conducted with chest X-ray and followed by hospitalization for treatment. The first TB prevalence survey was conducted in 1964 in Malang and Yogyakarta city, which was then followed by initiation of national program for TB control in 1969 through implementation of the national TB guidelines. From 1972 to 1995, TB treatment was no longer hospital based, but focusing on TB diagnosis and treatment in primary health care, i.e. Puskesmas. Conventional TB treatment (2HSZ/10H2S2) was then replaced gradually with two treatment regiment and active case finding. In 1993, the Royal Netherlands Association (KNCV) conducted pilot implementation of the DOTS strategy in four districts in Sulawesi. In collaboration with WHO and KNCV, NTP scaled up gradually to two other provinces, i.e. Jambi and East Java.

Preparation and implementation of DOTS strategy (1995-2000)

Successful pilot implementation of DOTS strategy in three provinces lead to formal recognition of DOTS strategy by the Ministry of Health to be scale-up nationally in 1995. In 1995-2000, the national guideline for TB control applying DOTS strategy was implemented in Puskesmas which serves as primary health care facilities. As commonly faced in the implementation of a new program, many challenges were found during implementation of these five DOTS strategies. In order to boost coverage of DOTS strategy and better achievement, two Joint External Monitoring Missions were conducted by international experts.

Expansion and intensification of DOTS strategy (2000-2005)

The national strategic plan for TB control was published in this period as a guideline tool for planning and implementation of TB control program in provinces and districts. Main achievements of the National TB Control Program during this period were: (1) Development of 2002-2006 strategic plan; (2) Capacity strengthening for manager and additional human resources at central and provincial levels; (3) Continues and step-wise training as part of human resource development; (4) Funding from donors and partners (the Netherlands government, TBCTA-CIDA, USAID, GDF, ISAC, GFATM, KNCV, UAB, Fidelis, etc.); (5) Planning and budgeting training at local level; (6) Enhancement of supervision and monitoring from national and provincial level; and (7) Involvement of lung clinics and public and private hospitals in the DOTS strategy implementation through Hospital DOTS Linkage pilot in Yogyakarta.

Consolidation of DOTS strategy and implementation of innovation (2006-2010)

This phase was marked with the success of TB control program to achieve global targets for Case Detection Rate (CDR) and Cure Rate (CR) in 2006. New challenges also arose at this phase.

The challenges are TB-HIV co-infection, resistance to TB drugs, various health care facilities providing TB care, and infection control in health facilities. New partners in TB control were also recognized in this phase, e.g. Directorate General of Medical Service in the Ministry of Health, Indonesian Medical Doctors Association, Ministry of Law and Human Rights. Despite temporary cessation of funding from the GFATM Round 1 dan Round 5, TB services were not interrupted due to mobilization of funding from central and local government as well as other international sources, such as USAID and WHO.

In addition to successful achievement of the global targets, Indonesia also showed new improvements in tackling new challenges in TB control program, such as:

(1) Involvement of key stakeholders, notably community based NGOs, e.g. Muhammadiyah, NU, etc.; Directorate General of Medical Service in the Ministry of Health; professional organizations under the Indonesian Medical Doctor Association; Ministry of Law and Human Rights, and others;
(2) Significant increase of number of hospitals implementing DOTS strategy and case notification from hospitals;
(3) Development of five quality assured laboratories for culture and DST which is certified by international laboratory;
(4) Drug resistance surveillance and tuberculin surveys in three areas;
(5) Pilot study for DST rapid test (using Hain test);
(6) Policy and guideline development for TB-HIV and implementation of TB-HIV collaboration;
(7) Policy, prevention and infection control guideline for TB and its implementation;
(8) Ensure adequate resources to close the financial gap for TB control through domestic sources and donor support; and
(9) Involvement of organizations to support TB patients (Pamali).

2.5.2. Organization of the National TB Control Program

Administrative management of TB control in Indonesia is currently under three different Directorate Generals in the Ministry of Health: Medical Service, Community Health, and Center for Disease Control. TB Sub-directorate is under the Directorate General of Disease Control, while Puskesmas (Health center) is under the Directorate General of Community Health and hospital is under the Directorate General of Medical Service. Health centers and hospitals are practically out of reach from the TB sub-directorate and the majority of hospitals have not yet adopted DOTS strategy. TB services are also conducted in private providers, prisons, military service and companies. Therefore, partnership between Directorate Generals and effective coordination by TB sub-directorate are needed to ensure integrated management of TB control. In 2010, restructurization within the Ministry of Health to integrate the Directorate of Medical Service and the Community Health was in progress.

Health services at district level are designated as the backbone for TB control. Each district is supported by primary health care facilities (microscopic centers, satellite health centers, and independent health centers). Currently, Indonesia has 1,649 microscopic health centers, 4,140 satellite health centers, and 1,632 independent health centers. Other health facilities such as hospitals, prison, and clinics, are also implementing DOTS strategy. A total of 5,735 health center doctors, 7,019 TB workers, and 4,065 laboratory technicians have been trained on DOTS strategy. At the district level, the Head of District Health Office is responsible for implementing health programs, including planning, budgeting and service monitoring. Under the district level CDC, a wasor (TB supervisor) is responsible for the program monitoring and supervision, treatment register, and drug availability. Health facilities are responsible for the diagnosis, treatment and treatment monitoring, supported by family member as treatment observer. At the provincial level, a core DOTS team consisting of Provincial Project Officer (PPO) and Health Office staff is established, especially in high burden provinces. In provinces with large geographical area and substantial number of health care facilities, a district cluster system has started to be developed with a primary aim to improve quality implementation of DOTS strategy in hospitals. To some extent, prisons, jail, and work places have also been linked to TB control program networking at the district level and health centers.

Findings from the TB prevalence survey in 2004 highlighted the facts that TB patients sought care in health facilities other than health centers, such as in hospital, lung clinics, and private practitioners. Pilot study, implementation and acceleration of DOTS strategy in these facilities as part of the Public-Private Mix initiatives has been started in 1999-2000. In 2007, all lung clinics, and nearly 30% of hospitals have implemented DOTS strategy. Less well-developed was the implementation of DOTS strategy in private sectors, although a model of private practice involvement in DOTS strategy has been piloted in Palembang in year 2002 and in Yogyakarta and Bali in year 2004-2005.

Table 5. Number of health care facilities implementing DOTS strategy*

Type of health care facilities	Total number of facilities	% of DOTS facilities
Health center	7352	7200 (98%)
Chest Clinic	26	26 (100%)
Lung Hospital	9	9 (100%)
Hospital	1645	
• Public Hospital	563	
• Parastatal Hospital	78	30%
• Military-Police Hospital	147	
• Private Hospital	848	
Private Practitioner	55000	Data not available

* Provincial data in TB national monitoring and evaluation meeting, 2010

To foster acceleration of hospital involvement in DOTS, 750 out of 1,645 hospitals has been trained in DOTS strategy with funding from Global Fund Round 1, Round 5 and USAID. With funding from TBCAP-USAID through KNCV, several provinces were supported by Technical Officers who specifically deal with DOTS expansion in hospital. Coordination at central level with the Directorate General of Medical Service has significantly intensified. Two guidelines have been developed, namely the Managerial Guideline for TB service provision with DOTS strategy in hospital and Guideline for TB diagnosis and treatment in hospital. In addition, the Directorate General of Medical Service has conducted assessment to several DOTS hospitals. Efforts to integrate implementation of DOTS strategy into the current hospital accreditation system is underway.

2.5.3. Partnership

TB partners are every person or group who has awareness, willingness, ability and high commitment to support and contribute toward TB control in their own capacity and potentials. These potentials are further optimized for successful implementation of TB control. Every partner shares the same understanding of the purpose of partnership, i.e. successful acceleration of TB control in an effective, efficient and continuous manner.

Gerdunas (*Gerakan Terpadu National* or National Integrated Movement) is a cross-sector movement formed in 1999 at central and local government level in order to promote acceleration of TB control measures through an integrated approach, involving hospitals, private sectors, academia, NGOs, funding agencies, and other stakeholders. Following the high level meetings held during 2002, Gerdunas provincial chapters were established in nearly all provinces, despite various commitment. The function of partnership can be grouped into three categories: (1) planning and stewardship; (2) financing, resource allocation and use; and (3) service provision. The following table describes potential TB partners at the national level that may be referred to in the identification of partners when situation and condition permits.

Table 6. Illustration of TB partners according to function of stakeholders (as per 2010)

Fungsi Kemitraan	Mitra
1. Policy, Planning, Stewardship, Structure	
TB technical assistance	WHO, KNCV
Drug management and procurement	MSH
DOTS strategy implementation in hospitals	Directorate General of Medical Service of MOH, Indonesian Medical Association
Data Analysis	Center for Research Development of MOH, UI, UGM, local academic institutions, research institutions
Advocacy and Communication	Coalition for Healthy Indonesia
2. Financing and resource allocation	
External Funding	GFATM, USAID /TBCTA , JICA
3. Service provision	
Healthcare provider associations (Professional association)	PERSO, ARSADA, ARSI, IRSPI, IDI, IBI, IDAI, PAPDI, PDPI, PPNI, PPPKMI, IAKMI and others
Government sectors	Ministry of Health, Ministry of Law and Human Rights, Police of Republic of Indonesia, Army, Ministry of Social Welfare, Ministry of Communication and Information, Ministry of Workforce and Transmigration and others.
Community-based TB services	PPTI, Aisyiyah, CARE, Hope Worldwide Indonesia, LKC, Muhammadiyah, NU, PKPU, PELKESI, PERDHAKI, PKK, World Vision Indonesia, Pamali, LPMI
Business/companies	PT Kaltim Prima Coal, PT Freeport and others
TB-HIV collaboration	FHI, Spiritia, other HIV/AIDS NGOs
Social support network	Spiritual leaders, cultural leaders, community leaders, political leaders and others.

2.5.4. Finance and regulation for TB control

Government commitment in allocating financial resources for health gradually increased every year. In 2009, total government budget for operational of TB control program was 145 billion rupiahs, increased by 7.1% compare to the previous financial year, which was 135 billion rupiahs. Despite the increase, the government only contributed 23.4% of the total national budget (621.5 billion rupiah) required for TB control. International funding was used to meet the financial gap, which reaches up to 269.36 billion rupiahs in 2009 or a 45% increased from the previous year.

Budget escalation for TB control program in Indonesia was triggered by a strong motivation to accelerate the achievement of Millennium Development Goals. Despite large amount of funding obtained from the central and local government as well as support from international funding, the funding gap remains, i.e. 31% definiciency in the total budget for TB control. This proportion was lower than the figure in 2009 which was 39%.

A focus financial strategy is needed to close the financial gap by increasing budget contributions from the local and central government. Up to date, local (province and district/municipality) government commitment to fund TB control program is still low, approximately 45% to 49% of total budget from the central government. The fiscal space for improving budget for TB control program allocated from the local government is still feasible. Therefore, local government commitment needs to be continously improved in this decentralized system.

Endorsement of resource allocation policy becomes another important factor to promote continuous allocation of health budget for TB control program. Through accurate budget allocation and local economic growth of 6-7% (National Statistic Bureau) it is expected that the current gap in the health budget for TB control program would decrease from 31% in 2010 to 13-15% in 2014, by strengthening local capacity and local commitment to achieve target indicators of MDGs in 2015.

Laws and regulations relevant for the national TB control are the following: Law no 36/2009 on Health, Law no 44/2009 on Hospital, Law no 29/2004 on Medical Practice, Law no 4/1984 on Disease outbreak management, Ministerial regulatioin (Permenkes) no 741/Menkes/PER/VII/2008 on minimum service standards for health at district level, and Regulation no 24 Kepmenkes RI no 228/2002 on developing minimum service standards in hospitals. The medical practice law specifically states the mandatory requirement of all medical practitioners to provide care according to service standards. Therefore, implementation of this law will benefit the TB control program, particularly related to DOTS expansion to private practitioners and endorsement of the ISTC. In year 2007, several professional organizations under the Indonesian Medical Association have formally endorsed ISTC as the standard of TB services. Law no 4/1984 gives mandatory requirements for all public and private health care facilities to notify priority communicable diseases to the respective authority, in this case the District Health Office.

In addition to existing laws, TB indicators are also mentioned both in the district minimal service standard which is mandatory for the local governments and in the minimal service standard mandatory for hospitals. Unfortunately, the regulatory capacity of local government still varies, due to implementation of decentralization policy. Progress in implementing regulations is slow and targets sets for meeting the proposed "minimum service standards" have not been monitored at local level nor at the health care facilities, including hospitals.

2.5.5. TB control program management

Successful expansion of DOTS strategy requries strong managerial supports. Decentralization in health care has negatively affected human resources capacity and development of TB control program. Although 98% of TB staff at health centers and 24% of TB staff in hospitals have been trained, high turn over of staff due to among other things, to decentralization policy in health results in a limited avaialbility of trained staff.

In addition to the ongoing need for basic DOTS strategy training, new challenges faced by the National TB Program has increased the demand for continuous training on more specific topics, such as management of MDR-TB, PAL, TB infection control, etc. The demand for training on DOTS strategy remains high due to expansion and various types of health facilities designated for DOTS, coupled with ongoing innovations in DOTS strategy in diagnostic tools and equipments, electronic TB recording and reporting, ACSM, and logistic management. Furthermore, shortage of staff at health facilities, high staff rotation resulting in lack of continuity between trainings are influencing the high needs for TB training. As a consequence, additional facilitators with specific skills and expertise are needed.

Other than off-the-job training, performance of human resources can also be improved through on the job training and supervision. Supervision is an integral part in every program. Yet it is rarely carried out effectively in order to identify and solve problems, follow up on newly trained staff, and to provide ongoing support and mentoring to staff. Implementation of supervision in TB control program still focuses on data collection.

Monitoring and evaluation are conducted through routine supervision (on the job training) and quarterly meeting at every level. However, when resources are decreasing (lack of staff, logistic and funds), often supervision is no longer practiced routinely. TB control program nowadays becomes more complex, particularly with the implementation of new strategies and involvement of various sectors. Plans to develop an electronic information system and geographical information system are underway for better planning and management of TB patients in the future. In addition to routine evaluation of progress in TB control, quarterly monitoring evaluation meeting is also conducted at health center level, particularly at microscopic health centers and satellite health centers, to improve laboratory quality, data validation and optimize TB networks.

The National TB Control Program currently used Fixed Drug Combination (FDC) and a small proportion of individual package (CombiPak) for patients who experience drug side effects. Availability of first line drugs for TB is one of the five components of DOTS whereby the government is responsible to provide adequate supply and buffer-stock to meet the needs in Indonesia. To date, only 13 out of 32 provinces have direct access to FDC distribution from the central government. At the local level, integration of TB drugs procurement system with basic drug service is already initiated. Local drug warehouse now includes TB drugs from the National TB Program in their routine distribution channel of essential drugs to health centers with quarterly LPLPS reporting system.

Recording and reporting system in the National TB Program follows the WHO international guideline with TB03 as the main register managed by district/municipality wasor (TB supervisor). Although accurate reporting from periphery to the central unit has been maintained and continuously improved over the years, several problems in recording and reporting have been recently identified. These are problems associated with timely reporting, data completeness, data accuracy (such as double registration, not following the procedure), and data seggregation according to types of health facilities. Other problems are also identified, such as non-standardized format of TB12 and TB13, weak surveillance of TB-HIV and paediatric TB, including weak surveillance in hospitals and other sectors. Data analysis and use of information on program indicators remain low in several areas. Various efforts to improve the system have been piloted, such as revision of electronic TB recording and reporting, web-based TB information system and software development. However, these innovations require considerable investment in terms of time, efforts and cost.

Quarterly monitoring and evaluation meetings in all provinces and districts also contribute in the improvement of data management, use and program performance monitoring.

2.5.6. TB Operational Research

One of the major achievements within the 2006-2010 period is the increasing number of TB operational research (OR) activities through establishment of TB Operational Research Group (TORG), dissemination of findings from TB OR to various stakeholders, intensive training and workshop on TB OR for proposal development and report writing, as well as scientific review for TB OR proposals. Up to date, several operational research activities have been conducted, and the research findings were disseminated in various forum and media, including publication at international journals. The findings were fedback to the national TB program through TB research parade which was attended by TB staff from various level and stakeholders. The main challenges for TB operational research are to construct a priority agenda for TB operational research and to promote strategic utilization of evidences for policy development and decision making process within the national TB control program.

BAB III

STRATEGIC ISSUES

3.1. Coverage and quality of DOTS

3.1.1. Laboratory networks

Over the last decade, diagnostic capacity of National TB Program in Indonesia has been improved considerably. However, ensuring quality of diagnostic services is still a challenge. Implementation of external quality assurance (EQA) is still weak and not all laboratories follow the routine cross-check due to limited capacity of the Provincial Health Laboratory (Balai Laboratorium kesehatan or BLK) in supervision, giving timely feedback from the cross-check results and absence of reference laboratory in seven new provinces. Plan for laboratory strengthening has already been developed and this will serve as a guidance for TB Sub-Directorate and BPPM. National and provincial referral laboratories need to be formally appointed and lines of authorities be clarified, in parallel with continued efforts in reducing gap in quantity and quality of human resources.

3.1.2. Drug Logistics

Overall, the drug logistic system has not shown optimum performance in ensuring continuous anti-TB drugs availability in health care facilities. The national data on stock out of category 1 anti-TB drugs show unstable supply in particular months. Hence, a similar situation of inadequate buffer stock was found based on the situation of drug supply in the beginning of year 2010.

For secondline TB drugs, effort to obtain approval from GLC (Green Light Committee) is in progress. Thus dedicated health care facilities for treatment of MDR-TB cases should be prepared immediately. Continuous improvement of TB drug management at provincial and district levels need to be continuously maintained to prevent drug stock out in the future.

3.2. Addressing TB/HIV, DR-TB, childhood TB and other vulnerable groups

3.2.1. TB-HIV

In general, TB-HIV coordination needs strengthening. Coverage of integrated TB-HIV services in health facilities providing TB or HIV/AIDS care are still low. Most ART hospitals were not linked to the national TB control program. TB screening among people with HIV/AIDS (Orang Dengan HIV AIDS or ODHA) has not been adopted as the routine practice.

Provision of Isoniazid Preventive Therapy is not part of the national TB-HIV policy yet. Coverage of TB-HIV collaboration in prison is currently limited. Additional challenges are poor knowledge, limited access to health promotion materials on TB/HIV as well as less empowered NGOs.

3.2.2. Drug Resistance TB

Efforts to face dual epidemic of TB/HIV requires increased collaboration, especially at the grass root level. In addition, intensive dissemination, advocacy, and improvement of access and human resource competencies are also needed. The threat of MDR-TB raises the need for regulating TB drugs and availability of second line drugs. Both efforts need to be supported with capacity building and professional organization involvement.

The urgency to bring access closer, especially for the poor and remote communities is another central issue. This effort needs to be supported with partnership, development of TB care-village health post, task delegation to village midwives/nurses to distribute TB drugs closer to the poor and vulnerable population, improve involvement of related sectors for the poor with definite tasks, and other related-sectors to reduce risk factors (e.g. Public Works and Agriculture Board). Likewise, improvement of quality TB care in prison requires special attention due to the threat of TB/HIV and MDR-TB.

3.2.3. Childhood TB

The burden of childhood TB illustrates current transmission of TB in the population. Childhood TB needs to receive special emphasis in TB control program. In general, the main challenge of childhood TB is overdiagnosis (despite the existence of underdiagnosis also), inappropriate case management, contact tracing not routinely carried out and underreporting of childhood TB. These challenges are also faced by DOTS hospitals or other health care facilities.

3.2.4. The poor and other vulnerable groups

Limited access to quality DOTS services remains a major problem among the poor, urban slums, prisoners, those who live in remote, border areas and islands and specifically the population in Eastern Indonesian. Poor people living in the cities face socio-economic problems to access DOTS service. Most prisons are not integrated to the national TB program, thus they do not have equal access to DOTS services yet. TB infection control is also not in place in those prisons. Epidemiologic data show that TB burden is higher in Eastern Indonesian, thus requiring special attentions to this area, particularly the remote areas. Papua needs special approaches due to widespread of HIV/AIDS epidemic. In addition, the gap in quality and quantity of human resources in this province is large, and thus it requires extra investments to meet the needs. Other challenges are high number drop out cases due to limited access, high cost of transportation and opportunity cost.

3.3. Compliance of public and private care providers to ISTC

Despite remarkable progress in the National TB control program, TB case management in hospitals and private practices were not yet in line with DOTS strategy and ISTC. ISTC contains statements of standards that can be applied internationally by all public or private providers. ISTC as clinical guidelines supports quality improvement and high quality care for TB patients treated with DOTS strategy.

High drop out rates in hospitals and private practices indicate problems in TB treatment. Findings from hospital assessment in implementation of DOTS strategy carried out by UGM, the Directorate General of Medical Serice and JEMM have identified important barriers in HDL expansion. The major challenges are variations in implementating DOTS strategy among hospitals involved, internal and external networks (including recording and reporting, monitoring and supervision from the local Heath Offices). Moreover, ISTC has not been applied as the standard for TB case management and the policy of local government doesnot provide financial support for TB patients who seek care in hospitals.

Current expansion of PPM creates the need to have a PPM working group or comprehensive DOTS team in every level (including district clusters) and province (such as involving professional organization, Specialistic Medical Service directorate, Ministry of Law and Human Rights). Effective dissemination and supervision is required to implement ISTC nationwide. Also, ISTC should be integrated in the medical curriculum for medical doctors, nurses and midwifes, and in accreditation/certification of health care facilities. Certified doctors and specialist doctors should be rewarded with a logo/brand of DOTS/ISTC as a signage, thus enable the patients to make an informed decision when selecting appropriate providers. A special TB wasor dedicated for engaging private practitioners and hospitals needs consideration. PPM implementation should be strengthened to include networking among private practitioners, health centers and hospitals with effective supervision in place. Improving the referral system between hospitals and health care facilities as well as involvement of private laboratories in the EQA are all important for successful PPM implementation.

3.4. The role of TB patients and communities

Community empowerment and partnership with NGOs have long been initiated in Indonesia, although the formal partnership between central government and NGOs was only established in 2002, followed by CCM (Country Coordinating Mechanisms) in 2003. Despite the existence of Gerdunas and CCM, coordination and collaboration between government and NGOs at the local level is still limited. Knowledge about TB and TB treatment is generally poor, and stronger interventions are needed for effective counselling and patient education to empower TB patients. Informing the rights and obligations of TB patients as stated in TB patient charter should also be provided to TB patients and communities. Facilitation and social economic empowerment for TB patients is part of the efforts to meet the needs. Communication, information and education interventions facilitate the the community empowerment program for TB control, such as through 'Desa Siaga'. All these efforts should be closely monitored and evaluated under a clear regulations to ensure their continuity. Recent discussions to revitalize Gerdunas or the establishment of a national committee for TB control illustrate the need to strengthen policy and managing partnerships in TB control.

3.5. The urgency of health system and program management strengthening

Strengthening health care facilities in general supported by competent human resources has been one of the key success factors in TB control. Training has been intensified, however the problem of staff rotation persists (10-20%). The national policy on human resources still restricts staff recruitments and development of structural positions. Low salary coupled with increasing workload as a consequence of new initiatives in TB control is inevitable. Therefore, increase of government commitment is critical as a pre-requisite for increased funding and other technical assistances.

The national TB program faced several managerial problems such as: (1) limited capacity in financial management to ensure effective and timely reporting from all provices and municipality/districts (covering 33 provinces and 462 districts/municipalities); (2) limited capacity to perform drug procurement, logistics management and monitoring evaluation; and (3) limited government capacity to implement regulatory functions relevant to mandatory reporting, drug availability and minimum service standards (*Standar Pelayanan Minimal* atau SPM).

3.6. Commitment of central and local government

In this decentralized health system, financing of TB control largely depends on funding allocation from central and local government. In general, local budget and expenditure (APBD) allocation for TB control is low due to large financial contribution from external sources and budget needs for other competing health programs. At present, funds for TB control program still relies on external funding, while drug procurement is funded through central government allocation. Decrease of funds in previous years lead to problems in drug stock-out. Low political commitment is a serious threat toward continuity of TB control program. Therefore, strengthening the capacity for advocacy to increase funding allocation from local-central government for TB control should be given a high priority.

3.7. Research, development and utilization of strategic information

The need to intensify research activities through partnership, training, and funding assistance is still present. Development and dissemination of research as part of strategic information system should result in strategic information used for decision making in TB control program.

Data recording and reporting for the purpose of surveillance, monitoring and evaluation from local up to central government has shown some improvement, despite present challenges regarding quality, timeliness and integration or reporting from many types of health care facilities. Thus, integration of TB surveillance with the national health information system remains to be established.

BAB IV

VISION, MISSION, AIM, TARGETS AND OBJECTIVES

4.1. Vision*

"TOWARD A FREE-TB, HEALTHY, JUST AND SELF-RELIANT SOCIETY."

4.2. Mission*

1. To enhance community empowerment, including civil societies and private sector, for TB control;
2. To ensure availability of comprehensive, equitable and quality TB care;
3. To ensure availability of TB control resources; and
4. To develop good TB control program management.

* The vision and mission of national TB control 2010-2014 is formulated according to the strategic plan of Ministry of Health 2010-2014.

4.3. Aim

To reduce TB death and prevalence in order to contribute to achieving the health development goal of improving the public health status.

4.4. Targets

The targets for TB control are set in reference to the strategic plan of the Ministry of Health 2009-2014, i.e. to reduce the prevalence of TB from 235 per 100,000 population to 224 per 100,000 population. The outcome indicators are to: (1) Increase case detection of smear positive TB from 73% to 90%; (2) Increase treatment success of new smear positive TB up to 88%; (3) Increase proportion of provinces with 70% CDR up to 50%; and (4) Increase proportion of provinces with 85% treatment success from 80% to 88%.

Table 7. TB control national strategy targets per year (2010-2014)

	Baseline	2010	2011	2012	2013	2014
TB prevalence (per 100.000)	228	217	207	197	188	180
Case detection rate (%)	73	73	75	80	85	90
Success rate (%)	91	88	88	88	88	88
Proportion of provinces with CDR ≥70%	15	15	25	35	45	50
Proportion of provinces with SR ≥85%	84	84	84	84	86	88

The above targets will be achieved through the following strategies:

1. Scaling-up and improving quality DOTS service
2. Addressing TB/HIV, MDR-TB, and the needs of poor and other vulnerable groups
3. Engaging all public and private providers in implementation of International Standards for TB Care.
4. Empowering TB patients and communities
5. Strengthening health system including HRD, and TB control program management
6. Increasing commitment of central and local government
7. Enhancing research, development and utilization of strategic information

4.5. Specific targets

4.5.1. Scaling-up and improving quality DOTS service

Indicator	2014 Target
Case notification rate (CNR)	85/100.000
Proportion of laboratories participating in external quality assurance (cross-check and panel testing) for smear microscopy examination	90%
Proportion of laboratories which pass external quality assurance (cross-check and panel testing) for smear microscopy examination	100%
Proportion of districts reporting no stock-out of first-line anti-TB drugs (category 1, category 2 and pediatric) on the last day of each quarter	85%

4.5.2. Addressing TB/HIV, MDR-TB, and the needs of poor and other vulnerable groups

Indicator	2014 Target
Proportion of childhood TB among all cases notified	5-10%
Proportion of prisons which implement routine TB screening to all new inmates	80%
Proportion of TB patients with HIV status recorded in facilities which provide TB-HIV care	100%
Proportion of PLWHA screened for TB among those who attended VCT	80%
Proportion of PLWHA whom received TB treatment among those who have been diagnosed with TB	100%
Proportion of HIV infected TB patients which have received CPT	100%
Proportion of MDR TB suspects whom DST has been performed	100%
Proportion of confirmed MDR TB patients whom received treatment	80%

4.5.3. Engaging all public and private providers in implementation of International Standards for TB Care.

Indicator	2014 Target
Number of village health posts which implement TB services	750 (45%)
Number of community based organizations which implement activities that support TB control	25%
Number of community based organizations which have DOTS facilities and report TB cases	80%
Proportion of new smear positive TB cases which have been referred by NGO cadres	<5%
Proportion of population with correct knowledge about TB (mode of transmission, symptoms, treatment and curability)	80

4.5.4. Empowering TB patients and communities

Indicator	2014 Target
Proportion of DOTS facilities which meets HR standards for TB control	250
Proportion of districts which meets HR standards for TB control	32
Proportion of provinces which meets HR standards for TB control	18
Proportion of health training institutions which incorporate TB control into the curriculum	3-5%
DOTS integrated into hospital accreditation scheme	70%
DOTS integrated into certification scheme for private practitioners	5%

4.5.5. Strengthening health system and TB control program management

Indicator	2014 Target
Proportion of DOTS facilities which meets HR standards for TB control	≥80%
Proportion of districts which meets HR standards for TB control	≥80%
Proportion of provinces which meets HR standards for TB control	≥80%
Proportion of pre-service health training institutions which incorporate TB control into the curriculum	100%
DOTS integrated into hospital accreditation scheme	Ya
DOTS integrated into certification scheme for private practitioners	Ya
Proportion of MDR-TB and TB-HIV facilities which implement TB IC	100%
Proportion of districts with staff trained in logistic management (including DMIS)	100%
Proportion of reporting unit at all levels which report case finding and treatment result in accordance to national guideline	100%

4.5.6. Increasing commitment of central and local government

Indicator	2014 Target
Proportion of central government contribution to national TB control budget need	30-50%
Proportion of local government contribution to national TB control budget need	5-10%
Proportion of local government contribution to local TB control budget need	15-30%
Proportion of private contribution to national TB control budget need	10-30%
Proportion of provinces which contribute at least 5% to local TB control budget need	80%
Proportion of districts which contribute at least 15% to local TB control budget need	80%

4.5.7. Improving research, development and utilization of strategic information

Indicator	2014 Target
Operations research studies completed and results disseminated through a national or global TB M&E System	25

BAB V

STRATEGY

This chapter formulates the national strategy in TB control program, consisting of general and functional strategies. The general strategy is the basic strategy for TB control program to adapt to the dynamic environment and continuous changes, while functional strategies strengthen the managerial functions in order to perform the general strategy and to achieve the targets.

TB control program in Indonesia has shown a remarkable progress in the last decade. In 2006, the case detection rate and treatment success has surpassed the global target. With 73% case detection rate and 90% treatment success rate, it is evident that the general strategy in TB control program is expansion, to further prevent MDR and treat MDR cases. If source of funding for TB remains available and the program is managed successfully, it is realistic to expect that by end of 2015 Indonesia will be able to achieve the MDGs target for TB.

The general strategy for TB control program in 2010-2014 is expansion. The aim is to consolidate programs and accelerate implementation of new initiatives in line with the WHO revised Stop TB Strategy, i.e. Toward Universal Access. Access to DOTS services must be available for all TB patients regardless of their socio-economic background, demographic characteristics, and clinical conditions. High quality DOTS for vulnerable groups, such as children, urban slum areas, women, the poor and uninsured, should receive higher priorities.

Seven strategies have been identified for the national TB control program in 2010-2014, comprising of four general strategies supported by three functional strategies. These strategies have been consistent with the previous national strategy, however, its their formulation and description have been developed in response to current challenges. The general strategies are:

1. Expand and improve quality DOTS service
2. Address TB/HIV, MDR-TB, pediatric TB, the needs of poor population and other vulnerable groups
3. Involve all public, community and private health providers in PPM-DOTS and ensure their compliance to *International Standards for TB Care*
4. Empower TB patients and affected communities

Implementation of the general strategies and achievement of their targets are supported by the functional strategies in order to strengthen managerial functions in TB control program. The functional strategies are:

5. Contribute to health system strengthening, including health workforce development, and strengthen TB control management
6. Strengthen policy and the central-local government commitment in TB control program
7. Promote research, development and utilization of strategic information

5.1. Expand and improve quality DOTS service

Expansion strategy in TB control program is carried out through quality DOTS service by implementing five basic components of DOTS strategy (i.e. political commitment, smear microscopy, uninterrupted drug supply, standardized treatment with direct observed treatment, and recording and reporting) in the best possible way. In addition to quality implementation of DOTS strategy, access to DOTS will also be expanded to cover all TB patients regardless of socio-economic, demographic, geographic and clinical conditions. Likewise, improved access to DOTS for the poor and vulnerable groups, such as children, women, urban slum, the poor and uninsured is given high priority.

Objective
Access to five components of DOTS strategy for all TB patients regardless of their characteristics is ensured and quality improvement for continuity of DOTS service is implemented.

Program interventions
The program will focus on strengthening quality implementation of five components of the DOTS strategy, with high priority given to early detection and quality diagnosis, effective logistics to ensure continuous availability of drugs, laboratory reagents and equipments, and standardized treatment with adequate patient supervision and support.

5.1.1. Ensure early detection and diagnosis through quality-assured bacteriology examination

Despite vast development in laboratory knowledge and technology for TB, early detection and quality diagnosis through smear microscopy examination remain to be the main diagnostic tools for TB. The activities are aimed to improve quality and performance of smear microscopy, culture, DST and other additional examinations to support successful implementation of national TB control program. In addition to laboratory strengthening for smear microscopy, culture and DST for *Mycobacterium Tuberculosis,* quality assurance in laboratory service is strengthened through implementation of safe laboratory practice for the staff, patients and environment; quality laboratory and availability of trained staff in laboratory service particularly for areas serving the poor and vulnerable groups (including children), unreached community; internal and external quality assurance for all laboratory facilities; and certified continuous quality improvement activities. Validation of new diagnostic tools will also be carried out in line with development of new diagnostic technology and scaling up of DST at the provincial level.

Besides strategies for improving availability, access to and quality of laboratory examination for diagnosing TB accurately, strategies to shorten delays from both health care and patient factors should also be in place. The interventions include:

- Increase the intensity of active case finding/screening to high risk groups (such as HIV, malnourished children, prisons, slums, smokers, diabetes patients)
- Prioritize contact investigation
- Increase awareness of health providers to TB symptoms
- Improve adherence to diagnostic algorithm
- Implement Practical Approach to Lung health (PAL)

5.1.2. Provision of pharmaceuticals, medical supplies: an effective logistic system to ensure continuous supply of drugs

Successful achievement of treatment indicators is dependent upon effective logistic system in place to ensure continuous supply of both first-line and second-line TB drugs as well as other medical supplies. The following interventions are applied to improve effectiveness of the logictic system in TB control program:

- Assist and facilitate local drugs company in the pre-qualification process (white-listing)
- Ensure effective and efficient distribution of TB drugs, including possibilities of contracting-out to independent institution
- Ensure availability and continuous supply of drugs and other logistics (such as lab reagents and supply) in all DOTS facilities in timely manner, including in areas serving the most needy population
- Rational distribution of drugs at all levels
- Implement drug management information system, including electronic alert system

5.1.3. Provide standardized treatment with adequate patient supervision and support

Standardized treatment for TB requires rational use of TB drugs by health provider and education, supervision and support from all stakeholders for TB patients under treatment and the treatment observer. All DOTS facility must apply patient-centered approach as follow:

- To inform the patients and give counselling of different health facilities providing free TB treatment and its implication for the patients with the aim of minimizing opportunity cost and respecting patient rights
- To ensure availability of treatment observer for every TB patient
- To optimize education for patients and treatment observer
- To facilitate patient access to available health facilities
- To develop community based DOTS

5.2. Address TB/HIV, MDR-TB, pediatric TB and the needs of the poor and other vulnerable groups

HIV epidemics is a serious threat to TB control program in Indonesia. At present, TB/HIV collaboration is still limited. The main challenge is to expand and strengthen collaborations in areas with high HIV prevalence (generalized and concentrated) to further develop collaboration in relevant aspects within TB control program in order to provide integrated and comprehensive service for TB/HIV patients at primary care level and referral centres in hospitals providing DOTS service, supported by TB-HIV surveillance implementation.

The problem of drug resistance TB is more challenging in the next five years. The burden is hgher due to increase of incidence of drug resistance TB, increased transmission and weak case management. The NTP and partners are fully aware of the problem and its cost implications and have made efforts to enhance MDR-TB case detection and treatment gradually at designated centers, develop adequate laboratory capacity and networking, and strengthen capacity for DRS. The key challenge is low access to PMDT due to slow progress in implementing efforts mentioned above.

TB in children reflects continuous TB transmission in the population. Overdiagnosis, improper case management, weak contact tracing and underreporting of paediatric TB cases are well-known. Therefore, this aspects need to be better implemented within TB control program.

To bring services closer to the poor and vulnerable groups (including prison), a systematic approach to implement DOTS strategy is needed. Border, remote and island areas pose operational challenges for TB control which require special attention.

Objecctive

- Detection and case management of TB-HIV patients enhanced
- New drug-resistance TB cases prevented and transmission of drug-resistance TB minimized through PMDT.
- Diagnostic capacity and case management of pediatrict TB improved
- Specific models for TB control in prison, vulnerable groups and remote areas are tested and implemented.

Program intervention

The main interventions are:

- Scaling up TB/HIV collaboration
- Prevention of DR-TB through:
  - Implementation of quality DOTS service in all care providers
  - Implement standardized case management of DR-TB according to PMDT
  - Implement MDR-TB surveillance
- Strengthen diagnosis (including validation of TB scoring) and case management of TB in children
- Pilot and implement models to strengthen DOTS for specific populations.

5.2.1. Expand TB/HIV collaboration

At the national level, policy for TB/HIV and mechanisms for TB/HIV collaboration and seroprevalence survey in priority provinces have been developed. However, efforts to give advocacy to relevant stakeholders including Ministry of Health, Ministry of Law and Human Rights, Ministry of Internal Affairs and other stakeholders should be continuously made to gain a stronger commitment toward ensuring optimum TB/HIV service, especially for most at risk populations atau MARPs. At the operational level, TB/HIV taskforce at the provincial level can enhance collaboration and coordination activities at all level. Similarly, improved quality of human resources in TB/HIV task force and having a pool of competent trainers who are trained internatoinally are critical to perform a cascade-tiered training at provincial and district level for TB and HIV teams. Standardization and dissemination of recording and reporting formats to improve monitoring and evaluation of TB/HIV collaboration should be strengthened.

Integrated TB/HIV services focusing on MARPs, including prisons, are aimed to improve adherence to treatment and visits to health facilities, active TB screening for HIV patients, expand HIV testing for TB suspects as well as immediate provision of ART for infected TB patients. In this endeavour, CBOs, FBOs dan community at large and their network to support prison and health centers that provide DOTS services for MARPs play a significant role. Besides ICF and TB infection control, IPT testing be implemented as an integral part of intervention with a primary focus on high risk groups.

5.2.2. Dealing with *Drug Resistant Tuberculosis (DR-TB)*

Two main interventions to deal with DR-TB are implemented, i.e. prevent DR-TB through quality implementation of DOTS service and Public-Private Mix, and implement standardized DR-TB case management according to PMDT strategy. The first intervention is closely linked to the third strategy, involvement of hospitals and other health facilities, increased commitment of professional organization to apply ISTC and implementation of regulation to give recognition to DOTS facilities through certification and hospital accreditation. These interventions will be described under strategy 5.3.

The second intervention is to implement standardized DR-TB case management based on PMDT strategy. It is expected that by 2014 5,100 DR-TB patients can be treated in 33 health facilities appointed for DR-TB treatment which coveres 374 districts/cities in Indonesia. Further strengthening will also be carried out to expand the laboratory network to include 17 quality-assured laboratory for culture and DST, to impelement DR-TB case management through better linkage between health centers and dedicated hospitals, to apply patient-centered approach in monitoring of treatment observers and providing patient support, to conduct monitoring and integrated DR-TB surveillance as part of DOTS service, to conduct period DRS and to have technical assistance.

TB infection control in health facilities and prison (*congregate settings*) are critical for TB/HIV and DR-TB case management. In collaboration with the Medical Service Directorate of the Ministry of Health, interventions for TB infection control includes to develop TB-infection control national taskforce, to develop policy, guidelines and operational plans, to conduct national situation analysis of current practices in TB infection control in different types of health facilities and congregate settings, to implement national plan as well as supervision, monitoring and evaluation, supported by *technical assistance*.

To be able to conduct the above interventions, commitment to provide adequate resources and implement regulation is the key factor. Likewise, implementation of the above intervention needs collaboration with the Medical Service Directorate General and other Directorate Generals within the Ministry of Health, professional organization and other ministries/stakeholders for the purpose of communication, social mobilization, availability of human resources, supply of second-line drugs, and expansion of PMDT.

5.2.3. Strengthening TB control in children

Interventions to strengthen TB control in children begin with improving capacity to quality diagnosis and perform case management according to ISTC and national standards. Revision of the national standards to diagnose and treat TB in children in reference to ISTC is necessary. Likewise, review and dissemination of the standardized scoring system for TB in children and a nationwide stepwise training for health providers. For improving diagnostic capacity, supply for Tuberculin test is made available.

As many hospitals have already been implementing DOTS strategy, improving diagnostic and case management practices for TB in children will also be integrated through hospital DOTS linkage, in particular, through applying five components of DOTS strategy in Paediatric department or services, strengthening the internal linkage with Paediatric department and recording reporting of TB cases in children. Performance of managing childhood TB cases can also be monitored separately.

5.2.4. Meeting the needs of the poor and vulnerable populations

The needs of poor and vulnerable populations toward DOTS services have various implications for TB control program. The first implication is to deliver quality DOTS services by minimizing opportunity cost for the patients, as described earlier. Health facilities and staff are expected to be cost-concious. In principle, TB drugs should be free for all patients.

A larger implication for TB control program in meeting the needs of poor-vulnerable populations is to develop and pilot specific models for implementing DOTS strategy in provinces/districts. An existing model is the TB village post which is integrated into community based health services which are appropriate for remote, border and island areas. Models still need to be developed to reach poor-vulnerable groups in urban slums with high TB or HIV prevalence, or populations vulnerable to DR-TB.

5.3. Involving all public, community, and private providers through Public-Private Mix (PPM) approach and ensuring adherence to the International Standards for TB care

The strategy to expand partnerships between public-private providers and public-public providers aims to involve all non-NTP care providers using the PPM approach and the International Standards for TB Care (ISTC). Within this PPM framework, initiatives to involve hospitals (Hospital DOTS Linkage) in particular have shown major contributions to TB control program. This demands further strengthening and expansion in its implementation to ensure quality DOTS for all TB patients seeking care in DOTS hospitals and advocacy-dissemination to non-DOTS hospitals. Other providers such as private, NGO, CBO, FBO, work place and private practitioners have also implemented DOTS to different extent. With large number of partners and providers engaged in TB control, interventions to improve capacity of government and Provincial/District Health Office to scale up, manage and accelerate the partnership with health care facilities and professional organizations are critical to expand PPM-DOTS and promote ISTC.

Objective

Access to quality DOTS for all TB patients through implementation of ISTC by all care providers.

Program interventions

The key interventions consist of scaling up Hospital DOTS Linkage and other health care facilities; and promoting ISTC to health providers delivering DOTS services.

5.3.1. Expand and accelerate hospital involvement (*Hospital DOTS Linkage*)

Scaling up of hospital and other health care facilities involvement in DOTS strategy has been initiated since 2006. In this phase, the expansion of hospitals imply improvement of quality implementation of DOTS strategy in hospitals that have implemented DOTS by integrating ISTC and TB patient charter, and expanding DOTS to hospitals that have not applied DOTS strategy. This intervention is carried out mainly in collaboration with the Medical Service Directorate, Ministry of Health, professional organizations and other stakeholders.

Networking of hospital units or other facilities that are involved in delivering DOTS service (internal network) needs to be strengthened, taking the advantage of existing structures and mechanisms in the hospitals. Potential interventions are: (1) development of clinical guidelines and standard operating procedures for managing TB cases in the outpatient and inpatient units based on ISTC; (2) advocacy to physicians, nurses and other health staff in units involved in delivering TB services; (3) development and implementation of tools and mechanisms to improve quality of TB care, such as clinical audit, integrated clinical pathway, clinical supervision, internal regulation for use of secondline drugs for TB, and others; (4) strengthening monitoring of HDL implementation. In addition to quality improvement efforts by health facilities, regulatory mechanism for hospital should be developed in line with existing general regulatory mechanisms for hospitals, i.e. integration of DOTS into the existing hospital accreditation standards, certification of DOTS facilities, and monitoring of implementation of minimum service standard.

Improved capacity of District/Provincial health office and health care facilities to implement Hospital DOTS Linkage is required to establish and maintain the external network. The aim is to improve external network as measured by increased successful referral, reduced dropouts, and increased treatment success rate.

TB surveillance is mandatory. Therefore, all health care facilities regardless of the ownership (Ministry of Health, Provincial Health Office, other Ministeries, parastatal and private) are compulsory to undertake surveillance activities as part of TB services for the purpose of monitoring TB patients and reporting to the National TB control program. Data at all level should be segregated by types of health facilities to show contributions of each facility at different level from district to central.

5.3.2. Promote *the International Standards for Tuberculosis Care (ISTC)*

ISTC has been endorsed, followed by reinforcing the role of professional organization in TB control, establishing ISTC taskforce at the national and provincial level to strengthen policy and its implementation. In this period (2010-2014), the intervention will focus on evaluating the national and provincial task forces and monitoring and evaluation of ISTC implementatio.

ISTC dissemination to various health care facilities, particularly to physicians and nurses will be intensified applying a more effective training method such as a case-based training or computer-based training. For future health professionals, the revised ISTC will be included in the pre-service curriculum and continuing professional education for relevant health care professionals. Possibilities for certification of a web-based training on ISTC, especially for private practices licensure, will be explored and piloted.

Assessment of training effectiveness will be integrated with monitoring and evaluation of ISTC implementation in health facilities. The ISTC implementation monitoring and evaluation system need to be developed by professional association.

5.4. Empower TB patients and engaged communities

Expansion of TB control program requires active participation of TB patients and communities to fight TB. Community empowerment and mobilization of TB patient network may increase the need for a better TB service, as well as, exploring potential local resources to support implementation of TB control, and optimizing cost efficiency in the context of limited infrastructure and human resources.

Objective

The demand for TB services in the community increased, capacity of health care providers to conduct advocacy, communication and social mobilization improved, TB patient charter disseminated, and community DOTS service established.

Program Interventions

The key interventions are to develop strategy and media for health promotion with specific target audiences, DOTS branding for the community, community organization and health care facilities/providers, and creating adequate resources for implementing community DOTS service. TB patients and health workers would be sensitized on TB patient charter

5.4.1. Creating demand: increasing the number of TB suspects who undergo the diagnosis process and TB patients who undergo treatment with DOT support

The demand for TB services will be created through advocating the needs and communicating TB patient rights to communities, community organizations, CBOs, FBOs, providers and other stakeholders. The following interventions will be implemented: nationwide campaign to improve understanding and support to Stop TB, to reduce TB related stigma through increasing the number of TB suspects who visit health care facilities for further examination and treatment, to promote free yet high quality TB drugs, and to support every TB patients undergo treatment with treatment observer. Effective campaigns require effective promotional media for each specific target group in order to improve general understanding and give better support to confirmed TB patients.

5.4.2. Strengthen the capacity of health care facility in conducting ACSM: Increasing the capacity of health care providers and outreach workers in promoting DOTS and education service with patient-centered approach

The need for conducting ACSM will steadily increase as a consequence of expansion as the general strategy for TB control program in five years ahead. Scaling-up of existing activities and implementation of new activities in TB control program require continuous ACSM. In addition to intensify ACSM activities through mass campaign carried out by CBOs and FBOs, health care providers and TB staff at the district/provincial level also need to plan, lead and organize ACSM activities. Potential interventions are: (1) Interventions to optimise involvement of health care providers and TB staff in ACSM training for health promotion and education, supported by availability of specific information and communication materials and media for specific target groups (such as hospital visitors, congregate settings etc.); (2) B*randing* DOTS through various outreach activities in TB control program; and (3) Provide reward or recognition for districts/provinces or health care facilities that implement quality DOTS successfully.

5.4.3. Promoting TB patient charter

TB patient charter is a new tool which has not been discussed widely and utilized in Indonesia. Therefore, the policy and guidance for implementing TB patient charter need to be established, followed by situational assessment of current practices in relation to respecting the rights of TB patients. The findings from the situational assessment will guide the country to develop operational plan for promoting TB patient charter. The first phase of promoting TB patient charter will be integrated in the delivery of TB services in health care facilities in order to support TB patients and to support health care facilities in implementing quality DOTS. The audience, thus, will be prioritizing on TB staff at all level, followed by health care providers working in health centers and hospitals, TB patients seeking care in those facilities, and finally the community at large.

5.4.4. Establish community DOTS services

Currently, DOTS services are provided in health care facilities. These facilities may not be accessible in certain provinces/districts. Therefore, an intervention to establish a community DOTS service will be piloted and implemented in partnership with the community in order to reduce delays in diagnosis, better support treatment observers and TB patients who undergo treatment. This intervention plays a major role to overcome geographical barriers in accessing DOTS service and to minimize opportunity cost in diagnosis and treatment of TB by bringing DOTS services closer to the most needy population.

5.5. Contribute to health system strengthening and management of TB control program

As a consequence of expansion strategy, the managerial functions of TB control program need strengthening in order to better support achievement of the general strategy. These managerial functions include human resource development, management information system, performance management system, and logistic system at health facility, district up to central level.

Objectives

Managerial and technical capacity in governance and effective TB control program strengthened; quality of DOTS services at health facilities and congregate settings enhanced; and availability of a sufficient number of health workers at levels of the of the health system, with the necessary competense to implement and sucessfully sustain all aspects of the new national TB control strategy based on their job descriptions, and with the needed support systems to motivate them to use their competencies to provide quality preventive and curative services to the entire population based on their needs ensured.

Program intervention

The interventions focus on three main areas: (1) to give contribution to health system strengthening, especially health policy improvement, human resource developmnet, finance, supply and provision of service and information, at the primary care level which will benefit all health programs implemented at the facility; (2) to strengthen infection control program at health care facilities, other congregate settings and households; and (3) applying multisectoral approach and take actions to improve social determinants affecting health status.

5.5.1. Governance: policy strengthening

The following areas will be strengthened:

- Strengthening pro-poor policy and intersectoral approach in TB control program
- Integrating and linking TB program to the national-regional planning development
- Develop national TB control strategy within the framework of national and regional development plans, in consultation with other stakeholders and sectors at local level.
- Strengthen regulatory capacity for healthcare facilities at all level, e.g. hospital laboratory, pharmacy, drug store, private practice etc., and health professionals particularly physicians
- Enforce obligation to report TB cases

- Develop and implement relevant regulatory tools for TB control program, such as certification for hospital implementing DOTS including TB service, accreditation for hospital laboratory, accreditation of laboratory, physician certification-recertification by Indonesian Medical Counsil and continuing professional education by IMA, TB drugs restriction in non-DOTS hospitals, limiting the availability of TB drugs at pharmacy or drug stores, FDC for patients covered by social insurance, internal regulatory mechanisms in the hospital to improve rational use of TB drugs and prevent irrational use of second-line drugs etc.
- Encourage local government to improve staff retention for the minimum of three years after being trained for TB control

5.5.2. Service Improvement: Improving quality of health care facilities with focus on primary health care

Contribution of TB control program in strengthening quality of health services at the primary level in general and congregate setting is carried out through acceleration of TB infection control implementation and adequate implementation of Practical Approach to Lung Health (PAL) at health facility level. PAL is an integrated case management approach for patients with respiratory symptoms who visit primary health care facilities. There are two key principles of PAL which are related to TB control: (1) standardized diagnosis and treatment for respiratory disorders; and (2) coordination among health workers. These two principles are the main reason that Stop TB strategy adopted PAL as a component of the health system strengthening strategy. PAL support case finding efforts through DOTS strategy.

The following interventions will be carried out to develop and implement TB infection control in primary health care:

- Establish task force on TB infection control at national and provincial level and develop policy and guidelines on TB infection control
- Develop and implement the national action plan in TB infection control which is developed based on the national policy
- Develop plans to implement TB infection control at facility level based on the facility-based assessment
- Implement TB infection control with priority for VCT, ARV hospitals, and health centre or hospitals dedicated for MDR treatment centre
- Seek technical assistance dan conduct training on TB infection control in prioritized health care facilities

For implementation of PAL, the interventions are:

- Conduct national situation analysis and facility-based assessment on PAL, with technical assistance;
- Establish national task force and policy on PAL
- Develop national guidelines and action plans for implementing PAL through series of national meetings and workshops, involving relevant stakeholders
- Develop training materials, plans and training evaluation
- Prepare equipments and facilities required to implement PAL in health centers and dedicated hospitals, chosen based on the facility-based assessment
- Implement cascade training method. By end of 2014, it is expected to have 100 health care facilities with PAL in place

5.5.3. Human Resources Development

Over the past few years, health workforce related issues have emerged as a major challenge for reaching and sustaining the TB control targets. New interventions such as HIV/AIDS, MDR-TB, TB-IC and others contribute to additional workoads and the need for new competencies. . Further more, the broader context of decentralization in health also increases the complexity of human resource development. High staff turnover and uneven staff distribution across provinces/districts cause increasing demands for the availability of skilled staff. Interventions to address staffing, motivation, retention and support systems have to date have been inadequately addressed and collaboration with overall Human Resources for Health departments and related areas have been limited.

The objectives of the interventions under human resource development are to ensure : (1) the availability of a sufficient number of health workers of all categories involved in work to achieve TB control program targets; (2) That all health workfers involved in TB control at all levels have the necessary competencies based on thei job descriptions; (3) that the health workers have the needed support systems to motivate them to use their competencies to provide quality preventive and curative TB services to the entire population according to their needs.

The following interventions will be developed in 2010-2014:

- Contribute to overall health workforce planning and policy development
- Organize ongoing in-service training on basic and new initiatives for health care providers and managers - public and private - involved in the implementation of the Stop TB strategy
- Strengthen contributions to strengthen pre-service (basic) training for physicians, nurses, laboratory technicians and other health workers involved in the implementation of the Stop TB Strategy;

- Strengthen and expand the engagement in strategic partnerships for health workforce development for comprehensive TB control with , for example:
  - Training divisions/institutions
  - Other in-service training programmes, e.g., HIV/AIDS
  - Ministry of Education and other relevant ministries
  - Professional associations
  - Private sector including NGOs
  - Bilateral and international organizations
- Contribute to integrated personnel management system to foster adequate workforce planning, recruitment, hiring, deployment, performance evaluation and retention.
- Monitor and supervise health worker performance to:
  - Provide support and mentoring
  - detect performance deficiencies;
  - identify new staff in need of training, and
  - identify additional staff needs for current interventions and for new interventions/ strategies.

5.6. Promote central and local government commitment for TB control program

Achievement of the above four general strategies in TB control program needs to be supported with the most appropriate strategy to enforce policy and commitment, as well as to implement the managerial functions effectively. Higher demand for TB control require stronger policy and commitment of central and local government in order to ensure universal access.

Objective

Funding allocation for TB control program from central and local government increased and support and resources from stakeholders outside TB control program and Ministry of Health increased.

Program intervention

Advocacy is systematically carried out to increase political commitment and to demonstrate concrete evidence of ownership and high commitment from central and local government, and other stakeholders. Advocacy to central government is performed ensure 100% supply of TB drugs excluding buffer stock. In addition, a system will be developed to promote and implement equity in financial resource allocation (especially from external sources) to provinces/districts with the highest need. Implementation of advocacy to local government is focused on specific targets, i.e. districts and provinces with high resource capacity as these districts/provinces have higher possibilities to allocate funding resources from local sources. Resources should also be mobilized from Ministries other than Ministry of Health (such as Ministry of Public Work, Environment etc) both at central and local level.

5.6.1. Develop a political commitment to improve budget allocation for TB control program from the local government

High political commitment is continuously searched through: (a) Development of policy brief to keep updating and give advocacy on TB for central and local government, supported by more specific advocacy messages on the new innovations; (b) Selection of trained TB ambassador; and (c) Improve public accountability through Gerdunas or Coalition and community organizations to put TB in the priority agenda and encourage local policy makers to increase their support toward services for TB patients and TB control program in general.

5.6.2. Mobilize government support and resources

Mobilize government support and resources through advocacy on local partnership/Gerdunas. Various advocacy activities are organized to improve their intensity and effectiveness:

- Involve TB patients as effective advocates: to communicate about TB, its demand for services, problems and solutions from the patient perspective
- Mobilize local resources and funding for TB control through advocacy to local government, legislative bodies and private sector
- Implement advocacy on TB control as part of povery alleviation strategy under the framework of social welfare framework (cq Ministry of Social Welfare) and the Planning Bureau (National and Local Development and Planning Bureau) Biro Perencanaan in order to support TB control as part of poverty reduction to meet the MDG 1 through involvement of NGOs.
- Build networking with other public sectors to mobilize resources from non-health sector in the effort to improve the social economic conditions of the community to enable them to reduce TB transmission and TB prevalence in the community. Partnership with professional organization, academic institution and NGOS needs to be comprehensively carried out, including intersectoral collaboration.
- Establish a national committee as a coordinating body at the national level

5.7. Promote research, development and utilization of strategic information

A number of TB operational research teams have conducted operational studies and published their findings in journal publications through collaboration between program managers and researchers. Since 2003, researchers have wider opportunities to participate in TB operation research through better access to information, proposal development workshops, implementation of operation research, and report and publication writing workshops. These activities are coordinated by TB operational research group (TORG).

New emerging challenges and innovations in TB control and the need to monitor progress of TB morbidity and mortality in Indonesia create the need to determine priority research agenda in TB control for the next five years. In addition to expand the interventions for operation research, TB research parade and routine meetings are necessary to improve the capacity of TORG and operational research teams at central level (for example Center for Research and Development in Health, Ministry of Health) and local level, the period of 2010-2014 will give emphasis on strategic use of information for decision making in the development of TB control program. The information is produced from both the operation research and routine surveillance.

Objective

Increase quantity and quality of TB operation research utilization of strategic information for planning.

Program intervention

In the next five year period (2010-2014) national priority research agenda in TB control program will be determined in order to: (a) Monitor intervention and progress of TB control program in Indonesia through country-wide surveys; (b) Support implementation of new innovation in TB control program in collaboration with international organizations; (c) Strengthen operation policies to improve effectiveness of TB control program management, such as improving supervision, surveilance activities.

TB research areas for 2010-2014 encompass

- Case finding
- Ensuring access and treatment adherence
- Diagnosis methods
- Clinical management
- Social, economic, behavior
- Health system, policy and financing
- Epidemiology: trends, outcomes and impacts of interventions
- Technology development (e.g. vaccines, diagnostics, drugs)

Implementation strategy to support studies in the areas above is focused on:

- Strengthen planning, monitoring and evaluation in TB research activities.
- Improve the organizational capacity on fundraising for TB research, especially for the TB institution at local/regional level.
- Improve the quality and quantity of TB researcher.
- Develop monitoring and evaluation mechanism specifically on TB-researcher performance.
- Improve the facilities to support the implementation of TB research, especially at local/regional level (such as: internet access, library, journals and other references).
- Improve regular meeting which involve all national and local TB institutions in order to share all the TB research results/findings.
- Conduct more research which will contribute to the sustainability of the TB program in Indonesia
- Communicating research findings in appropriate format and media for policy makers, program managers and other stakeholders, such as through policy brief

In addition to expanding activities for increasing quantity and quality of TB operational research, utilization of routine information for TB control strategic and operational decision making will be enhanced:

- Providing periodic briefing and feedback to policy makers, program manager, health facility managers and other stakeholders
- Increase timely access of policy makers and health service managers to strategic information through electronic reporting (e-TB manager, TB/HIV register and other web based systems)
- Develop web-based reporting by the health care facilities
- Integrating TB recording reporting with hospital routine morbidity-mortality report and provide seggregated data for PPM initiatives to enable the program to demonstrate contribution of each provider involved in PPM at district, province and national level
- Integrate TB surveillance into the national and local health information system

BAB VI

BUDGETING AND FINANCING

The total cost needed for TB control program in 2010-2014 is USD 527,265,544.00. The proportion of national contribution (consisting of central, provincial, district government and social health insurance) is expected to steadily increases over five years indicating increasing political commitment for TB control program.

Financial contribution from the private sectors are also expected to be increasing as a result of effective advocacy. DG CDC&EH has signed a Memorandum of Understanding with Jamsostek (Social insurance company for workers). Jamsostek currently covers 159,811 companies with 13 million employees and their families. It is expected that the coverage of DOTS strategy within Jamsostek gradually increases to reach 50% by 2014. PT ASKES (Health insurance company) currently covers 40% of the population. It is expected that DOTS coverage under PT ASKES would gradually increases to reach 35% by 2014.

Nonetheless, there will still be financial gaps with a total amount of US$ 112,028,239.00 (21%). External funding from GF R10, USAID (TB CARE) and other international sources are expected to assist in addressing these financial gaps.

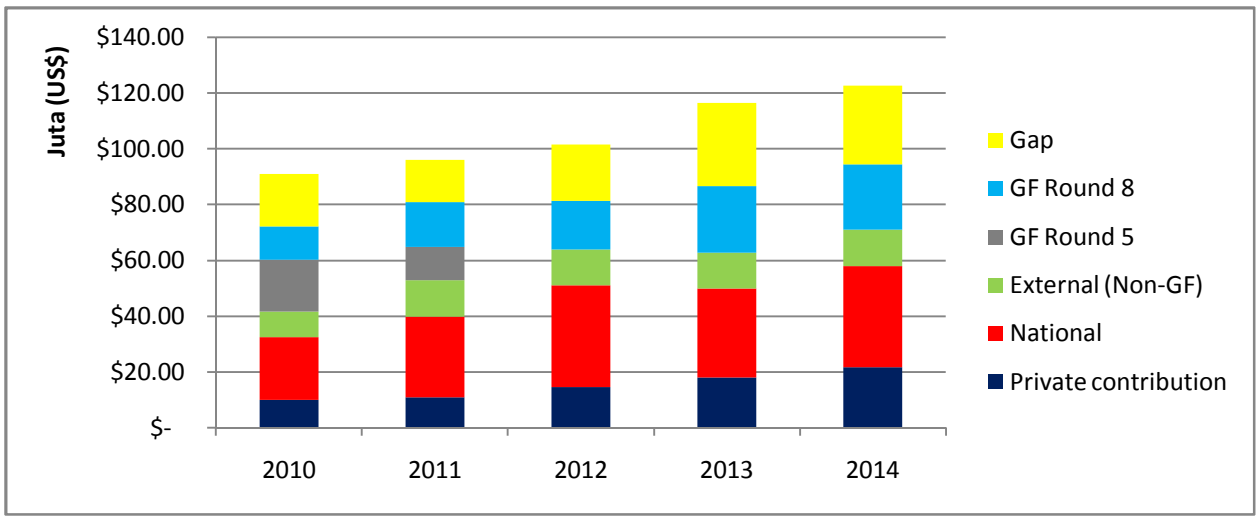

Figure 2. Financial gap analysis for TB control, 2010-2014

Overall five year budget allocated for each strategy in TB control national strategy is shown in Figure 3. The largest budget is allocated for quality DOTS service, followed by health system strengthening, addressing special challenges of MDR-TB, TB/HIV, childhood TB and other vulnerable groups

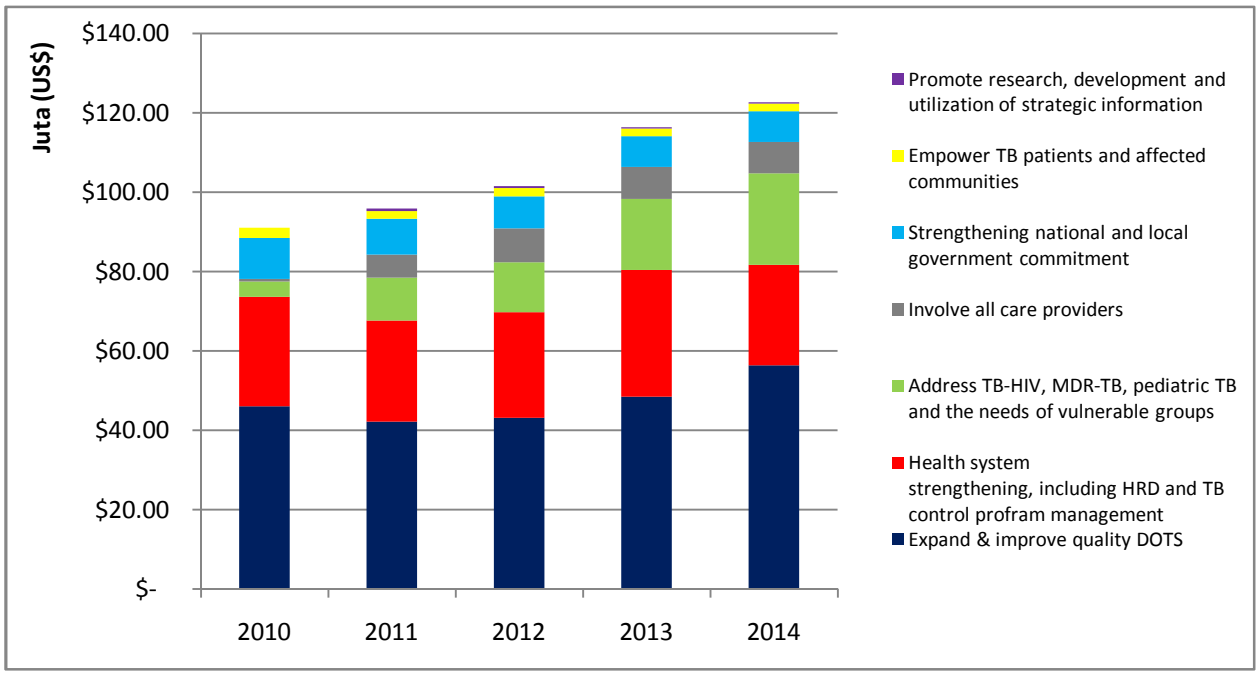

Figure 3. Available budget allocated for the seven strategies in TB control, 2010-2014

BAB VII

IMPLEMENTATION OF NATIONAL STRATEGY

The national strategy for TB control program 2010-2014 is developed and implemented in line with the Midterm Development Plan at national and local level 2010-2014, relevant health laws and government regulations (such as Health Law no. 39/2009, Hospital Law no. 44/2009, Medical Practice Law no. 29/2004, Presidential Instruction no. 1 and 3, 2010), national health system 2009 and the roadmap for health reform. Additionally, this document is also in corresponds to the Ministry of Health strategic plan 2010-2014.

Implementation of this national strategy provides strategic direction for TB control program to be able to achieve the global MDG targets, taking into consideration the regional variations. According to the National Midterm Development Plan 2010-2014, the regions are divided into:

- Sumatra
- Jawa and Bali
- Kalimantan
- Sulawesi
- Maluku
- Nusa Tenggara, dan
- Papua

Therefore, discussions at the regional level is encouraged to emphasize the regional situation analysis and to develop this document further for regional strategy and planning.

Geographically, in line with national development policy, implementation of the national TB strategy should be give special attention to remote, border and island areas, particularly those not yet reaching case detection and treatment success targets (Papua, West Papua, Maluccu, Riau). Technically, in line with the Global Plan to Stop TB, implementation of the national strategy should prioritize expansion of quality DOTS.

At the national level, implementation of this national strategy is further elaborated in the National Action Plan 2010-2014 which describes the annual plan of each strategy and components of TB control program for the next five year periods. Likewise, regional development of this action plan is encourage to successfully implement the national strategy and action plan. Provinces, districts and their Local Integrated Movement for TB (Gerduda) are then recommended to adopt this national strategy as well as regional prioritization as the main reference in developing their local strategy in TB control for 2010-2014.

Communication of this national strategy to central-local government, TB control program managers at all level, national-international stakeholders and the public are the first critical stage to ensure successful implementation of the national (and regional) strategy. Various communication channels may be used, such as regional workshops to disseminate and develop regional/local strategy, dissemination of information through hardcopies and upload to TB website, and other medias to reach wider audiences. Implementation of the national strategy is coordinated by the TB Sub-director of CDC Director General, Ministry of Health and the national committee (currently, Gerdunas), enforced by the Ministry of Health letter of decree.

Table 8. Mapping of roles in implementation of the national strategy

Institusi	Peran dalam implementasi stranas
Central government	• Funding
	• Priority setting
	• Law making
	• Inter-ministerial coordination
Ministry of Health	• Health sector planning
	• Funding
	• Technical leadership
	• Inter-program coordination (e.g. TB/HIV)
	• Inter-directorate coordination
	• Human resources
	• Drugs and logistics
	• Policies
NTP	• Program policy and guidance
	• TB control program planning
	• Funding
	• Human resource development for TB control
	• Surveillance(M&E and supervision)
	• Drug distribution
	• Partners coordination
	• Lab EQA
	• Reporting

Provincial health office	• Planning at provincial level
	• Coordination
	• HR: planning, training, coordination, partnerships, supervision, retention
	• Surveillance (M&E and supervision)
	• Drug and logistics distribution
	• Partners coordination
	• Lab EQA
	• Reporting
District/municipal health office	• Planning
	• Funding
	• Coordination of partnerships and inter-programs
	• TB program implementation
	• HR, planning, training, coordination, partnerships, supervision,retention
	• Procurement and distribution
	• Surveillance (M&E and supervision)
	• Reporting
	• Lab EQA Lab
Health care facilities	• Suspect screening and TB case detection
	• Patient referral
	• Diagnosis
	• Treatment
	• Treatment monitoring
	• Default tracing
	• Community education and patient support
	• Recording and reporting
	• Surveillance (M&E and supervision)
	• Lab: Internal QA

Community/NGO	• TB suspect referral
	• Advocacy
	• Treatment monitoring
Professional association	• ISTC implementation
	• Continuing education
	• Certification of private practitioners
Training/research institution	• Pre-service training
	• Research

BAB VIII

MONITORING AND EVALUATION OF THE NATIONAL STRATEGY

Implementation of the national strategy must be monitored periodically and evaluated systematically. As an initial phase, monitoring system of the strategy implementation will be developed and subsequently implemented annually as part of the routine national monitoring and evaluation exercise. The purpose of monitoring of the national strategy in TB control program is three fold, i.e. to continuously monitor the process and progress of its implementation, to identify problems and gaps during the implementation, and to anticipate and solve problems faced. The monitoring system of the national strategy will be developed and integrated to the routine national monitoring evaluation meeting which is held annually. Therefore, the stakeholders involved in this annual meeting need to be enlarged beyond TB program managers to enable discussions on monitoring of the national strategy.

For the evaluation of national strategy, the objective is to analyse relevance, efficiency, effectiveness, impact and sustainability of the national strategy. The principles of accountability, learning organization, continuous improvement and ownership in TB control are applied in the evaluation.

Different sources of data will be made available to conduct monitoring and evaluation of the national strategy. These are the routine surveillance data in TB control program (including MDR-TB), findings from studies carried out by TB operation research teams and other research groups, including NGOs, and evaluation conducted by external international organizations (such as the biannual Joint External Monitoring Mission and other specific missions for components of TB control program). The impact of the national TB control will be evaluated through prevalence survey and analysis of TB mortality data.

To enhance public accountability and transparency, findings from the monitoring and evaluation of national strategy are disseminated through various communication channels. This is to ensure the rights of the public to have open access to the findings in timely manner. Dissemination to policy makers, program managers and the public can take advantage of the following communication medias: printed media, electronic media, and other communication channels that can be easily accessed by the public.

Finally, information from monitoring and evaluation of national strategy will be followed up and used for the purpose of continuous improvement in the implementation of TB control. This information will also be used to assess harmonization of policies at national and local level, public and private as well as inter sector.

References

KEMENTERIAN KESEHATAN RI (2007), *Report of the Joint External TB Monitoring Mission*. Kementerian Kesehatan RI, Jakarta

KEMENTERIAN KESEHATAN RI (2009), *Rencana Aksi Nasional HIV/AIDS Kementerian Kesehatan Republik Indonesia 2009 – 2014*, Kementerian Kesehatan RI, Jakarta

KEMENTERIAN KESEHATAN RI (2010), *Rencana Strategis Kementrian Kesehatan Republik Indonesia 2010 – 2014*, Kementerian Kesehatan RI, Jakarta.

KEMENTERIAN KESEHATAN RI (2010), *Sistem Kesehatan Nasional: Bentuk dan Cara Penyelenggaraan Pembangunan Kesehatan*, Kementerian Kesehatan RI, Jakarta

LUMB, R (June 2010), *Presentation of Laboratory Assessment Mission*, USAID, Jakarta

LUMB, R (June 2010), *Presentation of TB Laboratory Plan Indonesia 2010 – 2014*, USAID, Jakarta

LUMB R, SJAHRURRACHMAN A, CHANDRA R (Juni 2010), *Report of The Drug Resistance Surveillance Assessment Mission Republic of Indonesia*, TBCTA, Jakarta

MENTERI KESEHATAN RI (2008), *Peraturan Menteri Kesehatan RI Nomor 741 Tahun 2008 tentang Standar Pealayanan Minimal Bidang Kesehatan di Kabupaten/Kota*, Kementerian Kesehatan RI, Jakarta

MENTERI KESEHATAN RI (2008), *Peraturan Menteri Kesehatan Nomor 828 Tahun 2008 tentang Petunjuk Teknis Standar Pelayanan Minimal Bidang Kesehatan di Kabupaten/Kota*, Kementerian Kesehatan RI, Jakarta

PRESIDEN RI (2010), *Instruksi Presiden Nomor 1 Tahun 2010 tentang Percepatan Pelaksanaan Prioritas Pembangunan Nasional*, Sekretariat Kabinet RI, Jakarta

PRESIDEN RI (2010), *Instruksi Presiden Nomor 3 Tahun 2010 tentang Program Pembangunan yang Berkeadilan*, Sekretariat Kabinet RI, Jakarta

PRESIDEN RI (2010), *Peraturan Presiden Republik Indonesia No. 5 Tahun 2010 tentang Rencana Pembangunan Jangka Menengah Nasional (RPJMN) tahun 2010 – 2014*, Sekretariat Kabinet RI, Jakarta

PRESIDEN RI (2010), *Rencana Pembangunan Jangka Menengah 2010 – 2014*, Bappenas RI, Jakarta

SARDJUNANI, N (March 2010), *Presentation of MDGs' Target Achievement on RPJMN 2010 – 2014*, Bappenas, Jakarta.

SUB-DIREKTORAT TB (2007), *Kerangka Kerja Advokasi, Komunikasi dan Mobilisasi Sosial Sub-Dit TB tahun 2007 – 2011*, Kementerian Kesehatan RI, Jakarta

SUB-DIREKTORAT TB (2010), *A Strategy for Control of Drug Resistance Tuberculosis in Indonesia 2010-2014,* 5th draft, Kementerian Kesehatan RI

TUBERCULOSIS COALITION FOR TECHNICAL ASSISTANCE (2009), *International Standard for TB Control: Diagnosis, Treatment and Public Health*, 2nd Edition, TBCTA, San Francisco

WHO (2009), *A Brief History of Tuberculosis Control in Indonesia,* WHO, Indonesia

WHO (2009), *A Ministerial Meeting of High M/XDR-TB Burden Countries: Addressing the key bottlenecks hampering the prevention and scale-up of M/XDR-TB control and patient care*, WHO, Beijing

WHO (2009), *HIV/AIDS in the South East Asia Region*, WHO, Geneva

WHO *(2009) Indonesian Health System Fact Sheet*. WHO, Indonesia

WHO (2009) *Planning The Development of Human Resources for Health for Implementation of the Stop TB Strategy: a handbook*, WHO, Geneva

WHO (2009) *WHO Global TB Report 2009: Epidemiology, Strategy, Financing*, WHO, Geneva

WHO (2010), *WHO Global Tuberculosis control 2010*, WHO, Geneva

WHO (2009), *WHO Guidelines on TB Treatment*, 4th Edition, WHO, Geneva