

# Tuberculosis Factsheet

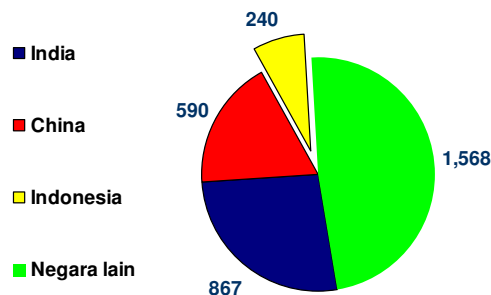
## Tuberculosis: Infection and Transmission

- TB is an infectious disease, caused by *Mycobacterium tuberculosis*.
- TB is spread from one person to another by airborne transmission (sputum droplets from TB patients).
- Infectious TB patients will produce aerosol droplets, which contain a number of TB bacilli when they cough, sneeze, or speak. A person inhales only a small proportion of TB bacilli can be infected by TB.
- An infectious TB patient will infect around 10-15 other persons each year. One third of the world population has been infected by TB.
- People will not always get sick of this disease although they are infected by TB bacilli. TB bacilli can remain 'dormant' for several years by having a thick and waxy coat. The possibility of getting sick increases when the immune system is weakened.
- TB is curable disease.

## Global TB situation

- There were approximately 9.2 million new Tuberculosis (TB) cases and approximately 1.7 million TB deaths in 2006.
  - The estimated incidence<sup>1</sup> is 9.1 million new cases of TB in 2006.
  - An estimated 1.7 million people (25/100,000) died from TB in 2006, including those co-infected with HIV (200,000).
- India, China and Indonesia contribute over 50% of the overall cases in the 22 high burden countries: Indonesia ranks number 3 after India and China in term of burden of TB cases (see picture 1).

Picture 1. Indonesia's TB burden within the world (2006).



## Global TB Targets

- Towards the 70% case-detection target, globally the world figure stands at 59% in 2005. Indonesia has achieved 68% of case detection in 2005, and increased becoming 76% in 2006.
- Of the additional smear-positive cases reported under DOTS in 2005, three-quarters (75%) were in China, India and Indonesia. These three countries have been driving the global acceleration in case-detection.
- Treatment success in Indonesia in the 2004 DOTS cohort of patients was 83%, and increased becoming 91% in 2005 (more than the global target 85%).
- National strategies are in line with international guidelines (WHO DOTS and new Stop TB strategy) and consistent with the Global Plan to Stop TB aiming at reaching the 2005 TB Targets and the 2015 Millennium Development Goals.

<b>Implementation</b>	
<b>Indicator 24 (target year 2005)</b>	
Case detection	70%
Treatment success	85%
<b>Impact</b>	
<b>Indicator 23 (target year 2015)</b>	
Prevalence (baseline 1990)	halve rate
Deaths	halve rate

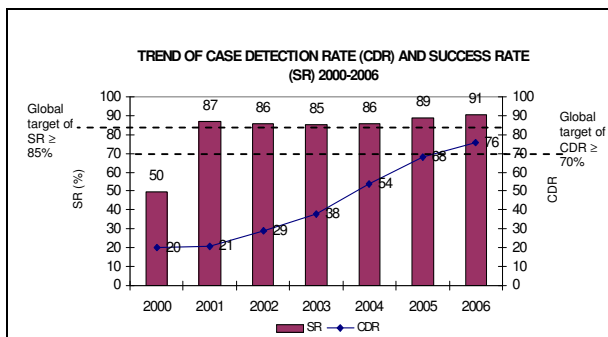
<sup>1</sup> Incidence is the number of new TB cases been diagnosed in a year.

## DOTS: 5 Components and Strategy

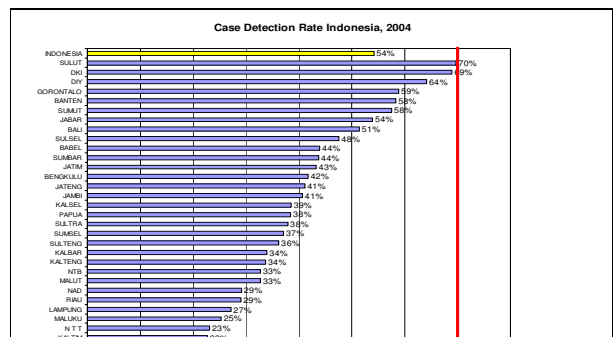
- Recommended Strategy for TB control (DOTS) has 5 key components:
  - **Sustained political commitment** to increase human and financial resources;
  - **Access to quality-assured TB sputum microscopy** for case detection among persons presenting with symptoms of TB;
  - **Standardized short-course chemotherapy** for all cases of TB under proper case management conditions, including **direct observation of treatment**;
  - **Uninterrupted supply of quality-assured drugs**;
  - **Recording and reporting system enabling outcome assessment** of all patients and assessment of overall program performance.
- The Global Plan to Stop TB is underpinned by six components of the new Stop TB Strategy developed by WHO:
  - Pursue high-quality DOTS expansion and enhancement
  - Address TB/HIV, MDR-TB and other challenges
  - Contribute to health system strengthening
  - Engage all care providers
  - Empower people with TB, and communities
  - Enable and promote research
- DOTS has been essential to TB control for more than a decade, and continues to be the primary component of the expanded Stop TB strategy, which includes management of multidrug resistant TB (MDR-TB), TB associated with HIV, health systems strengthening, involvement of all care providers and communities, and promoting research.

## INDONESIA - Current TB Situation and Progress

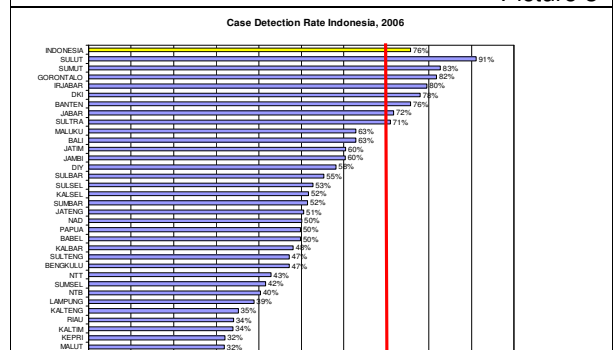
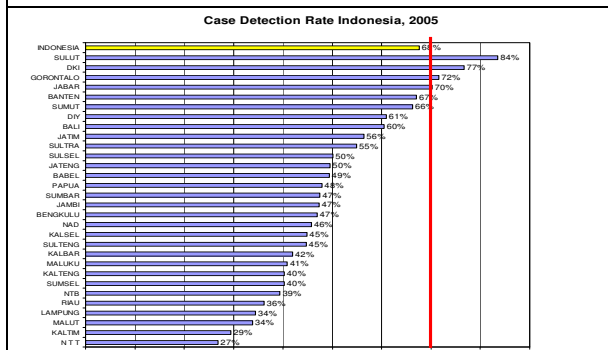
- DOTS strategy has been introduced in Indonesia since 1995 and widely implemented in public health system.
- Indonesia has achieved and maintained the global target of success rate above 85% over the past six years (since year 2000).
- Indonesia is making rapid progress with a reported case detection rate of 68% in 2005, and increased becoming 76% in 2006.
- The number of notified TB cases has been remarkably increasing over the last few years (*see picture 2*). Case detection rate (CDR) of new smear positives increased from 38% in 2003 to 76% in 2006, as a result of accelerated DOTS expansion through increased international donor supports (e.g. GFATM, USAID (TBCTA), CIDA, DFID, etc.) with technical assistance from Stop TB Partners notably WHO and KNCV).
- Almost all provinces in Indonesia show progress on TB treatment and case detection rate in 2004 to 2006 (*see picture 3-5*).



Picture 2



Picture 3



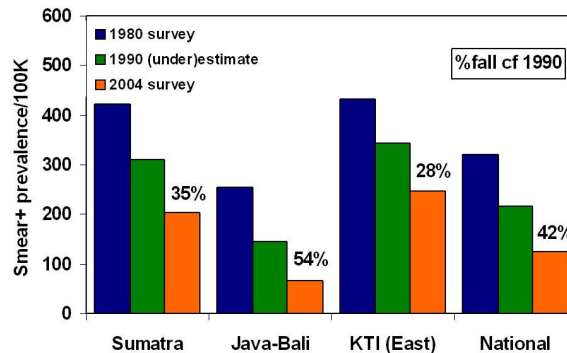
Picture 4

Picture 5

- Considerable progress in reducing TB prevalence<sup>2</sup> has been made in Indonesia. The Java-Bali regions show a halving of the rates, while remote areas are progressing much more slowly, but also showing significant downfalls (see picture 6).

Picture 6.

Progress towards MDGs: TB prevalence rate fell 4 % / year (1980-2004)



- The incidence and prevalence working estimates have been updated as a result of the latest 2004 TB prevalence survey. This has also indicated that marked regional differences exist in both prevalence and incidence with regional smear positive incidence (working estimates) varying from 107/100.000 in Java, 64/100,000 in DI Yogyakarta and Bali, to 160/100.000 in Sumatera and 210/100.000 in the Eastern provinces<sup>3</sup>.
- Management capacity has been enhanced at central and provincial levels.
- Donor support and partner involvement has increased.
- Rapid expansion through involvement of all lung clinics and lung hospitals, and about 30% of hospitals in TB care using DOTS strategy.
- Training acceleration for TB staff at all health care service units.

## INDONESIA - TB Survey/Assessment

- *Tuberculin Survey*
  - ◆ The objective is to estimate Annual Risk of Tuberculosis Infection (ARTI). It will be conducted in 4 – 5 provinces within 3 years of periods.
  - ◆ It was implemented in West Sumatera in 2006 to pilot the first ARTI survey after a 20 years gap from the last such study conducted in the country.
  - ◆ The total number of students tested in this study was 5948 and satisfactory read was 5653 pupils (95%).
  - ◆ The data showed the estimated prevalence of infection was 8.0% (95% CI 6.2-9.8%) and ARTI was 1.0% (1000 individuals per 100,000 acquire new TB infection each year), and these indicate TB is still becoming a public health problem in the community. These results represent an average situation from 1998 – 2006 (Mid year 2002) and can be used as baseline estimates for assessing the situation in the future.
  - ◆ Other Tuberculin Survey in 2007 is ongoing in Central Java and East Nusa Tenggara Provinces (representing epidemiological blocks in Java and eastern part of Indonesia) with a total sample is around 7900 students for each province.
- *Mortality Study*
  - ◆ Decreasing the TB related deaths is one of indicators to measure the achievement of MDG.
  - ◆ Mortality study piggy-backed on the IMRSSP (*Indonesian Mortality Registration System Strengthening Project*) model has been expanded to 4 provinces (Lampung, West Kalimantan, Gorontalo and Papua) covering a population of 1.5 million.
  - ◆ Mortality Study conducted in Central Java (Pekalongan District) as part of IMRSSP over 1 year period covering a population of 250,000 showed that the age standardized TB death rate was 53/100.000 and TB is rank number six among all causes of death.
  - ◆ Mortality studies have been done by very few countries and hence the IMRSSP project and verbal autopsy tools being used and tested will be useful for other countries to adopt in future.
  - ◆ Data that is being collected captures mortality from all causes and also enables determination of vital indicators such as IMR, U5MR, life expectancy table, etc.

<sup>2</sup> Prevalence is the existing amount of TB cases in a year (old + new TB cases).

<sup>3</sup> TB Prevalence Survey in Indonesia, NIHRD, Ministry of Health, Jakarta, 2004.

- ◆ This study will collect data on all causes of death, not only data on TB Mortality, and will strengthen the vital registration system in the long run.

□ *Hospital DOTS Assessment*

- ◆ Till January 2007, 37% of hospitals are implementing DOTS with wide variance in the quality. Number of 117 hospitals/clinics (53 public hospitals and 40 privates) were surveyed in Java for determining caseload of TB.
- ◆ The median ranking of TB in general hospital was number 2 in outpatient clinics and number 1 in lung hospitals and clinics. In inpatient department, TB ranked number 7 in general hospital.
- ◆ In general hospitals, new TB cases accounted for 19% amongst all new respiratory cases in outpatient department.
- ◆ Amongst 4,352 prescriptions studied, only 13% used program drugs and the rest used generic and branded drugs.
- ◆ Internal and external linkages in the hospitals surveyed were found to be sub optimal. TB/HIV collaboration was minimal.
- ◆ In general hospitals, almost 6.5% of category II cases with failed treatment indicating the potential of MDR-TB.
- ◆ In the DOTS hospitals surveyed, 60% had not moved beyond the initiation phase indicating the need for more inputs from the NTP, DG Medical Services and partners to improve the quality of services before further expansion.

## INDONESIA - TB Challenges

- The burden of TB in Indonesia is still too high, especially considering available cure.
- Nearly 300 people die of TB every day in Indonesia. More than 100,000 people die per year.
- Indonesia has over half a million new TB patients every year.

Table 1. Latest estimates and trends of TB indicators (2006).

Population	: 222,735,700	Prevalence (all cases/100,000 pop/year)	: 253
Global rank	: 3	TB mortality (all cases/100,000 pop/year)	:38
Incidence (all cases/100,000 pop/year)	: 234	TB cases HIV+ (adults aged 15-49, %)	: 0.6
Incidence (new SS+/100,000 pop/year)	: 105	New TB cases multidrug resistant (%)	: 2.0

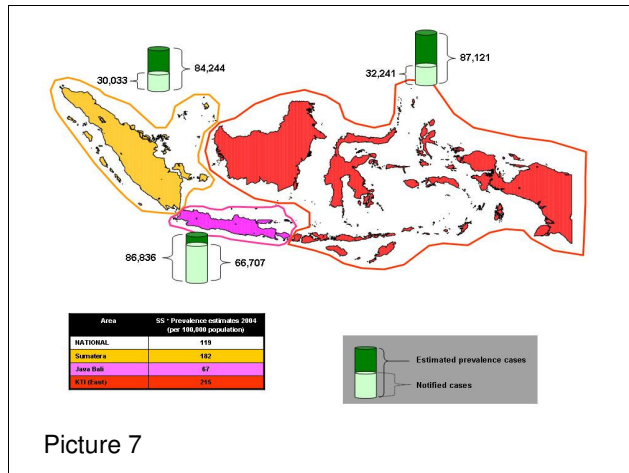
Source: Country Profile, WHO Report 2008

- In total there are over 600,000 TB patients in Indonesia. With a large difference in rates of disease between the three regions: Sumatera, Java-Bali and Eastern part of Indonesia (*see picture 7*).
- Incidence of smear positive cases for 2006 was estimated at 105 new cases per 100,000 populations (240,000 new cases per year) with a prevalence of 578,000 cases (all forms).
- TB is number one killer among infectious diseases and also number 3 on the list of 10 leading killer diseases in Indonesia, causing around 88,000 deaths per year.
- Most of TB patients are still in productive ages (15-55 years).
- Program focus is on expanding DOTS coverage throughout all health services in Indonesia, and improving quality. This will not only be achieved by scaling up current activities of the Puskesmas network (health centres), but also through innovative additional strategies (hospital DOTS Linkage, TB-HIV interventions, area specific planning for the poor and remote areas and hard to reach population, TB in prison, focus on TB in children, prevent drug resistance, scaling up involvement of NGOs and other organizations, etc).
- Joint TB-HIV intervention: HIV drives TB incidence and mortality in high HIV prevalence area (11-50% of HIV/AIDS patients die of TB).
- Indonesia has concentrated HIV epidemics, the adult prevalence of HIV/AIDS (15-49 years) is estimated at <0.2%<sup>4</sup>, with the highest burden in Bali, East Java, Papua, Riau, Jakarta and West Java. The common transmission route is through contaminated needle among injecting drug users (IDUs), except in Papua through heterosexual transmission. HIV surveillance among TB patients has not been implemented in Indonesia. The high-risk HIV areas which need to be addressed in priority with TB programs (*see picture 8*).
- Drug resistant surveillance has not yet been implemented in Indonesia and limited surveys in Jakarta have found MDR-TB in more than 4% of previously untreated cases<sup>5</sup>. A fully representative survey is needed to determine country situation (the national WHO estimate is 2.0%).

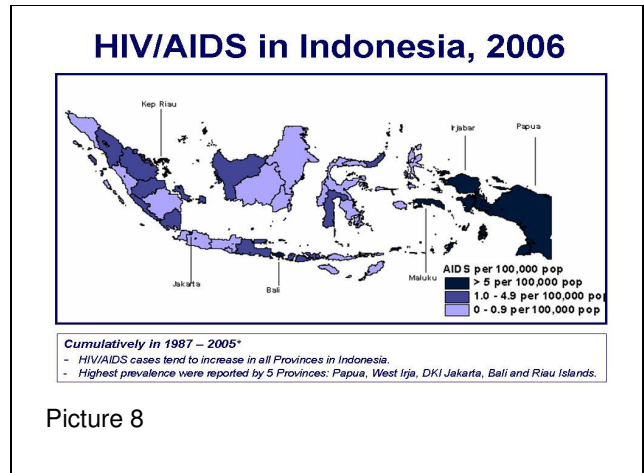
<sup>4</sup> UNAIDS, 2003.

<sup>5</sup> WHO Report, 2005.

- Special population-groups are more vulnerable to TB, including women, children, the elderly, and people with high risk to transmission, such as prisoners, migrants.
- TB mostly affects the poor: according to World Bank 53% of the population earns less than US\$ 2 per capita per day and 37 million people live below the poverty line (2003). Treating TB also means tackling poverty.

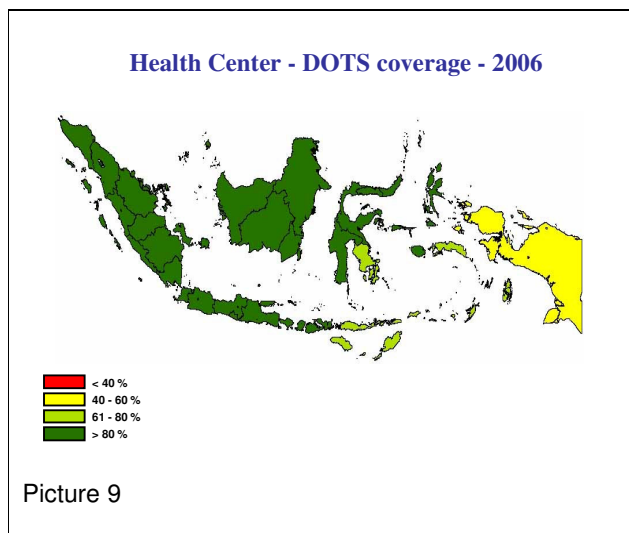


Picture 7

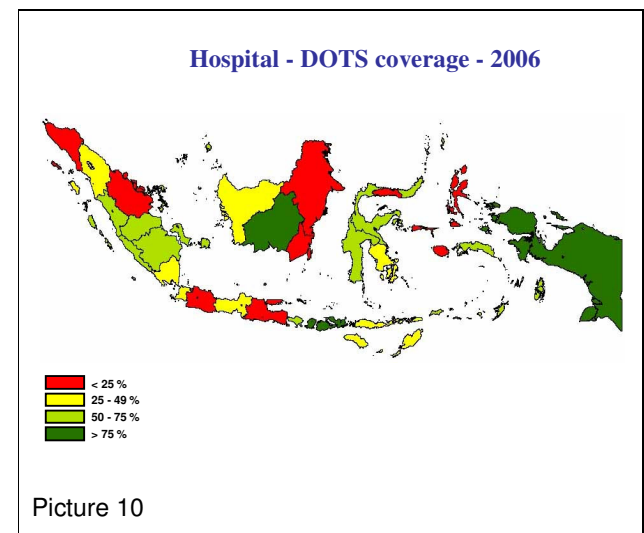


Picture 8

- Since 1999/2000, 98% Health Centers have been implementing DOTS, and the quality-assured still need to be strengthened through intensified training, on the job training, and technical assistance (*see picture 9*).
- Up till 2006, about 36% of all hospitals are involved in DOTS (*see picture 10*).
- Other special settings are becoming involved in delivering DOTS services: workplace, slums, prisons, peripheral system (midwives/ Posyandu/ etc.).
- GERDUNAS TB, Indonesia's National Integrated Movement to control TB, established in 1999, serves as the equivalent on the Stop TB Partnership, and the TB manager acts as Executive Secretary.
- TB Partnership Forum Indonesia established in 2001 and over 50 professional organizations, academic institutions, and NGOs have joined (Partners Directory available on 24 March 2005).



Picture 9



Picture 10

## Strategic Framework of Indonesia TB Control 2006 - 2010

### Why a Five years TB Plan for Indonesia?

300 Indonesians die from TB every day - a disease that is treatable. This is simply unacceptable today

### What are the main expected achievements of the TB Plan?

- Expand equitable **access for all** to quality TB diagnosis and treatment.
- **Treat around 2 million** people in Indonesia by 2010
- **Save half a million** lives by 2010

### What is the purpose of the TB Plan?

- The plan sets out **activities** that will make an impact on TB and its costs.
- The plan will serve as a powerful tool for setting out required **resources**
- The plan supports the need for **long-term planning** for action

### What are the targets of the TB Plan?

- **Reducing TB incidence** in line with the Millennium Development Goals
- **Halving TB prevalence and deaths** by 2015 compared with 1990 levels

### What is the strategy supporting the TB Plan?

→ *Accelerate the expansion of TB control*

1. Pursue equitable high-quality **DOTS** expansion and enhancement
2. Address **TB/HIV, MDR-TB** and other challenges
3. Engage all **care providers**
4. Empower **TB patients** and communities

→ *In support strengthen*

5. Policy and **local ownership**
6. **Health systems** strengthening
7. Research

### What actions are required?

- For all regions and **districts** to fully implement the actions in the plan, and to mobilize sufficient resources to make this happen.
- For all **health care professionals** to provide quality TB care and cure.
- For **civil society** to demand access to quality TB care.
- For **community** groups to support patients to come forward for diagnosis and to complete their treatment.
- For **advocates** to argue the case for investing in the plan.