

ASIAM Data set three

Disease burden

Asiam is one of the 22 high burden countries (HBC).

WHO estimates that 64% of the total population is infected with TB bacilli (WHO estimation 1997). The WHO Global Tuberculosis Control Report 2009 provides the following estimates for the year 2007:

- Prevalence of all forms: 664/100,000
- Estimated incidence of smear positive cases: 219/100,000
- TB mortality rate: 89/100,000.

According to the projected annual change in incidence, as published in the *Joint Program Review Report* (September 2006) the decline in incidence was estimated to be one percent in 2005-2006. However, as a result of an increasing detection rate and high treatment success rate, the annual decline in incidence is expected to reach 5.4% in 2012.

Table 1: Notification of TB cases, 2000-2008 (NTP Asiam)

Year	Population	New smear positive			New smear negative and extra pulmonary		
		Number	Notification rate /100,000	Case Detection Rate %	Number	Notification rate /100,000	Case Detection Rate %
2000	12,178,000	14,163	116	49.7%	3,888	32	10.8%
2001	12,400,000	13,691	110	47.5%	4,585	37	12.6%
2002	12,626,000	16,422	130	56.5%	6,996	55	19.1%
2003	12,856,000	17,935	140	61.2%	8,829	69	24.0%
2004	13,091,000*	17,639	135	60.7%	11,072	85	30.3%
2005	13,327,947	21,001	158	70%**	13,684	103	36.8%
2006	13,569,182	19,985	147	65%	14,675	108	39%
2007	13,814,784	19,421	141	64%	15,532	112	
2008	14,064,831	19,860	141	64%	18,525	132	

* Population projection by the National Institute of Statistics and based on the Asiam Inter-Censal Population Survey 2004, General Report, October 2004. Inter censal growth rate 1989-2004 1.81%.

** The case detection rate for the year 2005 is almost ten percentage points higher than previous years, which is partly due to a national active case finding campaign during the last quarter of that year.

Asiam is one of the countries in Western Pacific Region where HIV co-infection poses a significant challenge to TB control. The HIV prevalence among TB patients (all forms) is estimated at ten percent (National HIV Sero-Prevalence Survey Amongst TB Patients, 2005).

Drug resistance, specifically multidrug resistance and extensive drug resistance, is a serious threat to public health in all countries. The best way to prevent the development of secondary drug resistance is an efficient DOTS program. However, in spite of the good performance of the NTP, drug resistance is starting to emerge, in particular amongst retreated cases.

In the first National TB Drug Resistance Survey (2001), 10% of the new cases and 17.7% of the previously treated cases showed any drug resistance to at least one of four drugs. Prevalence rates of drug resistance to INH, R, E and S among new cases were 6.4%, 0.6%, 0.2%, and 5.0% respectively. Although no MDR cases were detected among new TB cases in 2001, a 95% confidence interval means that the number of MDR-TB cases could be as high as 1,750 per year. The final results of the Drug Resistance Survey (DRS) carried out in 2006 will provide updated data on the MDR-TB burden in Asiam.

Most affected population group

TB mostly affects the economically productive age group of 15 - 54 years, especially in vulnerable and marginalized populations, including those in remote rural settlements, indigenous and ethnic minorities, and those living in urban slum areas. The government estimates that about 21% of people in the poorest quintile have to travel more than five kilometers to reach a health center. About six percent of the poorest two quintiles live more than five kilometers from the nearest road (National Poverty Reduction Strategy - NPRS, 2002). This reduces access to health services for the poor and results in lower case detection.

Most affected areas in the country

The most affected provinces in the country, in terms of a higher than average notification, are in the centre of Asiam. The two Northeastern provinces, show extremely low notification in comparison with the national average (252/100,000). The population is mainly rural, living in remote areas with difficulties for transportation, and the health system in those provinces is facing a serious challenge in terms of improved access to health services.

Table 2: Breakdown of notification by provinces in 2006

Province	Population *	Number of notified new cases (all forms)	Notification rate (all forms)	Number of notified (+) cases SS	Notification rate (SS +)
1	535,076	2,333	436	1,274	238
2	1,076,848	3,238	301	2,197	204
3	631,420	1,616	256	1,183	187
4	436,016	1,227	281	786	180
5	144,386	364	252	256	177
6	722,605	1,755	243	1,235	171
7	468,465	1,013	216	750	160
8	885,005	2,719	307	1,397	158
9	888,773	2,859	322	1,401	158
10	610,643	1,380	226	947	155
11	658,756	1,946	295	996	151
12	1,261,297	3,332	264	1,889	150
13	145,046	325	224	202	139
14	1,673,561	3,777	226	2,191	131
15	109,366	183	167	137	125
16	943,007	2,146	228	1,145	121
17	167,658	463	276	196	117
18	127,189	222	175	136	107
19	47,314	116	245	49	104
20	284,945	547	192	286	100
21	33,989	81	238	30	88
22	991,476	1,384	140	626	63
23	120,028	100	83	62	52
24	45,705	38	83	19	42
Nat'l Hospitals		1,465		471	
Nat'l average			252		145
TOTAL	14,080,653	34,660		19,985	

* Provincial population figures as reported by the Provincial Governments

Anti TB drugs regimens

The National TB Program is using the WHO recommended regimens. New cases receive 2HRZE/4RH (Category one). Retreated cases receive 2HRZES/1HRZE/4RHE (Category two).

Category one regimen switched from eight-month to six-month in January 2005. Treatment is provided to TB patients under daily directly observed treatment (DOT) by a health worker

either in a hospital, or on ambulatory basis in TB units and Health Centers. Community DOTS supporters/watchers, trained by Health Centre staff, assist the TB patients with limited access to the Health Centres.

Concerning MDR-TB, the NTP will select the treatment strategy and regimen based upon the definitive results of the second National Drug Resistance Survey, which will be available by the end of September 2007.

Direct smear examinations

Table 2 shows the numbers of smears (new + follow up) and the number of suspects examined per year from 2001-2008.

Table 2

Year	Smears examined	Suspects examined
2001	183,316	53,067
2002	271,101	78,335
2003	361,349	105,617
2004	404,945	116,890
2005	463,246	138,144
2006	458,646	138,516
2007	487,987	147,929
2008	486,568	147,594

Treatment centers

Table 3 shows the number of DOT centers during 2001-2008

Year	DOT centers
2001	268
2002	392
2003	704
2004	841
2005	893
2006	893
2007	1,066
2008	1,066

HIV prevalence in TB patients

Table 4 shows the HIV prevalence in TB patients from 1995-2007

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Year	% Prevalence	Method
1995	2.5	Sentinel surveillance
1996	3.9	Sentinel surveillance
1997	5.2	Sentinel surveillance
1999	7.9	Sentinel surveillance
2000	6.7	Sentinel surveillance
2002	8.4	Sentinel surveillance
2003	11.8	1 st national sampling survey
2005	10	2 nd national sampling survey
2007	7.8	3 rd national sampling survey