

TB/HIV in the South-East Asia Region

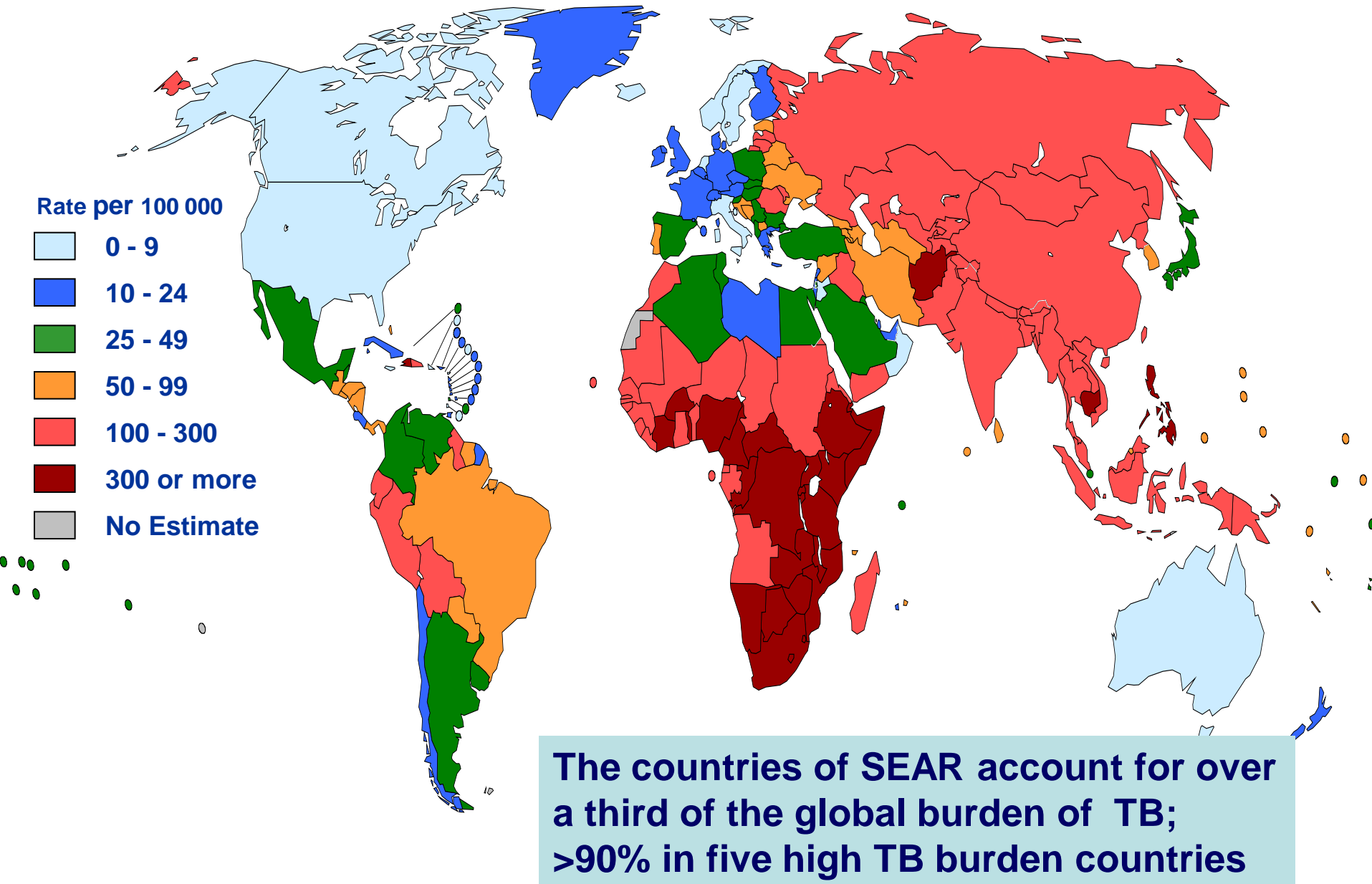
From Mekong to Bali:

The scale up of TB/HIV collaborative activities in the Asia Pacific

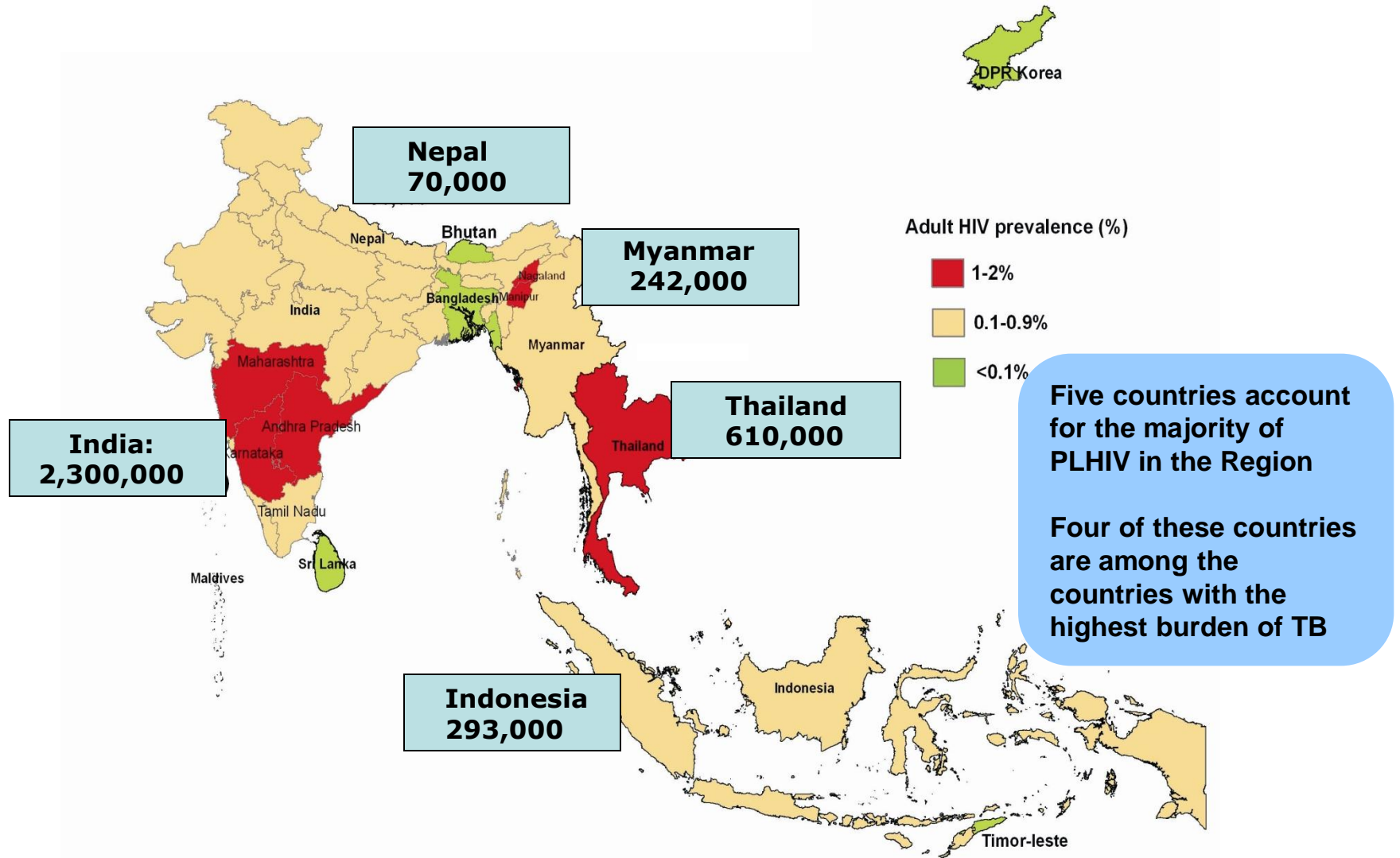
August 8-9, 2009 Bali, Indonesia

Situation

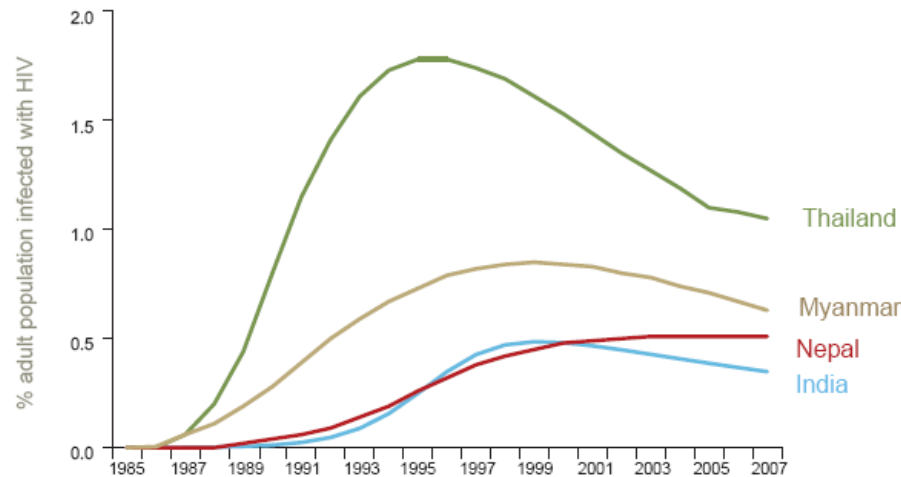
Estimated TB Incidence Rates



HIV Prevalence in the South-East Asia Region: 2008



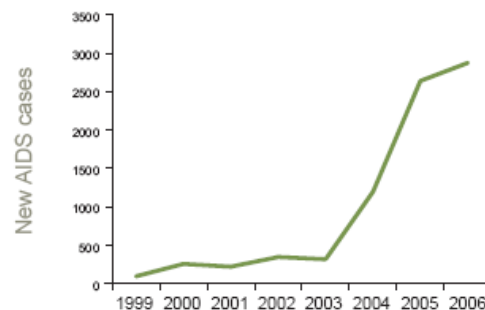
HIV prevalence stable/decreasing in most countries...



Source: The above adult HIV prevalence curves generated by Spectrum, Asia Epidemic model, are based on national surveillance data reported by Ministry of Health, SEAR countries

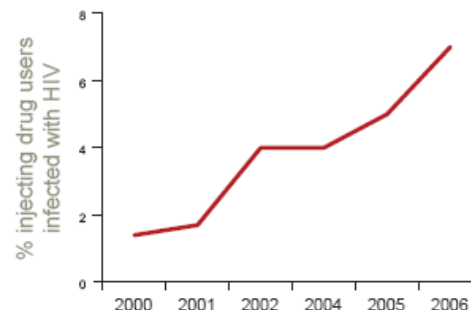
but increasing in others.

Rapid increase in reported AIDS cases, Indonesia



Source: National AIDS Programme, Ministry of Health, Indonesia, 2006

Steady increase in HIV prevalence among injecting drug users, Bangladesh



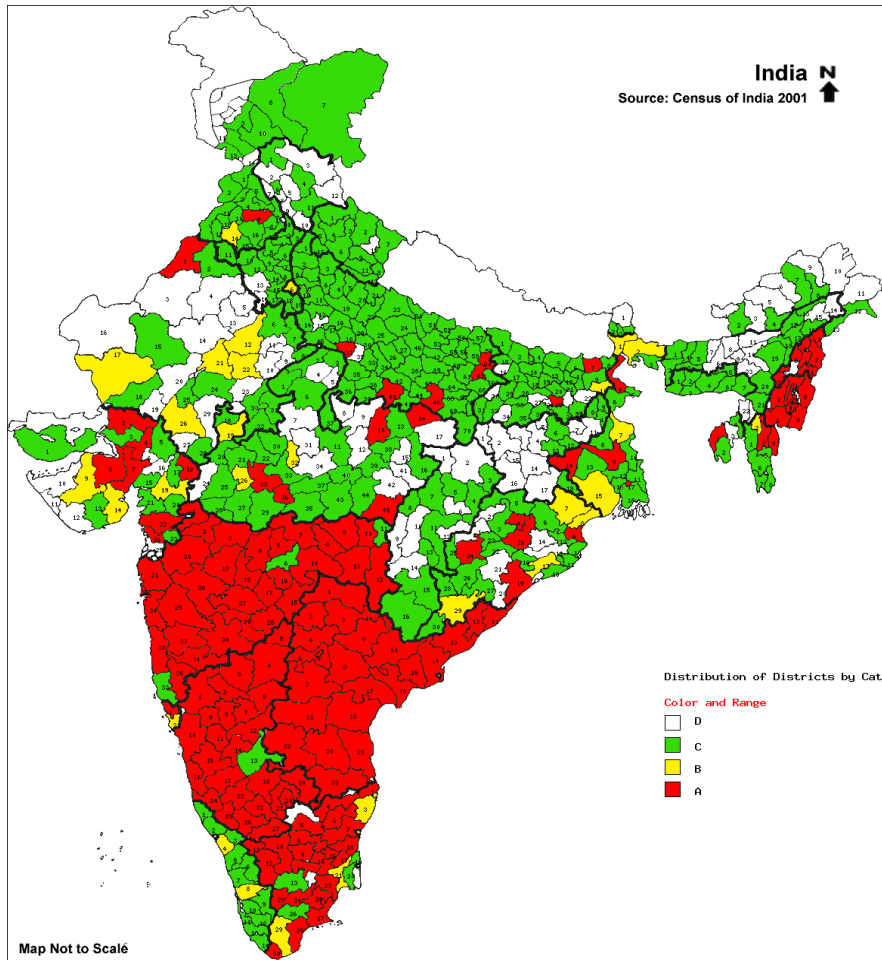
Source: National AIDS Programme, Ministry of Health, Bangladesh, 2006

Indonesia has the fastest growing HIV epidemic in Asia

HIV seroprevalence among TB cases

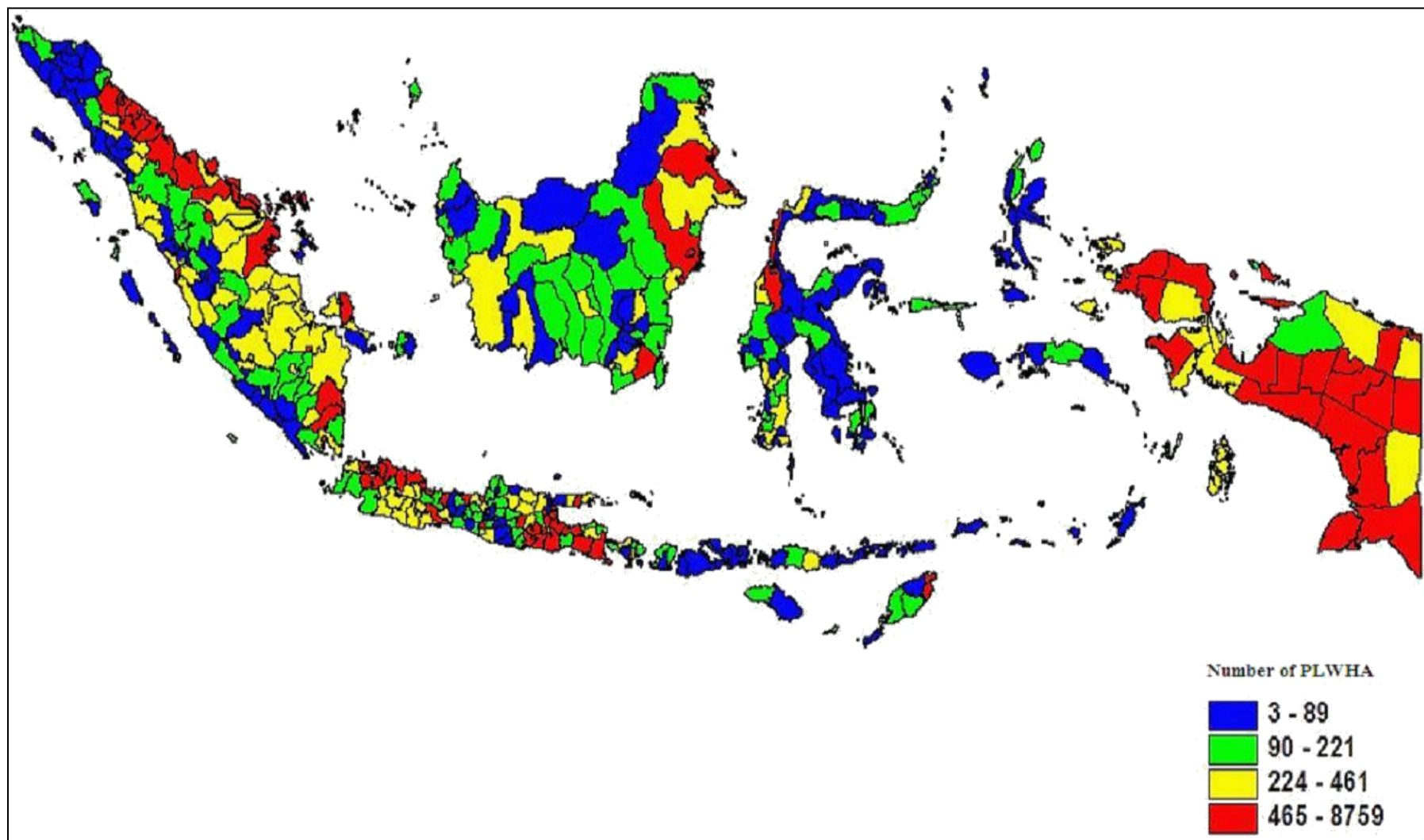
Country	Estimated HIV seroprevalence among incident TB cases	Country	Estimated HIV seroprevalence among incident TB cases
Bangladesh	< 0.05 %	Myanmar	10.9%
Bhutan	Not available	Nepal	2.4%
DPR Korea	Not applicable	Sri Lanka	0.2%
India	~4- 5%	Thailand	13-24%
Indonesia	2% -15% (Papua)	Timor-Leste	<100 cases of HIV reported/yr
Maldives	<5 cases of HIV reported/yr		

PLHIV: Categorization by Districts: India

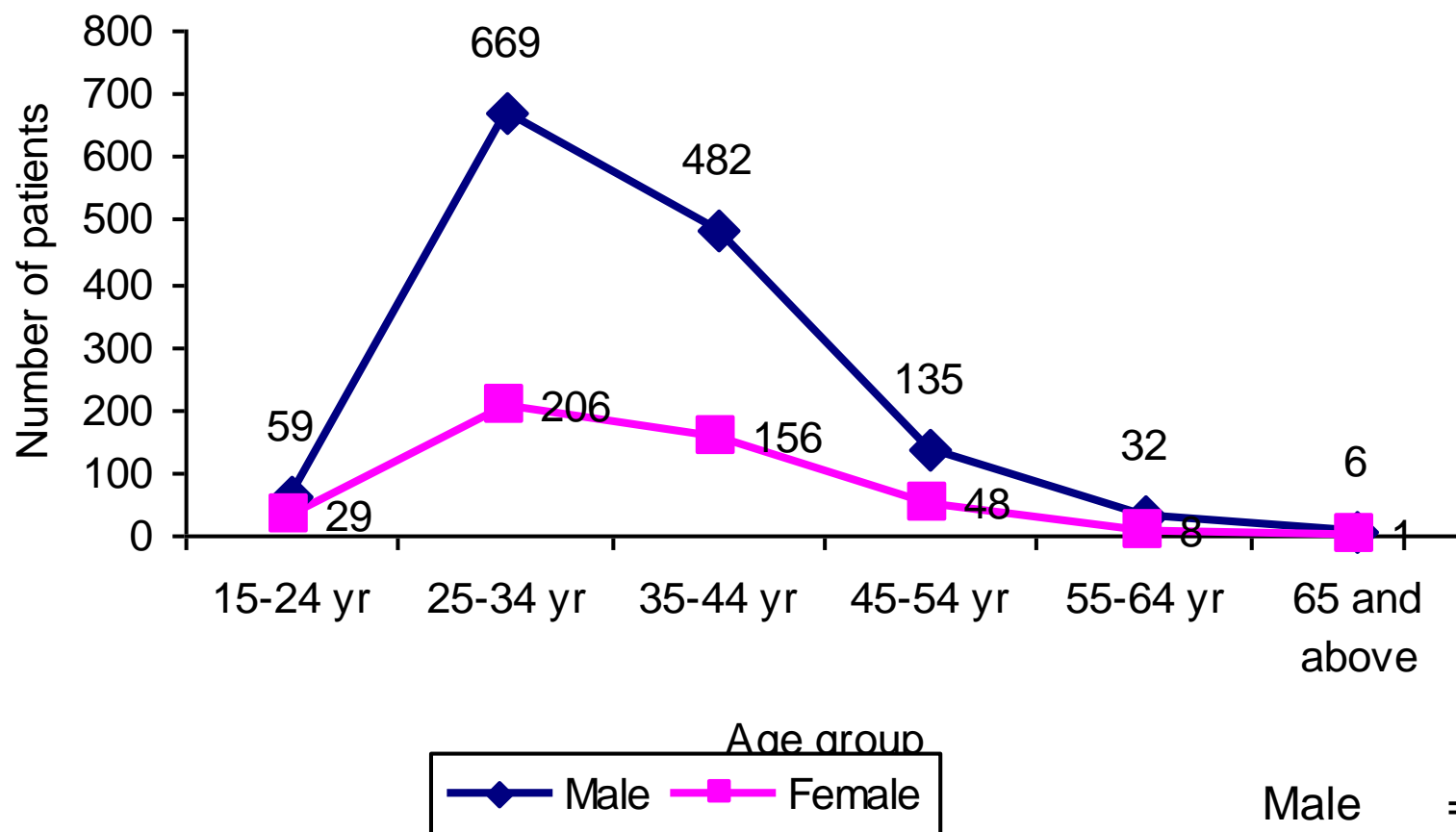


- Districts with HIV prevalence among ANC attendees $>1\%$ at any site in past 3 years
- Districts with HIV prevalence among ANC $<1\%$ and $>5\%$ among HRGs in past 3 years
- Districts with HIV prevalence among ANC $<1\%$ and $<5\%$ among HRGs in past 3 years

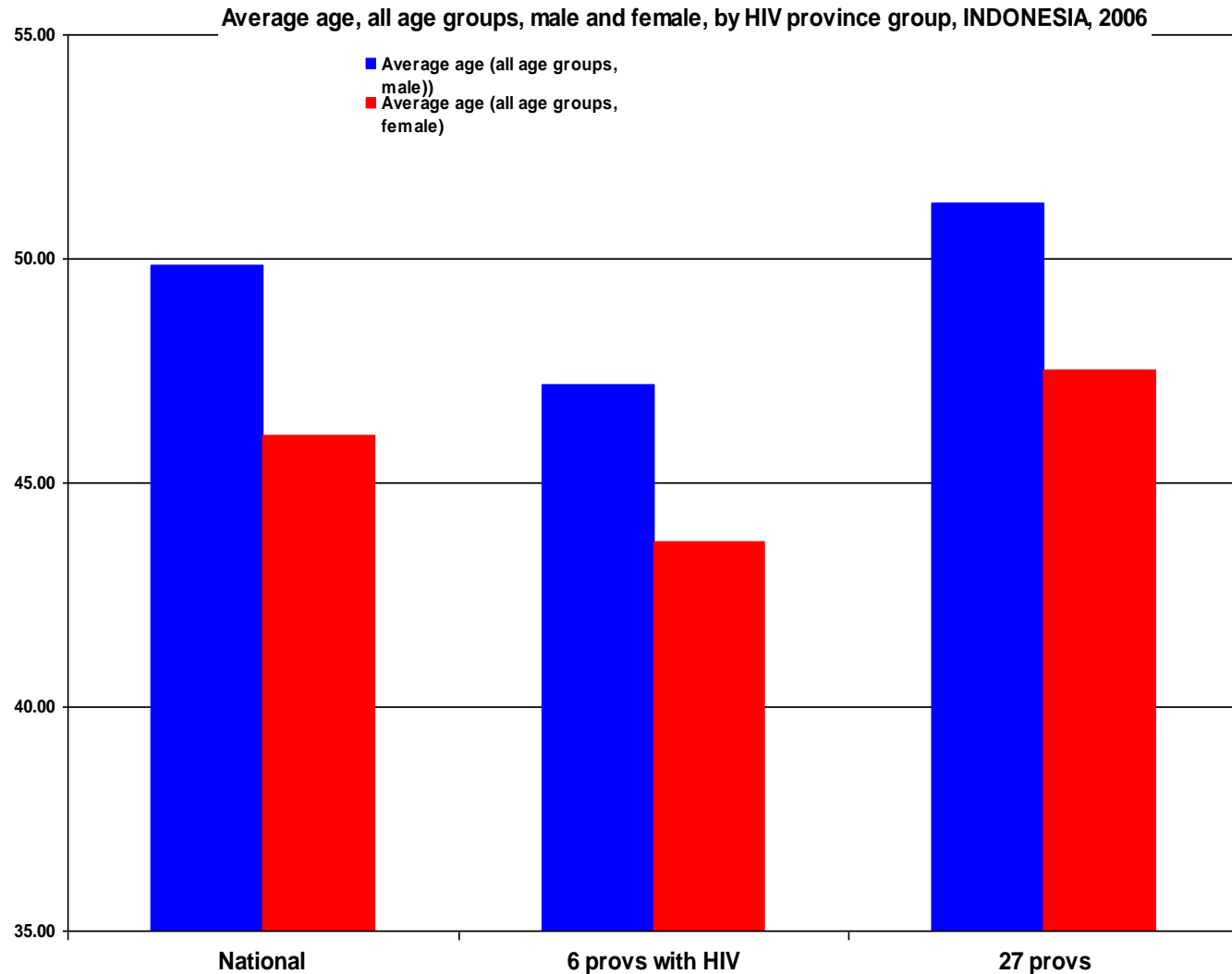
Estimates for PLHIV by district: Indonesia



Age and sex distribution: TB/HIV co-infected patients: Myanmar (2006-2008)



Average age by sex of TB/HIV patients in Indonesia by HIV prevalence in provinces



Progress

WHO Policy on TB/HIV

A. Establish the mechanisms for collaboration

- A.1. Set up a coordinating body for TB/HIV activities effective at all levels
- A.2. Conduct surveillance of HIV prevalence among tuberculosis patients
- A.3. Carry out joint TB/HIV planning
- A.4. Conduct monitoring and evaluation

B. Decrease the burden of tuberculosis in people living with HIV/AIDS

- B.1. Establish intensified tuberculosis case-finding
- B.2. Introduce isoniazid preventive therapy
- B.3. Ensure tuberculosis infection control in health care and congregate settings

3 I's

C. Decrease the burden of HIV in tuberculosis patients

- C.1. Provide HIV testing and counselling
- C.2. Introduce HIV prevention methods
- C.3. Introduce cotrimoxazole preventive therapy
- C.4. Ensure HIV/AIDS care and support
- C.5. Introduce antiretroviral therapy

Strategy for TB-HIV in the SEA Region

+ the “4th I”

“Integrated case management”

+ D. Systems strengthening

- **Establish regular interaction**
- **Resource mobilization**
- **Capacity building**
- **Involve communities, NGOs**

Progress at Country Level

National Coordinating committees: 10/11 countries

Planning and Implementation:

Full package of TB/HIV interventions (barring IPT) now available to over a third of the population in the SEA Region

- Integrated nation-wide implementation: [Thailand, India](#)
 - “Intensified” package of interventions available to 400 million population in 11 states of India
- Scaling up in 3 countries: [Indonesia, Myanmar and Nepal](#)
- Case by case management: [Maldives](#)
- Preparations for collaborative interventions in 5 countries--
[Bangladesh, Bhutan, Sri Lanka, and Timor Leste](#)

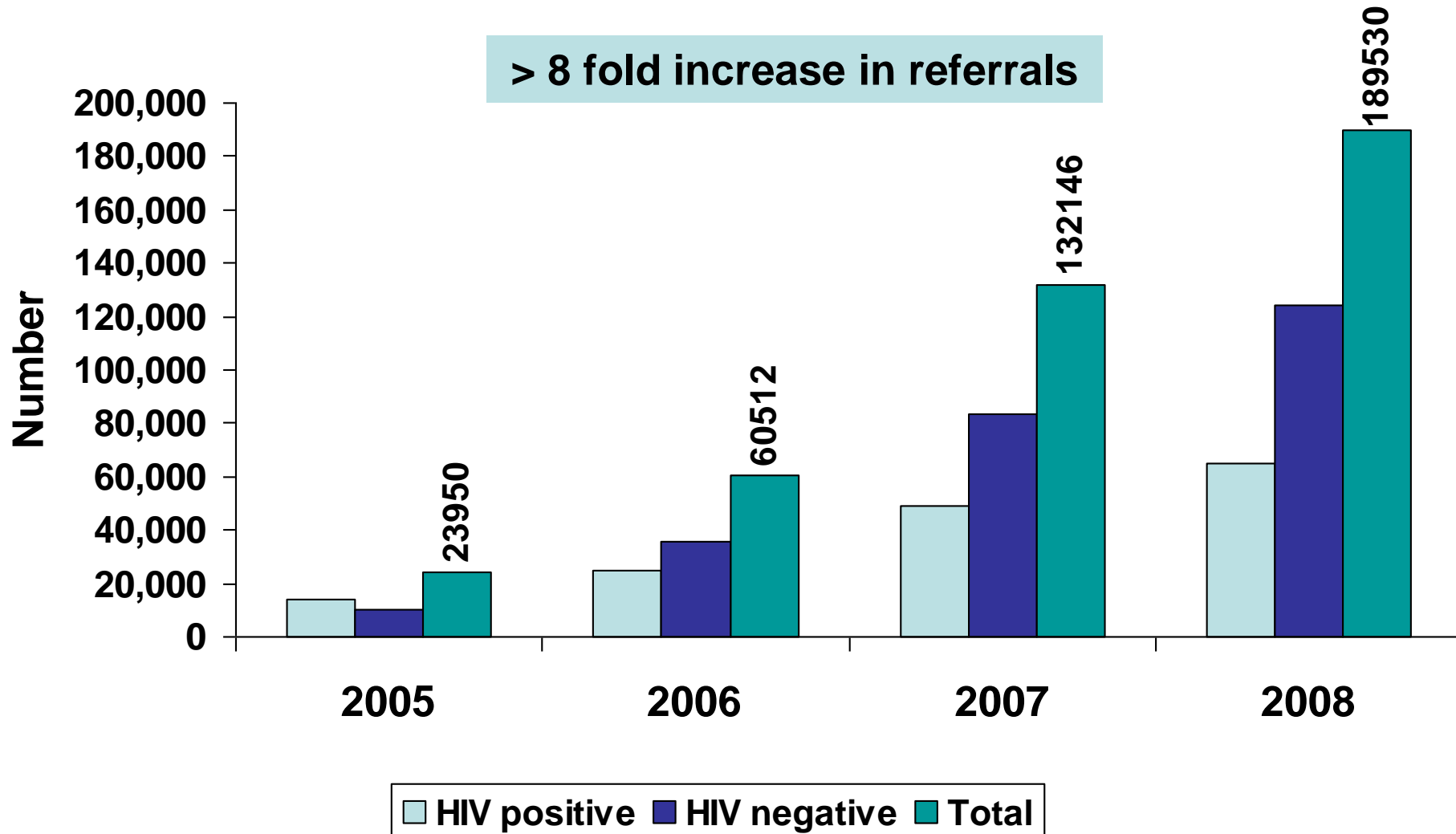
Surveillance, Monitoring and Evaluation

- HIV in TB patients
 - TB R and R formats include data on HIV among TB patients in 8 countries;
 - routine reporting in India, Myanmar, Thailand; others to follow
- TB in PLHIV
 - Much less reported data: better surveillance required in most settings
- Joint Monitoring and Evaluation
 - Needs to be systematically done in most settings

The 3 “I’s”

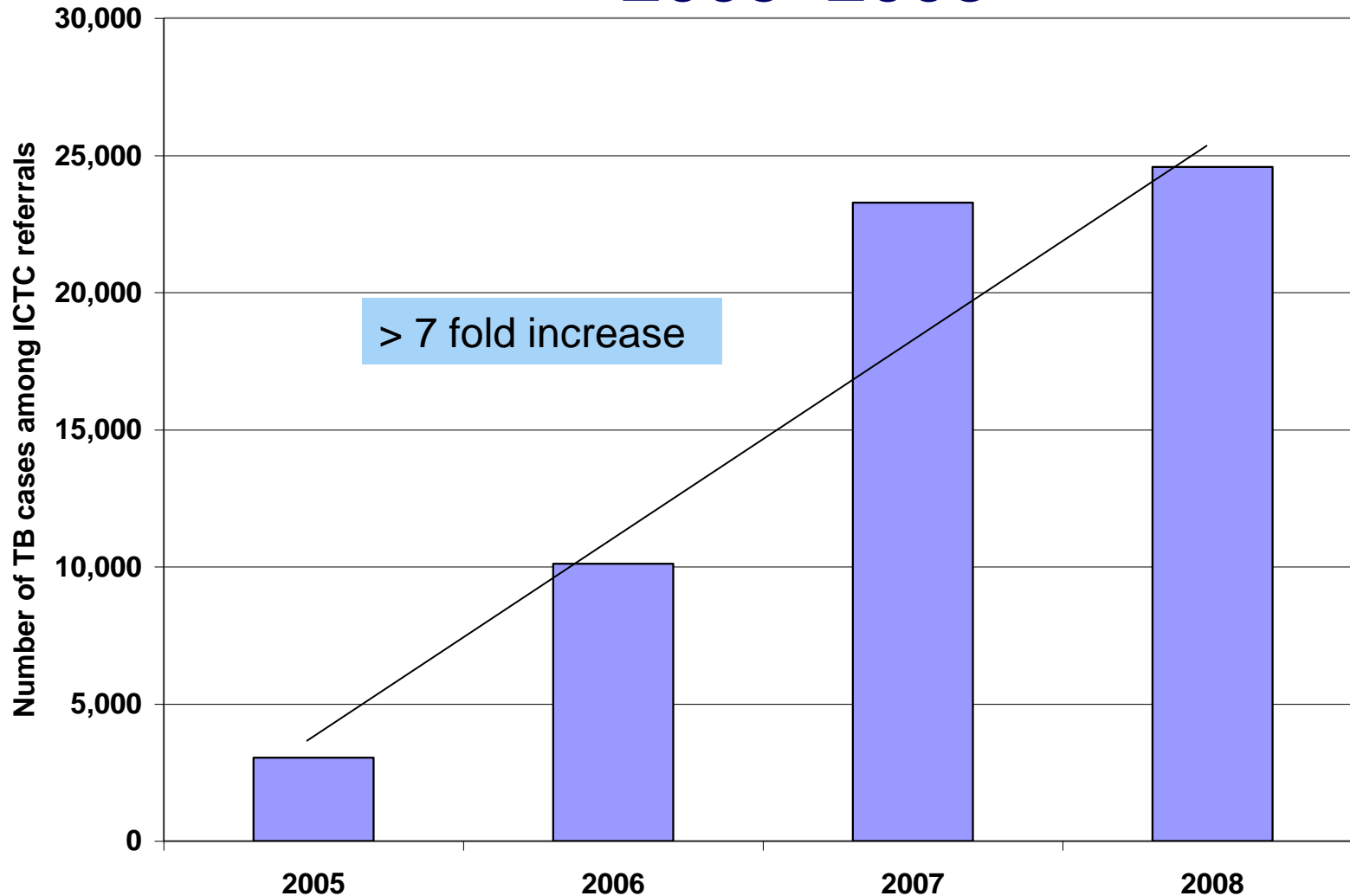
Intensified Case Finding

Intensified Case Finding – Screening for TB at ICTCs India, 2005-2008



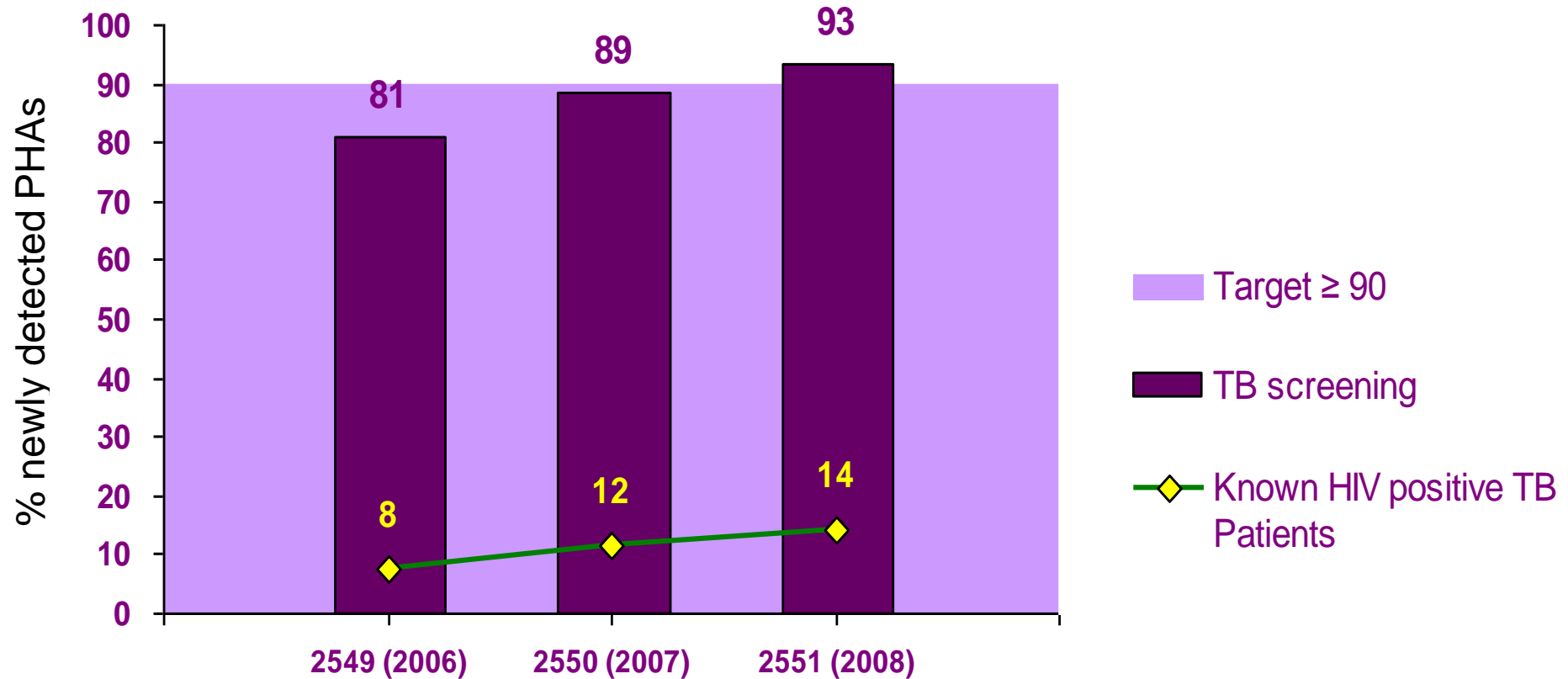
Source: Monthly reports from ICTCs collated and reported by respective State AIDS Control Societies

TB Cases Detected through ICF: India 2005–2008



Source: Monthly reports from ICTCs collated and reported by respective State AIDS Control Societies

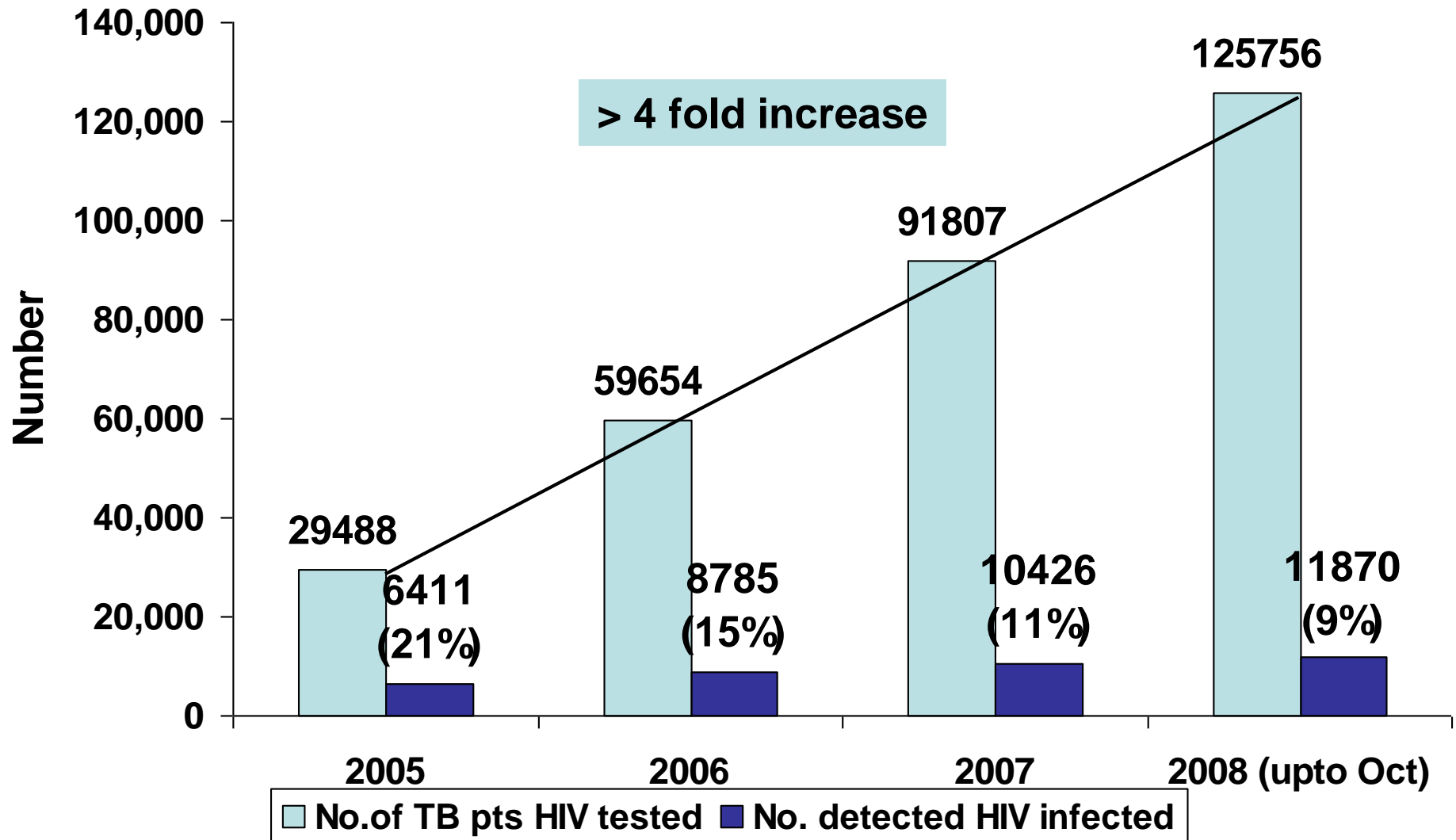
Intensified TB finding among newly detected PLHIV in Thailand, 2006-8



Source: Bureau of Tuberculosis Control, Dept of Disease Control, MopH Thailand, July 2009

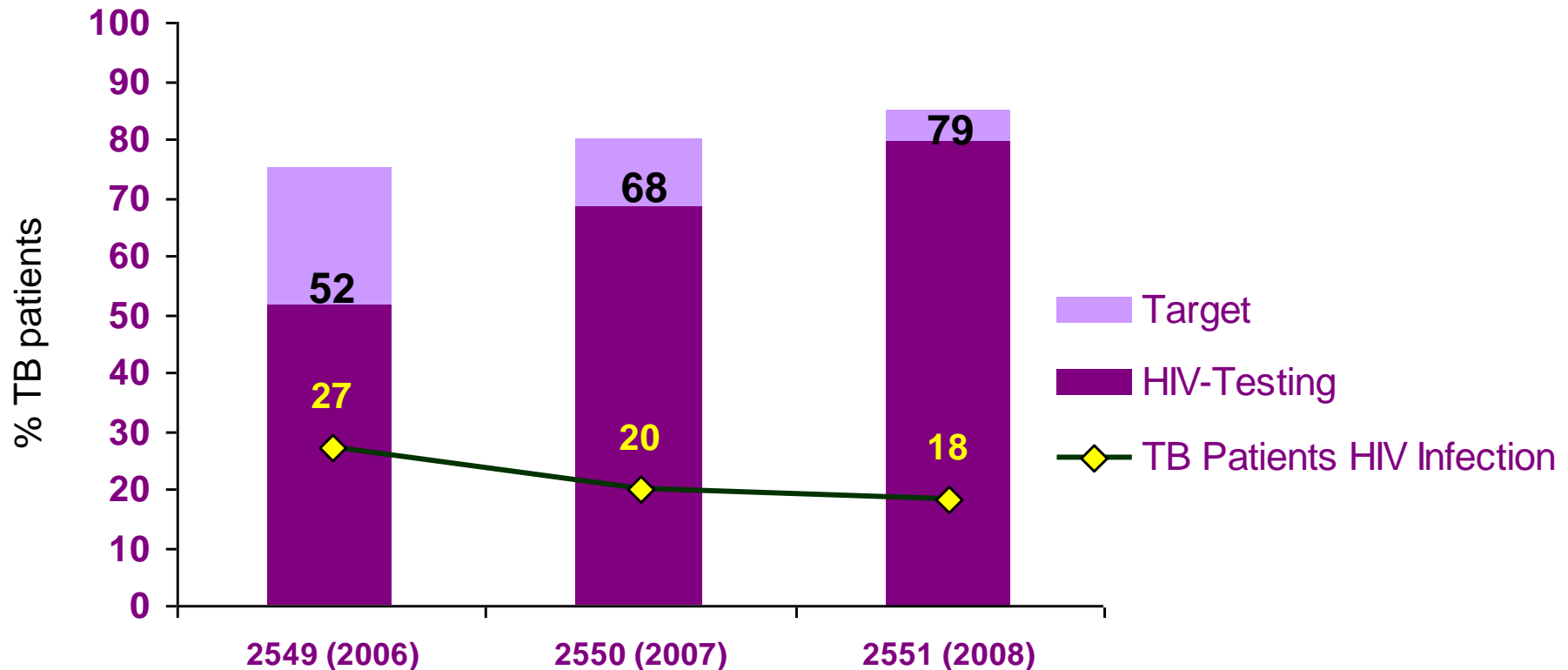
And vice versa

TB patients Newly HIV Tested: India 2005-2008



Source: Monthly reports from ICTCs collated and reported by respective State AIDS Control Societies

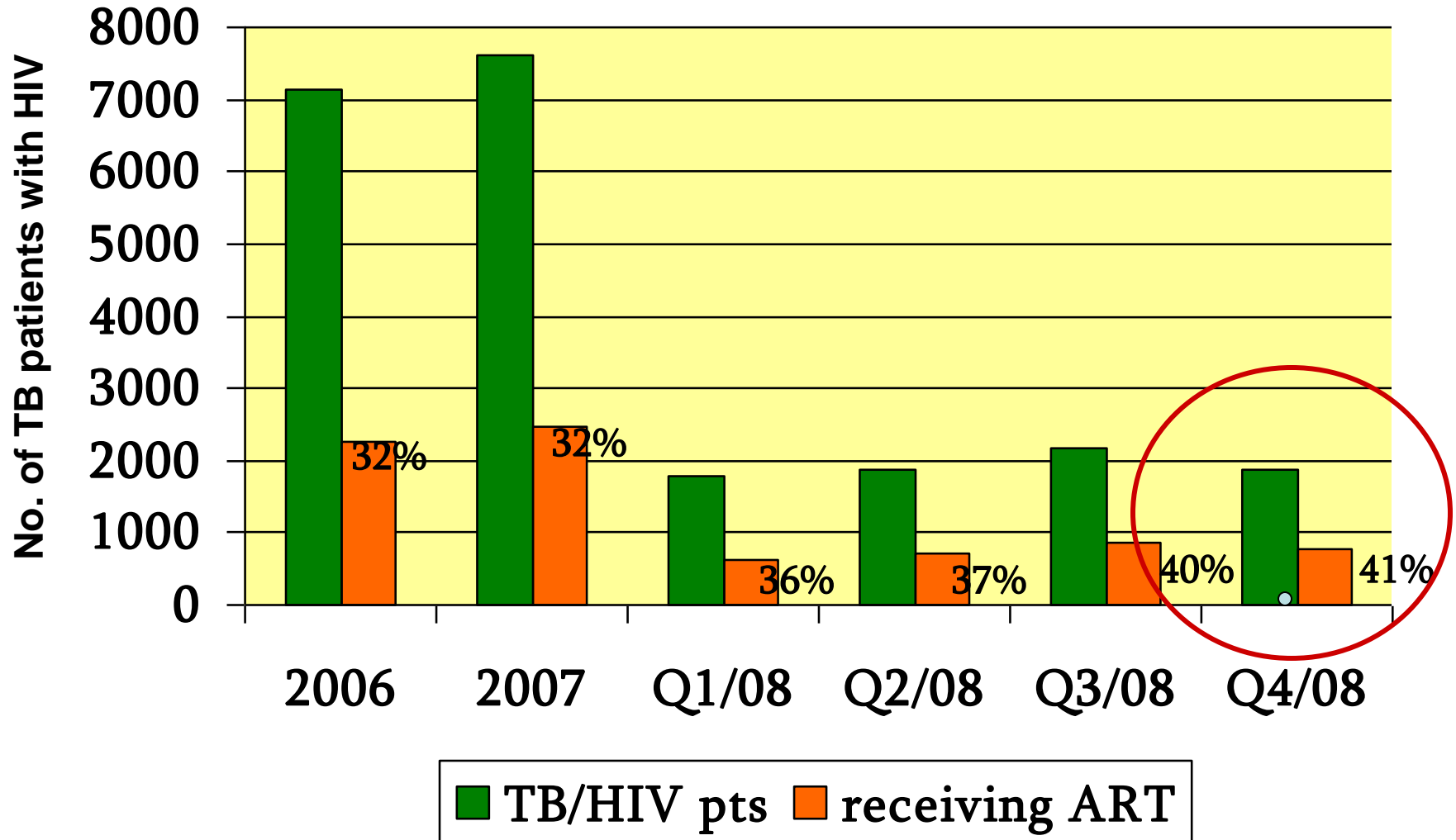
HIV testing among TB patients in Thailand, 2006-8.



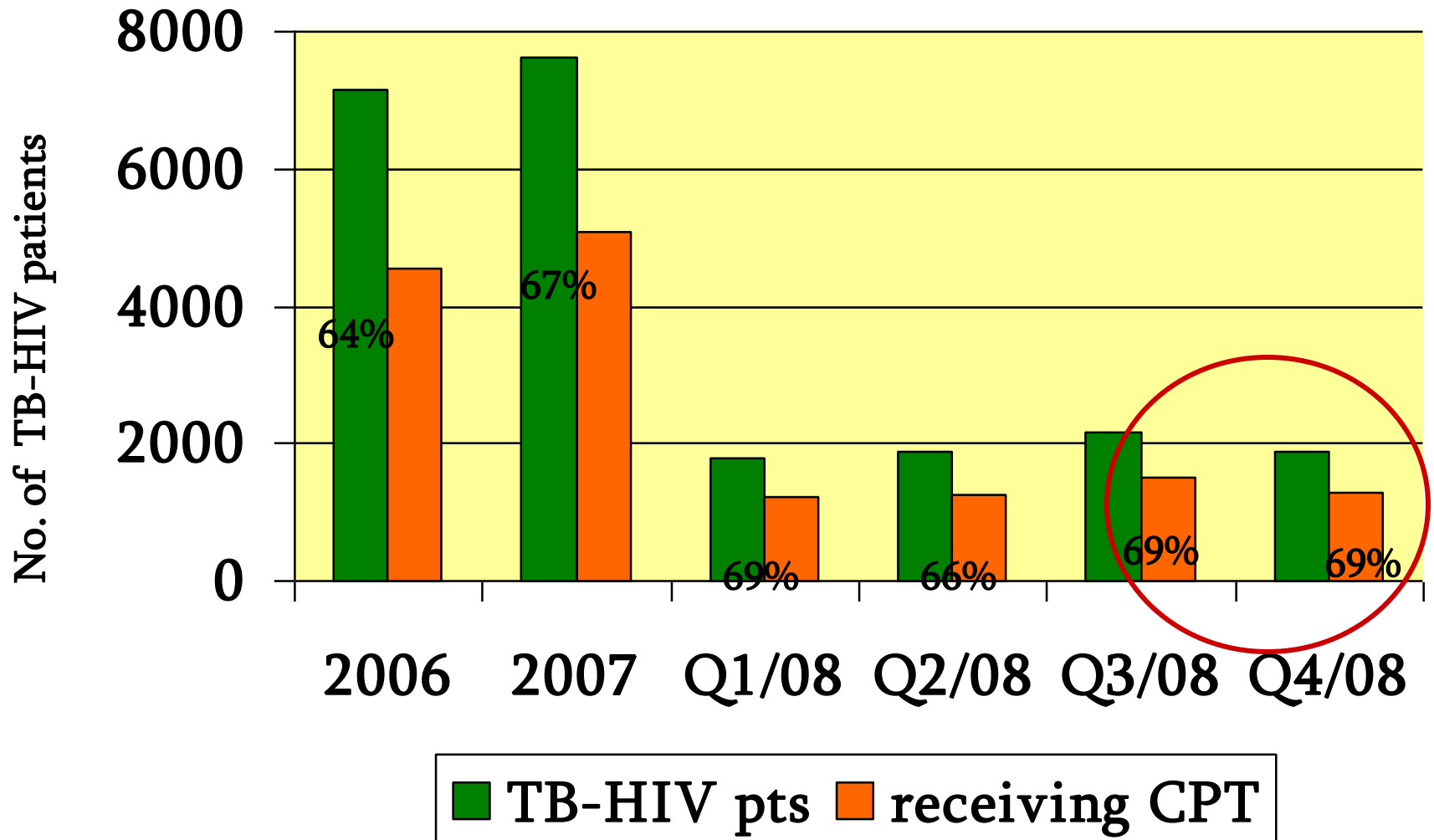
Source: Bureau of Tuberculosis Control, Dept of Disease Control, MopH Thailand, July 2009

Case Management

TB-HIV patients receiving ART during TB treatment: Thailand



TB-HIV patients receiving CPT during TB treatment; Thailand



CD4 counts among TB/HIV Patients: Thailand

Cohort	No. HIV-Infected TB Patients	Died Before CD4 Test Performed	Had CD4 Test Performed	CD4 Count (cells / mm ³)		
				<100	101-250	>250
2 & 3/ 2003	201	24% (48)	50% (101)	68% (69)	19% (19)	13% (13)
2004	349	9.2% (32)	76% (266)	69% (182)	24% (65)	7% (19)
2005	346	4% (14)	69% (237)	70% (165)	19% (45)	11% (27)
2006	341	5% (17)	55% (187)	69% (129)	21% (40)	10% (18)
2007	234	5% (12)	77% (181)	59% (106)	22% (40)	19% (35)

Source: ODPC 7, Ubon Rachatani, Thailand

Treatment outcomes: New smear positive TB patients: Thailand, 2007

	Success	Fail	Died	Default	TO
Total NM+	81.3%	1.7%	8.6%	4.9%	1.6%
TB (HIV+)	72.5%	2%	23.7%	6.2%	2.8%
TB (HIV- , unknown)	82.3%	1.7%	6.8%	4.8%	1.5%

Linking HIV-Infected TB Patients to Cotrimoxazole Prophylaxis and Antiretroviral Treatment in India

Neeraj Raizada¹, Lakbir Singh Chauhan², B. Sai Babu³, Rahul Thakur⁴, Ajay Khera⁵, D. Fraser Wares⁴, Suvanand Sahu⁴, D. Bachani⁵, B. B. Rewari⁵, Puneet K. Dewan^{6*}

“Among HIV-infected TB patients in India death was common despite the availability of free co-trimoxazole locally and ART from referral centres. Death was strongly associated with the absence of ART during TB treatment. To minimize death, programmes should promote high levels of ART uptake and closely monitor progress in implementation.”

(CPT) and antiretroviral treatment (ART) to HIV-infected tuberculosis (TB) patients in India we studied the effectiveness of delivering CPT and ART to HIV-infected TB patients in three districts in Andhra Pradesh, India, and evaluated factors associated with death during TB treatment.

Methods and Results: We prospectively abstracted data for all HIV-infected tuberculosis patients diagnosed from March 2007 through December 2008 using standard treatment outcome definitions. 734 HIV-infected tuberculosis patients were identified; 400 (54%) were females and 569 (80%) were between the ages of 24–44 years. 710 (97%) initiated CPT, and 351 (50%) collected all of their monthly cotrimoxazole pouches provided throughout TB treatment. Access to ART was documented for 351 (51%) patients. Overall 130 (17%) patients died during TB treatment. Patients receiving ART were less likely to die (adjusted hazard ratio [HR] 0.4, 95% confidence interval [CI] 0.3–0.6), while males and those with pulmonary TB were more likely to die (HR 1.7, 95% CI 1.1–2.7, and HR 1.9, 95% CI 1.1–3.2 respectively).

Conclusions: Among HIV-infected TB patients in India death was common despite the availability of free cotrimoxazole locally and ART from referral centres. Death was strongly associated with the absence of ART during TB treatment. To minimize death, programmes should promote high levels of ART uptake and closely monitor progress in implementation.

Citation: Raizada N, Chauhan LS, Babu BS, Thakur R, Khera A, et al. (2009) Linking HIV-Infected TB Patients to Cotrimoxazole Prophylaxis and Antiretroviral Treatment in India. PLoS ONE 4(6): e5999. doi:10.1371/journal.pone.0005999

Summarizing

Most HIV-TB patients are young, males, and do not know their HIV status when diagnosed for TB. 80% of those tested have CD4 counts below 250/cm—less than a fifth receive ART (reported) and nearly a quarter die....

Infection Control

- Infection control measures included in national plans: Bhutan India, Indonesia, Myanmar, Nepal and Thailand
- Introduction of appropriate measures a slow process

Focus on building capacity--

- Bi-regional workshop on air-borne infection with CDC, MOH Thailand and CSR units of SEARO and WPRO held in August 2008
- Training materials on Airborne infection control developed
- In-country technical assistance, national workshops
- Regional workshop on infection control to prevent TB transmission in health facilities – September 2009

Airborne Infection Control (IC)



Health education,
Administrative,
environmental controls,
Triaging...



IPT

Not policy in any country

Being piloted in Myanmar and Thailand

Commonly heard concerns:

- It is difficult to rule out active TB; so we may end up giving monotherapy
- INH resistance is high; IPT could further magnify INH resistance.
- Managing adherence to IPT is too complicated and would be costly
- Not so effective—and IPT efficacy wanes with time

The 4th “I”: Integrated Case Management

Principles:

- TB and HIV programmes benefit from close coordination and integration at service delivery level
- Patients benefit from a single source care for OI management, DOTS, CPT, and ART
- Programme efficiencies: Training, monitoring and evaluation
- The – “Integrated Management of Adult Illness” (IMAI) training package for health staff is an option to move towards this goal

Caveat:

- Decentralized HIV services are critical to achieving integration

“D” Strengthening systems...jointly

- **Establishing regular interaction**
- **Resource mobilization**
- **Capacity building**
- **Involving communities and NGOs**

Issues

Addressing TB/HIV: Fundamental challenge: Service delivery mismatch

Number of Health Institutions						
COUNTRY	TB Rx	TB Dx	HIV testing	ART	% with TB Tx and ART (assuming overlap; Ideal:100%)	Ratio TB Dx : VCT (Ideal : 1)
BANGLADESH	954	954	23	2	0.2%	41.48
BHUTAN	30	30	7	1	3.3%	4.29
DPR KOREA	285	285	34	0		8.38
INDIA	300000	12500	4889	211	<0.01%	2.74
INDONESIA	8000	4855	482	148	1.9%	10.07
MALDIVES	203	35	22	1	0.5%	1.59
MYANMAR	329	324	199	53	16.1%	1.62
NEPAL	4129	429	136	23	0.6%	3.15
SRI LANKA	26	26	26	5	19.2%	1
TIMOR LESTE	74	18	9	2	2.7%	2
THAILAND	847	1023	1014	1014	83.5%	1.01

Addressing TB/HIV: Programmatic issues

- **Systems for cross-referral, linkages between services:**
- **Approaches adopted to provide services,** level of health facilities, involvement of other providers and communities (much to learn from each other)
- **Health systems constraints**
 - **Diagnostics and drugs:** availability HIV test kits, TB cultures, X-rays; difficult in practice to apply recommended algorithms
 - **Personnel:** Not enough trained, skilled and motivated personnel for counseling—fear among Health Workers, stigmatization of patients
- **Infection control measures only now becoming a focus**

Addressing TB/HIV: Other challenges

- Confidentiality??
- Contact tracing in the face of strong social stigma?
- Capacity to look for MDR??
- Continuum of care – regular repeat screening for TB?

TB/HIV : Summary

- Wide variations in HIV prevalence, dynamic patterns across the Region, and within individual countries
- Substantial progress towards integration of TB/HIV activities into both programmes
- Less than 1/5th of PLHIV with active TB were reported in 2008 to have received ART
- Further decentralization of HIV counseling, care and treatment centres will help accelerate integration of TB/HIV services (4 “I’s” at every HIV service deliver point)

TB/HIV : The interim Goals in the SEA Region

To achieve by 2015:

- Equitable access to the full package of interventions for TB/HIV “under one roof” to all population groups in the Region, through integration of service delivery by both programmes and further decentralization

and as a result,

- Reduction in mortality rates among HIV-TB co-affected individuals to under 5%

With many thanks to

**National programme managers and
staff of the 11 countries of the WHO
South-East Asia Region**

and

**Staff from WHO HQ, SEARO and
Country offices**

**who helped with the data and graphs
used in this presentation**