



# SARAWAK STATE HEALTH DEPARTMENT

## EPIDEMIOLOGICAL NEWS

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### What's new for Tuberculosis (TB) in Sarawak?

Tuberculosis has been with us for too long. An epidemic that should belong to the past is still increasing globally. TB is still a leading killer of young adults worldwide which causes more death than any other infectious diseases. World Health Organization (WHO) has classified Malaysia as an intermediate TB burden country (Incidence rate < 25-100/ 100,000 pop).

In Sarawak, tuberculosis is still a public health problem. 1,575 new cases were registered in 2006 giving an incidence rate 68.1/100,000 population. More than half of these cases, 54.6% (860) to be exact, were infectious forms (sputum smear positive). Most of the new TB cases are reported from the urban areas of Kuching, Miri, Sibu and Bintulu. TB cases affects mostly male adults in their most productive years and the elderly, aged more than 55 years. TB-HIV co-infection is a growing threat worldwide and for Sarawak, the number of TB-HIV cases has risen over the past 12 years. In 2006, 12 cases were reported.

### What is ISTC?

The ISTC is an internationally accepted level of care for **all practitioners, public and private**, who engage in managing patients with, or are suspected of having, tuberculosis.

### What is the role of general practioners in the ISTC?

A balanced approach by the general practitioners, emphasizing both patient care, as well as public health responsibilities, is essential to reduce the suffering and economic losses from TB. The private health sector has a large share of first contacts, in keeping with the fact that initial symptoms of TB are virtually indistinguishable from those of other chest symptomatic individuals.

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## What are the Standards ?

The *Standards* addressed 3 categories of activities: **diagnosis, treatment, and public health responsibilities** of all providers.

### *Standards for Diagnosis*

**Standard 1** - All persons with otherwise unexplained productive cough lasting two to three weeks or more should be evaluated for tuberculosis.

**Standard 2** - All patients suspected of having pulmonary tuberculosis should have at least two, preferably, three sputum specimens obtained for microscopic examination, inclusive of at least one early morning specimen if possible.

**Standard 3** - All patients suspected of having extra pulmonary tuberculosis, should have appropriate specimens from the suspected sites of involvement, taken for microbiological evaluation.

**Standard 4** - All persons with chest radiographic findings suggestive of tuberculosis should have sputum specimens submitted for microbiological examination.

**Standard 5** - The diagnosis of sputum smear-negative pulmonary tuberculosis should be based on the following criteria:

- i. At least three negative sputum smears (including at least one early morning specimen)
- ii. Chest radiography findings consistent with tuberculosis
- iii. Lack of response to a trial of broad spectrum antimicrobials agents.

**Standard 6** - The diagnosis of intrathoracic tuberculosis in symptomatic children with negative sputum smears should be based on the following criteria:

- i. Chest radiographic abnormalities consistent with tuberculosis
- ii. Either a history of exposure to an infectious case **OR** evidence of tuberculosis infection (positive tuberculin skin test )

## *Standards for Treatment*

**Standard 7** - Provider is responsible for *prescribing appropriate regimen* and *ensuring adherence* until treatment is completed.

**Standard 8** - All patients who have not been treated previously should receive internationally accepted first-line treatment regimen.

*Initial phase*: Two months of isoniazid, rifampicin, pyrazinamide and ethambutol

*Continuation phase*: Four months of isoniazid and rifampicin.

**Standard 9** - To foster and assess adherence, a patient-centered, individualized approach to treatment should be developed for all patients. For example, the implementation of Directly observed therapy-DOT by a treatment supporter who is acceptable and accountable to the patient and to the health system

**Standard 10** - All patients should be monitored for response to therapy.

In pulmonary tuberculosis, by follow-up sputum microscopy at least at the time of completion of the initial phase of treatment (2 months), at 5 months, and at the end of treatment. In extra pulmonary tuberculosis and in children, clinically.

**Standard 11** - A written record of all medications given, bacteriologic response, and adverse reactions should be maintained for all patients.

**Standard 12** - In a population with a high prevalence of HIV infection and where tuberculosis and HIV infection co-exist, HIV counseling and testing is indicated for all tuberculosis patients as part of their routine management. This is presently practiced in Sarawak, as in the rest of Malaysia.

**Standard 13** - All patients with tuberculosis and HIV infection should be evaluated to determine if antiretroviral therapy is indicated during the course of treatment for tuberculosis. They should also receive co-trimoxazole as prophylaxis for other infections.

**Standard 14** - Patients who fail treatment and chronic cases should always be assessed for possible drug resistance. These tests are performed at the National Public Health Laboratory in Sungai Buloh.

**Standard 15** - Patients with tuberculosis caused by drug-resistant organisms should be treated for at least 18 months with specialized regimens containing second line anti tuberculosis drugs.

### ***Standards for Public Health Responsibilities***

**Standard 16** - All providers should ensure that high risk contacts (children under 5 years of age and persons with HIV infection who have been in contact with an infectious case) are evaluated for both latent infection with *M. tuberculosis* and active tuberculosis.

**Standard 17** - All providers must report both new and re-treatment tuberculosis cases and their treatment outcomes to local public health authorities (the nearest TB clinics in the district hospitals and health clinics).

### **Conclusion**

The Western Pacific Region of the WHO, of which Malaysia is a member, has a regional goal of reducing TB prevalence by 50 % by 2010. *The International Standards for Tuberculosis Care (ISTC)* was launched to sustain high commitment of TB control services, not only in the public sector but also in the private sector.

DISTRICTS	AIDS	Cholera	Dengue Fever	Dengue H. Fever	Dysentery	Food Poisoning	Gonorrhoea	Hand, Foot & Mouth	Leprosy	Malaria	Whooping Cough	Measles	Syphilis, Congenital	Syphilis (All Forms)	Tuberculosis (All forms)	Typhoid & Paratyphoid Fever	Typhus, Scrub	Hepatitis A	Hepatitis B	Hepatitis C	Other Hepatitis	Viral Encephalitis	TOTAL
Lundu	0	0	0	0	0	0	0	29	0	3	0	0	0	0	1	0	0	0	0	0	0	0	33
Bau	0	0	1	0	0	0	0	81	0	0	0	0	0	0	1	0	0	0	0	0	0	0	83
Kuching	0	0	45	0	1	1	4	280	0	6	0	2	0	5	28	0	0	0	2	7	0	0	381
Samarahan	0	0	4	0	0	0	0	11	0	1	0	1	0	0	4	0	0	0	0	0	0	0	21
Serian	0	0	4	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	10
Simunjan	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Sri Aman	0	0	6	0	0	1	0	40	0	1	0	0	0	1	1	0	0	0	0	0	0	0	50
L/ Antu	0	0	0	0	0	0	0	18	0	0	0	0	0	0	5	0	0	0	0	0	0	0	23
Betong	0	0	6	0	0	0	0	6	0	1	0	0	0	0	1	0	0	0	0	0	0	0	14
Saratok	0	0	0	0	0	0	0	24	0	1	0	0	0	1	4	1	0	0	0	0	0	0	31
Sarikei	0	0	8	0	0	0	0	86	0	3	0	0	0	0	4	0	0	0	0	0	0	0	101
Julau/Pakan	0	0	2	0	1	0	0	18	0	1	0	0	0	0	2/3	0	0	0	0	0	0	0	27
Meradong	0	0	2	0	0	0	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	8
Daro	0	0	3	0	0	0	0	9	0	0	0	0	0	0	3	0	0	0	0	0	0	0	15
Sibu/S'gau	0	0	140	0	1	0	0	239	0	7	0	0	0	0	11/0	0	0	0	0	0	0	3	401
Kanowit	0	0	2	0	0	0	4	3	0	1	0	0	0	0	1	1	0	0	0	0	0	0	12
Mukah	0	0	0	0	0	0	1	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Dalat	0	0	5	0	0	0	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	11
Kapit	0	0	2	0	0	0	0	4	0	6	0	0	0	1	4	0	0	0	0	0	0	0	17
Song	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Belaga	0	0	0	0	0	0	0	5	0	3	0	1	0	0	3	0	0	0	0	0	0	0	12
Bintulu	0	0	0	0	1	0	10	38	0	0	0	0	0	7	11	0	0	0	1	0	0	0	68
Tatau	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3
Miri	1	0	5	0	0	0	8	164	0	6	0	7	0	7	23	0	0	0	1	0	0	0	222
Marudi	0	0	4	0	2	0	0	4	0	9	0	0	0	1	9	0	0	0	0	0	0	0	29
Limbang	0	0	4	0	0	0	1	2	0	1	0	7	0	0	3	0	0	0	0	0	0	0	18
Lawas	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	6
<b>TOTAL</b>	<b>1</b>	<b>0</b>	<b>243</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>28</b>	<b>1095</b>	<b>0</b>	<b>55</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>23</b>	<b>136</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1616</b>

ICD CODE	DISEASES	Median 2002-2006	Month Ending		Cumulative Total	
			31/03/2006	31/03/2007	2006(Annual)	2007
B20 - B24	HIV/AIDS (Death)	1	3	1	114/69(1)(20)	5
A57	Chancroid	0	0	0	0	0
A00.9	Cholera	0	0	0	0	0
A90	Dengue Fever	59	246	243	1799	768
A91	Dengue Haemorrhagic Fever	3	3	0	22	6
A36.0-A36.9	Diphtheria	0	0	0	0	0
A06.0,A09	Dysentery All Types	13	13	6	86	24
A05,T61-T62	Food Poisoning	32	7	2	187	201
A54.0-A54.9	Gonococcal Infections(All Forms)	42	37	28	383	124
A54.3	Ophthalmia Neonatorum	0	0	0	0	0
A30.9	Leprosy	1	0	0	16	2
B54	Malaria	124	80	55	1371	201
B05	Measles	14	39	18	182	45
A20	Plague	0	0	0	0	0
A80.9	Poliomyelitis, acute	0	0	0	0	0
A82	Rabies	0	0	0	0	0
A68	Relapsing Fever	0	0	0	0	0
A50	Congenital Syphilis	0	0	0	0	0
A51-A53	Syphilis(All forms)	35	0	23	296	92
A33	Tetanus Neonatorum	0	29	0	2	0
A35	Tetanus (adults)	0	0	0	2	2
A16-A19	Tuberculosis(All forms)	118	158	136	1632	388
A01	Typhoid and Paratyphoid fevers	1	2	2	14	5
A75	Typhus, epidemic	0	0	0	0	0
A75.2	Typhus, flea-borne	0	0	0	8	2
A75.3	Typhus, scrub	0	0	0	0	0
A83,A84,A85,A86	Viral Encephalitis	1	3	3	35	13
B15.0-B15.9	Viral Hepatitis A	0	0	0	2	0
B16.0 - B 16.9	Viral Hepatitis B	12	2	4	34	33
B 18.2	Viral Hepatitis C	2	2	7	5	15
B19.0 - B19.9	Viral Hepatitis (unspecified)	0	0	2	1	2
A37	Whooping cough	0	0	0	8	0
A95	Yellow Fever	0	0	0	0	0

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