

# The TB/HIV Registry

## Surveillance Report on TB/HIV co-infection in Hong Kong (2014)

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## **TB-HIV Registry**

A total of 25 cases with TB-HIV co-infection were reported to the TB-HIV Registry in 2014. The cumulative number of cases reported to the TB-HIV Registry from all sources as in 2014 was 586 (Table 1).

Out of the 25 cases reported to the TB-HIV Registry in 2014, 15 (60.0%) had TB as a primary AIDS-defining illness (Table 2). The proportion of patients with pulmonary TB and a low CD4 count below 200/ $\mu$ L as primary AIDS-defining illness was similar to that with extra-pulmonary TB.

The pre-treatment drug sensitivity pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996-2014 is shown in Table 3. Nineteen patients reported to the TB-HIV Registry had a positive sputum or other specimen culture in 2014. Drug sensitivity result was available in eighteen. 11 (61.1%) had disease due to *Mycobacterium tuberculosis* with favourable sensitivity pattern. Two (11.1%) had bacillary resistance to streptomycin alone. Four (22.2%) had bacillary resistance to isoniazid and/or streptomycin. One patient (5.6%) had bacillary rifampicin mono-resistance. No patient had MDRTB in 2014. Among all the 406 cases reported to TB-HIV Registry with a positive sputum or other specimen culture between 1996 and 2014, 5 (1.2%) had MDRTB. This figure is slightly higher than the MDRTB rate of around 1% in general population. There is no XDR-TB cases detected among the reported TB-HIV cases. DH will continue to monitor prevalence of drug resistance in the context of HIV.

Table 4 shows the characteristics of 25 patients seen at chest clinics and/or SPP in 2014. The characteristics of these patients are similar to those of the 2013 cohort, namely, there are greater proportions of young males and non-Chinese Asians among TB-HIV co-infected patients as compared to non-HIV infected TB patients. CD4 count was generally low (median 63) at time of TB diagnosis. Extra-pulmonary involvement is common, with about two-thirds of patients having TB involving one or more extra-pulmonary sites.

**Table 1. Total number of TB-HIV cases reported to TB-HIV Registry, all sources (1996-2014)\***

Year	Number of TB-HIV cases**
1996	22
1997	19
1998	22
1999	25
2000	24
2001	34
2002	22
2003	28
2004	35
2005	42
2006	50
2007	56
<b>2008</b>	50
2009	38
2010	25
2011	28
2012	20
2013	21
2014	25
<b>Total</b>	<b>586</b>

\* Including cases reported from all sources (chest clinics, SPP, HA hospitals and private centres).

\*\* Some of the figures in the table for the previous years have been updated after (1) taking out some mismatched cases and cases with a revised diagnosis (2) adding some cases which were previously unreported.

**Table 2. TB as primary AIDS-defining illness among 400 cases reported to chest clinics and/or SPP (1996-2014)\***

Year	TB as primary AIDS-defining illness					Total
	Yes			No	Information not available	
	Extra-pulmonary	Pulmonary and TB cervical lymph node with CD4 < 200 µL	Subtotal			
1996	1	7	8	1	0	9
1997	2	3	5	2	0	7
1998	6	3	9	3	0	12
1999	7	6	13	3	0	16
2000	3	4	7	5	0	12
2001	4	6	10	7	0	17
2002	4	9	13	2	0	15
2003	1	10	11	5	0	16
2004	5	7	12	11	0	23
2005	8	14	22	7	0	29
2006	9	19	28	7	0	35
2007	10	17	27	8	2	37
2008	14	13	27	6	0	33
2009	9	3	12	6	5	23
2010	4	10	14	5	3	22
2011	6	8	14	8	6	28
2012	4	9	13	5	2	20
2013	7	10	17	1	3	21
2014	7	8	15	9	1	25
Total	111	166	277	101	22	400

\* Some of the figures in the table for the previous years have been updated. Of all the cases reported to the TB-HIV Registry from 1996 to 2014, 400 cases were seen at chest clinics and/or SPP. The table is compiled basing on data of these 400 cases.

**Table 3. Pre-treatment drug sensitivity pattern among culture positive (sputum and/or other specimens) TB-HIV cases from TB-HIV Registry, all sources (1996-2014)\***

Year	Susceptible to SHRE	Any resistance** (non-MDR/XDR)	MDR	XDR	Total number of culture positive cases
1996	7	1	0	0	8
1997	5	1	0	0	6
1998	13	1	0	0	14
1999	16	4	1	0	21
2000	13	2	0	0	15
2001	23	5	0	0	28
2002	11	3	1	0	15
2003	18	3***	0 (+1)***	0	21
2004	20	6	0	0	26
2005	29	5	0	0	34
2006	32	3	0	0	35
2007	30	7	1	0	38
2008	30	3	0	0	33
2009	22	7	0	0	29
2010	12	2	0	0	14
2011	12	4	0	0	16
2012	13	2	1	0	16
2013	13	5	0	0	18
2014	11	7	0	0	19****
Total	330	71	4 (+1)***	0	406

\* Of all the cases reported to the TB-HIV Registry from 1996 to 2014, 406 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 406 cases.

\*\* Any pattern of drug resistance except MDR (i.e. resistant to at least both H and R) and XDR (i.e. resistance to any fluoroquinolones, and at least one of the injectable drugs, in addition to MDR).

\*\*\* One of these patients had extremely poor treatment adherence, developed acquired resistance during anti-TB treatment and became MDR-TB.

\*\*\*\* Drug sensitivity result unknown in one patient.

**Table 4: Characteristics of 25 TB-HIV cases reported from chest clinics and SPP in 2014**

	Number	Proportion
Age distribution		
0 to 19	0	0.0%
20 to 39	10	40.0%
40 to 59	12	48.0%
60+	3	12.0%
Sex distribution		
Male	21	84.0%
Female	4	16.0%
Ethnicity		
Chinese	13	52.0%
Asians, non-Chinese	10	40.0%
African	2	8.0%
Others	0	0.0%
Case category		
New case	17	68.0%
Relapse	5	20.0%
Treatment after default	3	12.0%
Failure of previous treatment	0	0.0%
Others	0	0.0%
TB as a primary AIDS defining illness*		
Yes	15	62.5%
No	9	37.5%
CD4 count at time of co-infection (median, IQR)**	63 (41- 300) / $\mu$ L	
Anti-retroviral therapy at time of co-infection		
Yes	8	32.0%
No	17	68.0%
Presence of extra-pulmonary TB		
Yes	17	68.0%
No	7	28.0%
Unknown	1	4.0%
Extent of Respiratory TB***		
Minimal	6	37.5%
Moderate	3	18.8%
Extensive	7	43.8%
Sputum bacteriological status (pre-treatment)		
Smear + culture +	8	32.0%
Smear - culture +	6	24.0%
Smear + culture -	1	4.0%
Smear - culture -	5	20.0%
Incomplete/sputum test not performed	5	20.0%
Drug resistance pattern (pre-treatment)****		
Susceptible to SHRE	11	61.1%
Resistant to streptomycin alone	2	11.1%
Resistant to isoniazid alone	3	16.7%
Resistant to streptomycin + isoniazid	1	5.6%
Resistant to rifampicin alone	1	5.6%
MDR	0	0.0%
XDR	0	0.0%

\* Information on TB as primary AIDS-defining illness unknown in one patient.

\*\* Information on CD4 count unknown in 2 patients.

\*\*\* 16 out of 25 cases had lung parenchymal lesion on CXR. Information on CXR finding unknown in one patient.

\*\*\*\* 19 of 25 cases had a positive sputum and/or other specimen culture. Drug sensitivity result unknown in one patient.