

# The TB/HIV Registry

## Surveillance Report on TB/HIV co-infection in Hong Kong (2015)

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## **TB-HIV Registry**

A total of 24 cases with TB-HIV co-infection were reported to the TB-HIV Registry in 2015. The cumulative number of cases reported to the TB-HIV Registry from all sources as in 2015 was 610 (Table 1).

Information on TB as a primary AIDS-defining illness is available in 20 out of 24 cases reported to the TB-HIV Registry in 2015. Of these 20 cases, 12 (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 for 2015.

The pre-treatment drug susceptibility pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996-2015 is shown in Table 3. Twenty patients reported to the TB-HIV Registry had a positive sputum or other specimen culture in 2015. Drug sensitivity result was available in eighteen. 15 (83.3%) had disease due to *Mycobacterium tuberculosis* with favourable susceptibility pattern. One (5.6%) had bacillary resistance to streptomycin and isoniazid. Two patients had MDRTB in 2015. Among all the 426 cases reported to TB-HIV Registry with a positive sputum or other specimen culture between 1996 and 2015, 7 (1.6%) 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 24 patients seen at chest clinics and/or SPP in 2015. The characteristics of these patients are similar to those of the 2014 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 not excessively low (median 147) at time of TB diagnosis. Extra-pulmonary involvement is common, with over half of the 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 (1996-2015)\***

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
2008	50
2009	38
2010	25
2011	28
2012	20
2013	21
2014	25
2015	24
Total	610

\* 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 424 cases reported to chest clinics and/or SPP (1996-2015)\***

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
2015	7	5	12	8	4	24
<b>Total</b>	<b>118</b>	<b>171</b>	<b>289</b>	<b>109</b>	<b>26</b>	<b>424</b>

\* 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 2015, 424 cases were seen at chest clinics and/or SPP. The table is compiled basing on data of these 424 cases.

**Table 3. Pre-treatment drug susceptibility pattern among culture positive (sputum and/or other specimens) TB-HIV cases from TB-HIV Registry, all sources (1996-2015)\***

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****
2015	15	1	1 (+1)*****	0	20****
<b>Total</b>	<b>345</b>	<b>72</b>	<b>5 (+2)</b>	<b>0</b>	<b>426</b>

\* Of all the cases reported to the TB-HIV Registry from 1996 to 2015, 426 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 426 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 in 2014 and two patients in 2015.

\*\*\*\*\*One patient's pre-treatment sputum culture showed MTB with favourable drug susceptibility pattern; sputum culture at 3 month showed MDRTB, which might represent mixed population or acquired drug resistance

**Table 4: Characteristics of 24 TB-HIV cases reported from chest clinics and SPP in 2015**

	Number	Proportion
Age distribution		
0 to 19	0	0.0%
20 to 39	10	41.7%
40 to 59	13	54.2%
60+	1	4.2%
Sex distribution		
Male	21	87.5%
Female	3	12.5%
Ethnicity		
Chinese	16	66.7%
Asians, non-Chinese	7	29.2%
African	1	4.2%
Others	0	0.0%
Case category		
New case	20	83.3%
Relapse	2	8.3%
Treatment after default	1	4.2%
Failure of previous treatment	0	0.0%
Others	1	4.2%
TB as a primary AIDS defining illness*		
Yes	12	60.0%
No	8	40.0%
CD4 count at time of co-infection (median, IQR)**	147 (67.5- 247.5) / $\mu$ L	
Anti-retroviral therapy at time of co-infection***		
Yes	6	27.3%
No	16	72.7%
Presence of extra-pulmonary TB		
Yes	13	54.2%
No	11	45.8%
Extent of Respiratory TB****		
Minimal	7	43.8%
Moderate	4	25.0%
Extensive	5	31.3%
Sputum bacteriological status (pre-treatment)		
Smear + culture +	6	25.0%
Smear - culture +	8	33.3%
Smear + culture -	1	4.2%
Smear - culture -	7	29.2%
Incomplete/sputum test not performed	2	8.3%
Drug resistance pattern *****		
Susceptible to SHRE	15	83.3%
Resistant to streptomycin + isoniazid	1	5.6%
MDR	2	11.1%
XDR	0	0.0%

\* Information on TB as primary AIDS-defining illness unknown in four patients.

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

\*\*\* Information on anti-retroviral therapy at time of diagnosis unknown in two patients

\*\*\*\* Information on pre-treatment CXR finding not available in one patient. Of the remaining 23 patients, 16 had lung parenchyma

\*\*\*\*\* 20 of 24 cases had a positive sputum and/or other specimen culture. Drug sensitivity result unknown in two patients