

The TB/HIV Registry

Surveillance Report on TB/HIV co-infection in Hong Kong (2016)

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TB-HIV Registry

A total of 36 cases with TB-HIV co-infection were reported to the TB-HIV Registry in 2016. The cumulative number of cases reported to the TB-HIV Registry from all sources as in 2016 was 646 (Table 1).

Information on TB as a primary AIDS-defining illness is available in 33 out of 36 cases reported to the TB-HIV Registry in 2016. Of these 33 cases, 16 (48.5%) had TB as a primary AIDS-defining illness (Table 2). The proportion of patients with pulmonary TB and a low CD4 count below 200/ μ L as primary AIDS-defining illness was similar to that with extra-pulmonary TB for 2016.

The pre-treatment drug susceptibility pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996-2016 is shown in Table 3. Thirty patients reported to the TB-HIV Registry had a positive sputum or other specimen culture in 2016. Twenty seven (90.0%) had disease due to *Mycobacterium tuberculosis* with favourable susceptibility pattern. Two patients had (6.7%) had bacillary resistance to isoniazid and 1 patient (3.3%) had bacillary resistance to streptomycin. There was no MDR- or XDR-TB patients among the reported TB-HIV cases in 2016. Among all the 456 cases reported to TB-HIV Registry with a positive sputum or other specimen culture between 1996 and 2016, 7 (1.5%) had MDR-TB. This figure is slightly higher than the MDR-TB rate of around 1% in general population. DH will continue to monitor prevalence of drug resistance in the context of HIV.

Table 4 shows the characteristics of 36 patients seen at chest clinics and/or SPP in 2016. The characteristics of these patients are similar to those of the 2015 cohort, namely, there were 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 relatively low (median 87) at the time of TB diagnosis. Extra-pulmonary involvement was common, with over three-quarter 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 (1996-2016)*

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
2016	36
Total	646

* 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 460 cases reported to chest clinics and/or SPP (1996-2016)*

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
2016	8	8	16	17	3	36
Total	126	179	305	126	29	460

* 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 2016, 460 cases were seen at chest clinics and/or SPP. The table is compiled basing on data of these 460 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 (1996-2016)*

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****
2016	27	3	0	0	30
Total	372	75	5 (+2)	0	456

* Of all the cases reported to the TB-HIV Registry from 1996 to 2016, 456 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 456 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 susceptibility 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 36 TB-HIV cases reported from chest clinics and SPP in 2016

	Number	Proportion
Age distribution		
0 to 19	0	0.0%
20 to 39	12	33.3%
40 to 59	18	50.0%
60+	6	16.7%
Sex distribution		
Male	28	77.8%
Female	8	22.2%
Ethnicity		
Chinese	21	58.3%
Asians, non-Chinese	11	30.6%
African	4	11.1%
Others	0	0.0%
Case category		
New case	33	91.7%
Relapse	2	5.6%
Treatment after default	1	2.8%
Failure of previous treatment	0	0.0%
Others	0	0.0%
TB as a primary AIDS defining illness*		
Yes	16	48.5%
No	17	51.5%
CD4 count at time of co-infection (median, IQR)**	87 (32-299) / μ L	
Anti-retroviral therapy at time of co-infection***		
Yes	11	31.4%
No	24	68.6%
Presence of extra-pulmonary TB		
Yes	28	77.8%
No	8	22.2%
Extent of Respiratory TB****		
Minimal	8	36.4%
Moderate	6	27.3%
Extensive	8	36.4%
Sputum bacteriological status (pre-treatment)		
Smear + culture +	14	38.9%
Smear - culture +	11	30.6%
Smear + culture -	0	0.0%
Smear - culture -	6	16.7%
Incomplete/sputum test not performed	5	13.9%
Drug resistance pattern (pre-treatment)*****		
Susceptible to SHRE	27	90.0%
Resistant to streptomycin alone	1	3.3%
Resistant to isoniazid alone	2	6.7%
Resistant to rifampicin alone	0	0.0%
MDR	0	0.0%
XDR	0	0.0%

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

** Information on CD4 count unknown in three patients.

*** Information on anti-retroviral therapy at time of co-infection unknown in one patient.

**** 22 out of 36 cases had lung parenchymal lesion on CXR.

***** 30 of 36 cases had a positive sputum and/or other specimen culture.