

The TB / HIV Registry

Surveillance Report on TB/HIV co-infection in Hong Kong (2023)

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Table 1 shows the annual number of cases reported to TB-HIV registry from all sources (1996 – 2023). A total of 20 cases with TB-HIV co-infection were reported to the TB-HIV Registry in 2023. Out of these 20 cases, 14 (70%) had TB as a primary AIDS-defining illness (Table 2).

The drug susceptibility pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996 to 2023 is shown in Table 3. Nineteen (95%) out of 20 patients reported to the TB-HIV Registry in 2023 had a positive sputum and/or other specimen culture. Four cases had diseases due to *Mycobacterium tuberculosis* resistant to one or more first-line anti-TB drugs. Among these four cases, one of them had *Mycobacterium tuberculosis* resistant to both isoniazid and rifampicin, i.e. Multidrug-resistant TB (MDR-TB), and none of them was XDR/RR-TB case. There were a total of 587 notifications to TB-HIV Registry with a positive sputum or other specimen culture between 1996 and 2023, 10 (1.7%) of them had MDR-TB. DH will continue to monitor prevalence of drug resistance in the context of HIV.

Table 4 shows the characteristics of 20 patients seen at chest clinics and/or Special Preventive Programme (SPP) in 2023. Majority of them were Chinese men. All of them were new TB cases. Three-quarter of them were found to have tuberculosis disease at the same episode of diagnosing HIV infection so they were not receiving anti-retroviral therapy at the time of TB/HIV co-infection. The median CD4 count was 140.5/ μ L at time of TB diagnosis. Extra-pulmonary involvement (irrespective of lung involvement) is found in about half of the patients.

Table 1: Annual number of TB-HIV cases reported to TB-HIV Registry, all sources from 1996 to 2023 ⁽¹⁾

Year	Number of TB-HIV cases ⁽²⁾
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
2017	31
2018	29
2019	39
2020	18
2021	30
2022	15
2023	20

Notes:

- (1) Including cases reported from all sources (chest clinics, SPP, HA hospitals and private centres).
- (2) Some of the figures in the table for the previous years have been updated after
- (i) taking out some mismatched cases and cases with a revised diagnosis;
 - (ii) adding some cases which were previously unreported.

Table 2: TB as primary AIDS-defining illness reported to chest clinics and/or SPP from 1996 to 2023 ⁽¹⁾

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
2017	8	6	14	12	5	31
2018	5	8	13	11	5	29
2019	13	7	20	19	0	39
2020	3	5	8	9	1	18
2021	10	11	21	7	2	30
2022	4	4	8	6	1	15
2023	7	7	14	6	0	20

Note:

(1) Some of the figures in the table for the previous years have been updated.

Table 3: Drug susceptibility pattern among culture positive (sputum and/or other specimens) TB-HIV cases from TB-HIV Registry, all sources from 1996 to 2023

Year	Susceptible to HRES/HREZ ⁽²⁾	Any resistance (non-MDR/XDR)	MDR	XDR	Drug susceptibility unknown	Total number of culture positive cases ⁽³⁾
1996	7	1	0	0	0	8
1997	5	1	0	0	0	6
1998	13	1	0	0	0	14
1999	16	4	1	0	0	21
2000	13	2	0	0	0	15
2001	23	5	0	0	0	28
2002	11	3	1	0	0	15
2003	18	2	1	0	0	21
2004	20	6	0	0	0	26
2005	29	5	0	0	0	34
2006	32	3	0	0	0	35
2007	30	7	1	0	0	38
2008	30	3	0	0	0	33
2009	22	7	0	0	0	29
2010	12	2	0	0	0	14
2011	12	4	0	0	0	16
2012	13	2	1	0	0	16
2013	13	5	0	0	0	18
2014	11	7	0	0	1	19
2015	14	1	2	0	2	19
2016	27	3	2 ⁽¹⁾	0	0	32
2017	19	2	0 ⁽¹⁾	0	0	21
2018	16	2	0	0	0	18
2019	27	1	0	0	0	28
2020	11	0	0	0	0	11
2021	21	1	0	0	0	22
2022	8	3	0	0	0	11
2023	15 ⁽²⁾	3	1	0	0	19
Total	488	86	10	0	3	587

Note:

- (1) Excluding one case with clinical specimen cultured negative but rpo B mutation detected.
- (2) Routine drug susceptibility test (DST) for first line anti-TB drugs was changed from HRES to HREZ since mid-August 2023. (i.e. DST to streptomycin has been replaced by DST to pyrazinamide)
- (3) Repeated notifications for same cases in different year(s) (e.g. due to treatment after default, relapse, etc) are not excluded

Table 4: Characteristics of 20 TB-HIV cases reported from chest clinics and SPP in 2023

	Number	Proportion
Age distribution		
0 to 19	1	5.0%
20 to 39	3	15.0%
40 to 59	13	65.0%
60+	3	15.0%
Sex distribution		
Male	17	85.0%
Female	3	15.0%
Ethnicity		
Chinese	15	75.0%
Asians, non-Chinese	5	25.0%
African	0	0.0%
Others	0	0.0%
Case category		
New case	20	100.0%
Relapse	0	0.0%
Treatment after default	0	0.0%
Failure of previous treatment	0	0.0%
Others	0	0.0%
Unknown	0	0.0%
TB as a primary AIDS-defining illness		
Yes	14	70.0%
No	6	30.0%
CD4 count at time of co-infection (median, IQR)	140.5 (64.5-318.3)/uL	
Anti-retroviral therapy at time of co-infection		
Yes	4	20.0%
No	16	80.0%
Presence of extra-pulmonary TB (irrespective of lung involvement)		
Yes	9	45.0%
No	11	55.0%
Extent of Respiratory TB N = 18 ⁽¹⁾		
Minimal	12	66.7%
Moderate	3	16.7%
Extensive	3	16.7%
Sputum bacteriological status (pre-treatment)		
Smear + culture +	10	50.0%
Smear - culture +	7	35.0%
Smear + culture -	0	0.0%
Smear - culture -	3	15.0%
Drug resistance pattern (pre-treatment) (based on sputum and/or other specimen culture) N = 19 ⁽¹⁾		
Susceptible to HRES / HREZ ⁽²⁾	15	78.9%
Resistant to streptomycin alone	1	5.3%
Resistant to isoniazid alone	1	5.3%
Resistant to streptomycin and isoniazid	1	5.3%
Resistant to rifampicin alone	0	0.0%
MDR	1	5.3%
XDR	0	0.0%

Note:

- (1) N = number of cases available for analysis, N = 20 if not specified
- (2) Routine drug susceptibility test (DST) for first line anti-TB drugs was changed from HRES to HREZ since mid-August 2023. (i.e. DST to streptomycin has been replaced by DST to pyrazinamide)