ANNUAL REPORT 2017

TUBERCULOSIS & CHEST SERVICE

OF THE

DEPARTMENT OF HEALTH

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PREFACE

Tuberculosis (TB) continues to attract global attention in 2017. Since 2011, TB has been the leading cause of death from a single infectious agent, ranking above HIV/AIDS. In 2017, there were an estimated 1.3 million deaths among HIV-negative people and an additional 300 000 deaths among HIV-positive people, listing TB as the tenth leading cause of death worldwide. An estimated 10.0 million people (9% with HIV) developed TB disease in 2017. An estimated 558 000 people had rifampicin-resistant TB, of which 82% were multidrug-resistant TB (MDR-TB).

Locally, TB is still a prevalent endemic disease. In 2017, the number of TB notifications was 4 250, and the TB notification rate was 57.5 per 100 000 population. The corresponding figures in 2016 were 4 346 and 59.2 per 100 000 population, respectively. In 2017, the number of TB deaths was 184, and the TB mortality rate was 2.5 per 100 000 population. The corresponding figures in 2016 were 160 and 2.2 per 100 000 population. TB stayed outside the top ten causes of death in 2017. TB deaths accounted for 0.4% of the total registered deaths in Hong Kong. The average age of TB deaths was 75.4 years. Although the TB incidence rate has fallen from a historic high of 697.2 per 100 000 population in 1952 to 57.5 per 100 000 population in 2017, and the rate of MDR-TB has been maintained around 1% of all culture-proven TB cases (0.78% in 2017, no extensively drug-resistant TB found), the TB notification rate has declined slowly at 3.7% per year from 1998 to 2017.

To end the global TB epidemic, which is a Sustainable Development Goal for 2030, the World Health Organization (WHO) has advocated the End TB Strategy and set milestones for progressively reducing TB deaths and TB incidence rate by 2020 and 2025 to ultimately reduce TB deaths and TB incidence rate by 90% and 80% respectively in 2030, and 95% and 90% respectively in 2035. By 2035, the target projected TB incidence rate is below 10 per 100 000 population per year. The global TB incidence rate is falling at an average of 1.5% per year during 2000-2017, and the TB mortality rate among HIV-negative people is falling at about 3% per year. To reach the first milestones for 2020 (20% reduction TB incidence rate and 35% reduction in TB deaths in comparison with 2015), the TB incidence rate needs to be falling at 4-5% per year and the case fatality ratio needs to fall to 10%.

The WHO's End TB Strategy was approved by the World Health Assembly in 2014, and adopted by the United Nations in 2015. The End TB Strategy comprises three pillars (integrated patient-centred care and prevention, bold policies and supportive systems, and intensified research and innovation) and four principles (government stewardship and accountability with monitoring and evaluation, strong coalition with civil society

organizations and communities, protection and promotion of human rights, ethics and equity, and adaptation of the strategy and targets at country level with global collaboration).

To adequately address the global public health crisis of TB and MDR-TB, a comprehensive response is required, not only to intensify TB research and innovations in diagnosis, treatment and healthcare systems, but to achieve universal health coverage, address the social and economic determinants of the TB epidemic, and protects and fulfils the human rights and dignity of all people. With a dedicated focus for the first time on the global TB epidemic, a high-level meeting of the General Assembly was held on 26 September 2018 at the United Nations in New York to declare political commitment on the fight against TB. The political declaration of the high-level meeting was adopted by the General Assembly on 10 October 2018. The Secretary-General was requested to implement the political declaration in collaboration with the Director General of the WHO and to provide a progress report in 2020 on global and national progress in accelerating efforts to achieve agreed TB goals within the context of achieving the 2030 Agenda for Sustainable Development. The progress report will serve to inform preparations for a comprehensive review at a high-level meeting by the General Assembly in 2023.

Before the global epidemic may be effectively tackled with more effective TB vaccines, TB control still relies on effective case finding, rapid diagnosis of both TB and drug resistance using molecular methods, and timely initiation of effective TB treatment. Timely initiation of effective TB treatment and directly observed treatment in an ambulatory outpatient setting remain the cornerstones of TB control in Hong Kong, which have been strengthened by routine use of molecular tests (Xpert MTB/RIF followed by line probe assays) for rapid detection of drug resistance among sputum smear-positive cases and selected smear-negative cases.

In 2018, WHO published rapid communications regarding new recommendations on drug-resistant TB treatment, advocated the use of moxifloxacin/levofloxacin, linezolid and bedaquiline alongside clofazimine and cycloserine/terizidone in all MDR-TB patients, discouraged use of second-line injectable agents owing to substantial ototoxicity, advised against use of kanamycin and capreomycin owing to possibly worse treatment outcomes, and discussed precautions regarding use of the shorter MDR-TB treatment regimen (moxifloxacin, clofazimine, ethambutol and pyrazinamamide for 9-12 months supplemented by amikacin, high-dose isoniazid and prothionamide in the first 4-6 months). In Hong Kong, the treatment success rates for fluoroquinolone-susceptible MDR-TB using fluoroquinolone-based MDR-TB treatment regimens have been high. We have successfully treated fluoroquinolone-resistant MDR-TB with linezolid-containing regimens alongside

high-dose levofloxacin and high-dose isoniazid or prothionamide (with or without delamanid), seldom used bedaquiline, and never used the WHO-recommended shorter MDR-TB treatment regimen. We have not observed substantial ototoxicity or possibly worse treatment outcome owing to use of second-line injectable agents including kanamycin (probably related to use for 5 days per week initially and 3 days per week after first 1-2 months). Clofazimine is increasingly being included in the MDR-TB regimen. To strike a balance between treatment benefits and toxicity, it may be prudent to selectively follow WHO guidelines regarding use of linezolid and bedaquiline mainly in the treatment of fluoroquinolone-resistant MDR-TB, and systematically evaluate local cohort data before deciding the role of linezolid and bedaquiline for MDR-TB treatment in the local scenario.

Reactivation of TB may account for the persistence of TB in low-incidence countries and the stagnated decline in TB notification rates in places with intermediate TB burden including Hong Kong. Given the high TB incidence among the elderly, it may be possible to accelerate global decline of TB incidence by treating latent TB infection among elderly subjects in TB intermediate-incidence places. However, targeted screening of elderly for latent TB infection likely requires careful formulation and close monitoring for possible treatment adverse events, notably hepatotoxicity. A recent study has demonstrated poor tolerance among older (50-70 years of age) Chinese patients for the rifapentine-containing short-course regimen used for treating latent TB infection. By consideration of the benefit-risk ratio of latent TB infection treatment, it may also be ethically and practically difficult to treat latent TB infection in vulnerable social subgroups such as prisoners, homeless, migrant workers from TB high-incidence places. Meanwhile, we are continuing targeted screening of four main high-risk groups: household contacts of sputum smear-positive TB patients, patients with silicosis, people living with HIV, and patients initiating anti-TNF treatment.

The management of TB comorbidity is important. Diabetes mellitus has been the most common TB comorbidity in Hong Kong. Smoking is common among TB patients. We have routinely screened TB patients for diabetes mellitus and HIV, and promoted smoking cessation. While HIV is the single strongest risk factor for developing TB disease after infection, the prevalence of HIV co-infection among TB patients has fortunately been low below 1% (0.9% in 2017). HIV testing has been done among TB patients attending the Government TB and Chest Service on a voluntary basis after counselling and obtaining consent. Unlinked anonymous screening (UAS) has been stopped.

In the management of uncooperative patients with substantial public health hazards, we have more liberally enforced medical examination or isolation with reference to the Prevention and Control of Disease Ordinance after exhausting the use of non-coercive

measures such as counselling, education and psychosocial support.

In the management of TB among imported workers that are lost to follow up owing to return to home countries, we have routinely notified TB to other jurisdictions when the risk of defaulting TB treatment may be high or the patient has MDR-TB.

Neonatal BCG is routinely given in Hong Kong as part of a comprehensive TB control program. In 2017, over 99% of the newborns were given direct BCG vaccination at birth. The BCG revaccination programme for primary school children has been stopped since the school year starting from September 2000.

It is important to improve public awareness of TB as the majority of TB cases in Hong Kong are detected through passive case finding. This has been done mainly through health talks, Announcement in the Public Interest (API) on television and radio, interviews in mass media, newspaper columns, and exhibition and educational activities around the World TB Day that are organized in collaboration with the Hong Kong Tuberculosis, Chest and Heart Diseases Association and the Hospital Authority. World TB Day 2018 opening ceremony was held on 24 Mar 2018 in Plaza Hollywood, Diamond Hill, Kowloon.

We have been collaborating with other health authorities and academics in our fight against TB. Through collaboration with the Tuberculosis Trial Consortium (TBTC), we participated in a large phase 3 multicenter open-label randomized controlled treatment-shortening trial of high-dose rifapentine-containing TB treatment regimens. We are also enhancing our collaboration network with health authorities in the Guangdong-Hong Kong-Macao Greater Bay Area.

Part 1: Tuberculosis and Chest Service (TB&CS)

Approximately 80% of notified TB cases are managed in the Government TB&CS. In 2017, a total of 82 304 persons (including 19 715 new patients) attended TB&CS and the total attendance was 669 503. The corresponding figures in 2016 were 81 813 and 685 305. The diagnoses among new patients included active pulmonary TB (10.0%), active TB of other forms (4.3%), inactive TB (2.7%), bronchitis not specified as acute or chronic (6.9%), acute respiratory infection (3.8%), malignant neoplasm of trachea and bronchus (0.6%), bronchiectasis (1.5%), and asthma (0.3%). A total of 2 459 hospital admissions were arranged.

Part 2: Pneumoconiosis

The Pneumoconiosis Clinic (the Clinic) continued to provide a full range of outpatient services to patients with suspected or confirmed pneumoconiosis and mesothelioma. Apart from supporting the operation of Pneumoconiosis Medical Board (the Board) in assessment aspect under the Pneumoconiosis and Mesothelioma (Compensation) Ordinance (the Ordinance), the Clinic also provides services addressing the patients' diversified needs in terms of treatment, prevention and rehabilitation. The attendance at the clinic was 5 416 in 2017 compared with 5 149 in 2016. In 2017, 138 cases with suspected pneumoconiosis or mesothelioma were examined by the Board under the Ordinance, and 72 new cases (54 cases of silicosis, 2 cases of asbestos-related lung disease and 16 cases of mesothelioma) were confirmed by the Board. Up to the end of 2017, a total of 5 022 patients had been confirmed by the Board as having pneumoconiosis and/or mesothelioma under the Ordinance with the date of diagnosis on or after 1 January 1981.

Publications

1. Chang KC, Yew WW, Zhang Y. Pyrazinamide Is a Two-Edged Sword: Do WHO Guidelines Matter? Antimicrob Agents Chemother 2017;62(1). pii:e01907-17.

2. Li J, Nishikiori N, Leung CC, Yeoh E, Chung P. Is population ageing cancelling out progress made in tuberculosis control in Hong Kong Special Administrative Region SAR (China)? Age-adjusted analysis of case notification data, 1990-2015. Western Pac Surveill Response J 2017;8:33-36.

3. Dheda K, Gumbo T, Maartens G, Dooley KE, McNerney R, Murray M, Furin J, Nardell EA, London L, Lessem E, Theron G, van Helden P, Niemann S, Merker M, Dowdy D, Van Rie A, Siu GK, Pasipanodya JG, Rodrigues C, Clark TG, Sirgel FA, Esmail A, Lin HH, Atre SR, Schaaf HS, Chang KC, Lange C, Nahid P, Udwadia ZF, Horsburgh CR Jr, Churchyard GJ, Menzies D, Hesseling AC, Nuermberger E, McIlleron H, Fennelly KP, Goemaere E, Jaramillo E, Low M, Jara CM, Padayatchi N, Warren RM. The epidemiology, pathogenesis, transmission, diagnosis, and management of multidrug-resistant, extensively drug-resistant, and incurable tuberculosis. Lancet Respir Med 2017 Mar 15. pii: S2213-2600(17)30079-6.

4. Leung CC, Yew WW, Mok TYW, Lau KS, Wong CF, Chau CH, Chan CK, Chang KC, Tam G, Tam CM. Effects of diabetes mellitus on the clinical presentation and treatment response in tuberculosis. Respirology 2017;22:1225-1232.

5. Yew WW, Leung CC, Zhang Y. Oxidative stress and TB outcomes in patients with diabetes mellitus? J Antimicrob Chemother 2017;72:1552-1555.

6. Dheda K, Chang KC, Guglielmetti L, Furin J, Schaaf HS, Chesov D, Esmail A, Lange C. Clinical management of adults and children with multidrug-resistant and extensively drug-resistant tuberculosis. Clin Microbiol Infect 2017;23:131-140.

Addendum

In an effort to make the report more concise, the annexes in Part 3 have been revamped since the Annual Report for 2016 was published in 2018. Basically, data on cohort analysis (corresponding to Annexes 1(a) to 1(g) in the previous reports) have been omitted. Similarly, data on HBsAg sero-prevalence survey among TB patients seen at chest clinics (corresponding to Annex 5 in the previous reports) have also been omitted. The results of these analyses will be published on an ad hoc basis in future reports.

In the preface, we have excluded events that occurred after 31 Dec 2018.

Starting from the current report, a brief history of compensation for Pneumoconiosis and malignant mesothelioma in Hong Kong is provided here for reference.

The Pneumoconiosis (Compensation) Ordinance (the Ordinance) was first introduced in 1980 for compensation of workers who acquired pneumoconiosis as a result of occupational exposure to silica and asbestos dusts with the date of diagnosis on or after 1 January 1981. This compensation scheme is funded by a levy which is imposed in respect of construction and quarry operations in Hong Kong. Compensation was paid out in the form of a lump sum according to the assessed degree of incapacity and the expected degree of further deterioration. On the other hand, eligible patients having pneumoconiosis with the date of diagnosis before the enactment of this ordinance who were alive as at 31 December 1980 are eligible for a government funded ex-gratia compensation scheme. The Ordinance was amended in 1993 to replace the lump sum payment with monthly payment payable to patients until their death. Reassessment at 2-yearly interval was also introduced at the same time to update the degree of incapacity for adjustment of the monthly compensation. Previously compensated post-1981 pneumoconiotics could apply for reassessment for compensation for additional incapacity. Further amendments were made in 1996. A flat-rate compensation for pain, suffering, and loss of amenities was payable to all post-1981 pneumoconiotics who had joined the revised scheme in 1993 or afterwards, irrespective of whether there was additional degree of incapacity over previous lump-sum compensation. The 1996 amendment also allowed the Pneumoconiosis Medical Board (the Board) to take other tests (FEV1 and adjusted DLCO) into consideration in adjusting the degree of incapacity (as determined by FVC) by a maximum of 5%. The ex-gratia payment scheme for pre-1981 pneumoconiotics was also reviewed. On top of a flat-rate of monthly payment, additional payments were introduced for those in need of constant care, oxygen and medical appliances. In 2008, the Pneumoconiosis (Compensation) Ordinance was amended to cover compensation for mesothelioma patients when it became the Pneumoconiosis and Mesothelioma (Compensation) Ordinance.

A new set of reference values for spirometry were published for the local population in 2006. A calibration study was subsequently performed in the Pneumoconiosis Clinic, comparing the new reference values with those published in 1982 among normal construction and quarry workers as well as silicosis patients. The new set of reference values was shown to reflect the lung function status of normal heavy manual workers better than the older set. Because of such findings, the new set of reference values has been adopted for compensation assessment since 2009.

Part 1

TUBERCULOSIS

Part 1 - Tuberculosis Contents

APPENDIX 1

TB Notifications & Death Rate of Tuberculosis (All Forms)
1947 - 2017

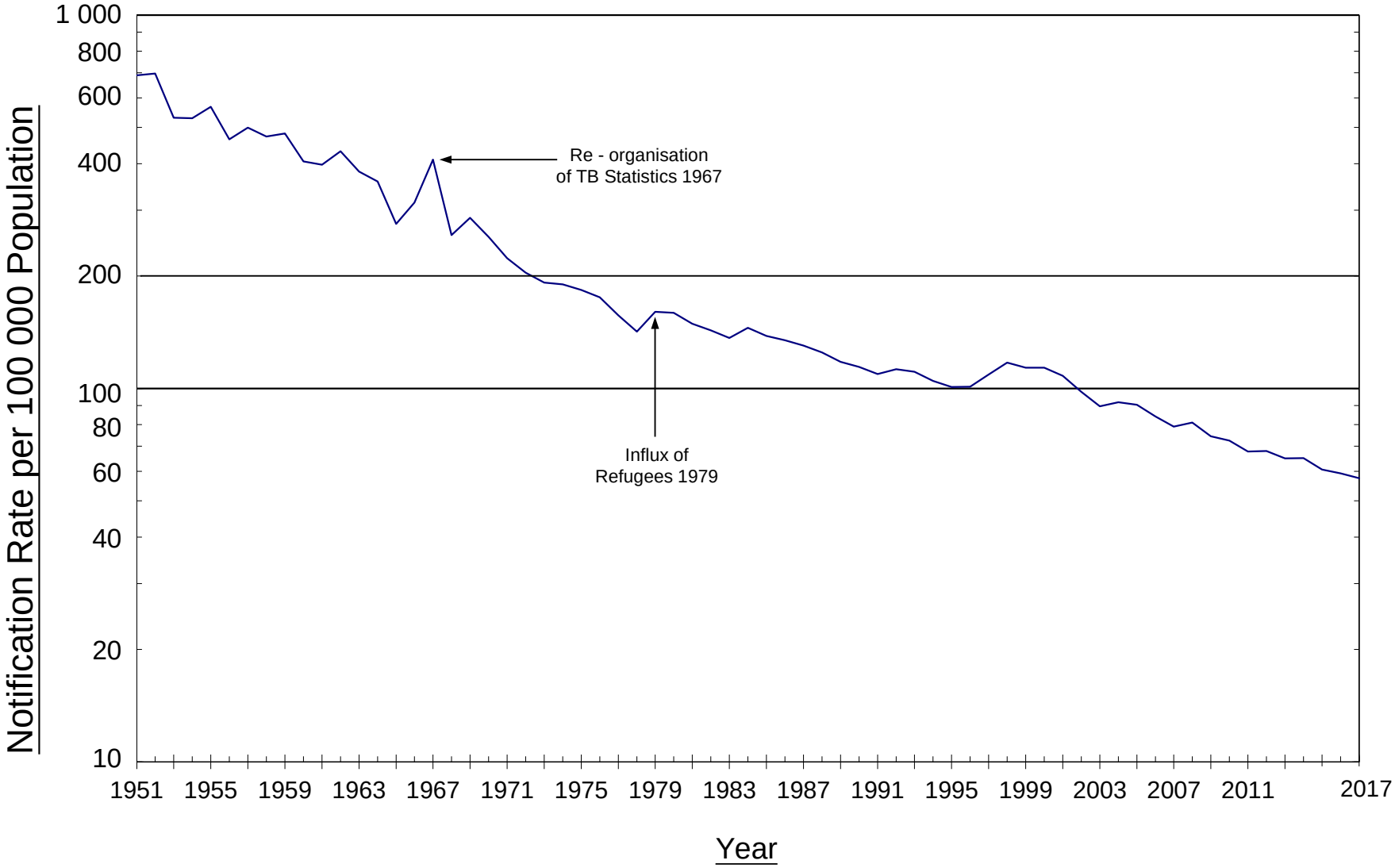
Year	TB Notifications			Notification Rate per 100 000 Pop	TB Deaths	Death Rate per 100 000 Pop	Ratio (Notifications/ Deaths)	Deaths ---------- x 100% Notifications
1947	4 855			277.4	1 861	106.3	2.61	38.33
1948	6 279			348.8	1 961	108.9	3.20	31.23
1949	7 510			404.4	2 611	140.6	2.88	34.77
1950	9 067			405.3	3 263	145.9	2.78	35.99
1951	13 886			689.0	4 190	207.9	3.31	30.17
1952	14 821			697.2	3 573	168.1	4.15	24.11
1953	11 900			530.7	2 939	131.1	4.05	24.70
1954	12 508			528.9	2 876	121.6	4.35	22.99
1955	14 148			568.1	2 810	112.8	5.03	19.86
1956	12 155			464.9	2 629	100.6	4.62	21.63
1957	13 665			499.4	2 675	97.8	5.11	19.58
1958	13 485			472.5	2 302	80.7	5.86	17.07
1959	14 302			482.0	2 178	73.4	6.57	15.23
1960	12 425			405.5	2 085	68.0	5.96	16.78
1961	12 584			397.2	1 907	60.2	6.60	15.15
1962	14 263			431.5	1 881	56.9	7.58	13.19
1963	13 031			380.9	1 762	51.5	7.40	13.52
1964	12 557			358.3	1 441	41.1	8.71	11.48
1965	9 927			275.9	1 278	35.5	7.77	12.87
1966	11 427			314.8	1 515	41.7	7.54	13.26
1967	15 253			409.7	1 493	40.1	10.22	9.79
1968	9 792			257.5	1 483	39.0	6.60	15.15
1969	11 072			286.5	1 470	38.0	7.53	13.28
1970	10 077			254.5	1 436	36.3	7.02	14.25
1971	9 028			223.2	1 250	30.9	7.22	13.85
1972	8 420			204.2	1 312	31.8	6.42	15.58
1973	8 152			192.2	1 154	27.2	7.06	14.16
1974	8 320			190.0	974	22.2	8.54	11.71
1975	8 192			183.6	646	14.5	12.68	7.89
1976	7 928			175.5	568	12.6	13.96	7.16
1977	7 191			156.9	532	11.6	13.52	7.40
1978	6 623			141.9	420	9.0	15.77	6.34
1979	7 907	(498) *		160.4	523	10.6	15.12	6.61
1980	8 065	(712)		159.3	551	10.9	14.64	6.83
1981	7 729	(254)		149.1	489	9.4	15.81	6.33
1982	7 527	(112)		143.0	454	8.6	16.58	6.03
1983	7 301	(73)		136.6	446	8.3	16.37	6.11
1984	7 843	(69)		145.3	420	7.8	18.67	5.36
1985	7 545	(59)	580 #	138.3	409	7.5	18.45	5.42
1986	7 432	(46)	544	134.5	407	7.4	18.26	5.48
1987	7 269	(41)	495	130.3	405	7.3	17.95	5.57
1988	7 021	(121)	433	124.8	388	6.9	18.10	5.53
1989	6 704	(226)	387	117.9	403	7.1	16.64	6.01
1990	6 510	(288)	341	114.1	382	6.7	17.04	5.87
1991	6 283	(281)	293	109.2	409	7.1	15.36	6.51
1992	6 534	(309)	264	112.6	410	7.1	15.94	6.27
1993	6 537	(264)	89	110.8	396	6.7	16.51	6.06
1994	6 319	(230)	87	104.7	409	6.8	15.45	6.47
1995	6 212	(175)	102	100.9	418	6.8	14.86	6.73
1996	6 501	(88)	162	101.0	292	4.5	22.26	4.49
1997	7 072	(34)	156	109.0	252	3.9	28.06	3.56
1998	7 673	(7)	169	117.3	270	4.1	28.42	3.52
1999	7 512	(5)	166	113.7	312	4.7	24.08	4.15
2000	7 578	(7)	152	113.7	299	4.5	25.34	3.95
2001	7 262	(0)	192	108.2	311	4.6	23.35	4.28
2002	6 602	(0)	186	97.9	267	4.0	24.73	4.04
2003	6 024	(0)	177	89.5	275	4.1	21.91	4.57
2004	6 226	(0)	110	91.8	286	4.2	21.77	4.59
2005	6 160	(0)	77	90.4	271	4.0	22.73	4.40
2006	5 766	(0)	58	84.1	294	4.3	19.61	5.10
2007	5 463	(0)	56	79.0	231	3.3	23.65	4.23
2008	5 635	(0)	67	81.0	229	3.3	24.61	4.06
2009	5 193	(0)	68	74.5	204	2.9	25.46	3.93
2010	5 093	(0)	80	72.5	191	2.7	26.66	3.75
2011	4 794	(0)	81	67.8	187	2.6	25.64	3.90
2012	4 858	(0)	100	67.9	199	2.8	24.41	4.10
2013	4 664	(0)	92	65.0	178	2.5	26.20	3.82
2014	4 705	(0)	85	65.1	187	2.6	25.16	3.97
2015	4 418	(0)	82	60.6	169	2.3	26.14	3.83
2016	4 346	(0)	67	59.2	160	2.2	27.16	3.68
2017	4 250	(0)	78	57.5	184	2.5	23.10	4.33

* Figures in brackets denote the number of Vietnamese refugees included.

\# Figures in this column denote the number of Chinese immigrants staying in Hong Kong for less than 7 years.

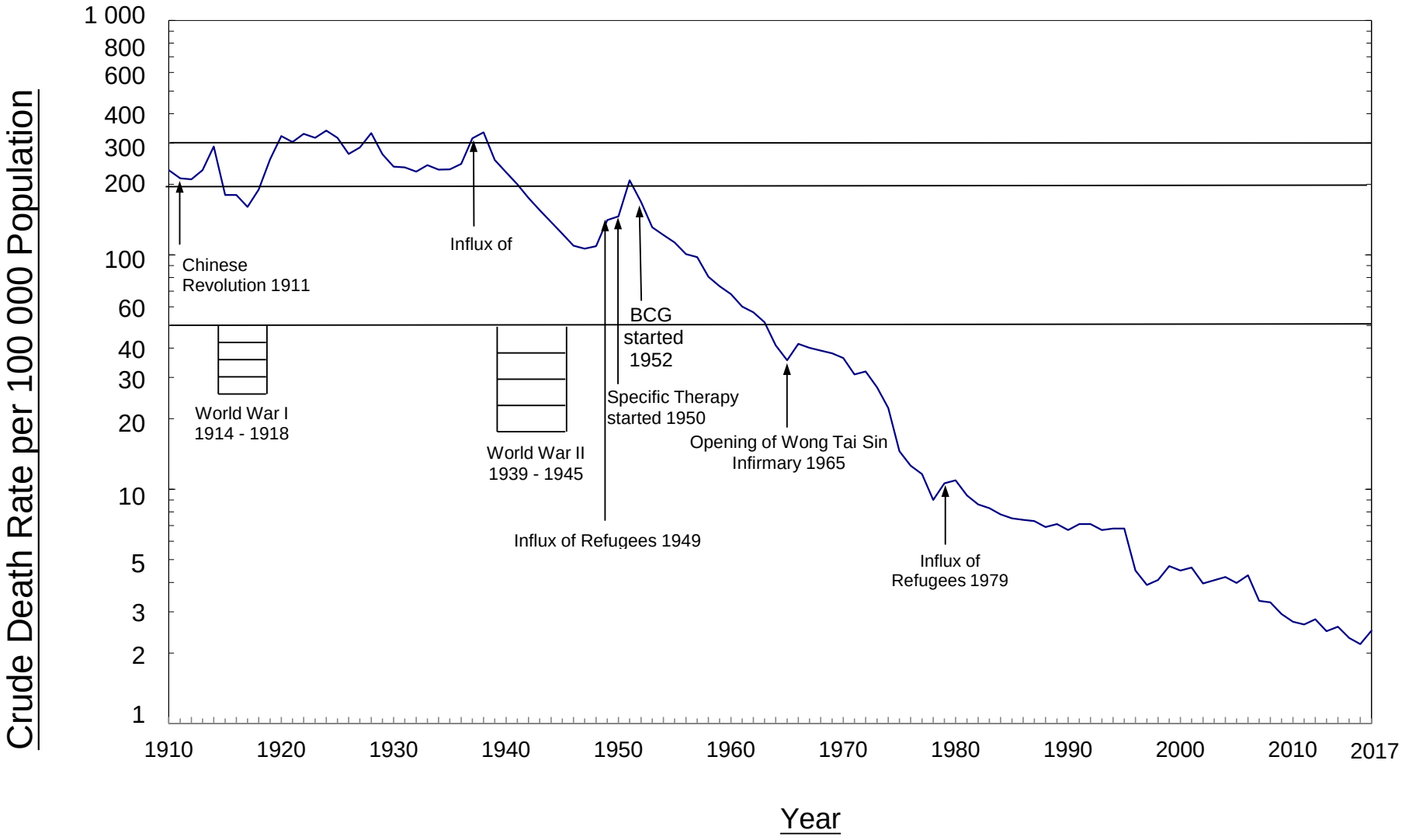
APPENDIX 2

TB Notification Rate (All Forms) 1951-2017



APPENDIX 3

Crude Death Rate due to Tuberculosis (All Forms) 1910-2017



APPENDIX 4(a)

Tuberculosis Notifications (All Forms) & Rate by Age & Sex 2017

Age Group	Tuberculosis Notifications (All Forms)			Tuberculosis Notifications Rate (per 100 000 population)		
	Male	Female	Total	Male	Female	Total
Under 1	0	3	3	1.40	2.24	1.81
1	0	0	0			
2	1	0	1			
3	0	0	0			
4	1	0	1			
5 - 9	2	3	5	1.26	2.05	1.64
10 - 14	5	10	15	3.72	7.77	5.70
15 - 19	65	40	105	39.76	26.26	33.25
20 - 24	79	75	154	36.26	33.53	34.87
25 - 29	66	131	197	28.68	47.55	38.96
30 - 34	88	116	204	38.43	34.00	35.78
35 - 39	84	146	230	36.43	41.50	39.49
40 - 44	79	118	197	33.83	34.96	34.50
45 - 49	123	126	249	51.46	38.08	43.69
50 - 54	194	98	292	68.89	28.46	46.65
55 - 59	260	117	377	84.72	36.48	60.07
60 - 64	275	98	373	106.75	37.04	71.43
65 - 69	326	116	442	159.80	55.69	107.20
70 - 74	259	73	332	207.37	58.49	132.96
75 - 79	227	79	306	231.87	78.84	154.47
80 - 84	241	77	318	315.03	81.14	185.53
85 & over	299	150	449	471.61	125.31	245.22
Total	**2 674**	**1 576**	**4 250**	**78.82**	**39.41**	**57.50**

Appendix 4(b)

Pulmonary TB Notifications by Age & Sex 2017**

Age Group	Pulmonary TB			Bacteriologically * Positive Pulmonary TB			Smear Positive Pulmonary TB		
	M	F	T	M	F	T	M	F	T
Under 1	0	3	3	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
2	1	0	1	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	1	0	1	0	0	0	0	0	0
5 - 9	0	2	2	0	1	1	0	1	1
10 - 14	2	9	11	1	8	9	0	5	5
15 - 19	54	33	87	39	16	55	22	9	31
20 - 24	56	44	100	36	34	70	18	22	40
25 - 29	48	81	129	35	46	81	25	27	52
30 - 34	71	76	147	50	54	104	24	31	55
35 - 39	64	89	153	44	58	102	24	32	56
40 - 44	68	76	144	41	47	88	21	21	42
45 - 49	97	76	173	65	50	115	48	24	72
50 - 54	160	61	221	109	44	153	70	20	90
55 - 59	209	56	265	148	32	180	87	21	108
60 - 64	232	65	297	163	41	204	85	16	101
65 - 69	266	69	335	199	51	250	84	22	106
70 - 74	218	52	270	168	40	208	75	17	92
75 - 79	192	49	241	149	35	184	58	16	74
80 - 84	198	55	253	173	41	214	81	19	100
85 & over	237	112	349	191	90	281	74	29	103
Total	**2 174**	**1 008**	**3 182**	**1 611**	**688**	**2 299**	**796**	**332**	**1 128**

** Pulmonary TB with or without extrapulmonary TB

* Either smear or culture positive

Appendix 4(c)

Rate of Pulmonary TB Notifications by Age & Sex 2017**

(Rate per 100 000 Population)

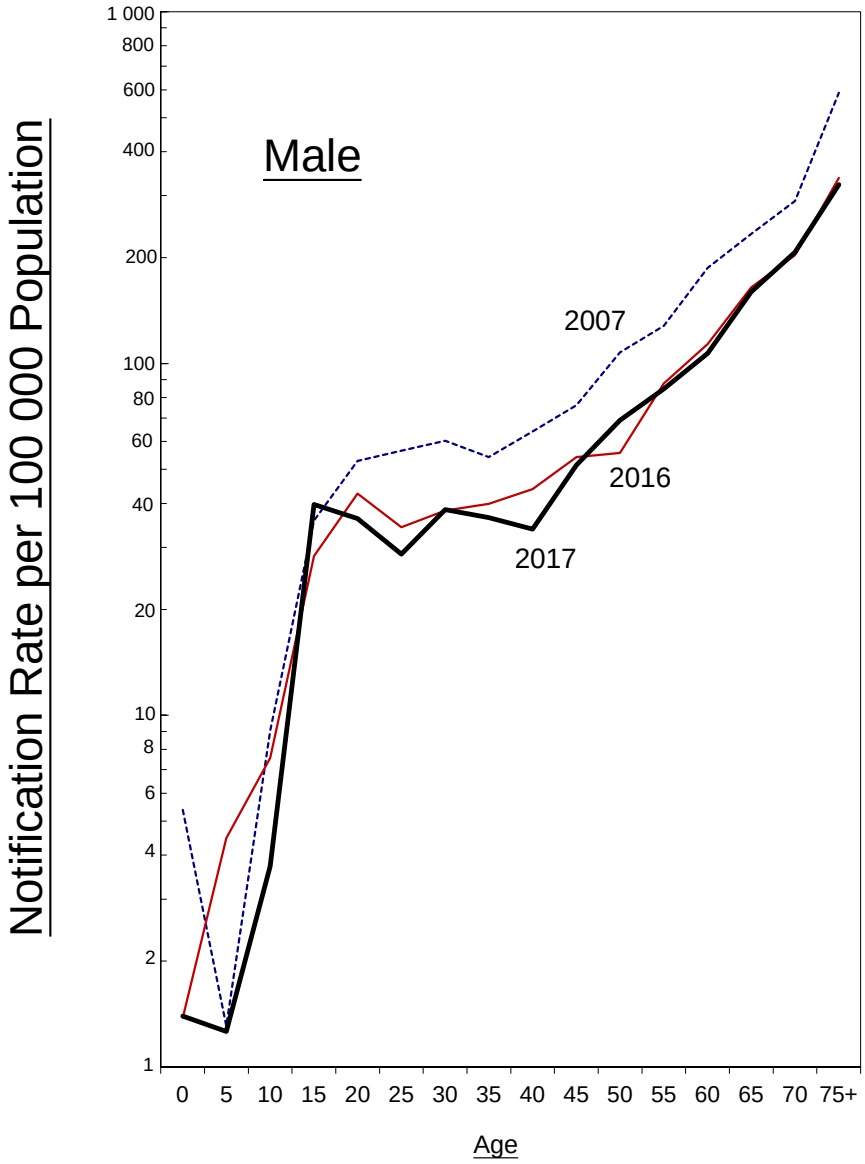
Age Group	Pulmonary TB			Bacteriologically * Positive Pulmonary TB			Smear Positive Pulmonary TB		
	M	F	T	M	F	T	M	F	T
0 - 4	1.4	2.2	1.8	0.0	0.0	0.0	0.0	0.0	0.0
5 - 9	0.0	1.4	0.7	0.0	0.7	0.3	0.0	0.7	0.3
10 - 14	1.5	7.0	4.2	0.7	6.2	3.4	0.0	3.9	1.9
15 - 19	33.0	21.7	27.5	23.9	10.5	17.4	13.5	5.9	9.8
20 - 24	25.7	19.7	22.6	16.5	15.2	15.9	8.3	9.8	9.1
25 - 29	20.9	29.4	25.5	15.2	16.7	16.0	10.9	9.8	10.3
30 - 34	31.0	22.3	25.8	21.8	15.8	18.2	10.5	9.1	9.6
35 - 39	27.8	25.3	26.3	19.1	16.5	17.5	10.4	9.1	9.6
40 - 44	29.1	22.5	25.2	17.6	13.9	15.4	9.0	6.2	7.4
45 - 49	40.6	23.0	30.4	27.2	15.1	20.2	20.1	7.3	12.6
50 - 54	56.8	17.7	35.3	38.7	12.8	24.4	24.9	5.8	14.4
55 - 59	68.1	17.5	42.2	48.2	10.0	28.7	28.3	6.5	17.2
60 - 64	90.1	24.6	56.9	63.3	15.5	39.1	33.0	6.0	19.3
65 - 69	130.4	33.1	81.3	97.5	24.5	60.6	41.2	10.6	25.7
70 - 74	174.5	41.7	108.1	134.5	32.1	83.3	60.0	13.6	36.8
75 - 79	196.1	48.9	121.7	152.2	34.9	92.9	59.2	16.0	37.4
80 - 84	258.8	58.0	147.6	226.1	43.2	124.9	105.9	20.0	58.3
85 & over	373.8	93.6	190.6	301.3	75.2	153.5	116.7	24.2	56.3
Total	**64.1**	**25.2**	**43.0**	**47.5**	**17.2**	**31.1**	**23.5**	**8.3**	**15.3**

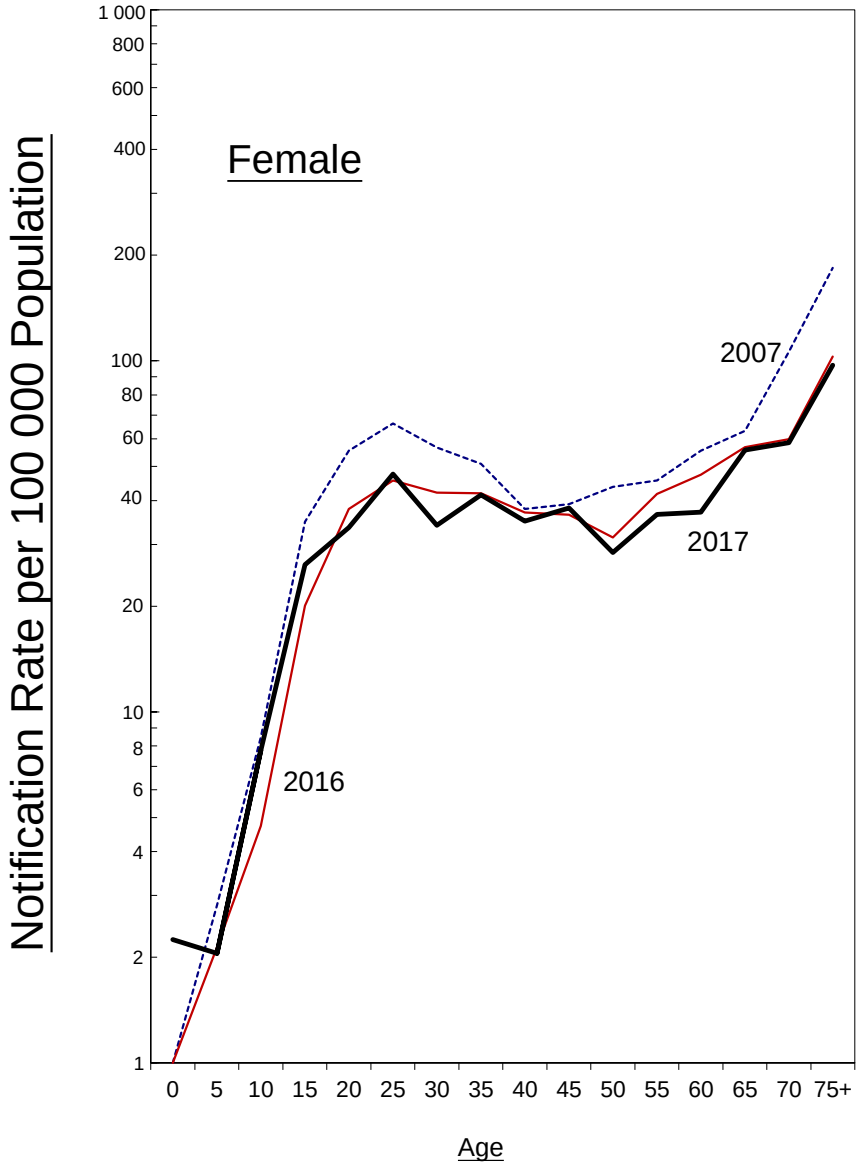
** Pulmonary TB with or without extrapulmonary TB

* Either smear or culture positive

APPENDIX 5

TB Notification Rate by Age & Sex 2007, 2016 & 2017





Appendix 6

Notifications of Tuberculosis by Type by Age & Sex 2017

Age Group	Pulmonary only #			Miliary			Meninges/CNS			Bones & Joints			Others		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Under 1	0	4	4	0	0	0	0	0	0	0	0	0	0	2	2
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
5-9	0	2	2	0	0	0	0	0	0	0	0	0	4	3	7
10-14	3	10	13	0	0	0	0	0	0	0	0	0	3	1	4
15-19	70	37	107	0	1	1	0	0	0	0	0	0	28	9	37
20-24	66	48	114	0	0	0	0	1	1	0	0	0	33	38	71
25-29	59	110	169	0	4	4	4	0	4	0	5	5	24	66	90
30-34	86	88	174	1	0	1	2	0	2	0	4	4	24	50	74
35-39	73	107	180	1	2	3	0	1	1	1	1	2	22	68	90
40-44	77	88	165	0	4	4	0	4	4	0	3	3	15	59	74
45-49	118	90	208	1	1	2	0	0	0	8	4	12	37	69	106
50-54	180	71	251	4	0	4	4	0	4	0	5	5	54	48	102
55-59	242	63	305	1	0	1	5	1	6	4	4	8	62	68	130
60-64	268	77	345	1	0	1	3	0	3	1	2	3	62	45	107
65-69	296	79	375	4	0	4	3	3	6	4	6	10	68	49	117
70-74	251	61	312	2	1	3	1	1	2	0	1	1	60	27	87
75-79	212	60	272	1	4	5	0	0	0	6	5	11	41	31	72
80-84	219	63	282	0	1	1	2	0	2	6	7	13	49	23	72
85 & over	260	117	377	0	2	2	1	0	1	2	4	6	84	41	125
Total*	2 482	1 175	3 657	16	20	36	25	11	36	32	51	83	670	697	1 367 **

* The total add up to greater than the notification number of 4 250 for 2017 as some cases have multiple sites.

* * Including	TB lymph node	517
	TB urogenital system	75
	TB peritonitis, intestines, mesenteric, appendicitis	145
	TB pleuritis, pleural effusion	421
	TB laryngitis	19
	TB skin	61
	Unspecified	129
	(Note: some cases have more than one site of extrapulmonary TB)	

Pulmonary TB only, without extrapulmonary site involvement

APPENDIX 7

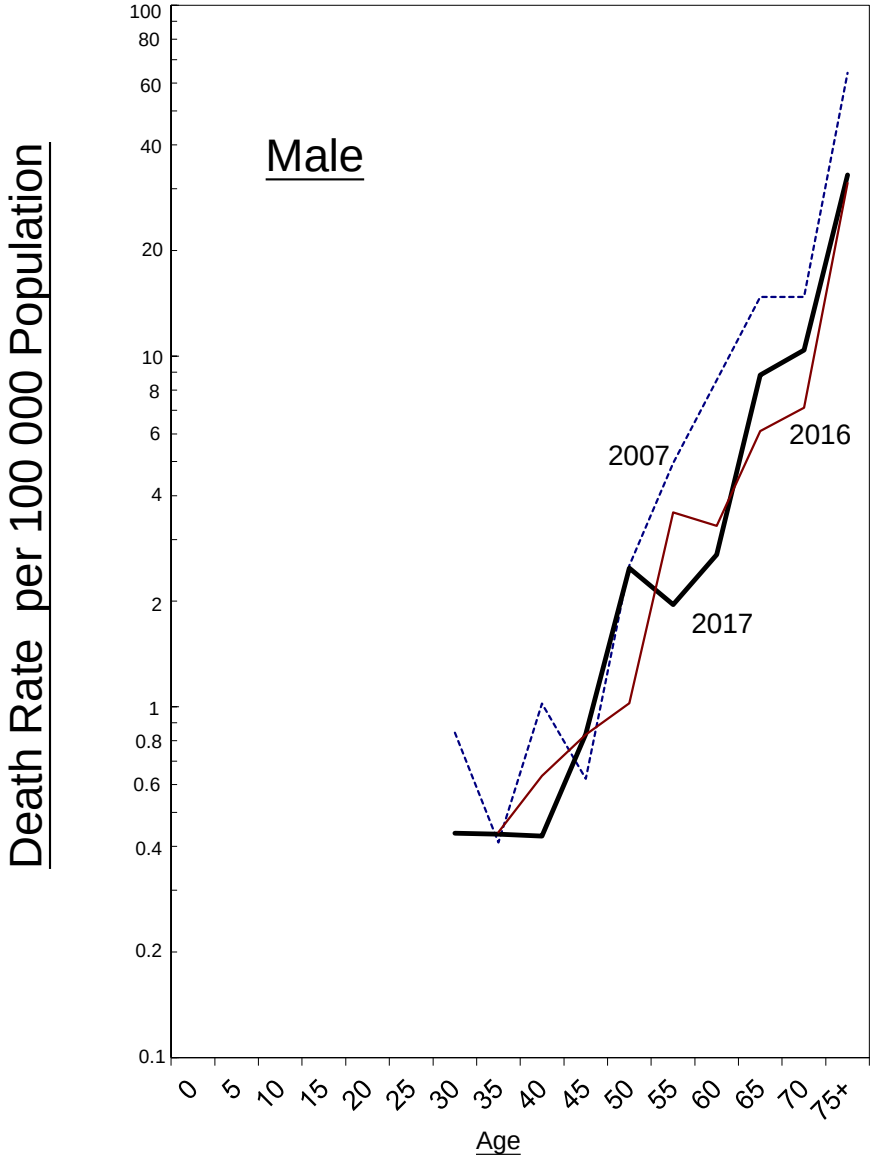
TB Death (All Forms) & Death Rate by Age & Sex 2017*

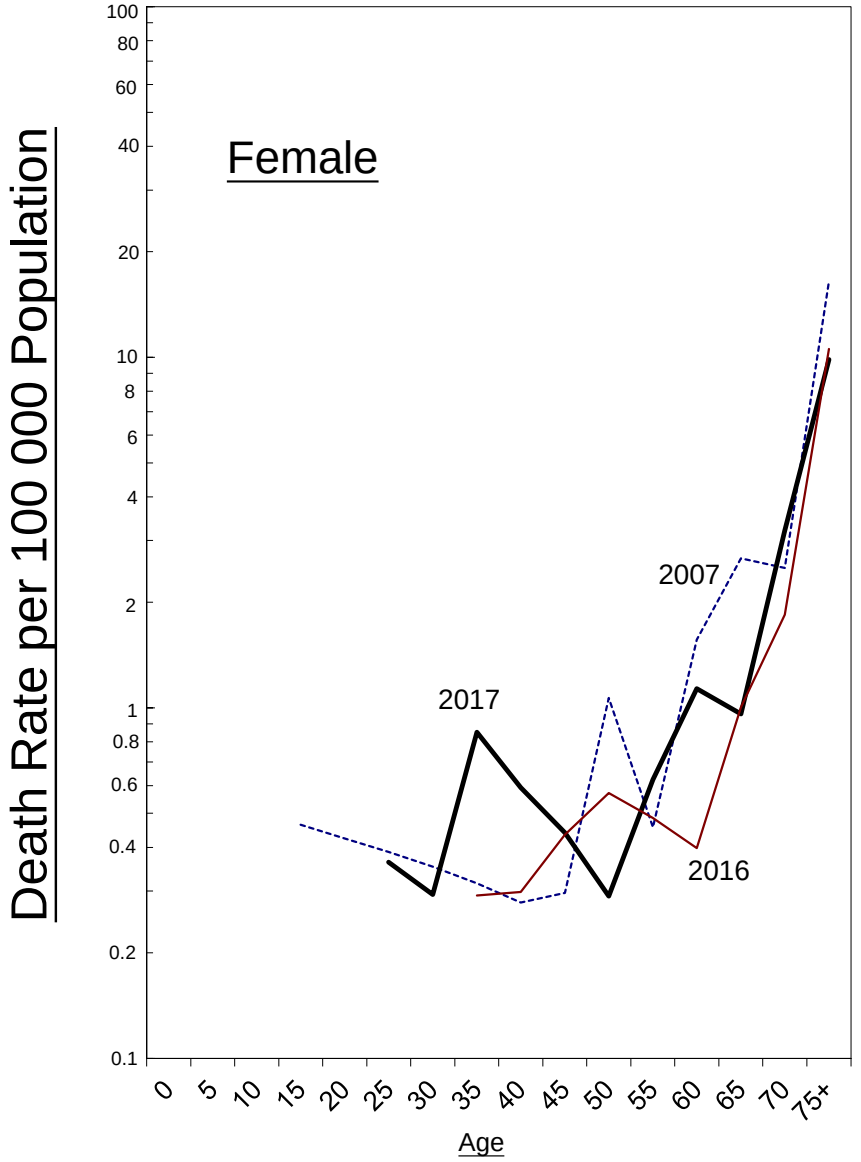
Age Group	Tuberculosis Death (All Forms)			Death Rate (per 100 000 population)		
	Male	Female	Total	Male	Female	Total
Under 1	0	0	0	0.00	0.00	0.00
1	0	0	0			
2	0	0	0			
3	0	0	0			
4	0	0	0			
5-9	0	0	0	0.00	0.00	0.00
10-14	0	0	0	0.00	0.00	0.00
15-19	0	0	0	0.00	0.00	0.00
20-24	0	0	0	0.00	0.00	0.00
25-29	0	1	1	0.00	0.36	0.20
30-34	1	1	2	0.44	0.29	0.35
35-39	1	3	4	0.43	0.85	0.69
40-44	1	2	3	0.43	0.59	0.53
45-49	2	0	2	0.84	0.00	0.35
50-54	7	1	8	2.49	0.29	1.28
55-59	6	2	8	1.96	0.62	1.27
60-64	7	3	10	2.72	1.13	1.91
65-69	18	2	20	8.82	0.96	4.85
70-74	13	4	17	10.41	3.21	6.81
75-79	15	6	21	15.32	5.99	10.60
80-84	21	8	29	27.45	8.43	16.92
85 & over	42	17	59	66.25	14.20	32.22
Total	**134**	**50**	**184**	**3.95**	**1.25**	**2.49**

* Data source : DH Death Registry 2017

APPENDIX 8

TB Mortality Rate by Age & Sex 2007, 2016 & 2017





Appendix 9

TB Deaths by Type by Age & Sex 2017*

Age Group	Pulmonary			Miliary			Meninges			Bones & Joints			Others		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Under 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
30-34	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0
35-39	0	2	2	1	1	2	0	0	0	0	0	0	0	0	0
40-44	1	0	1	0	0	0	0	1	1	0	0	0	0	1	1
45-49	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
50-54	6	1	7	1	0	1	0	0	0	0	0	0	0	0	0
55-59	5	1	6	0	0	0	0	0	0	1	0	1	0	1	1
60-64	6	2	8	1	0	1	0	0	0	0	1	1	0	0	0
65-69	15	2	17	0	0	0	2	0	2	0	0	0	1	0	1
70-74	9	1	10	0	0	0	0	1	1	0	0	0	4	2	6
75-79	14	5	19	1	0	1	0	1	1	0	0	0	0	0	0
80-84	19	6	25	1	2	3	0	0	0	0	0	0	1	0	1
85 & over	40	16	56	0	1	1	1	0	1	0	0	0	1	0	1
Total	118	37	155	5	4	9	3	4	7	1	1	2	7	4	11 **

* Data source : DH Death Registry 2017

** Breakdown of Deaths from other forms of TB:-

	Number
Tuberculosis of intestines, peritoneum and mesenteric glands	5
Sequelae of respiratory and unspecified tuberculosis	5
Tuberculosis of other specified organs	1
Total	11

Appendix 10

Tuberculosis Mortality
1950 - 2017

Year	% of TB Death below 5 years*	% of TB Death below 1 year*	Infant Mort. Rate from TB per 1 000 Registered Live Births*	% of TB Deaths among Total Registered Deaths*	Average Age of TB Death*
1950	38.34	9.81	5.28	17.7	24.0
1951	34.22	7.73	4.73	20.0	25.0
1952	34.28	7.05	3.50	18.4	25.0
1953	36.27	9.02	3.51	16.1	26.0
1954	31.26	8.17	2.82	14.9	29.0
1955	28.51	8.61	2.67	14.7	31.0
1956	25.22	7.34	1.99	13.6	32.0
1957	21.20	5.76	1.57	13.8	36.0
1958	19.64	7.04	1.52	11.2	36.5
1959	18.92	5.56	1.16	10.8	37.0
1960	10.55	2.21	0.42	10.9	43.0
1961	11.48	2.62	0.46	10.2	43.0
1962	5.74	1.44	0.24	9.3	46.0
1963	5.51	1.08	0.16	8.9	47.0
1964	4.09	0.90	0.12	8.0	48.0
1965	3.36	0.70	0.09	7.3	49.0
1966	2.71	0.73	0.12	8.1	53.0
1967	2.01	0.33	0.06	7.6	54.5
1968	1.15	0.20	0.04	7.7	56.5
1969	0.95	0.27	0.05	7.8	56.0
1970	0.63	0.00	0.00	6.9	57.5
1971	0.64	0.08	0.01	6.2	57.5
1972	0.30	0.15	0.02	6.2	59.0
1973	0.35	0.09	0.01	5.4	58.0
1974	0.82	0.21	0.02	4.4	58.5
1975	1.39	0.31	0.03	3.0	58.5
1976	0.70	0.00	0.00	2.4	59.5
1977	0.38	0.00	0.00	2.3	61.0
1978	0.48	0.24	0.01	1.8	61.0
1979	0.96	0.19	0.01	2.0	61.0
1980	0.73	0.18	0.01	2.1	62.0
1981	0.41	0.00	0.00	2.0	63.0
1982	0.22	0.00	0.00	1.8	63.0
1983	0.45	0.00	0.00	1.7	63.0
1984	0.24	0.24	0.01	1.6	64.5
1985	0.00	0.00	0.00	1.6	65.5
1986	0.00	0.00	0.00	1.6	68.0
1987	0.00	0.00	0.00	1.5	68.5
1988	0.52	0.26	0.01	1.4	69.0
1989	0.25	0.25	0.01	1.4	69.0
1990	0.52	0.52	0.03	1.3	69.0
1991	0.00	0.00	0.00	1.4	69.0
1992	0.00	0.00	0.00	1.3	68.0
1993	0.25	0.25	0.01	1.3	69.0
1994	0.00	0.00	0.00	1.4	71.0
1995	0.00	0.00	0.00	1.4	71.1
1996	0.00	0.00	0.00	0.9	70.6
1997	0.00	0.00	0.00	0.8	72.1
1998	0.37	0.00	0.00	0.8	72.6
1999	0.00	0.00	0.00	0.9	72.9
2000	0.00	0.00	0.00	0.9	73.4
2001	0.00	0.00	0.00	0.9	74.3
2002	0.00	0.00	0.00	0.8	74.0
2003	0.36	0.00	0.00	0.8	72.3
2004	0.00	0.00	0.00	0.8	73.4
2005	0.00	0.00	0.00	0.7	74.3
2006	0.00	0.00	0.00	0.8	73.5
2007	0.00	0.00	0.00	0.6	74.2
2008	0.00	0.00	0.00	0.6	74.5
2009	0.00	0.00	0.00	0.5	73.7
2010	0.00	0.00	0.00	0.4	73.1
2011	0.00	0.00	0.00	0.4	77.3 **
2012	0.00	0.00	0.00	0.5	75.9
2013	0.00	0.00	0.00	0.4	74.1
2014	0.00	0.00	0.00	0.4	76.0
2015	0.00	0.00	0.00	0.4	75.6
2016	0.00	0.00	0.00	0.3	77.2
2017	0.00	0.00	0.00	0.4	75.4

* Data source : DH Death Registry 2017

** The average age of TB death is calculated by the exact age of TB death from 2011 onwards. Figures may be slightly different from previous years which were compiled basing on the age groups of TB death.

APPENDIX 11

Top Ten Causes of Death 2017

Rank	Causes of Death	Detailed List No.	2017		
		ICD 10th Revision	Male	Female	Total
	All Causes		25 408	20 471	45 883 (4)
1	Malignant neoplasms	C00-C97	8 487	5 867	14 354
2	Pneumonia	J12-J18	4 360	3 672	8 032
3	Diseases of heart	I00-I09, I11 I13, I20-I51	3 323	2 815	6 138
4	Cerebrovascular diseases	I60-I69	1 546	1 578	3 124
5	External causes of morbidity and mortality #	V01-Y89	1 082	615	1 697
6	Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	821	838	1 659
7	Chronic lower respiratory diseases *	J40-J47	1 149	356	1 505
8	Dementia	F01-F03	557	898	1 455
9	Septicaemia	A40-A41	524	447	971
10	Diabetes mellitus	E10-E14	185	215	400
	Tuberculosis (including late effects of tuberculosis)		134	50	184
	All other causes	Residues of all causes	3 240	3 120	6 364 (4)

Notes : 1. Figures in brackets denote number of deaths of unknown sex included.

2. Classification of diseases and causes of death is based on the International Statistical Classification of Diseases and Related Health Problems (ICD) 10th Revision from 2001 onwards. The disease groups for the purpose of ranking causes of death have also been redefined based on the ICD 10th Revision, and new disease groups have been added. Figures for 2001 may not be comparable with figures for previous years which were compiled based on the ICD 9th Revision.

* Chronic lower respiratory diseases has been included as a disease group for the purpose of ranking the causes of death since 2001.

\# According to the ICD 10th Revision, when the morbid condition is classifiable under Chapter XIX as "injury, poisoning and certain other consequences of external causes", the codes under Chapter XX for "external causes of morbidity and mortality" should be used as the primary cause.

APPENDIX 12(a)

Origin of Tuberculosis Notifications
2007 - 2017

Origin	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
East Kowloon Chest Clinic	121	129	100	99	105	101	83	83	105	83	83
Kowloon Chest Clinic	220	184	171	165	122	154	167	127	95	98	98
Sai Ying Pun Chest Clinic	108	86	69	80	71	89	79	70	69	59	61
Shaukiwan Chest Clinic	128	105	80	72	74	65	74	66	72	56	45
Shaukiwan Pneumoconiosis	13	13	16	6	9	10	2	9	0	5	7
Shek Kip Mei Chest Clinic	111	127	92	87	90	101	95	80	89	83	70
South Kwai Chung Chest Clinic	187	200	158	166	146	158	122	127	103	98	99
Tai Po Chest Clinic	79	81	63	71	86	82	93	64	54	63	60
Wanchai Chest Clinic	169	168	170	143	118	110	113	95	89	83	88
Yan Oi Chest Clinic	165	179	172	152	173	144	146	104	105	109	100
Yaumatei Chest Clinic	151	137	139	131	128	132	112	101	92	82	81
Yuen Chau Kok Chest Clinic	122	116	124	131	112	108	110	98	80	80	81
Yung Fung Shee Chest Clinic	120	147	118	131	112	116	86	92	87	75	73
Castle Peak Hospital (Chest Clinic)	4	5	0	0	0	2	0	0	0	0	0
Cheung Chau Chest Clinic	1	2	1	1	1	1	0	0	0	2	1
Sai Kung Chest Clinic	5	9	1	3	6	4	4	2	3	1	2
Sheung Shui Chest Clinic	53	45	42	63	33	21	30	33	22	30	29
Tung Chung Chest Clinic	12	9	7	11	13	9	11	11	9	21	12
Yuen Long Chest Clinic	64	67	73	80	48	39	66	51	67	53	59
Sub-total	1 833	1 809	1 596	1 592	1 447	1 446	1 393	1 213	1 141	1 081	1 049
Grantham Hospital	215	209	214	180	163	138	148	140	166	148	128
Haven of Hope Hospital	124	87	103	65	80	68	77	95	96	86	68
Kowloon Hospital	108	120	84	108	92	97	64	74	105	111	111
Ruttonjee Hospital	218	165	183	170	176	165	127	140	109	122	117
Wong Tai Sin Hospital	90	104	82	105	57	58	86	69	62	47	49
Other Govt. Institutions (a)	66	78	54	64	62	54	51	61	49	53	58
Other H.A. Hospitals	2 530	2 648	2 472	2 425	2 364	2 497	2 377	2 578	2 370	2343	2309
Private Practitioners	90	83	57	101	100	109	118	129	122	146	141
Private Hospitals	189	332	348	283	253	226	223	206	198	209	220
Total	5 463	5 635	5 193	5 093	4 794	4 858	4 664	4 705	4 418	4 346	4 250
% of cases from Chest Clinics among the total	33.6	32.1	30.7	31.3	30.2	29.8	29.9	25.8	25.8	24.9	24.7
% from Chest Hospitals (b)	13.8	12.2	12.8	12.3	11.8	10.8	10.8	11.0	12.2	11.8	11.1
% from Other Public Hospitals	47.5	48.4	48.6	48.9	50.6	52.5	52.1	56.1	54.8	55.1	55.7
% from Private Sector	5.1	7.4	7.8	7.5	7.4	6.9	7.3	7.1	7.2	8.2	8.5

Notes : (a) Sources are from Public Mortuaries, Prison Hospitals, & Army Hospitals.
(b) Chest Hospitals include Kowloon Hospital, Wong Tai Sin Hospital, Ruttonjee Hospital, Grantham Hospital and Haven of Hope Hospital.

Appendix 12(b)

Breakdown of Origin of TB
Notifications for "Other H.A. Hospitals" 2017

Name of Hospital	No. of TB Notification
Alice Ho Miu Ling Nethersole Hospital	91
Caritas Medical Centre	121
Castle Peak Hospital	1
Hong Kong Buddhist Hospital	3
Kwong Wah Hospital	144
North District Hospital	130
North Lantau Hospital	2
Our Lady of Maryknoll Hospital	7
Pamela Youde Nethersole Eastern Hospital	148
Pok Oi Hospital	95
Prince of Wales Hospital	232
Princess Margaret Hospital	211
Queen Elizabeth Hospital	296
Queen Mary Hospital	105
Shatin Hospital	7
Tai Po Hospital	5
Tseung Kwan O Hospital	116
Tuen Mun Hospital	220
Tung Wah Eastern Hospital	6
Tung Wah Group of Hospitals Fung Yiu King Hospital	2
Tung Wah Hospital	10
United Christian Hospital	248
Yan Chai Hospital	109
Total	**2 309**

Appendix 13

Tuberculosis Notifications & Notification Rates

by District Council District 2017

District Council District	Notification	Notification Rate (per 100 000 pop.)
Hong Kong Island	617	49.4
Central & Western	123	50.3
Wanchai	80	44.1
Eastern	264	47.9
Southern	150	55.4
Kowloon	1 538	68.2
Kowloon City	244	58.4
Kwun Tong	493	73.6
Sham Shui Po	300	73.7
Wong Tai Sin	314	73.9
Yau Tsim Mong	187	55.5
NT (East)	984	50.9
Islands	83	51.0
Northern	168	53.0
Sai Kung/Tseung Kwan O	222	47.6
Shatin	358	52.5
Tai Po	153	49.9
NT (West)	1 041	53.3
Kwai Tsing	327	63.4
Tsuen Wan	130	41.0
Tuen Mun	265	54.3
Yuen Long	319	50.6
Marine	0	0.0
Unknown	21	0.0
Others	49	0.0
Total	4 250	**57.5**

Appendix 14

Establishment & Strength of TB & Chest Service

as at 1.12.2017

Post	Establishment	Strength
Consultant Chest Physician i/c	1	1
Consultant Chest Physician	1	1
Senior Medical & Health Officer	7	6
Medical & Health Officer	23	25
Senior Nursing Officer	1	0
Nursing Officer	15	15
Registered Nurse	75	76
Enrolled Nurse	74	73
Senior Dispenser	9	9
Dispenser	9	9
Executive Officer I	1	1
Statistical Officer II	3	3
Personal Secretary I	1	1
Clerical Officer	16	13
Assistant Clerical Officer	20	23
Clerical Assistant	55	54
Office Assistant	9	8
Workman II	43	58
Senior Radiographer	3	3
Radiographer I	8	8
Radiographer II	21	21
Radiographic Technician	4	4
Darkroom Technician	10	7

Appendix 15
Total Attendances at Chest Clinics
2007 - 2017

Clinic/Hospital	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
East Kowloon Chest Clinic	63 191	59 670	56 566	58 167	55 678	49 894	51 368	52 449	52 874	54 391	53 160
Kowloon Chest Clinic	67 093	62 017	56 658	56 523	47 693	50 666	52 766	52 423	45 953	45 938	46 887
Sai Ying Pun Chest Clinic	42 770	40 126	36 036	34 502	36 441	36 877	33 892	33 274	36 301	36 622	32 200
Shaukiwan Chest Clinic	48 207	50 618	45 028	41 263	41 804	40 600	42 335	44 417	45 789	42 426	37 176
Shaukiwan Pneumoconiosis	8 359	8 501	8 187	7 719	6 869	6 576	6 137	5 433	4 920	4 806	4 840
Shek Kip Mei Chest Clinic	58 679	52 161	54 933	49 216	49 500	47 853	49 164	51 852	48 142	47 816	47 374
South Kwai Chung Chest Clinic	78 238	81 441	82 044	81 923	75 752	78 785	75 062	73 740	78 403	73 985	67 149
Tai Po Chest Clinic	34 769	33 297	35 492	36 215	37 628	39 318	41 316	32 443	30 988	33 357	32 126
Wanchai Chest Clinic	56 790	50 465	50 461	49 609	48 893	46 777	47 901	49 276	43 900	45 326	42 857
Yan Oi Chest Clinic	70 643	66 058	63 411	67 564	63 333	67 804	64 184	60 278	60 770	61 780	64 016
Yaumatei Chest Clinic	69 549	68 587	70 439	68 633	68 164	62 688	61 905	60 937	57 835	58 938	55 234
Yuen Chau Kok Chest Clinic	55 454	57 211	60 481	58 027	65 627	59 542	67 573	60 396	51 136	56 538	63 228
Yung Fung Shee Chest Clinic	73 944	71 767	74 196	80 444	73 038	74 204	75 140	67 274	65 603	73 857	72 019
Castle Peak Hospital (ceased operation from 1 April 2015)	240	192	146	149	145	146	124	126	38	0	0
Cheung Chau Chest Clinic	2 318	1 411	869	1 206	1 286	1 349	1 356	1 273	1 562	1 139	1 781
Sai Kung Chest Clinic	2 280	1 885	1 745	2 277	1 861	1 546	1 542	1 371	1 513	1 385	1 248
Sheung Shui Chest Clinic	22 333	21 909	22 468	22 303	21 775	17 495	15 308	16 827	15 361	14 113	15 539
Tung Chung	4 086	4 263	5 137	4 433	4 447	4 248	4 303	4 091	4 166	5 554	5 484
Yuen Long Chest Clinic	27 960	29 979	29 935	30 729	30 201	27 413	29 929	27 377	26 361	26 427	26 369
Hei Ling Chau ATC	282	290	344	303	202	190	240	162	127	117	130
Lai Chi Kok Reception Centre	519	412	379	303	330	365	279	250	278	234	245
Shek Pik Prison Hospital	188	232	201	186	94	140	192	184	199	189	159
Stanley Prison Hospital	665	796	719	687	688	529	488	443	360	367	282
Total	**788 557**	**763 288**	**755 875**	**752 381**	**731 449**	**715 005**	**722 504**	**696 296**	**672 579**	**685 305**	**669 503**

Appendix 16

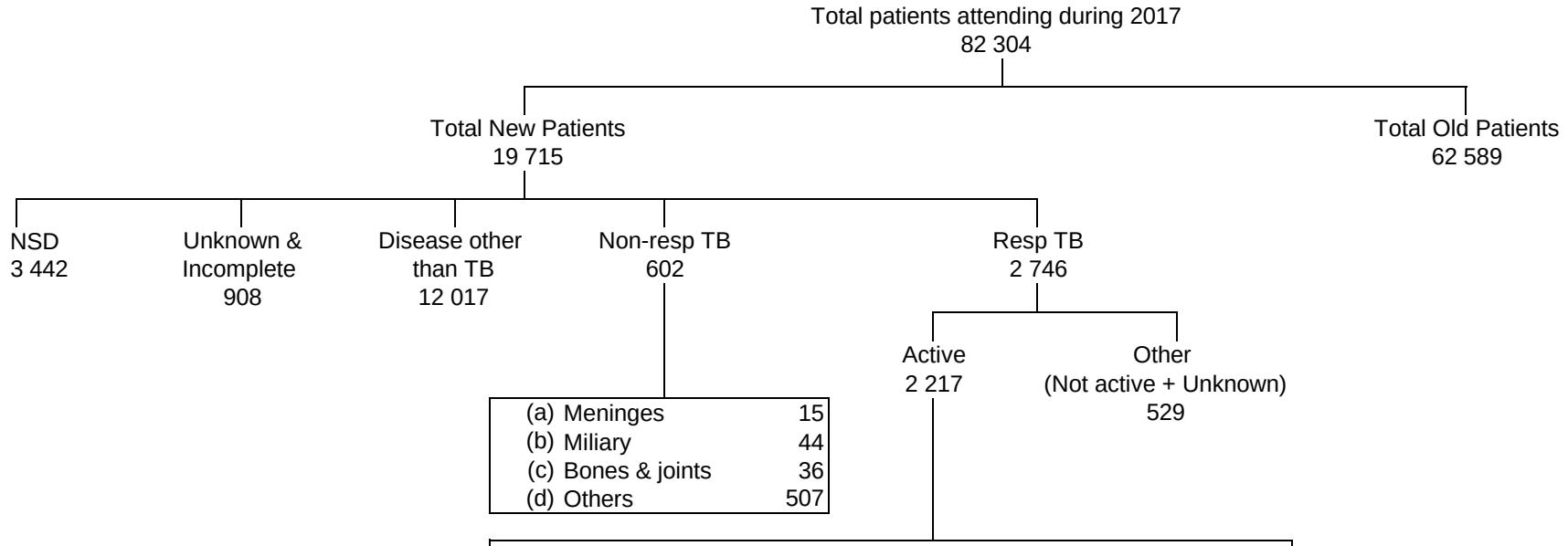
No. of Doctor Sessions, Cases Seen by Doctor and Patient/Doctor Session 2017

Clinic/Hospital	Doctor Sessions	Cases Seen by Doctor	Patient/Doctor Session
Full Time Clinics			
East Kowloon	565	12 602	22
Kowloon	620	14 705	24
Pneumoconiosis	350	4 851	14
Sai Ying Pun	609	10 008	16
Shaukeiwan	569	10 692	19
Shek Kip Mei	581	12 163	21
South Kwai Chung	951	20 284	21
Tai Po	515	8 073	16
Wanchai	704	13 620	19
Yan Oi	871	20 833	24
Yaumatei	805	13 555	17
Yuen Chau Kok	836	16 652	20
Yung Fung Shee	667	15 901	24
Sub-total	**8 643**	**173 939**	**20**
Part Time Clinics			
Cheung Chau	18	293	16
Sai Kung	48	551	11
Sheung Shui	296	3 638	12
Tung Chung	147	1 962	13
Yuen Long	398	6 906	17
Sub-total	**907**	**13 350**	**15**
Institutions Correctional Services Department			
Hei Ling Chau	13	130	10
Lai Chi Kok Reception Center	27	184	7
Shek Pik	14	159	11
Stanley Prison	13	219	17
Sub-total	**67**	**692**	**10**
Total	**9 617**	**187 981**	**20**

Note: Doctor Session - one doctor of a half-day session

Appendix 17

Flow Chart of Patients Attending Chest Clinics 2017 *



Bacteriology	Extent	Number
Negative	Minimal	129
	Moderate	44
	Extensive	8
	Not Recorded	118
Positive	Minimal	417
	Moderate	252
	Extensive	164
	Not Recorded	133
Incomplete	Minimal	231
	Moderate	176
	Extensive	66
	Not Recorded	479

Bacteriology	Cavity	Number
Negative	Yes	25
	No	274
Positive	Yes	212
	No	754
Incomplete	Yes	174
	No	778

* A total of 82 304 patients attended, comprising 62 589 old cases and 19 715 new cases. Among new cases, 2 746 had respiratory TB with 2 217 being active, 602 had non-respiratory TB, 12 017 had diseases other than TB, 908 had unknown and incomplete diagnoses, and 3 442 had NSD (no specific diagnosis). Of the 602 new cases with non-respiratory TB, 15 had TB affecting meninges, 44 had miliary TB, 36 had TB affecting bones and joints, and 507 had TB affecting other sites.

Appendix 18

Classification of Patients of First Attendance with New Case Card Completed by Clinics According to International Classification of Diseases Code 2017

Code		Classification	Total
ICD 9	ICD 10		
010	A15.7, A16.7	Primary Tuberculosis Infection	2
011	A15.0-15.3, A16.0-16.3	Pulmonary Tuberculosis	1 963
012	A15.4-15.6, A15.8-15.9, A16.3-16.5, A16.8-16.9	Other Respiratory Tuberculosis	304
013	A17.0-17.1	Tuberculosis of Nervous System	17
014	A18.3	Tuberculosis of Intestines	62
015	A18.0	Tuberculosis of Bones & Joints	49
016	A18.1	Tuberculosis of Genito-urinary System	32
017	A18.2, A18.4-18.8	Tuberculosis of Other Organs	340
018	A19.0-19.2, A19.8-19.9	Miliary Tuberculosis	44
137	B90.0-90.2, B90.8-90.9	Late effects of Tuberculosis	529
160-165	C30-C39, C34.0-34.3, C34.8-34.9	Malignant Neoplasm of Respiratory System	121
212	D14.0-14.4	Benign Neoplasm of Respiratory System	
460-466	J00-J06, J02.0, J02.8-02.9, J03.0, J03.9, J04.0-04.2, J05.0-05.1, J06.8-	Acute Respiratory Infection	741
470-478	J30-39, J30.0-30.4, J39.9	Other Diseases of Upper Resp Tract	26
480-486	J09-J18, J12.9, J15.0-15.2, J15.5-15.9	Pneumonia	
487	J09, J10.0-10.1, J10.8, J11.0-11.1, J11.8	Influenza	36
490-491	J40, J41.0-41.1, J41.8, J42	Bronchitis, (not specified as acute or chronic) & chronic brochitis	1 370
492	J43, J43.0-43.2, J43.8-43.9	Emphysema	9
493	J45, J45.0-45.1, J45.8-45.9, J46	Asthma	64
494	J47	Bronchiectasis	302
495-496	J44, J44.0-44.1, J44.8-44.9	Others	49
501	J61	Asbestosis	
502	J62, J62.0, J62.8	Silicosis	14
505	J64	Pneumoconiosis, unspecified	
506-508	J63	Others	
510	J86	Pyothorax (Empyema)	1
511	J90	Pleurisy	41
512	J93, J93.0-93.1, J93.8-93.9	Pneumothorax	11
513-519	J95-99, J96.0-96.1, J96.9, J98.4, J99.1, [J99.0* (M05.1†), J99.1*, J99.1* (M33.0-M33.1†), J99.1* (M31.3†), J99.1* (M32.1†), J99.1* (M33.2†), J99.1* (M34.8†)]	Other Diseases of Respiratory System	
786	R00-09, R04.0-04.2, R04.8-04.9 R06.0-06.2, R06.5-06.8, R07.0-07.4, R09.1, R09.3	Unknown	2 847
V71	Z00, Z01.6, Z02, Z02.1-02.2, Z02.6-02.9, Z11.1, Z71.1	N.S.D.	3 448
		Diseases Other than TB & Resp System	7 293
Total			19 715

NB. Above is a crude mapping of some of the codings in ICD9 to ICD10 as a reference only. Such mapping may result in mis-classification of some cases.

Appendix 19 (a)

Extent of Active Respiratory TB in First Attenders at Chest Clinics 2015-2017

Extent *	2015		2016		2017	
	No.	%	No.	%	No.	%
1. Minimal	939	39.6	881	38.6	777	35.0
2. Moderate	581	24.5	499	21.8	472	21.3
3. Extensive	258	10.9	257	11.3	238	10.7
4. Not Recorded	596	25.1	647	28.3	730	32.9
Total	2 374	100.0	2 284	100.0	2 217	100.0
No. of first attenders	19 374		19 650		19 715	
% of active TB	12.3		11.6		11.2	

* 1. Minimal : Less than right upper lobe
2. Moderate : More than right upper lobe
3. Extensive : More than a lung

Percentage on Sputum Results of Active TB in First Attenders at Chest Clinics 2017

	Number	%
Smear +	495	22.3
Smear - Culture +	531	24.0
Smear - Culture -	275	12.4
Incomplete	916	41.3
Total	2 217	100.0

APPENDIX 19 (b1)

Rate of Drug-resistant Tuberculosis

Among cases registered during the period January to December 2017 *(Data from PHLC)*

Age Group	Category	% resistance to				* % resistance to			MDR-TB	# Total % resistance	Total no. of cases analysed
		E	R	H	S	1 drug	2 drugs	≥ 3 drugs			
0 - 19	New cases	2.15	1.08	7.53	15.05	9.68	3.23	3.23	1.08	16.13	93
	Previously treated cases	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1
	Overall	2.13	1.06	7.45	14.89	9.57	3.19	3.19	1.06	15.96	94
20 - 39	New cases	1.76	1.96	6.26	10.96	10.76	1.96	1.76	1.57	14.48	511
	Previously treated cases	5.56	5.56	11.11	22.22	11.11	5.56	5.56	5.56	22.22	18
	Overall	1.89	2.08	6.43	11.34	10.78	2.08	1.89	1.70	14.74	529
40 - 59	New cases	0.52	1.56	7.02	9.88	10.66	2.99	0.65	0.91	14.30	769
	Previously treated cases	0.00	3.23	9.68	6.45	9.68	0.00	3.23	3.23	12.90	31
	Overall	0.50	1.63	7.13	9.75	10.63	2.88	0.75	1.00	14.25	800
60 up	New cases	0.42	0.30	5.67	7.84	7.06	3.20	0.24	0.18	10.49	1658
	Previously treated cases	1.56	3.13	9.38	13.28	7.81	4.69	3.13	3.13	15.63	128
	Overall	0.50	0.50	5.94	8.23	7.11	3.30	0.45	0.39	10.86	1786
All	New cases	0.73	0.92	6.17	9.11	8.68	2.94	0.69	0.63	12.31	3 031
	Previously treated cases	1.69	3.37	9.55	12.92	8.43	3.93	3.37	3.37	15.73	178
	Overall	0.78	1.06	6.36	9.32	8.66	2.99	0.84	0.78	12.50	3 209

Notes: E = ethambutol; R = rifampicin; H = isoniazid; S = streptomycin

* % resistant to one, two or more than two of the four drugs E, R, H and S

total % resistance: resistant to at least one of the four drugs E, R, H and S

New cases: for cases with no past history of anti-tuberculosis treatment / *Unknown cases*

Previously treated cases: for cases with past history of anti-tuberculosis treatment

Overall: for all cases

NB: The TB Reference Laboratory of Department of Health is using the absolute concentration method for drug susceptibility tests.

APPENDIX 19 (b2)

Rate of Drug-resistant Tuberculosis

Among cases with date of starting treatment during the period January to December 2017

	New case		Previously treated cases		Combined	
	N	%	N	%	N	%
Total number of strains tested	3 031	100	178	100	3 209	100
Susceptible to all 4 drugs	2 658	87.69	150	84.27	2 808	87.50
Any resistance	373	12.31	28	15.73	401	12.50
H	187	6.17	17	9.55	204	6.36
R	28	0.92	6	3.37	34	1.06
E	22	0.73	3	1.69	25	0.78
S	276	9.11	23	12.92	299	9.32
Monoresistance	263	8.68	15	8.43	278	8.66
H	77	2.54	4	2.25	81	2.52
R	9	0.30	0	0.00	9	0.28
E	3	0.10	0	0.00	3	0.09
S	174	5.74	11	6.18	185	5.77
Multidrug resistance	19	0.63	6	3.37	25	0.78
H+R	2	0.07	0	0.00	2	0.06
H+R+E	2	0.07	1	0.56	3	0.09
H+R+S	6	0.20	3	1.69	9	0.28
H+R+E+S	9	0.30	2	1.12	11	0.34
Other patterns	91	3.00	7	3.93	98	3.05
H+E	4	0.13	0	0.00	4	0.12
H+S	83	2.74	7	3.93	90	2.80
H+E+S	4	0.13	0	0.00	4	0.12
R+E	0	0.00	0	0.00	0	0.00
R+S	0	0.00	0	0.00	0	0.00
R+E+S	0	0.00	0	0.00	0	0.00
E+S	0	0.00	0	0.00	0	0.00
Number of drugs resistant to:						
0 drug	2 658	87.69	150	84.27	2 808	87.50
1 drug	263	8.68	15	8.43	278	8.66
2 drugs	89	2.94	7	3.93	96	2.99
3 drugs	12	0.40	4	2.25	16	0.50
4 drugs	9	0.30	2	1.12	11	0.34

Appendix 19 (c1)

Trend of anti-TB drug resistance (1998-2017)*

New cases

(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ethambutol	1.24	1.11	0.54	0.96	0.65	0.42	0.34	0.54	0.35	0.12	0.45	0.26	0.25	0.33	0.70	0.54	0.65	0.54	0.50	0.73
Rifampicin	1.17	0.97	0.61	0.83	0.46	0.69	0.75	0.83	0.86	0.46	0.64	0.90	0.78	0.88	0.95	1.03	0.85	0.92	0.78	0.92
Isoniazid	6.78	6.22	5.21	5.02	4.71	4.64	3.65	4.16	4.13	3.79	4.33	4.19	4.86	4.18	4.66	4.39	5.33	4.90	5.80	6.17
Streptomycin	7.65	9.34	7.78	7.39	7.40	7.59	6.90	6.72	6.00	7.47	6.89	8.04	7.61	7.32	9.48	8.22	9.36	9.30	8.91	9.11
MDR-TB	1.06	0.75	0.47	0.55	0.34	0.46	0.48	0.51	0.55	0.31	0.30	0.67	0.70	0.63	0.74	0.70	0.68	0.54	0.50	0.63
Total % resistance	10.89	12.61	10.35	10.39	10.22	10.54	8.84	9.33	8.64	9.32	9.41	10.59	9.88	10.08	11.67	10.72	12.47	11.98	11.43	12.31

Previously treated cases

(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ethambutol	3.51	3.16	2.68	1.85	2.04	2.19	2.14	3.92	1.61	0.90	2.65	0.47	2.56	0.00	1.70	0.99	4.73	2.50	2.27	1.69
Rifampicin	4.61	6.09	5.98	3.71	4.59	3.41	4.29	3.64	2.90	2.10	3.53	1.73	4.47	2.84	4.08	2.22	5.09	3.13	4.17	3.37
Isoniazid	11.84	11.51	15.26	11.80	9.69	9.00	10.46	8.68	10.00	9.31	10.00	6.45	9.58	6.38	10.54	6.17	12.73	13.75	12.88	9.55
Streptomycin	13.82	14.45	13.81	10.96	10.97	9.25	11.26	10.08	9.35	11.11	9.12	8.49	13.42	10.28	13.95	10.62	13.09	15.63	13.64	12.92
MDR-TB	4.17	5.19	5.36	3.54	3.57	2.92	3.75	2.52	2.90	2.10	2.94	1.57	4.15	2.13	3.74	1.98	4.00	3.13	3.41	3.37
Total % resistance	18.86	20.32	20.41	16.36	16.58	14.11	16.35	14.29	13.55	15.32	15.59	12.26	17.25	12.06	18.71	13.58	20.73	21.25	19.32	15.73

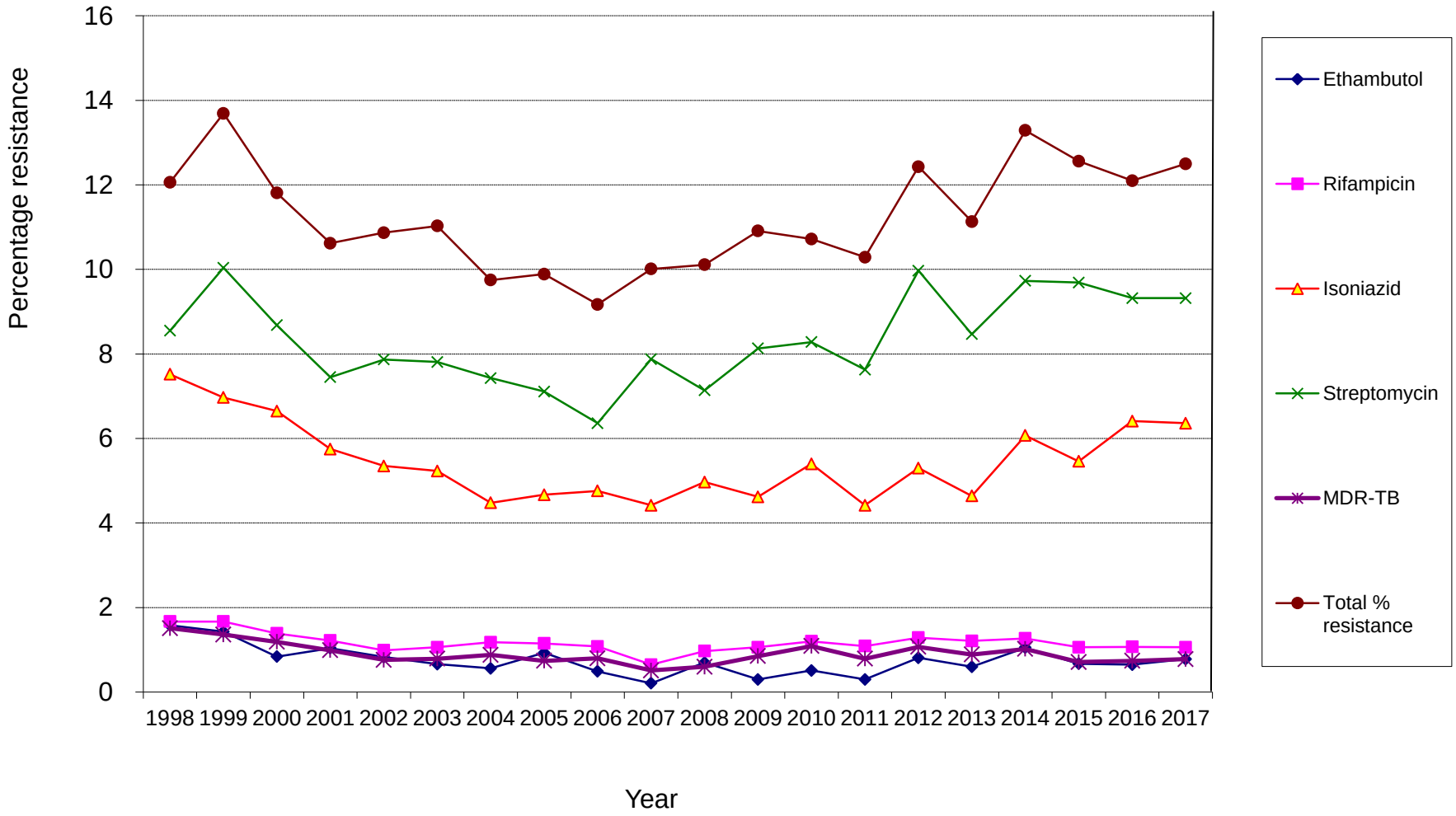
Overall

(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ethambutol	1.58	1.43	0.84	1.04	0.83	0.66	0.56	0.93	0.49	0.21	0.70	0.30	0.51	0.30	0.81	0.60	1.05	0.67	0.65	0.78
Rifampicin	1.67	1.67	1.39	1.22	0.99	1.06	1.18	1.15	1.08	0.65	0.97	1.06	1.20	1.09	1.29	1.21	1.27	1.06	1.07	1.06
Isoniazid	7.52	6.97	6.65	5.75	5.35	5.23	4.48	4.67	4.76	4.42	4.97	4.62	5.40	4.42	5.30	4.64	6.07	5.46	6.41	6.36
Streptomycin	8.55	10.04	8.68	7.45	7.87	7.81	7.43	7.11	6.36	7.88	7.14	8.13	8.28	7.63	9.97	8.47	9.73	9.69	9.32	9.32
MDR-TB	1.51	1.36	1.19	0.99	0.76	0.79	0.88	0.74	0.80	0.51	0.60	0.85	1.09	0.79	1.07	0.89	1.02	0.71	0.74	0.78
Total % resistance	12.06	13.69	11.81	10.62	10.87	11.03	9.75	9.89	9.17	10.01	10.11	10.91	10.72	10.29	12.43	11.13	13.29	12.56	12.10	12.50

*1998 - 2015: Data from Programme Record Forms; 2016 - 2017: Data from Public Health Laboratory Centre

Appendix 19 (c2)

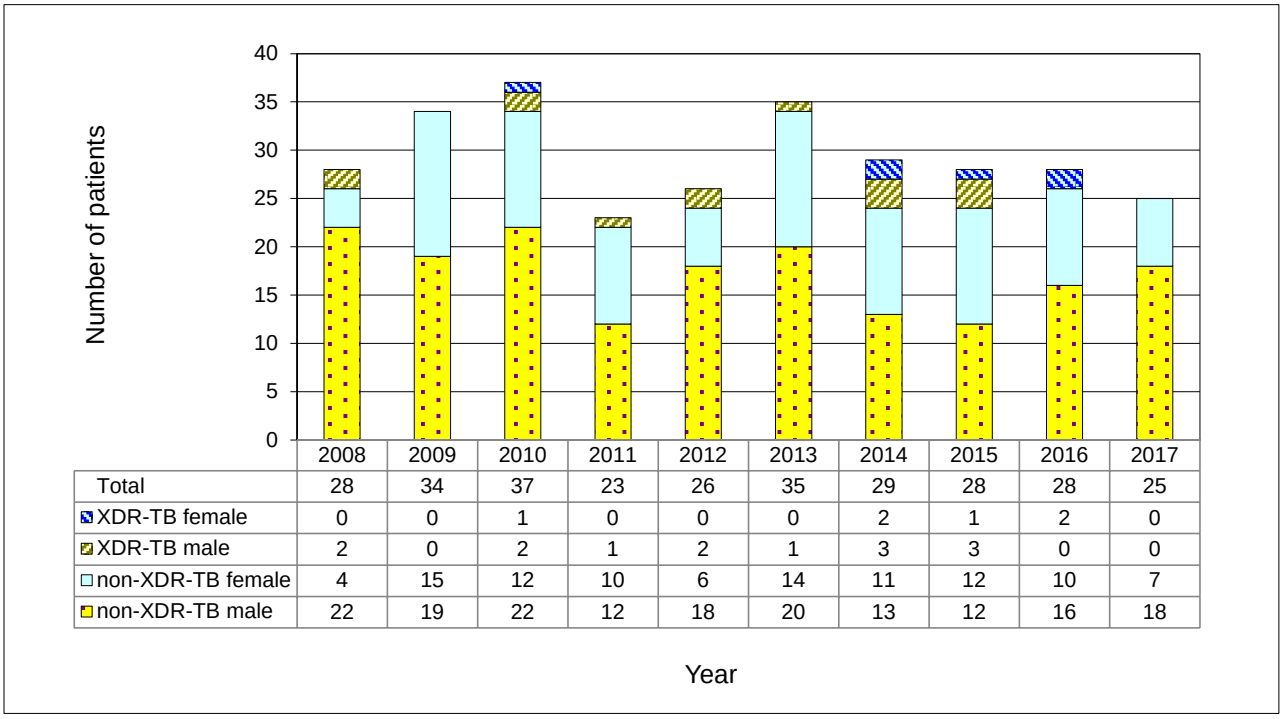
Trend of anti-TB drug resistance (1998-2017) (Overall)



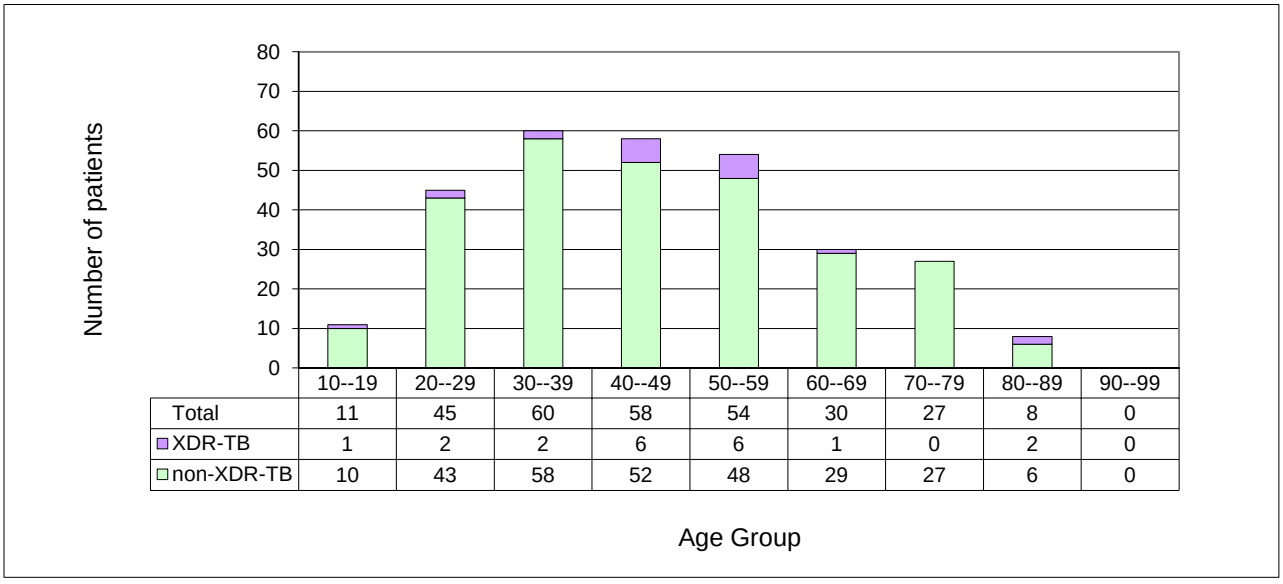
Appendix 19 (d)

MDR-TB and XDR-TB by Sex and Year (Upper Graph) and by Age (Lower Graph) (2008-2017)

Cases of MDR-TB and XDR-TB are identified from four main sources: (1) Programme forms; (2) MDR-TB registry; (3) Prison registry; (4) TB Reference Laboratory. The year to which the case belongs is defined as the year of starting treatment with second-line anti-TB drugs, or if treatment has not been started (e.g., patient died, or no effective second-line drugs are available for treatment), it is defined as the year of reporting MDR-TB.



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	28	34	37	23	26	35	29	28	28	25
XDR-TB female	0	0	1	0	0	0	2	1	2	0
XDR-TB male	2	0	2	1	2	1	3	3	0	0
non-XDR-TB female	4	15	12	10	6	14	11	12	10	7
non-XDR-TB male	22	19	22	12	18	20	13	12	16	18



	10--19	20--29	30--39	40--49	50--59	60--69	70--79	80--89	90--99
Total	11	45	60	58	54	30	27	8	0
XDR-TB	1	2	2	6	6	1	0	2	0
non-XDR-TB	10	43	58	52	48	29	27	6	0

Definitions: MDR-TB = multidrug-resistant tuberculosis [resistant to at least isoniazid and rifampicin]

XDR-TB = extensively drug-resistant tuberculosis [resistant to any fluoroquinolone, and at least one of the three injectable second-line drugs (capreomycin, kanamycin, and amikacin), in addition to MDR-TB]

NB: In the above graphs, non-XDR-TB refers to MDR-TB excluding XDR-TB cases.

Since 2014, MDR-TB cases have been counted according to the year of TB notification.

Appendix 20 (a)
Treatment Return 2017

Service Regimen																											
	No. put	Bought in					Treatment completed					Transfer out to		Interrup		Drop out				Complete defaulter				No. still	Unsup	Incomp	No. def.
Name of Clinic/Hospital	on Rx b/f	1	2	3	4	5	<6M	at 6M	>6M	NTM	%	hosp.	other cc	Rx temp	Died	Rx by GP	Leave HK	Def. >1x	AMA	<2M	>2M <3M	>3M	%	onRx c/f	Rx	super. Rx	>2M <3M
	A	B	C	D	E	F	G	H	I	J		K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Full Time Clinics																											
East Kowloon	141	119	0	10	119	55	2	32	150	3	87.1	42	14	6	13	1	2	1	4	1	3	0	1.9	170	4	52	0
Kowloon	171	125	13	7	116	50	1	42	181	3	87.8	38	15	0	11	1	5	0	9	1	0	1	0.8	174	0	55	0
South Kwai Chung	199	124	4	7	168	61	3	45	227	0	85.0	46	13	0	23	3	9	3	4	0	8	1	2.8	178	13	22	0
Sai Ying Pun	91	54	15	2	92	35	1	33	118	3	86.8	35	13	2	10	1	6	0	1	0	0	2	1.1	64	2	31	0
Shaukeiwan	119	77	10	3	65	31	6	30	107	4	89.0	20	18	0	4	1	6	0	1	1	0	0	0.6	107	0	25	0
Shek Kip Mei	82	98	4	4	96	42	3	30	163	3	83.2	27	8	0	12	0	9	1	3	0	0	12	5.2	55	0	57	7
Tai Po	126	83	0	1	61	8	3	16	127	0	86.1	0	8	0	12	0	4	0	1	0	0	6	3.6	102	0	4	2
Wanchai	105	125	10	5	47	34	15	48	104	10	79.2	15	9	0	4	3	16	0	2	0	4	1	2.6	95	0	25	0
Yan Oi	198	125	1	8	131	53	1	41	197	5	85.9	34	6	1	13	4	9	1	5	1	0	2	1.1	196	0	81	0
Yaumatei	178	114	11	6	100	31	3	48	162	3	83.3	16	30	0	11	4	7	2	4	0	5	8	5.2	137	0	5	0
Yuen Chau Kok	187	140	1	2	122	50	8	46	178	5	85.5	35	10	0	17	1	11	1	3	0	0	1	0.4	186	0	15	0
Yung Fung Shee	177	157	2	8	173	79	4	51	211	21	82.6	58	10	0	14	3	7	1	2	0	1	7	2.5	206	2	89	0
Sub-total	1 774	1 341	71	63	1 290	529	50	462	1 925	60	85.0	366	154	9	144	22	91	10	39	4	21	41	2.3	1 670	21	461	9
Hosp Discharge Clinic																											
East Kowloon	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Part Time Clinics																											
Cheung Chau	4	1	0	0	1	5	0	1	5	0	85.7	0	0	0	1	0	0	0	0	0	0	0	0.0	4	0	2	0
Sai Kung	10	3	0	1	5	0	0	1	7	0	100.0	0	4	0	0	0	0	0	0	0	0	0	0.0	7	0	2	0
Sheung Shui	76	39	2	2	66	13	2	21	77	1	88.3	5	4	0	3	0	5	1	0	1	2	1	3.6	75	0	38	0
Tung Chung	28	17	0	2	21	10	3	10	29	0	92.9	2	0	0	2	0	1	0	0	0	0	0	0.0	31	0	26	0
Yuen Long	128	71	3	3	67	15	2	23	120	2	86.7	8	10	0	2	1	8	1	0	0	3	6	5.5	101	0	112	0
Sub-total	246	131	5	8	160	43	7	56	238	3	88.3	15	18	0	8	1	14	2	0	1	5	7	3.9	218	0	180	0
Institutions Correctional Services Department																											
Hei Ling Chau	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Stanley Prison	6	15	0	0	0	0	4	5	0	0	45.5	0	0	0	0	1	0	1	0	5	0	0	45.5	5	0	0	0
Shek Pik Prison	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Sub-total	6	15	0	0	0	0	4	5	0	0	45.5	0	0	0	0	1	0	1	0	5	0	0	45.5	5	0	0	0
Total	2 026	1 487	76	71	1 450	572	61	523	2 163	63	85.2	381	172	9	152	24	105	13	39	10	26	48	2.7	1 893	21	641	9

Appendix 20 (b)
Treatment Return 2017

Other Regimen																											
	No. put	Bought in					Treatment completed					Transfer out to		Interrup		Drop out				Complete defaulter				No. still	Unsup	Incomp	No. def.
Name of Clinic/Hospital	on Rx b/f	1	2	3	4	5	<6M	at6M	>6M	NTM	%	hosp.	other cc	Rx temp	Died	Rx by GP	Leave HK	Def. >1x	AMA	<2M	>2M <3M	>3M	%	onRx c/f	Rx	super. Rx	>2M <3M
	A	B	C	D	E	F	G	H	I	J		K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Full Time Clinics																											
East Kowloon	55	19	1	0	27	14	0	7	43	1	87.7	10	1	0	6	0	0	0	0	0	0	0	0.0	48	0	22	0
Kowloon	20	5	3	2	17	5	1	0	15	0	83.3	7	1	0	2	0	1	0	0	0	0	0	0.0	25	0	14	0
South Kwai Chung	82	8	2	3	37	6	0	1	36	0	69.8	3	2	0	10	0	1	0	2	0	3	0	5.7	80	1	5	0
Sai Ying Pun	55	1	3	1	27	2	0	0	17	2	70.8	2	4	1	4	0	0	0	0	0	0	1	4.2	58	4	1	0
Shaukeiwan	22	4	1	0	13	2	0	1	13	4	63.6	4	2	0	4	0	0	0	0	0	0	0	0.0	14	0	3	0
Shek Kip Mei	115	4	1	1	36	11	1	1	22	3	82.1	10	7	0	1	0	0	0	1	0	0	0	0.0	122	0	6	0
Tai Po	28	7	0	0	10	3	0	2	18	3	62.5	0	0	0	2	0	1	0	2	0	0	4	12.5	16	0	0	0
Wanchai	34	5	1	0	10	2	1	3	12	3	75.0	3	0	0	2	0	0	0	0	0	0	0	0.0	28	0	5	0
Yan Oi	38	3	1	3	34	10	0	0	20	2	76.9	9	3	0	3	0	0	0	0	0	0	1	3.8	51	0	0	0
Yaumatei	37	11	4	1	21	5	0	2	31	3	70.2	2	2	0	6	0	1	2	0	0	2	2	8.5	26	0	0	0
Yuen Chau Kok	42	12	0	0	24	4	1	2	29	1	86.1	7	4	0	4	0	0	0	0	0	0	0	0.0	34	0	17	0
Yung Fung Shee	72	5	0	0	24	24	1	3	18	7	65.6	8	1	0	3	1	0	0	0	0	0	0	0.0	83	0	0	0
Sub-total	600	84	17	11	280	88	5	22	274	29	74.9	65	27	1	47	1	4	2	5	0	5	8	3.3	585	5	73	0
Hosp Discharge Clinic																											
East Kowloon	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Part Time Clinics																											
Cheung Chau	1	0	0	0	0	1	0	0	1	0	0.0	0	0	0	1	0	0	0	0	0	0	0	0.0	0	0	0	0
Sai Kung	0	1	0	0	0	0	0	0	1	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Sheung Shui	15	3	0	1	13	6	0	2	8	2	62.5	5	1	0	4	0	0	0	0	0	0	0	0.0	16	0	6	0
Tung Chung	1	0	0	1	7	0	0	1	0	0	50.0	0	0	0	0	0	0	0	0	0	0	1	50.0	7	0	0	0
Yuen Long	25	2	1	7	31	8	1	3	19	0	73.3	7	1	0	6	0	1	0	0	0	1	0	3.3	35	0	12	0
Sub-total	42	6	1	9	51	15	1	6	29	2	68.6	12	2	0	11	0	1	0	0	0	1	1	3.9	58	0	18	0
Institutions Correctional Services Department																											
Hei Ling Chau	0	4	12	0	1	0	0	2	1	0	0.0	0	9	0	0	0	0	0	0	0	0	0	0.0	5	0	0	0
Stanley Prison	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Shek Pik Prison	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Sub-total	0	4	12	0	1	0	0	2	1	0	0.0	0	9	0	0	0	0	0	0	0	0	0	0.0	5	0	0	0
Total	642	94	30	20	332	103	6	30	304	31	74.4	77	38	1	58	1	5	2	5	0	6	9	3.3	648	5	91	0

APPENDIX 20 (c)

Explanatory Notes for Appendices 20(a) & 20(b)

Name of clinic/hospital	Service regimen / Other regimens *																									
	b/f	Brought in					Treatment completed					Transfer out to		Interrup. Rx temp.	Died	Drop out				Complete defaulter				Number still on Rx c/f	Unsup. Rx	Incomp. Super. Rx	No. Def. >2m, <3m
							<6M	at 6M	>6M	NTM		hospi-tal	other cc			Rx by GP	Leave HK	Def. >1x	AMA	<2M	>2M, <3M	>3M	%				
	A	B *	C *	D *	E *	F *	G	H	I	J		K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

$$\% = \frac{H + I}{A + B + C + D + E + F - G - K - L - M - Q - W}$$

$$V = \frac{S + T + U}{A + B + C + D + E + F - G - K - L - M - Q - W}$$

$$W = (A + B + C + D + E + F) - (G + H + I + K + L + M + N + O + P + Q + R + S + T + U)$$

* Explanatory Notes :

Service regimen	Upon starting treatment, the regimen contains any combination of drugs including H (isoniazid), R (rifampicin), Z (pyrazinamide), E (ethambutol), and S (streptomycin).
Other regimens	Upon starting treatment, the regimen contains second line drugs apart from H, R, Z, E or S.
Item B	New cases with treatment started in chest clinics.
Item C	Retreatment cases, with treatment newly started. Previous treatment either not completed, or even if claimed to be completed, without documentation in the available clinic record.
Item D	Relapse cases, with treatment newly started. Previous treatment is completed with documentation in the available clinic record.
Item E	Treatment cases transferred in from hospitals, private doctors, etc. without treatment started previously at any chest clinics for this episode of tuberculosis.
Item F	Other transferred in treatment cases, with treatment given previously in any chest clinics for this episode of tuberculosis.

APPENDIX 20 (d)

Explanatory Notes For Appendices 20(a) and 20(b)

Appendix 20 (a) : Service regimen: For treatment cases who, upon starting anti-TB drugs, were given any combination of drugs including H (isoniazid), R (rifampicin), Z (pyrazinamide), E (ethambutol), and S (streptomycin).

Appendix 20 (b) : Other regimens: For treatment cases who, upon starting anti-TB drugs, were given also second line drugs apart from H, R, Z, E or S.

Number put on treatment b/f:

(A) - No. put on Rx b/f: Total number of treatment cases c/f from last month's balance.

Brought in:

- Items (B), (C), (D) & (E) will be using a new treatment number, while item (F) will be using the same previous treatment number, as follows:

(B) (1) Newly started treatment in your chest clinic.

(C) (2) Retreatment cases, with treatment newly started, including:
- Cases previously classified under items(O), (P), (Q), (R), (S), (T) or (U) in the most recent episode of treatment, with treatment restarted now after treatment has been interrupted for over 2 months;
- Cases claiming to have anti-TB treatment completed previously in chest clinic or chest hospital, but the clinic record is not available, e.g., because it has been destroyed;
- Cases claiming to have anti-TB treatment completed previously from sources other than chest clinic or chest hospital.

(D) (3) Relapse case:
- Cases having treatment completed previously (even if this is completed less than 2 months ago) in either chest clinic or chest hospital as indicated in the clinic record which is still available, e.g., cases classified under items (H) or (I) in the most recent episode.

(E) (4) Transfer in from hospitals, general practitioners (GPs), or prison:
- Cases previously unknown to any one chest clinic for this episode of treatment.

(F) (5) Cases using the same previous treatment number:
- Cases previously known to chest clinic for this episode of treatment, and now being transferred in from other chest clinics, hospitals, GPs, or prison, e.g., cases previously classified under items (K) or (L);
- Cases previously classified under items (O), (P), (Q), (R), or (S) in the most recent episode of treatment, with treatment restarted now after treatment has been interrupted for less than 2 months;
- Cases previously classified under item (M), and resuming treatment now.

Treatment completed:

(G) < 6m: Treatment stopped permanently by doctor prematurely, e.g., revised diagnosis.

(H) at 6m: Treatment stopped permanently by doctor at or within 2 weeks of 6 month from DOS.

(I) > 6m: Treatment stopped permanently by doctor at 7 month or more.

(J) NTM = Non-tuberculous mycobacteria cases

Column following (J): % = (H + I)/(A + B + C + D + E + F – G – K – L – M – Q – W)

Transfer out to:

(K) hosp: Admission to hospital.

(L) other cc: Transfer out to other chest clinics.

Interrup. Rx temp.:
(M) Treatment interrupted by doctor temporarily, e.g., due to side effects of drug such as impaired LFT.

Died:
(N) Treatment cases who died.

Drop out:
(O) Rx by GP: Changed to be treated by GP.
(P) Leave HK: Treatment cases known to be going back to Philippines, China, or other countries for good as stated in the clinic record (whether AMA has been signed or not).
(Q) Def. > 1x: Defaulted treatment and NFA in conference with MO for more than one time.
(R) AMA: Treatment cases who have signed AMA, excluding those who are to be classified under items (O) or (P).

Complete defaulter:
(S) < 2m: Defaulted treatment for less than 2 months, and NFA in conference with MO for the first time.
(T) > 2m, < 3m: Defaulted treatment for more than 2 months but less than 3 months, and NFA in conference with MO for the first time.
(U) > 3m: Defaulted treatment for more than 3 months, and NFA in conference with MO for the first time.
(V) % = (S + T + U)/(A + B + C + D + E + F – G – K – L – M – Q – W)

No. still on Rx c/f:
(W) - Number of treatment cases in hand at the end of the month = (A + B + C + D + E + F) – (G + H + I + K + L + M + N + O + P + Q + R + S + T + U)

Unsup. Rx:
(X) - Treatment cases with all anti-TB drugs supplied (not even taken one dose at chest clinic) and unsupervised. Count under this item if this happens within the first 2 month of treatment.

Incomp. super. Rx:
(Y) - Treatment incompletely supervised, including:
  - Treatment supervised by non-clinic staff, e.g., CNS, old aged home staff, Vietnamese camp, prison.
  - Drug supplied to patient or relatives.

  Count under this item if this happens within the first 2 months of treatment.

No. def. > 2m, < 3m:
(Z) - Number of defaulters who have defaulted treatment for more than 2 months but less than 3 months, but not yet NFA in conference with MO. (NB: No cases who have been counted under this item in the last month will be counted again under this item for the subsequent months.)

  This item needs to be counted only on the last working day of the month when completing the monthly treatment return.

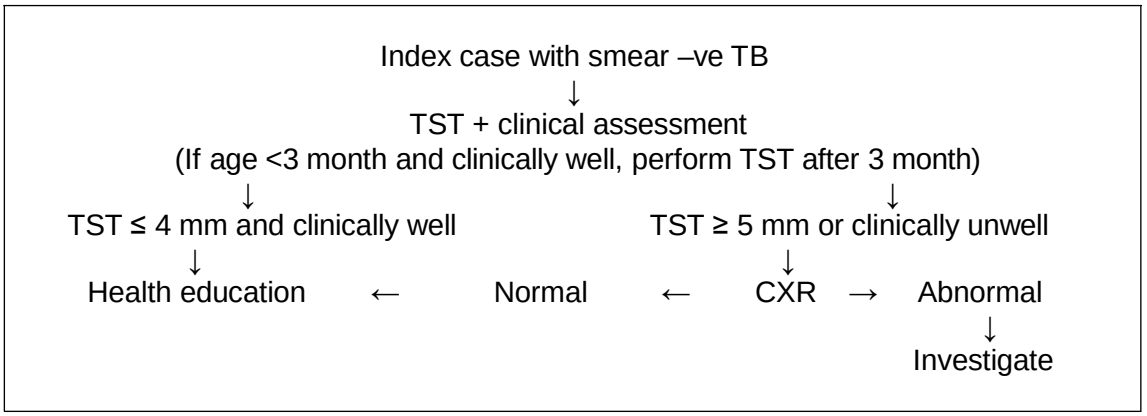
Appendix 21 (a)

Scheme for Investigation of Close Contacts (Household) in the Tuberculosis & Chest Service, Department of Health

(Updated 18 May 2015)

Scenario	Strategy
Index case is smear-negative and the close contact < 5 years old	Tuberculin skin test, with chest X-ray if the test reads 5 mm or more.
Index case is smear-negative and the close contact aged 5 years or more	Chest X-ray
Index case is smear-positive and the close contact < 35 years old	Chest X-ray and tuberculin skin test, with treatment of latent TB infection if appropriate.
Index case is smear-positive and the close contact aged 35 years or more	Chest X-ray, with tuberculin skin test and treatment of latent TB infection after assessment on a case-by-case basis.

Flow chart for contact investigation of close contacts aged below 5 with smear negative index case *



* If the index case has smear-negative TB and the close contact case is aged below five, the contact case is first evaluated by tuberculin skin test alongside clinical assessment. If the contact case is aged below 3 months and clinically well, the tuberculin test can be postponed until the contact case is 3 months old. If the contact case is clinically well and the tuberculin skin test result is 4 mm or less, health education is all that is required. If the contact case is clinically unwell or the tuberculin skin test result is 5 mm or more, chest X-ray is taken. If chest X-ray is normal, only health education is required. Otherwise, further investigation may be considered.

Appendix 21 (b)

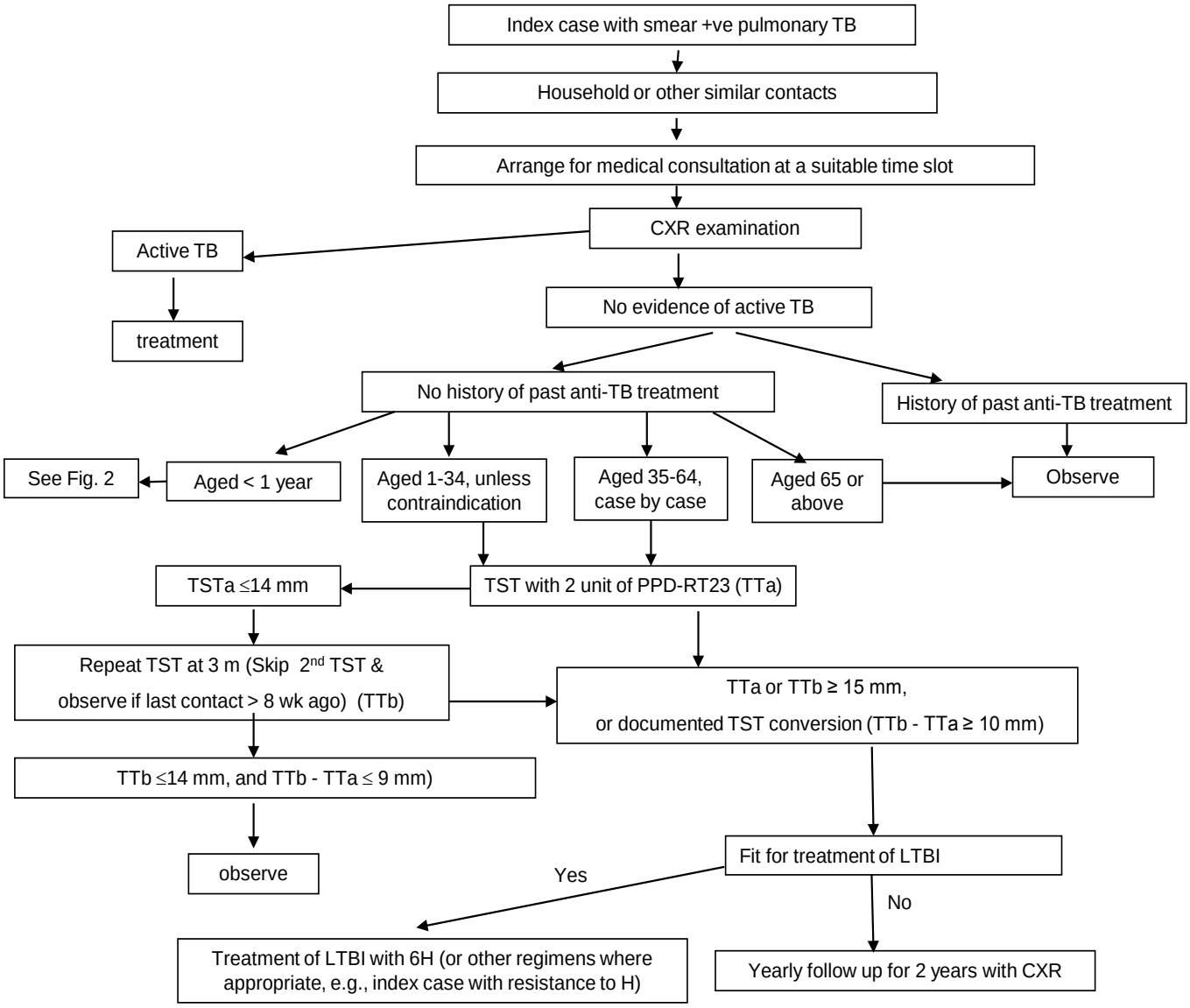


Figure 1: General schema for targeted screening of household contacts of smear-positive pulmonary TB patients

* Targeted screening for active TB and latent TB infection is regularly offered to subjects exposed to smear-positive pulmonary TB patients in the same household or other similar scenarios. Medical consultation is arranged at a suitable time slot, when chest X-ray examination will first be done to exclude active TB for which treatment will be given. Contacts with no evidence of active TB but a history of past anti-TB treatment will be observed, whereas those with no history of past anti-TB treatment will be managed according to their age group. For contacts aged below 1, please refer to App 21b2. For contacts aged 1 to 34, tuberculin skin test (TST) is routinely offered, unless there are contraindications. For those aged 35 to 64, TST is offered on a case-by-case basis. For those aged 65 or above, just observe. TST is done using 2 units of PPD-RT23. If the induration measured after 48 to 72 hours is no more than 14 mm, repeat TST 3 months later, unless the contact has had no further contact with the index case for more than 8 weeks. If the test response of either the first or the second TST is at least 15 mm, or if the difference between the two test responses is at least 10 mm, consider treatment of latent TB infection with daily isoniazid for 6 months (or other regimens where appropriate, for example, when the index case has TB with isoniazid resistance). If treatment of latent TB infection is indicated but the contact case is medically not fit, consider yearly follow up for 2 years with chest X-ray.

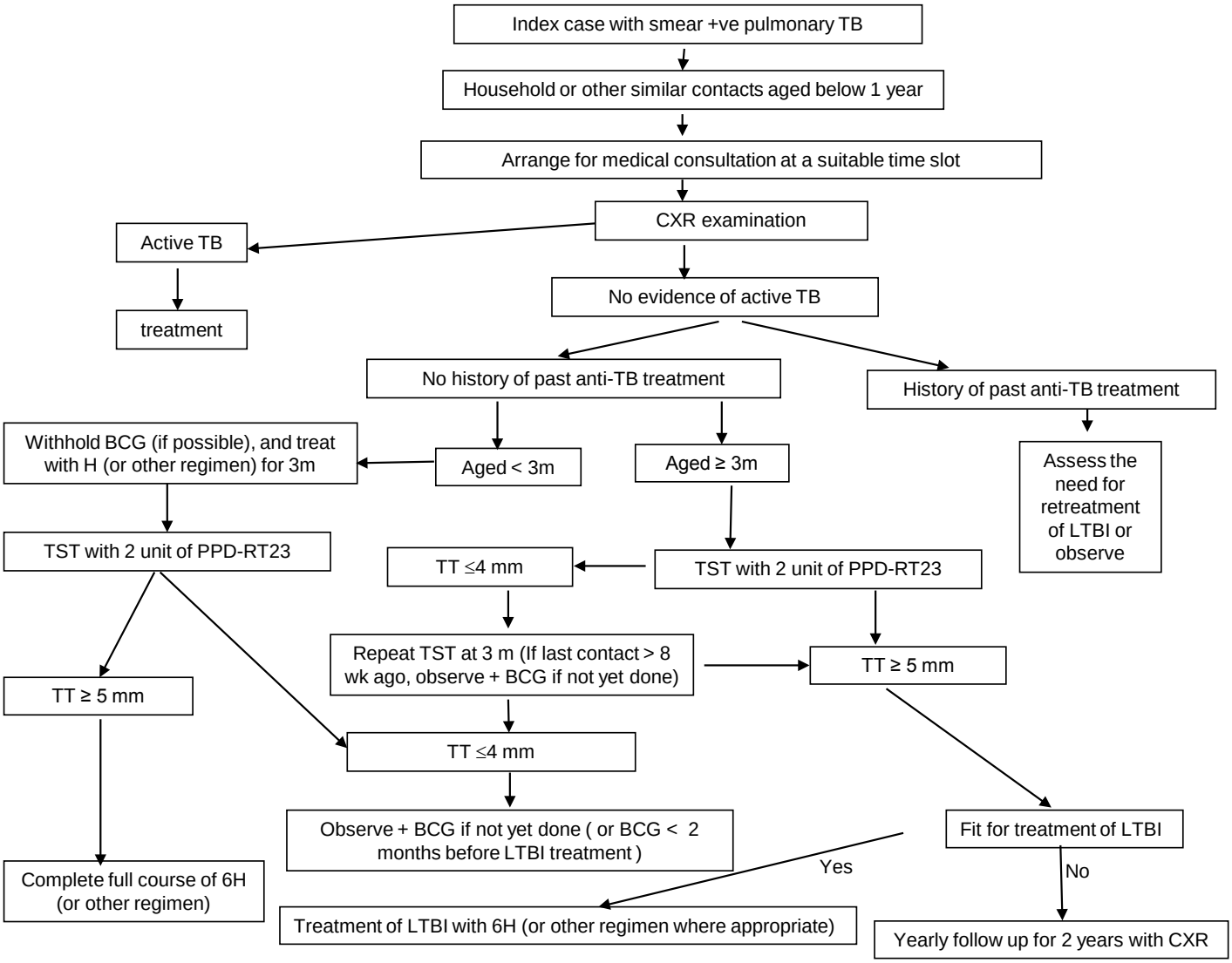


Figure 2: Targeted screening of household contacts aged below one year

* Targeted screening for active TB and latent TB infection is regularly offered to subjects aged below 1 year and exposed to smear-positive pulmonary TB patients in the same household or other similar scenarios. Medical consultation is arranged at a suitable time slot, when chest X-ray examination will first be done to exclude active TB for which treatment will be given. For contacts with no evidence of active TB but a history of past anti-TB treatment, the need for retreatment of latent TB infection versus observation will be assessed. For those with neither active TB nor a history of past anti-TB treatment, further management is stratified by their age group. For contacts aged below 3 months, withhold BCG if possible, and treat with isoniazid daily (or other regimens) for 3 months. This is followed by tuberculin skin test (TST) using 2 units of PPD-RT23. If the test response is at least 5 mm, complete a full course of 6-month isoniazid preventive treatment (or other regimens). If the test response is no more than 4 mm, observe and give BCG if it has not yet been given or given less than 2 months before starting treatment for latent TB infection.

For contacts aged 3 months or above, TST is done using 2 units of PPD-RT23. If the test response is no more than 4 mm, repeat TST 3 months later, unless the contact has had no further contact with the index case for more than 8 weeks. If the test response of either the first or second TST is at least 5 mm, consider treatment of latent TB infection with daily isoniazid for 6 months (or other regimens where appropriate). If treatment of latent TB infection is indicated but the contact case is medically not fit, consider yearly follow up for 2 years with chest X-ray. If the test response of the second TST (or the single TST done more than 8 weeks ago after last contact) is no more than 4 mm, observe and give BCG if it has not yet been given .

Appendix 21 (C)

Examination of Contacts in the Chest Clinics 2017

Particulars	Smear Positive Index Cases		Smear Negative Index Cases		Total	
No. of patients (new & old) listed	1 118		2 899		4 017	
No. of contacts listed	2 692		7 081		9 773	
Number of contacts x-rayed	2 680	(100.00%)	7 279	(100.00%)	9 959	(100.00%)
Results						
(a) NSD & Unknown	2 458	(91.72%)	6 661	(91.51%)	9 119	(91.57%)
(b) Disease other than TB	144	(5.37%)	401	(5.51%)	545	(5.47%)
(c) Inactive respiratory TB	30	(1.12%)	75	(1.03%)	105	(1.05%)
(d) Active respiratory TB						
A (radiologically)	16	(0.60%)	97	(1.33%)	113	(1.13%)
B (bacteriogically)	5	(0.19%) > 25 (0.93%)	6	(0.08%) > 104 (1.43%)	11	(0.11%) > 129 (1.30%)
C (incomplete)	4	(0.15%)	1	(0.01%)	5	(0.05%)
(e) Non-respiratory TB	1	(0.04%)	5	(0.07%)	6	(0.06%)
(f) Result not yet known	22	(0.82%)	33	(0.45%)	55	(0.55%)

Appendix 22 (a)

Scheme for BCG Administration in Hong Kong 2017

Population Group		Procedures
Newborns		Direct BCG with intradermal method
Children under the age of 15	Negative BCG history and negative BCG scar	Direct BCG with intradermal method (since September 2000)
	BCG history and / or BCG scar	No action
Primary School Children (aged 6-10)		BCG revaccination programme stopped since September 2000

Notes: (1) Freeze dried BCG from Statens Serum Institut of Denmark being used

(2) Any child with symptoms and/or BCG complications should be seen by a doctor

Appendix 22 (b)

BCG Vaccinations at Birth 2017

Institution		No. of Live-births	BCG Vaccination	% Vaccinated
Hospital under HA management	P.Y. Nethersole East	2 618	2 536	96.9
	Queen Mary	3 795	3 714	97.9
Private Hospital	Canossa	562	555	98.8
	H.K. Adventist	347	334	96.3
	H.K. Sanatorium	3 179	3 151	99.1
	Matilda International	950	879	92.5
	St. Paul's	1 181	1 170	99.1
Total (HK Island)		12 632	12 339	97.7
Hospital under HA management	Kwong Wah	4 506	4 463	99.0
	Queen Elizabeth	5 785	5 706	98.6
	United Christian	4 146	4 135	99.7
Private Hospital	H.K. Baptist	2 499	2 460	98.4
	St. Teresa's	4 425	4 364	98.6
	Precious Blood	731	729	99.7
Total (Kowloon)		22 092	21 857	98.9
Hospital under HA management	Alice H.M.L. Nethersole	-	-	-
	Prince of Wales	6 875	6 835	99.4
	Princess Margaret	4 764	4 736	99.4
	Tuen Mun	5 387	5 347	99.3
Private Hospital	T.W. Adventist	1 210	1 201	99.3
	Shatin Int'l Medical Ctr Union	3 582	3 537	98.7
Total (NT Areas)		21 818	21 656	99.3
Mother & Child Health Centre		-	135	-
Grand Total		56 542	55 987	99.0

Appendix 23

TB and Chest Beds in Public Services 2017

Hospital		No. of TB and Chest Beds
Hospital Authority	Grantham Hospital	113
	Kowloon Hospital	104
	Ruttonjee Hospital	134
	Haven of Hope Hospital	134
	Wong Tai Sin Hospital	93
	Total (Hospital Authority)	578
Custody	Stanley Prison Hospital	20
	Grand Total (2017)	598
	Grand Total (2016)	595
	Grand Total (2015)	590

Appendix 24

Annual Admissions to Hospitals from Government Chest Clinics 2006 - 2017

Year	Total Admissions
2006	4 571
2007	4 038
2008	3 170
2009	3 345
2010	3 330
2011	3 142
2012	2 940
2013	2 823
2014	2 799
2015	2 631
2016	2 579
2017	2 459

Admissions by Clinic	Year 2017
East Kowloon	196
Kowloon	154
Sai Ying Pun	214
Shaukeiwan	201
Shaukeiwan Pneumoconiosis	59
Shek Kip Mei	96
South Kwai Chung	435
Tai Po	36
Tung Chung	21
Wanchai	154
Yan Oi	354
Yaumatei	110
Yuen Chau Kok	137
Yung Fung Shee	170
Cheung Chau	4
NT Unit	118
Total	2 459

Appendix 25

HIV Surveillance Among TB Patients

Provider-initiated HIV Antibody Testing Among TB Patients in Government Chest Clinics (2005 – 2017)

Year	HIV positive		HIV negative		HIV results unknown or not done		Total	
	Number	%	Number	%	Number	%	Number	%
2005	35	0.7%	4 174	80.5%	973	18.8%	5 182	100%
2006	33	0.7%	4 478	90.4%	445	9.0%	4 956	100%
2007	41	0.9%	4 034	87.8%	517	11.3%	4 592	100%
2008	48	1.0%	4 073	88.8%	464	10.1%	4 585	100%
2009	40	0.9%	3 953	88.1%	496	11.0%	4 489	100%
2010	28	0.7%	3 805	89.5%	418	9.8%	4 251	100%
2011	33	0.8%	3 623	89.7%	381	9.4%	4 037	100%
2012	22	0.5%	3 685	90.7%	357	8.8%	4 064	100%
2013	24	0.6%	3 512	87.6%	473	11.8%	4 009	100%
2014	23	0.6%	3 322	87.5%	450	11.9%	3 795	100%
2015	24	0.7%	3 266	90.4%	322	8.9%	3 612	100%
2016	28	0.8%	3 244	91.3%	283	8.0%	3 555	100%
2017	31	0.9%	3 225	93.0%	211	6.1%	3 467	100%

Unlinked Anonymous Screening (UAS) for HIV in TB & Chest Service

Period	Category	Sample	Number Tested (No. +ve) (% +ve)	
1.12.90 - 31.1.91	Outpatient	Blood	1 548	
5.6.91 - 5.8.91	Inpatient	Blood	485	
1.4.92 – 30.6.92	Outpatient	Blood	1 469	(2) (0.14%)
1.4.93 – 30.6.93	Outpatient	Blood	1 173	
Sep 95 – Nov 95	Outpatient	Urine	895	(2) (0.22%)
Sep 96 – Dec 96	Outpatient	Urine	998	(4) (0.40%)
Oct 97 – Jan 98	Outpatient	Urine	1 003	(2) (0.20%)
Oct 98 – Jan 99	Outpatient	Urine	833	(4) (0.48%)
Sep 99 – Dec 99	Outpatient	Urine	1 166	(8) (0.69%)
Sep 00 – Dec 00	Outpatient	Urine	1 018	(5) (0.49%)
Oct 01 – Dec 01	Outpatient	Urine	1 071	(4) (0.37%)
Oct 02 – Jan 03	Outpatient	Urine	1 000	(8) (0.80%)
Nov 03 – Feb 04	Outpatient	Urine	920	(6) (0.65%)
Oct 04 – Feb 05	Outpatient	Urine	1 056	(9) (0.85%)
Nov 05 – Jan 06	Outpatient	Urine	841	(7) (0.83%)
Nov 06 – Feb 07	Outpatient	Urine	841	(5) (0.59%)
Nov 07 – Feb 08	Outpatient	Urine	887	(11) (1.24%)

Since late 2008, UAS is no longer performed, and surveillance of HIV among TB patients mainly depends on voluntary HIV testing.

Appendix 26

Number of 'Confirmed' cases of TB in health care staff
Notified to Labour Department (1995 – 2017)

Year	Number
1995	2
1996	2
1997	10
1998	39
1999	57
2000	39
2001	41
2002	29
2003	30
2004	42
2005	30
2006	18
2007	16
2008	25
2009	18
2010	11
2011	17
2012	15
2013	7
2014	7
2015	9
2016	6
2017	9

'Confirmed' Cases of TB in Health Care Staff Notified
to Labour Department (2017) by Age and Job Title

Age Group	Doctor	Nurse	Other Allied Health Professional	Other Supporting Staff	Total
20 – 24	-	-	-	-	0
25 – 29	1	-	-	-	1
30 – 34	-	-	1	1	2
35 – 39	-	2	-	-	2
40 – 44	-	-	-	-	0
45 – 49	-	-	-	-	0
50 – 54	1	1	1	-	3
55 – 59	-	-	-	1	1
60 – 64	-	-	-	-	0
65 – 69	-	-	-	-	0
70 – 74	-	-	-	-	0
Total	2	3	2	2	9

Appendix 27
Cohorts of TB Patients

Treatment outcomes for TB cases registered in 2016 calendar year (number of patients)

	Number of cases registered in 2016 *		Cured or treatment completed		Treatment failed		Died		Lost to follow-up (defaulted)		Not evaluated **	
All new and relapse cases (bacteriologicaly confirmed or clinically diagnosed, pulmonary or extrapulmonary)	4 272	100.00%	2 766	64.75%	0	0.00%	731	17.11%	141	3.30%	634	14.84%
Previously treated patients (excluding relapse cases) ***	43	100.00%	18	41.86%	0	0.00%	2	4.65%	14	32.56%	9	20.93%
HIV-positive TB cases, all types	35	100.00%	15	42.86%	0	0.00%	2	5.71%	8	22.86%	10	28.57%

NB:
* Excludes cases moved to second-line treatment (i.e., excluding rifampicin-resistant cases).
** "Not evaluted" includes "transferred out", "still on treatment" and any other registered cases where the treatment outcome has not been evaluated.
*** "Previously treated patients (excluding relapse cases)" include "treatment after default" and "failure of previous treatment" cases.

Treatment outcomes for TB cases started on second-line TB treatment in 2015 calendar year (number of patients)

	Number of cases started on second-line TB treatment in 2015		Cured or treatment completed		Treatment failed		Died		Lost to follow-up (defaulted)		Not evaluated ****	
All confirmed RR-TB/ MDR-TB cases	24	100.00%	17	70.83%	0	0.00%	2	8.33%	0	0.00%	5	20.83%
All confirmed XDR-TB cases *****	2	100.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

NB:
**** "Not evaluted" includes "transferred out", "still on treatment" and any other registered cases where the treatment outcome has not been evaluated.
***** Excluding all confirmed RR-TB/ MDR-TB cases which are not XDR-TB cases.

Part 2

PNEUMOCONIOSIS

Part 2 - Pneumoconiosis : Contents

Appendix No.

Appendix 1

New Cases of Suspected Pneumoconiosis/Mesothelioma attending
the Pneumoconiosis Clinic in Hong Kong 1956 - 2017

Year	Number of New Cases Undergoing Assessment							Cumulative Total	Cumulative Total of patients Confirmed by the Board		
	Government Workers	Non-government Workers	Total		Number of cases confirmed by the Board				R1		R2
					(b)	(e)	(f)				
1956	1	-	1					1			
1957	4	4	8					9			
1958	9	13	22					31			
1959	5	7	12					43			
1960	9	6	15					58			
1961	8	-	8					66			
1962	3	1	4					70			
1963	9	5	14					84			
1964	21	17	38					122			
1965	9	4	13					135			
1966	7	9	16					151			
1967	3	6	9					160			
1968	4	2	6					166			
1969	4	10	14					180			
1970	22	36	58					238			
1971	9	18	27					265			
1972	9	29	38					303			
1973	3	39	42					345			
1974	-	97	97					442			
1975	5	84	89					531			
1976	15	252	267					798			
1977	3	216	219					1 017			
1978	12	207	219					1 236			
1979	2	210	212					1 448			
1980	12	532	544	(a)				1 992	386	(a)	-
1981	8	608	616					2 608	1 332		162
1982	4	511	515					3 123	1 434		634
1983	2	292	294					3 417	1 469		945
1984	1	231	232					3 649	1 477		1 140
1985	1	179	180					3 829	1 479		1 322
1986	3	176	179		(3)		(188)	4 008	1 485		1 513
1987	4	166	170		(2)		(164)	4 178	1 485		1 679
1988	6	172	178		(4)		(194)	4 356	1 488		1 877
1989	-	156	156		(1)		(145)	4 512	1 488		2 023
1990	2	147	149		(1)		(118)	4 661	1 489		2 142
1991	-	171	171		(1)		(8)	4 832	1 489		2 151
1992	2	171	173		(3)		(186)	5 005	1 490		2 340
1993	2	247	249		(4)		(148)	5 254	1 492		2 492
1994	-	327	327		(7)		(271)	5 581	1 493		2 770
1995	9	245	254		(9)		(221)	5 835	1 494		3 000
1996	4	193	197		(9)		(110)	6 032	1 494		3 119
1997	4	154	158		(7)		(116)	6 190	1 494		3 242
1998	2	197	199		(5)		(104)	6 389	1 494		3 351
1999	-	291	291		(15)		(139)	6 680	1 494		3 505
2000	3	235	238		(11)		(103)	6 918	1 494		3 619
2001	6	230	236		(9)		(123)	7 154	1 494		3 751
2002	3	212	215		(9)		(108)	7 369	1 494		3 868
2003	3	142	145		(6)		(74)	7 514	1 494		3 948
2004	3	138	141		(4)		(69)	7 655	1 494		4 021
2005	-	134	134		(2)		(68)	7 789	1 494		4 091
2006	-	278	278		(7)		(109)	8 067	1 494		4 207
2007	-	120	120		(2)		(67)	8 187	1 494		4 276
2008	3	118	121		(5)	(2)	(65)	8 308	1 494		4 348
2009	-	167	167		(5)	(17)	(86)	8 475	1 494		4 456
2010	-	152	152		(1)	(12)	(61)	8 627	1 494		4 530
2011	-	130	130		(9)	(13)	(63)	8 757	1 494		4 615
2012	-	122	122		(3)	(12)	(44)	8 879	1 494		4 674
2013	-	156	156		(2)	(17)*	(51)	9 035	1 494		4 743 *
2014	3	138	141		(2)	(14)	(68)	9 176	1 494		4 827
2015	4	153	157		(0)	(13)	(56)	9 333	1 494		4 896
2016	2	144	146		(4)	(7)	(43)	9 479	1 494		4 950
2017	6	132	138	(c)	(2)	(16)	(54)	9 617	1 494	(d)	5 022

Notes :

(a) The Pneumoconiosis Compensation Scheme was initiated in 1980, before that reporting was voluntary.

(b) The figures in this column denote the number of cases of asbestos-related lung disease confirmed by the Board.

(c) Up to the moment that this report is being compiled, 56 of these 138 assessment cases in 2017 had been confirmed to be pneumoconiosis by the Pneumoconiosis Medical Board. And the following tables (Appendix 2 to Appendix 8) are compiled based on these 56 cases.

(d) Under Revised Ordinance 1993 : 584 out of 1 494 pneumoconiotics had joined the pneumoconiosis ex-gratia scheme up to the year 2017. 45 living pneumoconiotics were each receiving a monthly ex-gratia payment of $7,140.00 in 2017.

(e) The figures in this column denote the number of cases of Mesothelioma confirmed by the Board.

(f) The figures in this column denote the number of cases of Silicosis confirmed by the Board.

R1 Patients having pneumoconiosis with the date of diagnosis before 1 January 1981 who were alive as at 31 December 1980 are eligible for a government funded ex-gratia compensation scheme.

R2 Patients having pneumoconiosis with the date of diagnosis on or after 1 January 1981 are elligible for a levy funded compensation scheme under the Pneumoconiosis (Compensation) Ordinance (the Ordinance). The Ordinace was amended to cover for mesothelioma as well in 2008.

* 1 patient is confirmed with a second disease in that year.

Appendix 2

Age Distribution of Pneumoconiosis Patients confirmed in 2017

Age	Number of Cases	%
<25	0	0
25 - 29	0	0
30 - 34	0	0
35 - 39	0	0
40 - 44	1	2
45 - 49	0	0
50 - 54	0	0
55 - 59	12	21
60 - 64	20	36
65 - 69	14	25
70 - 74	6	11
75+	3	5
Total	56	100

Appendix 3

Occupation Distribution of Pneumoconiosis Patients confirmed in 2017

Type of Occupation	Number of Cases	%
Construction	41	73
Construction/Quarry	1	2
Others	14	25
Total	56	100

Appendix 4

Pneumoconiosis Patients confirmed in 2017 by Duration of Exposure to Dust

Duration	Number of Cases	%
< 5 years	0	0
5 - 9	0	0
10 - 14	2	4
15 - 19	5	9
20 - 24	3	5
25 - 29	13	23
30+	31	55
Unknown	2	4
Total	56	100

Appendix 5

Pneumoconiosis Patients confirmed in 2017 by Degree of Incapacity

Degree of Incapacity (%)	No. of New Cases Compensated under Compensation Ordinance
5	28
10	12
15	6
20	3
25	0
30	3
35	0
40	1
45	0
50	0
55	0
60	0
65	0
70	0
75	0
80	0
85	0
90	0
95	0
100	1
N. A.	2
Total	56

Appendix 6

Pneumoconiosis Patients confirmed in 2017
Classified by Radiological Appearance

Type of Opacity		Profusion 1	Profusion 2	Profusion 3	Sub-Total
Small opacities					
Rounded					
p	(up to 1.5 mm diameter)	45	0	0	45
q	(1.5 to 3.0 mm diameter)	4	2	0	6
r	(3.0 to 10.0 mm diameter	0	0	0	0
Irregular					
s	(fine irregular or linear)	2	0	0	2
t	(medium irregular)	1	0	0	1
u	(coarse irregular)	0	0	0	0
Sub-total		52	2	0	54
Combined opacities		-	-	-	0
N. A.		-	-	-	2
Total					56

3 out of the 56 patients have large opacities as follows :

Large opacities		
A	(Single opacity 1 - 5 cm or multiple opacities > 1 cm each but sum of diameter < 5 cm)	2
B	(Single or multiple opacities > those in Category A and with combined area < the equivalent of right upper zone)	1
C	(Single or multiple opacities with combined area > the equivalent of right upper zone)	0
Total		3

Appendix 7

History of Tuberculosis (TB) among Patients with Pneumoconiosis confirmed in 2017

History of TB		Number of Cases	%
History of TB	Bacteriological Positive	8	14
	Bacteriological Negative	4	7
	Not Available	2	4
No History of TB		42	75
Total		56	100

Appendix 8

Pneumoconiosis Patients confirmed in 2017 by Other Particulars

Characteristics		Number of Cases	%
Smoking	Smoker/Ex-smoker	49	87
	Non-smoker	5	9
	Unknown	2	4
	Total	56	100
Still exposed to dust when seen by the Pneumoconiosis Clinic	Yes	25	44
	No	29	52
	Unknown	2	4
	Total	56	100
General Condition	Good	50	89
	Fair	4	7
	Poor	0	0
	Died	2	4
	Total	56	100

Part 3

ANNEX

Part 3 – Annex : Contents

Annex No.

Annex 1(a)

TB Among Chinese New Immigrants

Number of all notified TB cases and TB cases who are Chinese new immigrants (with years of arrival in Hong Kong)

	Years of arrival	2013	2014	2015	2016	2017
Notified TB cases who are Chinese New Immigrants (with years of arrival in Hong Kong)	< 1 year	18	12	10	12	13
	1 ≤ and < 2 year	9	15	14	7	11
	2 ≤ and < 3 year	11	12	12	10	13
	3 ≤ and < 4 year	14	14	16	14	12
	4 ≤ and < 5 year	14	12	10	7	10
	5 ≤ and < 6 year	16	7	7	13	16
	6 ≤ and < 7 year	10	13	13	4	3
	Total	92	85	82	67	78
Overall notified TB cases		4 664	4 705	4 418	4 346	4 250

The above table shows the number of all notified TB cases in Hong Kong from 2013 to 2017 and the number of TB cases among the Chinese new immigrants (staying in Hong Kong for less than 7 years) according to the number of years they have arrived in Hong Kong.

In Annex 1(b), the tables show the number of notified TB cases among the Chinese new immigrants by age and sex, and the estimated rates. In Annex 1(c), the table shows the number of all notified TB cases in Hong Kong by age and sex, and the rates.

As shown from Annex 1(c), the rates of TB among males are in general higher than that among females, and higher in the older age groups. The overall rates (per 100 000) from 2013 to 2017 are 64.9, 65.0, 60.5, 59.2 and 57.5 respectively.

From Annex 1(b), the overall estimated rates (per 100 000) among the new immigrants from 2013 to 2017 are 29.7, 26.9, 26.2, 20.8 and 23.9 respectively. The rates are lower than those of the general Hong Kong population. Although Mainland China has been classified by the World Health Organization as among one of the high TB burden countries in the world, the new immigrants coming to Hong Kong are likely to be a “selected” group. Their demographics and health condition may be quite different from and not representative of the whole population in China. For example, they may be younger, more ‘fit’, or with better socioeconomic condition. Hence, the rate of TB among this group may be lower.

Annex 1(b)

TB Notification and Estimated Rates Among Chinese New Immigrants By Age & Sex (2013-2017)

Notified TB cases who are Chinese new immigrants (coming to HK < 7 years), by age and sex

	2013	2013	2013	2014	2014	2014	2015	2015	2015	2016	2016	2016	2017	2017	2017
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	7	3	10	5	2	7	3	3	6	4	2	6	5	1	6
20-39	12	43	55	20	30	50	9	35	44	8	24	32	9	27	36
40-59	9	14	23	12	12	24	10	16	26	7	14	21	9	20	29
60+	2	2	4	2	2	4	5	1	6	6	2	8	6	1	7
Total	30	62	92	39	46	85	27	55	82	25	42	67	29	49	78

Estimated rate of TB (per 100 000) among Chinese new immigrants (coming to HK < 7 years)

	2013	2013	2013	2014	2014	2014	2015	2015	2015	2016	2016	2016	2017	2017	2017
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	15.9	7.3	11.8	11.6	5.0	8.4	7.3	8.0	7.6	9.4	5.1	7.4	11.6	2.6	7.3
20-39	42.9	35.0	36.5	68.6	24.1	32.5	30.1	28.9	29.2	25.1	21.1	22.0	27.0	25.1	25.5
40-59	39.4	32.3	34.7	49.9	25.6	33.8	39.7	32.4	34.9	23.2	26.0	25.0	26.7	35.7	32.3
60+	66.7	42.8	52.2	59.8	40.0	48.0	132.4	18.8	65.9	123.7	32.5	72.7	98.2	14.2	53.2
Total	30.7	29.3	29.7	39.1	21.2	26.9	27.1	25.8	26.2	22.9	19.8	20.8	24.9	23.3	23.9

Annex 1(c)

TB Notification and Rates (All Cases) By Age & Sex (2013-2017)

All TB cases by age and sex

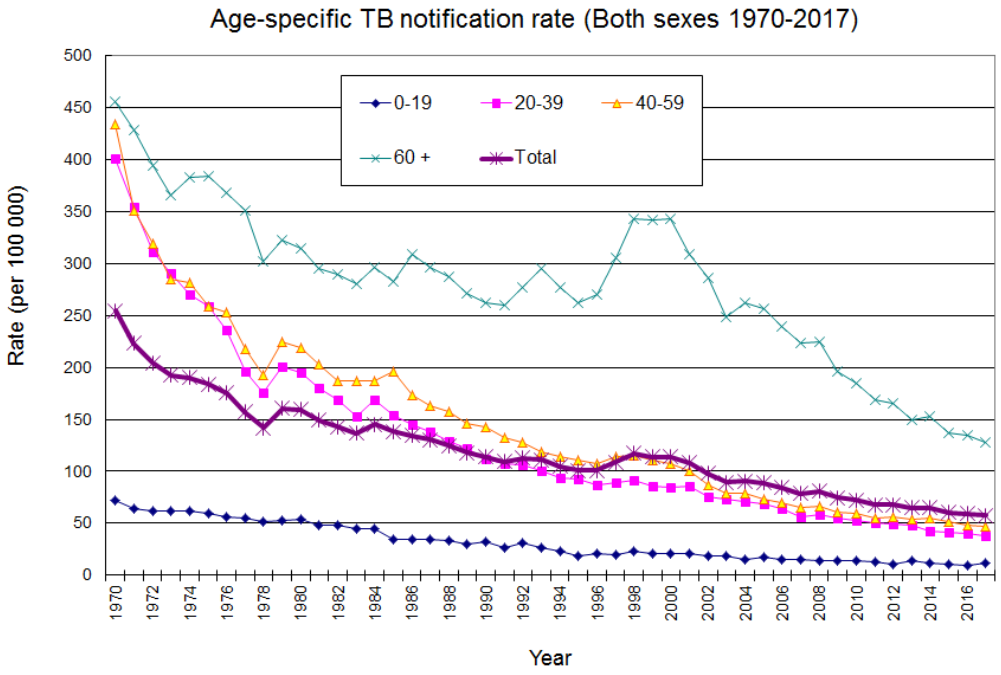
	2013	2013	2013	2014	2014	2014	2015	2015	2015	2016	2016	2016	2017	2017	2017
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	100	71	171	83	55	138	75	52	127	62	43	105	74	56	130
20-39	428	580	1 008	400	493	893	370	490	860	352	503	855	317	468	785
40-59	813	489	1 302	806	532	1 338	774	477	1 251	665	485	1 150	656	459	1 115
60+	1 565	618	2 183	1 709	627	2 336	1 607	573	2 180	1 618	618	2 236	1 627	593	2 220
Total	2 906	1 758	4 664	2 998	1 707	4 705	2 826	1 592	4 418	2 697	1 649	4 346	2 674	1 576	4 250

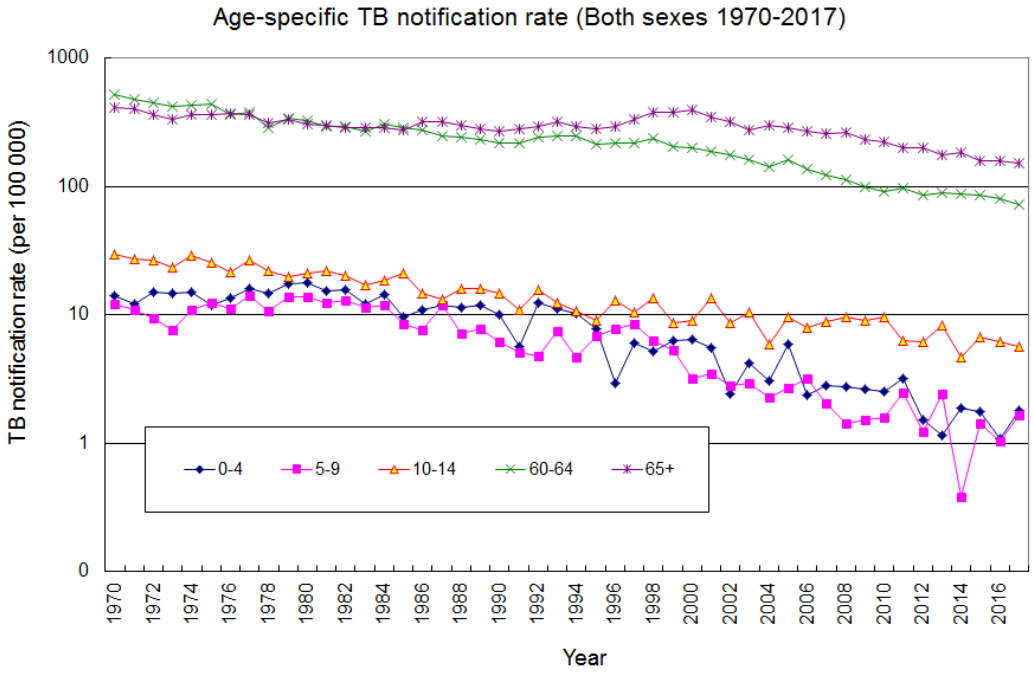
Rate of TB (all notified cases) (per 100 000)

	2013	2013	2013	2014	2014	2014	2015	2015	2015	2016	2016	2016	2017	2017	2017
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	16.1	12.2	14.2	13.5	9.5	11.6	12.2	9.0	10.7	10.3	7.6	9.0	12.3	10.0	11.2
20-39	47.1	48.3	47.8	44.1	41.1	42.4	40.8	40.9	40.8	38.7	42.1	40.6	34.9	39.3	37.4
40-59	73.5	37.5	54.0	73.3	40.3	55.3	71.0	35.9	51.7	61.9	36.5	47.9	61.8	34.4	46.6
60+	224.9	80.4	149.1	235.8	78.2	153.0	212.6	68.5	136.9	205.6	70.9	134.8	197.4	65.0	127.8
Total	87.2	45.6	64.9	89.6	43.8	65.0	83.9	40.4	60.5	79.9	41.6	59.2	78.8	39.4	57.5

Annex 2

Trend of age-specific TB notification rates (1970-2017)





- All the age-specific TB notification rates, particularly those of the younger age groups, show a generally declining trend.
- TB cases can develop from progressive primary infection, exogenous re-infection, or endogenous reactivation. The trend of progressive primary infection is best reflected by the trends of the younger age groups, in particular that of the 0-4 age group. On the other hand, endogenous reactivation is better reflected by the trends of the older age groups, which generally show slower rates of decline than those of the younger age groups.
- The transient increase in rates for the age group 60+ during the period 1997 to 2000 (top graph) is likely due to strengthened surveillance measures targeting at bacteriologically positive and death cases through laboratory data and data from death certificates.

Annex 3(a)

TB-HIV Registry

A total of 31 cases with TB-HIV co-infection were reported to the TB-HIV Registry in 2017. The cumulative number of cases reported to the TB-HIV Registry from all sources as in 2017 was 677 (Table 1).

Information on TB as a primary AIDS-defining illness is available in 26 out of 31 cases reported to the TB-HIV Registry in 2017, Of these 26 cases, 14 (53.8%) had TB as a primary AIDS-defining illness (Table 2). The proportion of patients with extra-pulmonary TB was slightly higher than pulmonary TB and a low CD4 count below 200/µL as primary AIDS-defining illness in 2017.

The pre-treatment drug susceptibility pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996-2017 is shown in Table 3. Twenty two patients reported to the TB-HIV Registry had a positive sputum or other specimen culture in 2017. One additional patient had negative culture but molecular test showed rpoB gene mutation associated with rifampicin resistance. Nineteen (82.6%) had disease due to *Mycobacterium tuberculosis* with favourable susceptibility pattern. One had bacillary resistance to streptomycin. One had bacillary resistance to streptomycin and isoniazid. Two patients had RR/MDRTB in 2017. Among all the 479 cases reported to TB-HIV Registry with a positive sputum or other specimen culture between 1996 and 2017, 9 (1.9%) 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 so far. DH will continue to monitor prevalence of drug resistance in the context of HIV.

Table 4 shows the characteristics of 31 patients seen at chest clinics and/or SPP in 2017. The characteristics of these patients are similar to those of the 2016 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. The median CD4 count was 96 /µL at time of TB diagnosis. Extra-pulmonary involvement is common, with nearly 80% of the patients having TB involving one or more extra-pulmonary sites.

Annex 3 (b)

Table 1. Total number of TB-HIV cases reported to TB-HIV Registry, all sources (1996-2017)*

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
2017	31
Total	677

* 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.

Annex 3 (c)

Table 2. TB as primary AIDS-defining illness among 491 cases reported to chest clinics and/or SPP (1996-2017)*

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
Total	134	185	319	138	34	491

* 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 2017, 491 cases were seen at chest clinics and/or SPP. The table is compiled basing on data of these 491 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 (1996-2017)*

Year	Susceptible to SHRE	Any resistance** (non-MDR/XDR)	RR/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
2017	19	2	2******	0	23
Total	391	77	7 (+2)	0	479

* Of all the cases reported to the TB-HIV Registry from 1996 to 2017, 479 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 479 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.
****** One case had negative sputum culture but molecular test showed rpoB gene mutation associated with rifampicin resistance.

Annex 3 (d)

Table 4 Characteristics of 31 TB-HIV cases reported from chest clinics and SPP in 2017

Age distribution	Number	Proportion
0 to 19	0	0.0%
20 to 39	9	29.0%
40 to 59	17	54.8%
60+	5	16.1%
Sex distribution		
Male	23	74.3%
Female	8	25.8%
Ethnicity		
Chinese	22	71.0%
Asians, non-Chinese	8	25.8%
African	0	0.0%
Others	1	3.2%
Case category		
New case	26	83.9%
Relapse	2	6.5%
Treatment after default	0	0.0%
Failure of previous treatment	0	0.0%
Others	1	3.2%
Unknown	2	6.5%
TB as a primary AIDS defining illness*		
Yes	14	53.8%
No	12	46.2%
CD4 count at time of co-infection (median, IQR)**	96 (35-363) /µL	
Anti-retroviral therapy at time of co-infection		
Yes	9	29.0%
No	22	71.0%
Presence of extra-pulmonary TB		
Yes	25	80.6%
No	6	19.4%
Extent of Respiratory TB***		
Minimal	11	55.0%
Moderate	2	10.0%
Extensive	7	35.0%
Sputum bacteriological status (pre-treatment)		
Smear + culture +	8	25.8%
Smear - culture +	8	25.8%
Smear + culture -	0	0.0%
Smear - culture -	11	35.5%
Incomplete/sputum test not performed	4	12.9%
Drug resistance pattern (pre-treatment)****		
Susceptible to SHRE	19	82.6%
Resistant to streptomycin alone	1	4.3%
Resistant to streptomycin and isoniazid	1	4.3%
Resistant to rifampicin alone	1	4.3%
MDR	1	4.3%
XDR	0	0.0%

* Information on TB as primary AIDS-defining illness unknown in five patients.
** Information on CD4 count unknown in seven patients.
*** 20 out of 31 cases had lung parenchymal lesion on CXR.
**** 23 of 31 cases had a positive sputum and/or other specimen culture.

Annex 4

Crude and Standardised Death Rate and Notification Rate 1981 - 2017
(per 100 000 population)

Year	Crude Death Rate	Standardised Death Rate *	Crude Notification Rate	Standardised Notification Rate *
1981	9.4	9.4	149.1	149.1
1982	8.6	8.4	140.3	142.1
1983	8.3	7.2	136.6	135.2
1984	7.8	7.9	145.3	142.7
1985	7.5	6.9	138.3	134.6
1986	7.4	6.6	134.5	134.6
1987	7.3	6.3	130.3	124.2
1988	6.9	5.8	124.8	122.1
1989	7.1	5.9	117.9	111.4
1990	6.7	5.7	114.1	107.7
1991	7.1	5.6	109.2	100.5
1992	7.1	5.5	112.6	107.9
1993	6.7	5.1	110.8	100.2
1994	6.8	5.0	104.7	88.9
1995	6.8	4.8	100.9	88.9
1996	4.5	3.1	101.0	88.7
1997	3.9	2.6	109.0	93.1
1998	4.1	2.8	117.3	98.6
1999	4.7	3.1	113.7	93.9
2000	4.5	2.8	113.7	93.4
2001	4.6	2.8	108.2	88.6
2002	4.0	2.4	97.9	78.9
2003	4.1	2.5	89.5	72.3
2004	4.2	2.4	91.8	71.1
2005	4.0	2.2	90.4	70.5
2006	4.3	2.4	84.1	63.3
2007	3.3	1.8	79.0	58.5
2008	3.3	1.7	81.0	59.3
2009	2.9	1.5	74.5	54.1
2010	2.7	1.4	72.5	52.0
2011	2.6	1.3	67.8	48.4
2012	2.8	1.4	67.9	47.2
2013	2.5	1.2	64.9	46.1
2014	2.6	1.3	65.0	44.2
2015	2.3	1.0	60.5	41.2
2016	2.2	0.9	59.2	39.4
2017	2.5	1.1	57.5	38.3

* Age and sex-standardisation, using the mid-1981 population as the standard population.

NB. The rates have been updated based on the updated population figures from the 2017 Population Census.

Part 4

SUPPLEMENT

Part 4 – Supplement : Contents

Supplement

FORM 1

PREVENTION AND CONTROL OF DISEASE ORDINANCE

(Cap. 599)

TUBERCULOSIS NOTIFICATION

Particulars of Infected Person

Name in English:	Name in Chinese:	Age / Sex:	I.D. Card / Passport No.:
Residential Address:			Telephone No.: (Home) : (Mobile) : Patient : Family member : (Office / school / others):
Name and address of workplace / school / other institution:			
Job title / Class attended :			
Hospital / Clinic sent to (if any):			Hospital No.:

Site of TB (please ✓ all applicable)		Sputum (please ✓ and attach laboratory report if available)				Other specimens (specify and ✓ below):	
☐ Lung	☐ Meninges						
☐ Pleura	☐ Bone & Joint						
☐ Lymph node	☐ Urinary system		Smear	Culture	PCR test	Smear	Culture
☐ Miliary	☐ Genital system	Positive					
☐ Other(s) (please specify):		Negative					
		Unknown					
		Not done					

Duration of stay in Hong Kong: _____ Years

History of past treatment for TB
(delete whichever not applicable): Yes / No

If yes, YEAR first receiving treatment: _____

Disposal (please ✓ in front boxes and specify):

☐ Treatment started on: _____ (Date: dd/mm/yyyy)

☐ On observation

☐ Referred to _____ Hospital / Clinic / Private Practitioner

☐ Died on: _____ (Date: dd/mm/yyyy)

(Please DELETE whichever is not applicable)

I will arrange for examination of contacts myself. / Please arrange for examination of contacts.

Further Remarks:

Notified under the Prevention and Control of Disease Regulation by

Dr. _____ of _____Hospital / Clinic / Private Practice
(Full Name in BLOCK Letters)

_____ Ward / Unit / Specialty on _____ / _____ / _____ (Date: dd/mm/yyyy)

Telephone No.: _____ Fax No.: _____ _____
(Signature)

[Part 1: To be completed by DOCTOR requesting TB denotification]

To: Statistics Unit, Wanchai Chest Clinic, 99 Kennedy Road, Hong Kong (Fax: 2572 8921)

Denotification of Previously Notified TB Case

Clinic/ Hospital:		Clinic Hospital number:	
Name of patient:		HKID/ passport number:	
Date notified:		Smear:	Positive / Negative / Unknown
Revised diagnosis or other remarks:		Culture:	Negative / M tuberculosis / Non-tuberculous mycobacteria / Unknown / Others _____
Denotification requested by (Name and signature of doctor):		Tel: Fax:	Date:

++

[Part 2: To be completed by Statistics Unit of TB&CS]

From: Statistics Unit of TB&CS

To: DOCTOR who sent in this request for denotification (Fax no.)

It is confirmed that the above TB denotification request has been received by the Statistics Unit of TB & Chest Service at Wanchai Chest Clinic.

Date:

Chop or signature:

++

[Part 3: To be completed by Statistics Unit of TB&CS]

From: Statistics Unit of TB&CS

To: _____ Chest Clinic (AE Chest Clinic) (Fax no.:)

Please note the above request for denotification for further necessary actions.

++

[Part 4: To be completed by AE Chest Clinic]

We have taken note of the above request for denotification. We have the following comments:

- ☐ No comments
- ☐ Agree with the request for denotification
- ☐ Please ignore the request for denotification, reason:

Signature and name of Chest Clinic doctor:		Chest Clinic:	Date:

Notes for using the Form "TBdenotification/1403" for requesting denotification of a case previously notified as TB

1. If a doctor wants to request for denotification of a previously notified TB case, he fills in Part 1 and fax the form to Wanchai Chest Clinic (Fax: 2572 8921; Attention: Statistics Unit of TB&CS).
2. Upon receiving the request for denotification, Statistics Unit of TB&CS fills in Part 2 and fax back to the doctor for acknowledgment of receiving the request.
3. The Statistics Unit of TB&CS then fills in Part 3, and fax the form to the NO of the relevant Chest Clinic (the AE Chest Clinic) which has been handling this case as AE case, for further necessary actions.
4. The health nurse of AE Chest Clinic, upon receiving the fax, will take note of the denotification for further necessary actions. For example, if there is no evidence to suggest otherwise, the AE Chest Clinic will treat the case now as not a TB case, and discontinue the public health actions which would then become unnecessary. Alternatively, if the AE Chest Clinic, with the input of the doctor i/c of the case (when necessary), is of the opinion that the case should not be denotified, it will continue to carry out the necessary public health actions and inform Statistics Unit of TB&CS to ignore the request for denotification. Thus, the doctor i/c of the AE Chest Clinic fills in Part 4 and tick the appropriate item, and fax the form back to Statistics Unit of TB&CS. If the AE chest clinic does not have any additional information on whether to support or refute the denotification (e.g., patient is not being followed up at chest clinic), the doctor i/c of the AE Chest Clinic may tick the item "No comments".
5. Upon receiving the fax return back from the AE Chest Clinic, the Statistics Unit will act accordingly, e.g., denotify the case or ignore the denotification request.
6. For cases denotified by chest clinic doctors, there is no need to fill in Part 3 and Part 4.

OCCUPATIONAL SAFETY AND HEALTH ORDINANCE
NOTIFICATION OF OCCUPATIONAL DISEASES

To : Commissioner for Labour

PARTICULARS OF PATIENT

Name: _____ HKID/Passport no.: _____

Male/Female* Date of birth: ___ /___ /____ Occupation: _____

Home address: _____

_____

Telephone no. (Home) _____ (Office) _____ (Pager/Mobile) _____

Name and address of employer: _____

_____ Telephone no. (Employer) _____

Workplace address (if different from employer's address): _____

_____

For Internal use:

Code: ____

Code: ____

Code: ____

Code: ____

NOTIFIABLE OCCUPATIONAL DISEASES (*Please put a tick in* □)

□1	Radiation Illness	□18	Lead Poisoning	□35	Chrome Ulceration
□2	Heat Cataract	□19	Manganese Poisoning	□36	Urinary Tract Cancer
□3	Compressed Air Illness	□20	Phosphorus Poisoning	□37	Peripheral Polyneuropathy
□4	Cramp of Hand or Forearm	□21	Arsenic Poisoning	□38	Localised Papillomatous or Keratotic New Skin Growth
□5	Beat Hand	□22	Mercury Poisoning	□39	Occupational Vitiligo
□6	Beat Knee	□23	Carbon Bisulphide Poisoning	□40	Occupational Dermatitis
□7	Beat Elbow	□24	Benzene Poisoning	□41	Chemical Induced Upper Respiratory Tract Inflammation
□8	Tenosynovitis of Hand or Forearm	□25	Poisoning by Nitro-, Amino-, or Chloro- Derivatives of Benzene	□42	Nasal or Paranasal Sinus Cancer
□9	Anthrax	□26	Dinitrophenol Poisoning	□43	Byssinosis
□10	Glanders	□27	Poisoning by Halogen Derivatives of Hydrocarbons	□44	Occupational Asthma
□11	Leptospirosis	□28	Diethylene Dioxide Poisoning	□45	Silicosis
□12	Extrinsic Allergic Alveolitis	□29	Chlorinated Naphthalene Poisoning	□46	Asbestos-Related Diseases
□13	Brucellosis	□30	Poisoning by Oxides of Nitrogen	□47	Occupational Deafness
□14	Tuberculosis in health care workers	□31	Beryllium Poisoning	□48	Carpal Tunnel Syndrome
□15	Parenterally Contracted Viral Hepatitis in health care workers	□32	Cadmium Poisoning	□49	Legionnaires' Disease
□16	Streptococcus suis Infection	□33	Dystrophy of the Cornea	□50	Severe Acute Respiratory Syndrome
□17	Avian Chlamydiosis	□34	Skin Cancer	□51	Avian Influenza A

Diagnosis: Confirm/Suspect* Date of onset of illness: _____ / _____ / _____

Follow-up of patient: Treated/Referred to hospital/Others(specify)*: _____

Other relevant information: _____

Name of notifying medical practitioner: _____

Address of notifying medical practitioner: _____

_____

Telephone no. of notifying medical practitioner: _____

Fax no. of notifying medical practitioner: _____

Date: _____ Signature: _____

**Delete whichever is inapplicable*

*Please return this form by **fax (no. 25812049)** or by **mail** to Occupational Health Service, Labour Department, 15/F Harbour Building, 38 Pier Road, Central, Hong Kong.*

For details of Notifiable Occupational Diseases and their related occupations, please refer to Schedule 2 of the Occupational Safety & Health Ordinance and to the Labour Department publication "Guidance Notes on the Diagnosis of Notifiable Occupational Diseases". Enquiry telephone no. : 2852 4041.

LD483 (Rev. 8.2.2005)