

ANNUAL REPORT 2011

TUBERCULOSIS & CHEST SERVICE

OF THE

DEPARTMENT OF HEALTH

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PREFACE

Tuberculosis (TB) is still a major infectious disease worldwide. Globally in 2011, there were 8.7 million new TB cases, almost 1 million deaths from TB among HIV-negative people and an additional 0.43 million deaths from HIV-associated TB, according to the World Health Organization. Effective anti-TB treatment has been available for half a century. However, with the long course of treatment required to cure the disease, non-adherence and emergence of drug resistance were encountered since the earliest days of chemotherapy. Globally, almost half a million cases of multidrug-resistant TB (MDR-TB) with bacillary resistance to at least isoniazid and rifampicin are estimated to emerge every year. Among them, around 40,000 are extensively drug-resistant TB (XDR-TB), defined as MDR-TB with additional resistance to fluoroquinolones and one or more of the three injectable drugs -- kanamycin, amikacin and capreomycin. XDR-TB carries a very poor prognosis with high treatment failure and mortality rates. Significant epidemiological clustering was also observed, probably reflecting the prolonged period of infectiousness with ineffective treatment, especially in the nosocomial settings.

With the effective implementation of directly observed treatment-short course (DOTS) and DOTS-plus in Hong Kong, the overall TB situation and drug resistance problem have been brought under progressive control. The notification rate of TB decreased from a peak of 697 per 100,000 in 1952 to 72.5 per 100,000 in 2010. Fluctuations did occur from time to time, possibly related to changes in attendance and/ or notification patterns. In 2011, the TB notification declined further to 67.8 per 100,000. However, with the ageing of the TB epidemic, 39.2% of the TB patients are aged 65 or above, likely reflecting both the high past TB burden and waning immunity/ increasing co-morbidities with age. Despite a smaller elderly population among the males, 45.8% of male TB patients were aged 65 or above, while the corresponding figure for females was 27.2%. The higher smoking prevalence in our male population likely accounted for a substantial portion of the gender disparity, but multiple other factors could also be involved. Bacillary resistance rates to the first-line TB drugs were also on a declining trend, with only about 1% of all culture-confirmed TB being MDR-TB and about 10% of the MDR-TB being XDR-TB. However, the high rates of drug-resistant TB in some neighbouring areas remain an important source of concern, especially in view of the increasingly frequent population movement.

XDR-TB was included as one of the specified diseases under the Prevention and Control of Disease Regulation (CAP 599A) of the Prevention and Control of Disease Ordinance (CAP 599), which was introduced in 2008 to provide for the control and prevention of diseases, and to apply relevant measures of the International Health Regulations promulgated by the World Health Organization. As a result, statutory provision

has been made for a health officer to prohibit, by order in writing, an XDR-TB patient from leaving Hong Kong. In 2011, orders continued to be made to prohibit all known cases of XDR-TB patients from leaving Hong Kong, with XDR-TB patients intercepted at the border being sent to an infectious hospital or other designated places for assessment.

In 2011, a TB information system was introduced within the TB and Chest Service to support the provision of out-patient clinical services as well as to facilitate information exchange and tracking of attendance across the different chest clinics. Collaborative efforts continued to be made in the evaluation of new diagnostic tools and drugs/ regimens to meet the new challenges in TB control. Conventional culture for TB takes a long turn-over time of weeks to months, and this may delay the diagnosis and affect the management / public health control for some TB cases, especially for those with more extensive forms of drug resistance. New molecular tools allow rapid diagnosis of TB and early detection of drug resistance. To facilitate the proper management of our patients, real-time DNA amplification assays for sputum / other clinical specimens for *Mycobacterium tuberculosis* are introduced on a pilot basis to allow rapid diagnosis of TB, especially among sputum smear-negative patients. They were also used to allow rapid differentiation of TB from non-tuberculous mycobacteria from smear-positive patients with atypical clinical and / or radiological presentation. Genotypic tests for rifampicin, isoniazid and fluoroquinolone resistance were also performed where appropriate. In line with our previous involvement in the milestone Hong Kong Chest Service/ British Medical Research Council TB trials that helped to establish the standard 6-month short-course regimen, the Hong Kong Tuberculosis Service also joined the Tuberculosis Trial Consortium (TBTC) in 2009 as one of the new study sites for the development and evaluation of new TB treatment regimens. In 2011, a phase II clinical trial on the use of different daily doses of rifapentine to substitute for rifampicin in the intensive phase regimen for the treatment of active TB (TBTC study 29x) was rolled out locally. It is hoped that some of these pilot and research activities will translate into effective, safe, and affordable tools suitable for large-scale implementation to control, and ultimately eliminate, this major killer in the history of mankind.

The 3rd Asia-Pacific Region Union Conference which was held successfully in Hong Kong on 8-11 July 2011. The TB and Chest service took a very active part in supporting the organization of the conference, which allowed over 1000 delegates to exchange experience and expertise on various issues surrounding the main theme of "Current challenges in tuberculosis and lung health". A number of scientific papers were published by the TB&CS in collaboration with other investigators / authors from different sectors in 2011.¹⁻¹⁰ These articles covered diversified aspects from basic science, epidemiology, clinical care to public health control. Besides contributing to the body of scientific evidence, upon which the global TB control and treatment strategies develop, they

also helped to provide some of the necessary data to guide our local TB control programme.

During the year, 86,307 patients attended the TB&CS as compared to 89,142 in 2010, and the total attendance was 731,449 in comparison with 752,381 in 2010. Among the 86,307 patients, 20,602 patients were new attendants, of whom 20.7% were found free of any chest diseases. The diagnoses among other new patients included active pulmonary tuberculosis (11.3%), active tuberculosis of other forms (3.5%), inactive tuberculosis (6.2%), bronchitis not specified as acute or chronic (12.5%), acute respiratory infection (4.9%), pneumonia (6.7%), malignant neoplasm of trachea and bronchus (1.4%), bronchiectasis (1.4%), asthma (0.7%) and emphysema (0.2%). Among all the attendance, 3,142 hospital admissions were arranged.

During the preparation of this Annual Report, the population figures of the years 2007, 2008 and 2009 have been updated based on the data from the 2011 Population Census. Thus, the respective notification and death rates for 2007, 2008 and 2009 are updated and are shown in Annexes 7(a) to 7(d), 8(a) to 8(d), and 9(a) to 9(d) respectively.

Part 1: Tuberculosis

The number of tuberculosis notifications in 2011 was 4,794, making a notification rate of 67.8 per 100,000 population. The corresponding figures in 2010 were 5,093 and 72.5 respectively.

The number of tuberculosis deaths was 187 in 2011 as compared with 191 in 2010. The corresponding tuberculosis mortality rates were 2.6 and 2.7 per 100,000 population in 2011 and 2010. Study 33

Tuberculosis stayed outside the top ten causes of death in 2011. Tuberculosis deaths accounted for 0.4% of the total registered deaths in Hong Kong. The average age of tuberculosis deaths was 77.3.

In 2011, 99.5% of the newborns were given direct BCG vaccination at birth. The BCG revaccination programme for primary school children was stopped since the school year starting from September 2000.

HIV testing was done among tuberculosis patients of the TB&CS on a voluntary basis after counselling and consent. The positive rate remained low. On the other hand,

unlinked anonymous screening (UAS) was no longer considered necessary and surveillance of HIV among TB patients mainly depends on voluntary HIV testing.

Part 2: Pneumoconiosis

The Pneumoconiosis (Compensation) Ordinance was first introduced in 1980 for compensation of workers who acquired pneumoconiosis as a result of occupational exposure to silica and asbestos dusts. 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. The Ordinance was amended in 1993 to replace the lump sum payment with monthly payment. 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 applied for reassessment under the revised scheme, irrespective of whether there was additional degree of incapacity over previous lump-sum compensation. The 1996 amendment also allowed the Pneumoconiosis Medical Board to take other tests into consideration in adjusting the degree of incapacity as determined by FVC test 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 and 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 finding, the new set of reference values was adopted for compensation assessment since 2009.

The Pneumoconiosis Clinic continued to provide a full range of outpatient services to patients with suspected or confirmed pneumoconiosis. These services covered not only the assessment aspect, but also addressed the patients' diversified needs in terms of treatment, prevention and rehabilitation. The attendance at the clinic was 6,869 in 2011 compared with 7,719 in 2010. In 2011, 130 new cases of pneumoconiosis or mesothelioma

were registered in the TB&CS, and 85 new cases (including 63 cases of silicosis, 9 cases of asbestosis and 13 cases of mesothelioma) were confirmed by the Pneumoconiosis Medical Board. Up to the end of 2011, a total of 4,615 patients had been compensated.

Publications:

1. Chang KC, Yew WW, Zhang Y. Pyrazinamide susceptibility testing in Mycobacterium tuberculosis: a systematic review with meta-analyses. *Antimicrob Agents Chemother.* 2011;55:4499-505
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3. Leung EC, Yew WW, Leung CC, Leung WM, Tam CM. Shorter treatment duration for selected patients with multidrug-resistant tuberculosis. *Eur Respir J.* 2011;38:227-30.
4. Lo AI, Huang Y, Lam SY, Cheung AH, Au R, Leung CC, Lam WK, Ip MS, Chan-Yeung M, Lam B. Early detection of central airway lung cancer in smokers with silicosis. *Int J Tuberc Lung Dis.* 2011;15:523-7.
5. Leung CC, Yew WW, Grosset J. Harnessing the full sterilising activity of rifamycins. *Int J Tuberc Lung Dis.* 2011;15:429-30.
6. Leung CC, Feller-Kopman D, Niederman MS, Spiro SG. Year in review 2010: Tuberculosis, pleural diseases, respiratory infections. *Respirology.* 2011;16:564-73.
7. Chang KC, Leung CC, Grosset J, Yew WW. Treatment of tuberculosis and optimal dosing schedules. *Thorax.* 2011;66:997-1007
8. Yew WW, Lange C, Leung CC. Treatment of tuberculosis update 2010. *Eur Respir J.* 2011;37:441-62.
9. Leung CC, Lam TH, Yew WW, Chan WM, Law WS, Tam CM. Lower lung cancer mortality in obesity. *Int J Epidemiol.* 2011;40:174-82.
10. Leung CC, Rieder HL, Lange C, Yew WW. Treatment of latent infection with m. tuberculosis: update 2010. *Eur Respir J.* 2011;37:690-711.

Part 1

TUBERCULOSIS

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APPENDIX 1

TB Notifications & Death Rate of Tuberculosis (All Forms)

1947 - 2011

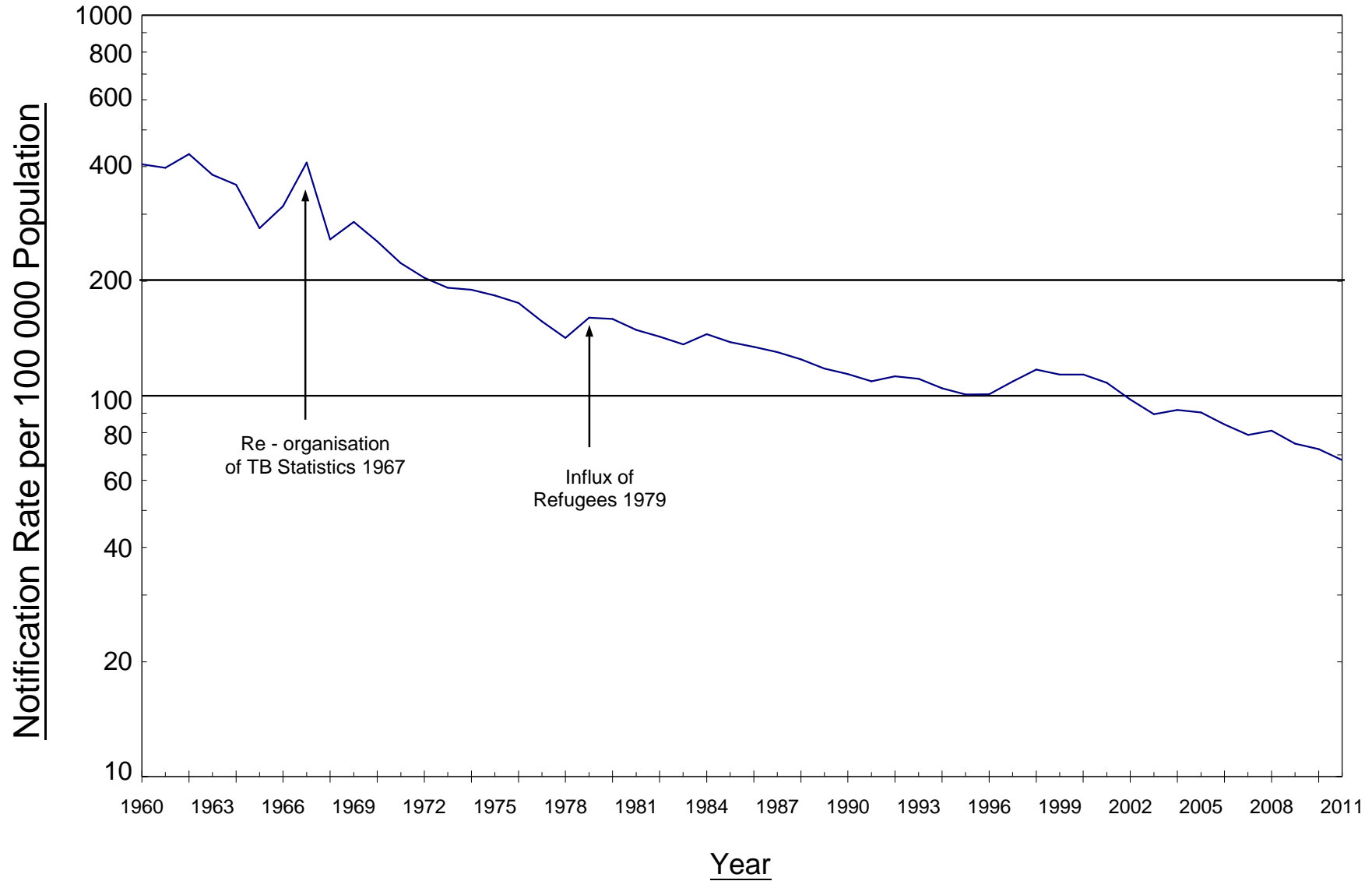
Year	TB Notifications		Notification Rate per 100,000 Pop	TB Deaths	Death Rate per 100,000 Pop	Ratio (Notifications/Deaths)	Deaths ----- x 100% Notifications
1947	4855		277.4	1861	106.3	2.61	38.33
1948	6279		348.8	1961	108.9	3.20	31.23
1949	7510		404.4	2611	140.6	2.88	34.77
1950	9067		405.3	3263	145.9	2.78	35.99
1951	13886		689.0	4190	207.9	3.31	30.17
1952	14821		697.2	3573	168.1	4.15	24.11
1953	11900		530.7	2939	131.1	4.05	24.70
1954	12508		528.9	2876	121.6	4.35	22.99
1955	14148		568.1	2810	112.8	5.03	19.86
1956	12155		464.9	2629	100.6	4.62	21.63
1957	13665		499.4	2675	97.8	5.11	19.58
1958	13485		472.5	2302	80.7	5.86	17.07
1959	14302		482.0	2178	73.4	6.57	15.23
1960	12425		405.5	2085	68.0	5.96	16.78
1961	12584		397.2	1907	60.2	6.60	15.15
1962	14263		431.5	1881	56.9	7.58	13.19
1963	13031		380.9	1762	51.5	7.40	13.52
1964	12557		358.3	1441	41.1	8.71	11.48
1965	9927		275.9	1278	35.5	7.77	12.87
1966	11427		314.8	1515	41.7	7.54	13.26
1967	15253		409.7	1493	40.1	10.22	9.79
1968	9792		257.5	1483	39.0	6.60	15.15
1969	11072		286.5	1470	38.0	7.53	13.28
1970	10077		254.5	1436	36.3	7.02	14.25
1971	9028		223.2	1250	30.9	7.22	13.85
1972	8420		204.2	1312	31.8	6.42	15.58
1973	8152		192.2	1154	27.2	7.06	14.16
1974	8320		190.0	974	22.2	8.54	11.71
1975	8192		183.6	646	14.5	12.68	7.89
1976	7928		175.5	568	12.6	13.96	7.16
1977	7191		156.9	532	11.6	13.52	7.40
1978	6623		141.9	420	9.0	15.77	6.34
1979	7907	(498) *	160.4	523	10.6	15.12	6.61
1980	8065	(712)	159.3	551	10.9	14.64	6.83
1981	7729	(254)	149.1	489	9.4	15.81	6.33
1982	7527	(112)	143.0	454	8.6	16.58	6.03
1983	7301	(73)	136.6	446	8.3	16.37	6.11
1984	7843	(69)	145.3	420	7.8	18.67	5.36
1985	7545	(59)	138.3	409	7.5	18.45	5.42
1986	7432	(46)	134.5	407	7.4	18.26	5.48
1987	7269	(41)	130.3	405	7.3	17.95	5.57
1988	7021	(121)	124.8	388	6.9	18.10	5.53
1989	6704	(226)	117.9	403	7.1	16.64	6.01
1990	6510	(288)	114.1	382	6.7	17.04	5.87
1991	6283	(281)	109.2	409	7.1	15.36	6.51
1992	6534	(309)	112.6	410	7.1	15.94	6.27
1993	6537	(264)	110.8	396	6.7	16.51	6.06
1994	6319	(230)	104.7	409	6.8	15.45	6.47
1995	6212	(175)	100.9	418	6.8	14.86	6.73
1996	6501	(88)	101.0	292	4.5	22.26	4.49
1997	7072	(34)	109.0	252	3.9	28.06	3.56
1998	7673	(7)	117.3	270	4.1	28.42	3.52
1999	7512	(5)	113.7	312	4.7	24.08	4.15
2000	7578	(7)	113.7	299	4.5	25.34	3.95
2001	7262	(0)	108.16	311	4.6	23.35	4.28
2002	6602	(0)	97.89	267	4.0	24.73	4.04
2003	6024	(0)	89.50	275	4.1	21.91	4.57
2004	6226	(0)	91.78	286	4.2	21.77	4.59
2005	6160	(0)	90.41	271	4.0	22.73	4.40
2006	5766	(0)	84.09	294	4.3	19.61	5.10
2007	5463	(0)	78.99	231	3.3	23.65	4.23
2008	5635	(0)	80.99	229	3.3	24.61	4.06
2009	5193	(0)	74.48	204	2.9	25.46	3.93
2010	5093	(0)	72.51	191	2.7	26.66	3.75
2011	4794	(0)	67.79	187	2.6	25.64	3.90

* 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.

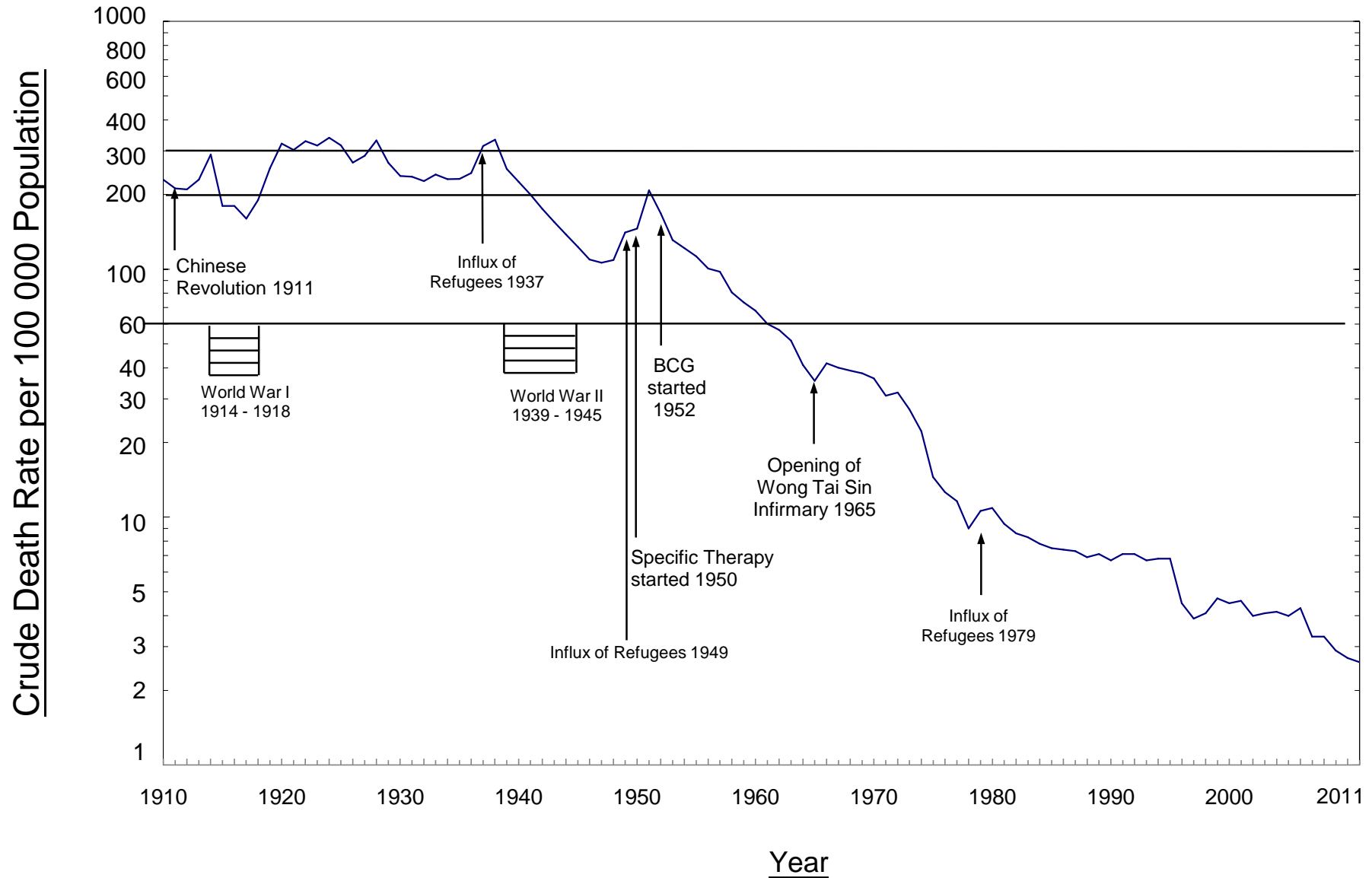
APPENDIX 2

TB Notification Rate (All Forms) 1960-2011



APPENDIX 3

Crude Death Rate due to Tuberculosis (All Forms) 1910-2011



APPENDIX 4 (a)**Tuberculosis Notifications (All Forms) & Rate by Age & Sex 2011**

Age Group	Tuberculosis Notifications (All Forms)			Tuberculosis Notifications Rate (per 100,000 population)		
	Male	Female	Total	Male	Female	Total
Under 1	1	1	2	2.32	4.18	3.21
1	1	0	1			
2	1	4	5			
3	0	0	0			
4	0	0	0			
5-9	3	3	6	2.38	2.56	2.47
10-14	11	10	21	6.44	6.24	6.34
15-19	77	45	122	35.43	21.80	28.79
20-24	119	116	235	53.68	50.48	52.05
25-29	105	166	271	45.75	54.50	50.74
30-34	105	178	283	46.50	54.90	51.45
35-39	116	145	261	49.47	44.19	46.39
40-44	100	126	226	41.20	38.18	39.46
45-49	191	116	307	64.68	32.55	47.11
50-54	285	124	409	91.11	38.17	64.14
55-59	266	102	368	104.77	39.35	71.72
60-64	295	103	398	143.83	50.37	97.17
65-69	222	51	273	182.72	45.21	116.52
70-74	271	79	350	232.22	69.48	151.91
75-79	307	93	400	316.49	85.95	194.93
80-84	307	86	393	492.78	102.63	268.99
85 & over	309	154	463	759.21	181.82	369.22
Total	3092	1702	4794	93.61	45.16	67.79

Appendix 4 (b)

Pulmonary TB Notifications by Age & Sex 2011**

Age Group	Pulmonary TB			Bacteriologically *			Smear		
	M	F	T	M	F	T	M	F	T
Under 1	1	1	2	0	1	1	0	1	1
1	1	0	1	0	0	0	0	0	0
2	1	1	2	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5-9	1	0	1	1	0	1	0	0	0
10-14	7	9	16	1	4	5	1	3	4
15-19	64	35	99	45	24	69	26	15	41
20-24	107	94	201	83	64	147	48	45	93
25-29	81	124	205	51	73	124	31	43	74
30-34	85	130	215	46	86	132	29	52	81
35-39	100	91	191	60	63	123	37	38	75
40-44	83	89	172	56	52	108	33	34	67
45-49	164	74	238	121	47	168	79	28	107
50-54	253	88	341	192	58	250	120	32	152
55-59	240	70	310	181	47	228	115	29	144
60-64	249	70	319	182	40	222	109	27	136
65-69	201	36	237	157	24	181	84	12	96
70-74	244	55	299	186	43	229	100	22	122
75-79	279	67	346	211	44	255	98	25	123
80-84	271	67	338	223	56	279	98	25	123
85 & over	271	127	398	220	96	316	89	41	130
Total	2703	1228	3931	2016	822	2838	1097	472	1569

** Pulmonary TB with or without extrapulmonary TB

* Either smear or culture positive

Appendix 4(c)

Rate of Pulmonary TB Notifications by Age & Sex 2011**

(Rate per 100,000 Population)

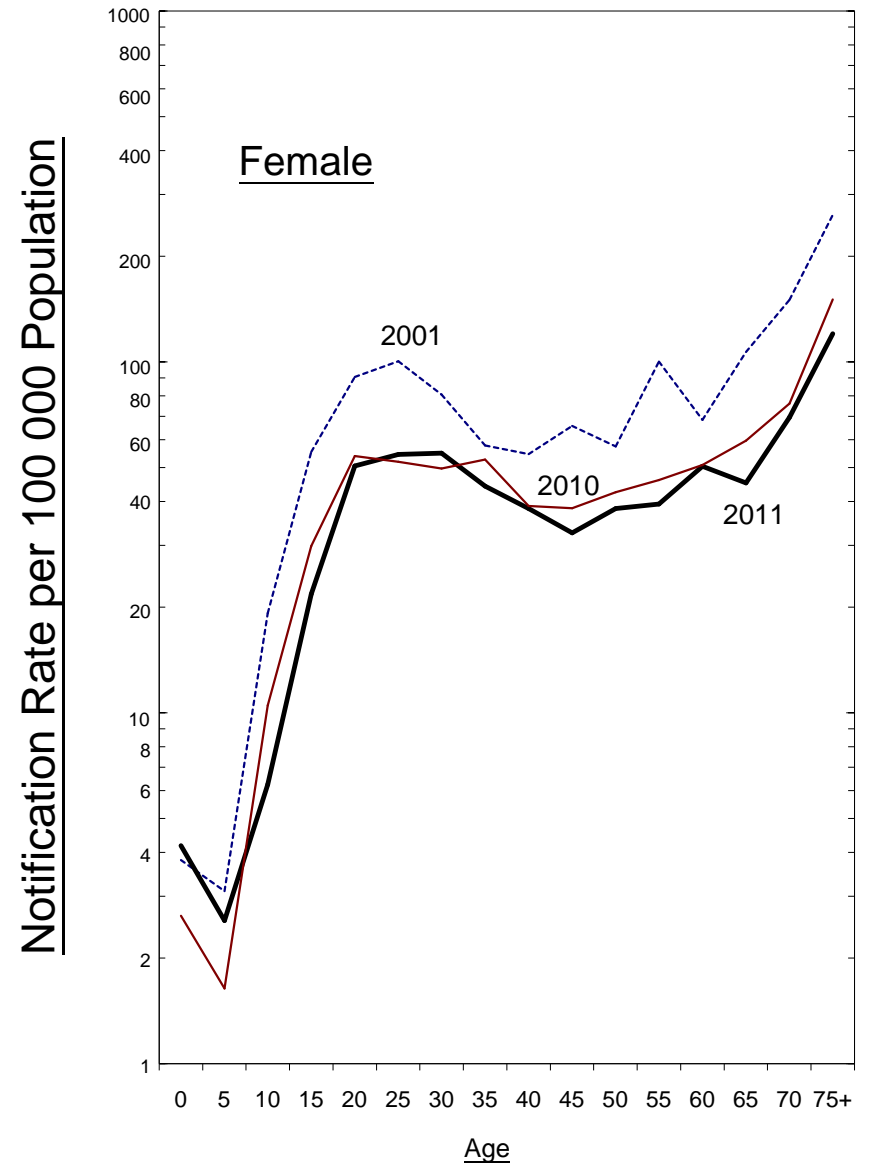
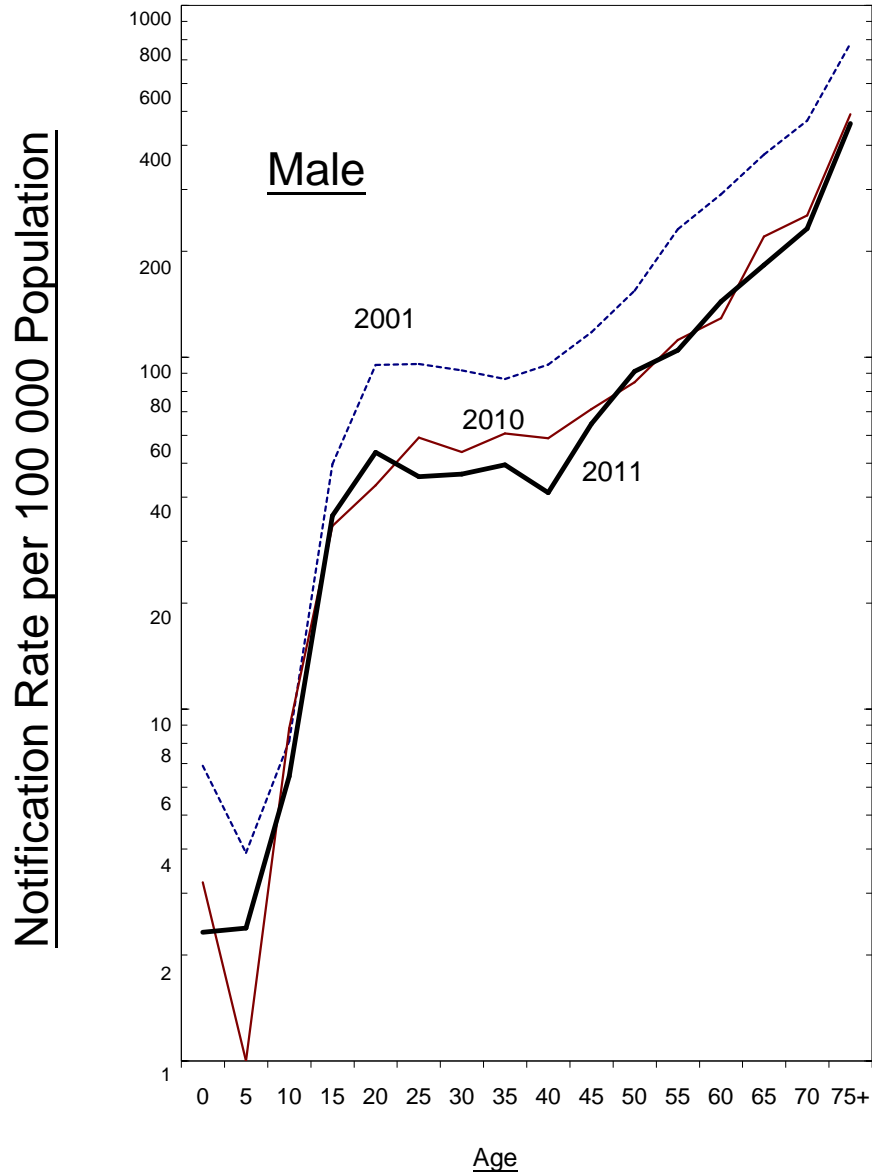
Age Group	Pulmonary TB			Bacteriologically * Positive Pulmonary TB			Smear Positive Pulmonary TB		
	M	F	T	M	F	T	M	F	T
0-4	2.3	1.7	2.0	0.0	0.8	0.4	0.0	0.8	0.4
5-9	0.8	0.0	0.4	0.8	0.0	0.4	0.0	0.0	0.0
10-14	4.1	5.6	4.8	0.6	2.5	1.5	0.6	1.9	1.2
15-19	29.5	17.0	23.4	20.7	11.6	16.3	12.0	7.3	9.7
20-24	48.3	40.9	44.5	37.4	27.9	32.6	21.7	19.6	20.6
25-29	35.3	40.7	38.4	22.2	24.0	23.2	13.5	14.1	13.9
30-34	37.6	40.1	39.1	20.4	26.5	24.0	12.8	16.0	14.7
35-39	42.6	27.7	33.9	25.6	19.2	21.9	15.8	11.6	13.3
40-44	34.2	27.0	30.0	23.1	15.8	18.9	13.6	10.3	11.7
45-49	55.5	20.8	36.5	41.0	13.2	25.8	26.8	7.9	16.4
50-54	80.9	27.1	53.5	61.4	17.9	39.2	38.4	9.8	23.8
55-59	94.5	27.0	60.4	71.3	18.1	44.4	45.3	11.2	28.1
60-64	121.4	34.2	77.9	88.7	19.6	54.2	53.1	13.2	33.2
65-69	165.4	31.9	101.2	129.2	21.3	77.3	69.1	10.6	41.0
70-74	209.1	48.4	129.8	159.4	37.8	99.4	85.7	19.3	53.0
75-79	287.6	61.9	168.6	217.5	40.7	124.3	101.0	23.1	59.9
80-84	435.0	80.0	231.3	357.9	66.8	191.0	157.3	29.8	84.2
85 & over	665.8	149.9	317.4	540.5	113.3	252.0	218.7	48.4	103.7
Total	81.8	32.6	55.6	61.0	21.8	40.1	33.2	12.5	22.2

** Pulmonary TB with or without extrapulmonary TB

* Either smear or culture positive

APPENDIX 5

TB Notification Rate by Age & Sex 2001, 2010 & 2011



Appendix 6

Notifications of Tuberculosis by Type by Age & Sex 2011

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	1	-	1	-	-	-	-	-	-	-	-	-	-	1	1
1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
2	-	-	-	1	-	1	-	1	1	-	1	1	-	2	2
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5-9	1	-	1	-	-	-	-	1	1	-	-	-	2	2	4
10-14	7	8	15	-	-	-	-	-	-	-	-	-	4	2	6
15-19	59	30	89	1	1	2	-	3	3	-	1	1	17	10	27
20-24	90	83	173	1	-	1	-	-	-	1	-	1	27	33	60
25-29	67	101	168	4	4	8	1	3	4	-	2	2	33	56	89
30-34	65	102	167	1	6	7	2	2	4	-	2	2	37	66	103
35-39	81	74	155	3	0	3	2	1	3	-	2	2	30	68	98
40-44	68	75	143	1	-	1	1	-	1	1	2	3	29	49	78
45-49	149	61	210	1	2	3	1	1	2	3	1	4	37	51	88
50-54	236	68	304	2	1	3	2	-	2	2	3	5	43	52	95
55-59	215	60	275	-	2	2	1	-	1	8	5	13	42	35	77
60-64	215	61	276	2	-	2	4	2	6	9	4	13	65	36	101
65-69	185	31	216	2	1	3	1	2	3	4	2	6	30	15	45
70-74	223	46	269	-	2	2	-	-	-	2	5	7	46	26	72
75-79	237	59	296	2	2	4	2	-	2	1	4	5	65	28	93
80-84	237	58	295	2	2	4	-	-	-	3	2	5	65	24	89
85 & over	252	112	364	3	1	4	1	1	2	4	2	6	49	38	87
Total	2388	1029	3417	26	24	50 (a)	18	17	35 (b)	38	38	76 (c)	622	594	1216 (d)*

* Including	TB lymph node	443
	TB urogenital system	64
	TB peritonitis, intestines, mesenteric, appendicitis	91
	TB pleuritis, pleural effusion	503
	TB laryngitis	5
	TB skin	56
	TB other sites	21
	Unspecified	33

(Note: some cases have more than one site of extrapulmonary TB)

- (a) All miliary TB cases has coexisting pulmonary TB; also include 5 cases with coexisting TB of other extrapulmonary sites.
- (b) Including 4 cases with coexisting pulmonary TB; also include 0 cases with coexisting TB of other extrapulmonary sites.
- (c) Including 16 cases with coexisting pulmonary TB; also include 5 case with coexisting TB of other extrapulmonary sites.
- (d) Including 443 cases with coexisting pulmonary TB.

Pulmonary TB only, without extrapulmonary site involvement

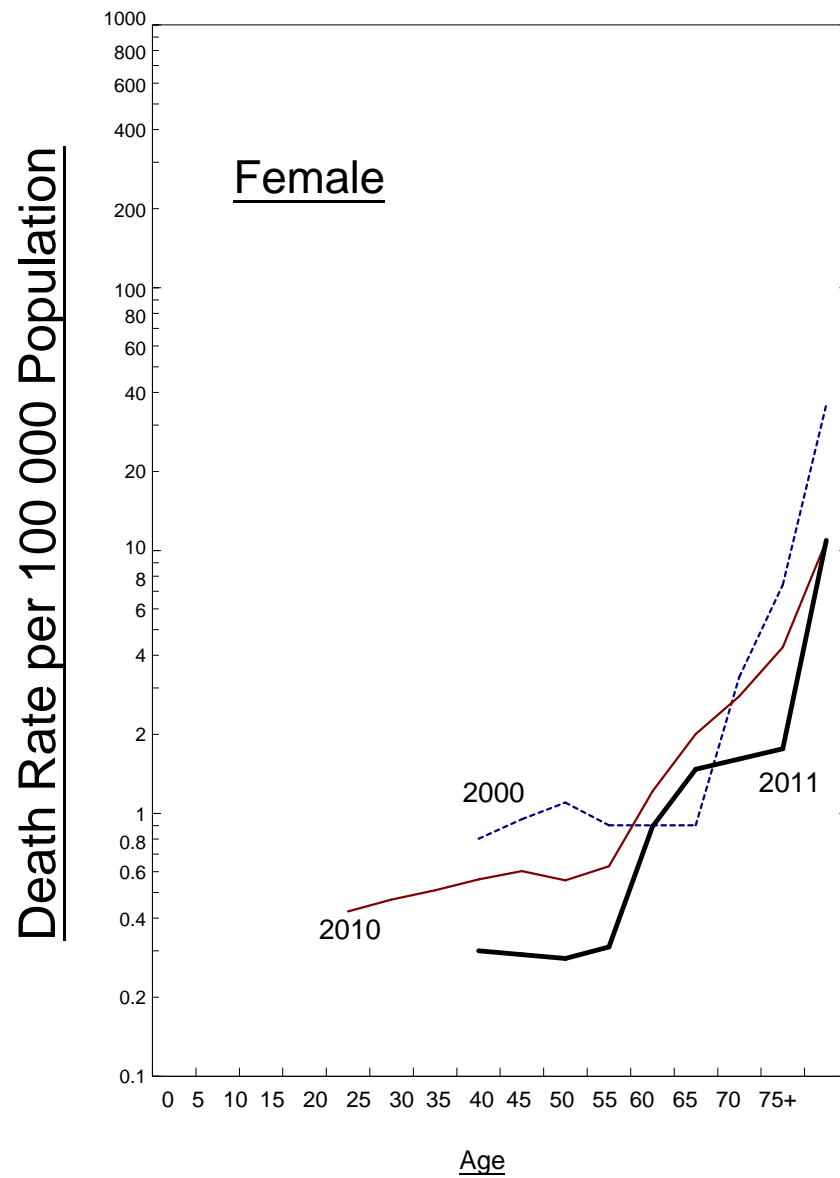
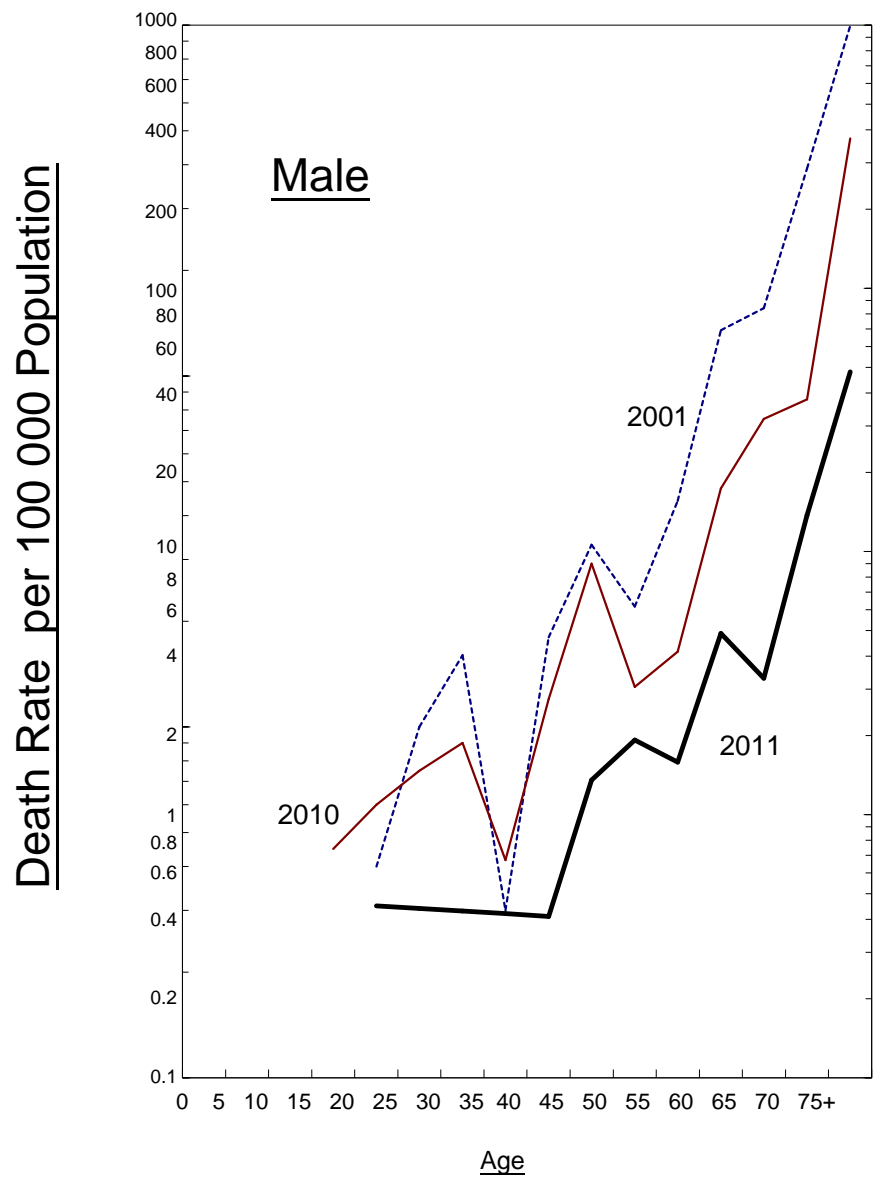
APPENDIX 7

TB Death (All Forms) & Death Rate by Age & Sex 2011

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	1	0	1	0.45	0.00	0.22
25-29	1	0	1	0.44	0.00	0.19
30-34	0	0	0	0.00	0.00	0.00
35-39	0	1	1	0.00	0.30	0.18
40-44	1	0	1	0.41	0.00	0.17
45-49	4	1	5	1.35	0.28	0.77
50-54	6	1	7	1.92	0.31	1.10
55-59	4	0	4	1.58	0.00	0.78
60-64	10	3	13	4.88	1.47	3.17
65-69	4	0	4	3.29	0.00	1.71
70-74	16	2	18	13.71	1.76	7.81
75-79	25	8	33	25.77	7.39	16.08
80-84	29	10	39	46.55	11.93	26.69
85 & over	43	17	60	105.65	20.07	47.85
Total	144	43	187	4.36	1.14	2.644

APPENDIX 8

TB Mortality Rate by Age & Sex 2001, 2010 & 2011



Appendix 9

TB Deaths by Type by Age & Sex 2011

Age Group	Pulmonary only #			Miliary			Meninges			Bones & Joints			Others		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Under 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20-24	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
45-49	1	-	1	2	1	3	1	-	1	-	-	-	-	-	-
50-54	5	1	6	-	-	-	-	-	-	-	-	-	1	-	1
55-59	3	-	3	-	-	-	-	-	-	-	-	-	1	-	1
60-64	9	1	10	1	1	2	-	-	-	-	-	-	-	1	1
65-69	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-
70-74	14	1	15	-	1	1	-	-	-	-	-	-	2	-	2
75-79	22	7	29	2	-	2	-	-	-	-	-	-	1	1	2
80-84	27	8	35	1	-	1	-	-	-	-	-	-	1	2	3
85 & over	40	15	55	2	-	2	-	1	1	-	-	-	1	1	2
Total	125	34	159	10	3	13	1	1	2	-	-	-	8	5	13 *

* Breakdown of Deaths from other forms of TB:-	Number
Tuberculosis of intestines, peritoneum & mesenteric glands	4
Tuberculosis of other organ	2
Sequelae of respiratory and unspecified tuberculosis	7
Total	13

Pulmonary TB only, without extrapulmonary site involvement.

APPENDIX 10

1950 - 2011

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 *

Note: * The average age of TB death is calculated by taking the average of the ages of all individual TB death cases from 2011 onwards. Figures of previous years may be slightly different as they are calculated based on the age groups of TB deaths.

APPENDIX 11

Top Ten Causes of Death 2011

Rank	Causes of Death	Detailed List No.	2011		
		ICD 10th Revision	Male	Female	Total
	All Causes		23608	18576	42188 (4)
1	Malignant neoplasms	C00-C97	7936	5305	13241
2	Diseases of heart	I00-I09, I11 I13, I20-I51	3353	2981	6334
3	Pneumonia	J12-J18	3359	2852	6211
4	Cerebrovascular diseases	I60-I69	1709	1630	3339
5	External causes of morbidity and mortality #	V01-Y89	990	577	1567
6	Chronic lower respiratory diseases *	J40-J47	1457	508	1965
7	Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	727	818	1545
8	Septicaemia	A40-A41	421	346	767
9	Dementia	F01-F03	276	477	753
10	Diabetes mellitus	E10-E14	213	244	457
	Tuberculosis (including late effects of tuberculosis)		144	43	187
	All other causes	Residues of all causes	3023	2795	5822 (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
2001 - 2011**

Origin	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
East Kowloon Chest Clinic	173	144	123	121	132	86	121	129	100	99	105
Kowloon Chest Clinic	413	420	432	330	287	231	220	184	171	165	122
Sai Ying Pun Chest Clinic (a)	194	142	133	148	112	92	108	86	69	80	71
Shaukiwan Chest Clinic	158	148	122	138	111	104	128	105	80	72	74
Shaukiwan Pneumoconiosis	23	27	12	29	10	15	13	13	16	6	9
Shek Kip Mei Chest Clinic	208	180	162	157	140	96	111	127	92	87	90
South Kwai Chung Chest Clinic	339	279	300	261	282	224	187	200	158	166	146
Tai Po Chest Clinic	84	96	111	112	101	92	79	81	63	71	86
Wanchai Chest Clinic	384	279	264	223	214	191	169	168	170	143	118
Yan Oi Chest Clinic	396	355	320	290	263	238	165	179	172	152	173
Yaumatei Chest Clinic	373	271	233	203	249	204	151	137	139	131	128
Yuen Chau Kok Chest Clinic	288	223	226	181	148	136	122	116	124	131	112
Yung Fung Shee Chest Clinic	213	218	197	178	174	148	120	147	118	131	112
Castle Peak Hospital (Chest Clinic)				5	3	3	4	5	0	0	0
Cheung Chau Chest Clinic			2	2	3	1	1	2	1	1	1
Sai Kung Chest Clinic	4	11	7	7	4	9	5	9	1	3	6
Sheung Shui Chest Clinic	81	96	59	54	64	61	53	45	42	63	33
Tung Chung Chest Clinic	24	35	22	16	11	15	12	9	7	11	13
Yuen Long Chest Clinic	96	103	75	80	93	69	64	67	73	80	48
Sub-total	3451	3027	2800	2535	2401	2015	1833	1809	1596	1592	1447
Grantham Hospital	259	249	252	257	165	176	215	209	214	180	163
Haven of Hope Hospital	116	147	119	137	127	124	124	87	103	65	80
Kowloon Hospital	322	237	220	205	113	142	108	120	84	108	92
Ruttonjee Hospital	305	236	223	263	256	264	218	165	183	170	176
Wong Tai Sin Hospital	330	263	166	189	184	140	90	104	82	105	57
Other Govt. Institutions (b)	113	107	84	87	84	60	66	78	54	64	62
Other H.A. Hospitals	2176	2133	1937	2301	2543	2538	2530	2648	2472	2425	2364
Private Practitioners	125	130	159	136	156	164	90	83	57	101	100
Private Hospitals	65	73	64	116	131	143	189	332	348	283	253
Total	7262	6602	6024	6226	6160	5766	5463	5635	5193	5093	4794
% of cases from Chest Clinics among the total	47.5	45.8	46.5	40.7	39.0	34.9	33.6	32.1	30.7	31.3	30.2
% from Chest Hospitals (c)	18.3	17.1	16.3	16.9	13.7	14.7	13.8	12.2	12.8	12.3	11.9
% from Other Public Hospitals	31.5	33.9	33.5	38.4	42.6	45.1	47.5	48.4	48.6	48.9	50.6
% from Private Sector	2.6	3.1	3.7	4.0	4.7	5.3	5.1	7.4	7.8	7.5	7.4

Notes : (a) Including notifications from Cheung Chau Chest Clinic (1997-2002)
 (b) Sources are from Public Mortuaries, Prison Hospitals, & Army Hospitals.
 (c) 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" 2011

Name of Hospital	No. of TB Notification
Alice Ho Miu Ling Nethersole Hospital	85
Caritas Medical Centre	155
Fung Yiu King Hospital	1
Hong Kong Buddhist Hospital	3
Kwai Chung Hospital	1
Kwong Wah Hospital	166
North District Hospital	162
Our Lady of Maryknoll Hospital	10
Pamela Youde Nethersole Eastern Hospital	171
Pok Oi Hospital	56
Prince of Wales Hospital	223
Princess Margaret Hospital	243
Queen Elizabeth Hospital	240
Queen Mary Hospital	112
Shatin Hospital	8
Tai Po Hospital	5
Tseung Kwan O Hospital	82
Tuen Mun Hospital	221
Tung Wah Eastern Hospital	11
Tung Wah Hospital	6
United Christian Hospital	1
Wong Chuk Hang Hospital	286
Yan Chai Hospital	116
Total	2364

Appendix 13

Tuberculosis Notifications & Notification Rates

by District Council District 2011

District Council District	Notification	Notification Rate (per 100,000 pop.)
<u>Hong Kong Island</u>	813	64.0
Central & Western	153	60.8
Wanchai	98	64.2
Eastern	381	64.8
Southern	181	65.0
<u>Kowloon</u>	1682	79.8
Kowloon City	208	55.1
Kwun Tong	522	83.9
Sham Shui Po	356	93.5
Wong Tai Sin	346	82.3
Yau Tsim Mong	250	81.2
<u>NT (East)</u>	1035	57.2
Islands	73	51.7
Northern	199	65.4
Sai Kung/Tseung Kwan O	182	41.7
Shatin	396	62.8
Tai Po	185	62.3
<u>NT (West)</u>	1207	64.1
Kwai Tsing	394	77.1
Tsuen Wan	177	58.1
Tuen Mun	300	61.5
Yuen Long	336	58.1
Marine	0	0.0
Unknown	16	0.0
Others	41	0.0
Total	4794	67.8

APPENDIX 14

Establishment & Strength of TB & Chest Service

As at 31.12.2011

Post	Establishment	Strength
Consultant Chest Physician i/c	1	1
Consultant Chest Physician	1	1
Senior Medical & Health Officer	7	7
Medical & Health Officer	23	22
Senior Nursing Officer	1	1
Nursing Officer	15	11
Registered Nurse	75	82
Enrolled Nurse	74	76
Senior Dispenser	9	9
Dispenser	2	3
Executive Officer I	1	1
Statistical Officer II	3	3
Personal Secretary I	1	1
Clerical Officer	16	14
Assistant Clerical Officer	20	22
Clerical Assistant	54	53
Office Assistant	9	9
Workman II	54	54
Senior Radiographer	3	3
Radiographer I	7	7
Radiographer II	21	19
Radiographic Technician	5	4
Darkroom Technician	10	10

APPENDIX 15
Total Attendances at Chest Clinics
2001 - 2011

Clinic/Hospital	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
East Kowloon Chest Clinic	64820	60729	56132	58535	61835	56737	63191	59670	56566	58167	55678
Kowloon Chest Clinic	106321	98403	97223	86502	77337	73627	67093	62017	56658	56523	47693
Sai Ying Pun Chest Clinic	53854	51808	45437	46974	45159	42034	42770	40126	36036	34502	36441
Shaukiwan Chest Clinic	57215	57968	47541	50828	50699	49667	48207	50618	45028	41263	41804
Shaukiwan Pneumoconiosis	10889	9120	8008	8098	9144	8866	8359	8501	8187	7719	6869
Shek Kip Mei Chest Clinic	71134	65572	60461	60382	60789	57848	58679	52161	54933	49216	49500
South Kwai Chung Chest Clinic	90448	85221	78998	75487	80015	79455	78238	81441	82044	81923	75752
Tai Po Chest Clinic (Full Time)	-	7866	33518	30879	35347	35728	34769	33297	35492	36215	37628
Tung Chung (Full Time)	6241	6129	6807	1928	-	-	-	-	-	-	-
Wanchai Chest Clinic	79212	70500	62322	60406	57906	58545	56790	50465	50461	49609	48893
Yan Oi Chest Clinic	72982	66905	66084	70168	72078	72144	70643	66058	63411	67564	63333
Yaumatei Chest Clinic	114499	95700	71378	70294	80708	72180	69549	68587	70439	68633	68164
Yuen Chau Kok Chest Clinic	65190	64748	60339	56322	59328	57680	55454	57211	60481	58027	65627
Yung Fung Shee Chest Clinic	73663	77078	77516	71269	78279	72570	73944	71767	74196	80444	73038
Castle Peak Hospital	1010	416	372	373	317	241	240	192	146	149	145
Cheung Chau Chest Clinic	1640	2404	1944	2032	2066	1589	2318	1411	869	1206	1286
Sai Kung Chest Clinic	1945	2119	2372	2495	2382	2542	2280	1885	1745	2277	1861
Sheung Shui Chest Clinic	24271	24273	22933	23211	22601	21765	22333	21909	22468	22303	21775
Tai Po Chest Clinic (Part Time)	25636	17761	-	-	-	-	-	-	-	-	-
Tung Chung (Part Time)	-	-	-	2802	5173	4447	4086	4263	5137	4433	4447
Yuen Long Chest Clinic	27208	29393	28702	31054	33056	29344	27960	29979	29935	30729	30201
Hei Ling Chau ATC	2474	2302	2352	1670	585	472	282	290	344	303	202
Lai Chi Kok Reception Centre	-	-	-	723	479	356	519	412	379	303	330
Shek Pik Prison Hospital	291	277	203	211	141	157	188	232	201	186	94
Stanley Prison Hospital	10532	11977	8829	7459	527	603	665	796	719	687	688
Total	961475	908669	839471	820102	835951	798597	788557	763288	755875	752381	731449

Appendix 16

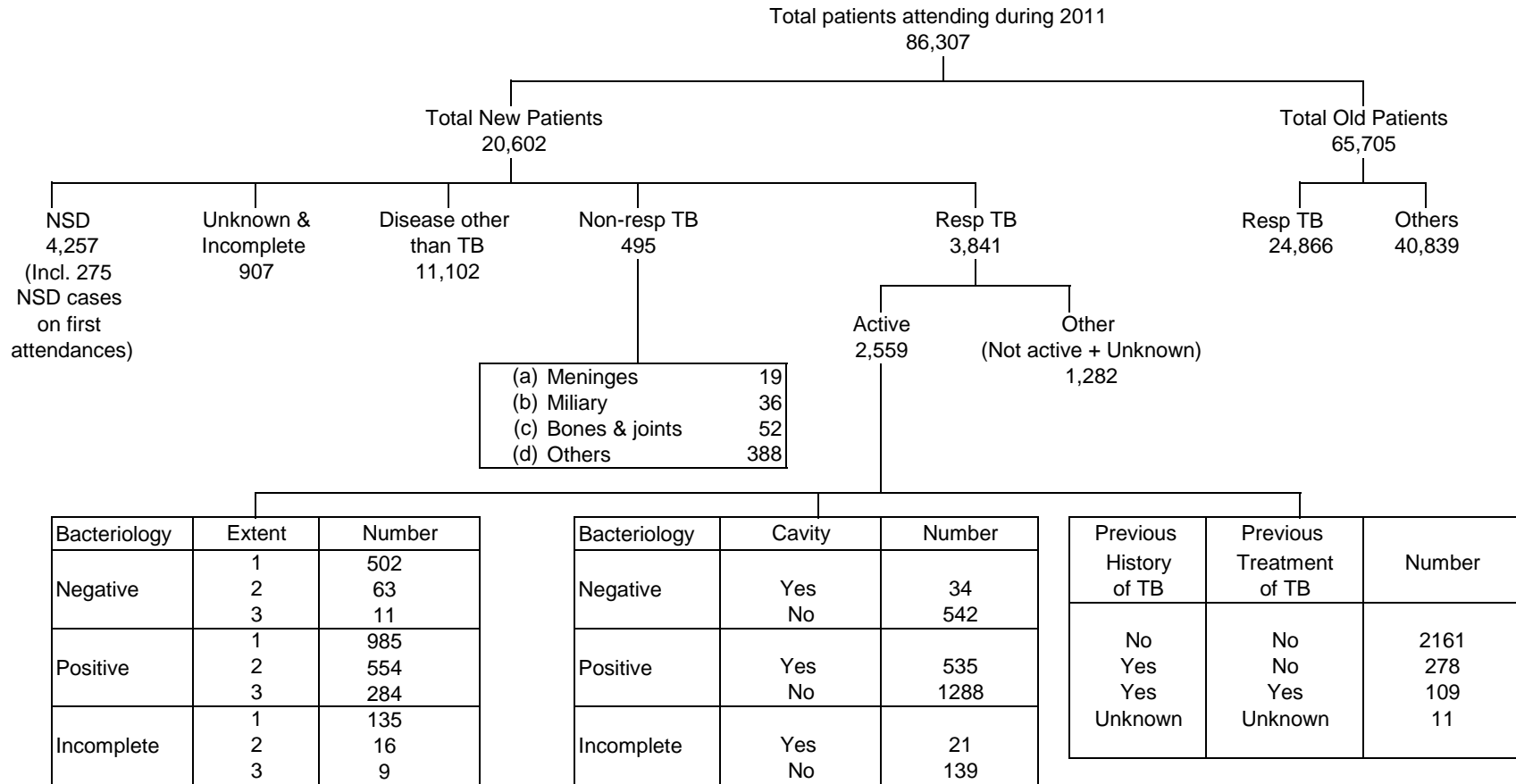
No. of Doctor Sessions, Cases Seen by Doctor and Patient/ Doctor Session 2011

Clinic/Hospital	Doctor Sessions	Cases Seen by Doctor	Patient/Doctor Session
<u>Full Time Clinics</u>			
East Kowloon	540	14258	26
Kowloon	1485	18239	12
Pneumoconiosis	492	6608	13
Sai Ying Pun	547	13116	24
Shaukeiwan	492	12652	26
Shek Kip Mei	538	13180	24
South Kwai Chung	984	24185	25
Tai Po	492	9055	18
Wanchai	951	17701	19
Yan Oi	799	19102	24
Yaumatei	906	16330	18
Yuen Chau Kok	752	17061	23
Yung Fung Shee	588	15839	27
Sub-total	9566	197326	21
<u>Part Time Clinics</u>			
Castle Peak	27	136	5
Cheung Chau	24	272	11
Sai Kung	48	682	14
Sheung Shui	296	5960	20
Tung Chung	146	1742	12
Yuen Long	396	7590	19
Sub-total	937	16382	17
<u>Institutions Correctional Ser Dept</u>			
Hei Ling Chau	13	196	15
Lai Chi Kok Reception Center	51	283	6
Shek Pik	13	94	7
Stanley Prison	24	688	29
Sub-total	101	1261	12
Total	10604	214969	20

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

APPENDIX 17

Flow Chart of Patients Attending Chest Clinics 2011 *



* A total of 86307 patients attended, comprising 65705 old cases and 20602 new cases. Among old cases, 24866 had respiratory TB. Among new cases, 3841 had respiratory TB with 2559 being active, 495 had non-respiratory TB, 11102 had diseases other than TB, 907 had unknown and incomplete diagnoses, and 4257 had NSD (no specific diagnosis). Of the 495 new cases with non-respiratory TB, 19 had TB affecting meninges, 36 had miliary TB, 52 had TB affecting bones and joints, and 388 had TB affecting other sites.

Among the 2559 new cases with active respiratory TB, 2161 had neither previous history of TB nor previous treatment of TB, 278 had previous history of TB but no previous treatment, 109 had previous history of TB with treatment, and 11 had unknown status. In terms of bacteriology (negative, positive, or incomplete) and cavity, 34 were negative with cavity, 542 were negative without cavity, 535 were positive with cavity, 1288 were positive without cavity, 21 were incomplete with cavity, and 139 were incomplete without cavity. In terms of bacteriology and extent of disease (1, 2, or 3), 502 were negative with extent 1, 63 were negative with extent 2, 11 were negative with extent 3, 985 were positive with extent 1, 554 were positive with extent 2, 284 were positive with extent 3, 135 were incomplete with extent 1, 16 were complete with extent 2, and 9 were incomplete with extent 3.

APPENDIX 18

Classification of Patients of First Attendance with New Case Card Completed By Clinics According to International Classification of Diseases Code 2011

Code	Classification	Total
010	Primary Tuberculosis Infection	10
011	Pulmonary Tuberculosis	2329
012	Other Respiratory Tuberculosis	220
013	Tuberculosis of Meninges	19
014	Tuberculosis of Intestines	39
015	Tuberculosis of Bones & Joints	52
016	Tuberculosis of Genito-urinary System	38
017	Tuberculosis of Other Organs	311
018	Miliary Tuberculosis	36
137	Late effects of Tuberculosis	1282
160-165	Malignant Neoplasm of Respiratory System	301
212	Benign Neoplasm of Respiratory System	1
460-466	Acute Respiratory Infection	1018
470-478	Other Diseases of Upper Resp Tract	80
480-486	Pneumonia	1371
487	Influenza	4
490-491	Bronchitis, (not specified as acute or chronic) & chronic brochitis	2565
492	Emphysema	36
493	Asthma	137
494	Bronchiectasis	285
495-496	Others	195
501	Asbestosis	0
502	Silicosis	2
505	Pneumoconiosis, unspecified	1
506-508	Others	0
510	Empyema	0
511	Pleurisy	95
512	Pneumothorax	24
513-519	Other Diseases of Respiratory System	239
786	Unknown	2547
V71	N.S.D.	1312
	Diseases Other than TB & Resp System	4748
Total		19297

Appendix 19 (a)

Extent of Active Respiratory TB in First Attenders at Chest Clinics

2009-2011

Extent *	2009		2010		2011	
	No.	%	No.	%	No.	%
1. Minimal	1953	65.6	1794	63.6	1622	63.4
2. Moderate	697	23.4	714	25.3	633	24.7
3. Extensive	327	11.0	311	11.0	304	11.9
Total	2977	100.0	2819	100.0	2559	100.0
No. of first attenders	21592		22588		20602	
% of active TB	13.8		12.5		12.4	

- * 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 2011

	Number	%
Smear +	1108	43.3
Smear - Culture +	645	25.2
Smear - Culture -	530	20.7
Incomplete	276	10.8
Total	2559	100.0

APPENDIX 19 (b1)

Rate of Drug-resistant Tuberculosis

Among cases (mainly cases seen at chest clinics) registered during the period January to June 2011 (Data from Programme Forms)

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	0.00	0.00	0.00	2.38	2.38	0.00	0.00	0.00	2.38	42
	Previously treated cases	0.00	0.00	50.00	50.00	0.00	50.00	0.00	0.00	50.00	2
	Overall	0.00	0.00	2.27	4.55	2.27	2.27	0.00	0.00	4.55	44
20 - 39	New cases	0.34	1.01	4.70	8.39	9.40	2.01	0.34	1.01	11.74	298
	Previously treated cases	0.00	8.33	0.00	16.67	8.33	8.33	0.00	0.00	16.67	12
	Overall	0.32	1.29	4.52	8.71	9.35	2.26	0.32	0.97	11.94	310
40 - 59	New cases	0.00	0.56	2.25	6.18	5.90	1.12	0.28	0.28	7.30	356
	Previously treated cases	0.00	3.45	10.34	6.90	13.79	3.45	0.00	0.00	17.24	29
	Overall	0.00	0.78	2.86	6.23	6.49	1.30	0.26	0.26	8.05	385
60 up	New cases	0.39	0.39	4.84	5.22	7.35	1.74	0.00	0.00	9.09	517
	Previously treated cases	0.00	1.19	3.57	9.52	5.95	2.38	1.19	1.19	9.52	84
	Overall	0.33	0.50	4.66	5.82	7.15	1.83	0.17	0.17	9.15	601
All	New cases	0.25	0.58	3.87	6.18	7.25	1.57	0.16	0.33	8.99	1213
	Previously treated cases	0.00	2.36	5.51	10.24	7.87	3.94	0.79	0.79	12.60	127
	Overall	0.22	0.75	4.03	6.57	7.31	1.79	0.22	0.37	9.33	1340

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
 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 (mainly cases seen at chest clinics) with date of starting treatment during the period January to June 2011:

	New case		Previously treated cases		Combined	
	N	%	N	%	N	%
Total number of strains tested	1213	100	127	100	1340	100
Susceptible to all 4 drugs	1104	91.01	111	87.40	1215	90.67
Any resistance	109	8.99	16	12.60	125	9.33
H	47	3.87	7	5.51	54	4.03
R	7	0.58	3	2.36	10	0.75
E	3	0.25	0	0.00	3	0.22
S	75	6.18	13	10.24	88	6.57
Mono-resistance	88	7.25	10	7.87	98	7.31
H	27	2.23	2	1.57	29	2.16
R	2	0.16	1	0.79	3	0.22
E	2	0.16	0	0.00	2	0.15
S	57	4.70	7	5.51	64	4.78
Multidrug resistance	4	0.33	1	0.79	5	0.37
H+R	2	0.16	0	0.00	2	0.15
H+R+E	0	0.00	0	0.00	0	0.00
H+R+S	2	0.16	1	0.79	3	0.22
H+R+E+S	0	0.00	0	0.00	0	0.00
Other patterns	17	1.40	5	3.94	22	1.64
H+E	1	0.08	0	0.00	1	0.07
H+S	15	1.24	4	3.15	19	1.42
H+E+S	0	0.00	0	0.00	0	0.00
R+E	0	0.00	0	0.00	0	0.00
R+S	1	0.08	1	0.79	2	0.15
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	1104	91.01	111	87.40	1215	90.67
1 drug	88	7.25	10	7.87	98	7.31
2 drugs	19	1.57	5	3.94	24	1.79
3 drugs	2	0.16	1	0.79	3	0.22
4 drugs	0	0.00	0	0.00	0	0.00

APPENDIX 19 (c1)

Rate of Drug-resistant Tuberculosis

Among cases (mainly cases seen at chest clinics) registered during the period January to December 2010 (Data from Programme Forms)

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	0.00	1.01	5.05	6.06	5.05	2.02	1.01	1.01	8.08	99
	Previously treated cases	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1
	Overall	0.00	1.00	5.00	6.00	5.00	2.00	1.00	1.00	8.00	100
20 - 39	New cases	0.50	1.68	5.70	8.71	8.38	1.68	1.51	1.68	11.56	597
	Previously treated cases	9.52	19.05	21.43	19.05	4.76	7.14	14.29	19.05	26.19	42
	Overall	1.10	2.82	6.73	9.39	8.14	2.03	2.35	2.82	12.52	639
40 - 59	New cases	0.27	0.96	5.77	8.24	7.42	3.16	0.41	0.69	10.99	728
	Previously treated cases	3.13	4.69	12.50	20.31	14.06	4.69	4.69	4.69	23.44	64
	Overall	0.51	1.26	6.31	9.22	7.95	3.28	0.76	1.01	11.99	792
60 up	New cases	0.10	0.10	3.68	6.66	6.16	1.89	0.20	0.10	8.25	1006
	Previously treated cases	0.97	1.46	6.31	10.19	9.71	2.91	0.97	0.97	13.59	206
	Overall	0.25	0.33	4.13	7.26	6.77	2.06	0.33	0.25	9.16	1212
All	New cases	0.25	0.78	4.86	7.61	7.04	2.22	0.62	0.70	9.88	2430
	Previously treated cases	2.56	4.47	9.58	13.42	9.90	3.83	3.51	4.15	17.25	313
	Overall	0.51	1.20	5.40	8.28	7.36	2.41	0.95	1.09	10.72	2743

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
 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 (c2)

Rate of Drug-resistant Tuberculosis

Among cases (mainly cases seen at chest clinics) with date of starting treatment during the period January to December 2010:

	New case		Previously treated cases		Combined	
	N	%	N	%	N	%
Total number of strains tested	2430	100	313	100	2743	100
Susceptible to all 4 drugs	2190	90.12	259	82.75	2449	89.28
Any resistance	240	9.88	54	17.25	294	10.72
H	118	4.86	30	9.58	148	5.40
R	19	0.78	14	4.47	33	1.20
E	6	0.25	8	2.56	14	0.51
S	185	7.61	42	13.42	227	8.28
Mono-resistance	171	7.04	31	9.90	202	7.36
H	50	2.06	7	2.24	57	2.08
R	1	0.04	1	0.32	2	0.07
E	0	0.00	0	0.00	0	0.00
S	120	4.94	23	7.35	143	5.21
Multidrug resistance	17	0.70	13	4.15	30	1.09
H+R	4	0.16	3	0.96	7	0.26
H+R+E	0	0.00	1	0.32	1	0.04
H+R+S	9	0.37	3	0.96	12	0.44
H+R+E+S	4	0.16	6	1.92	10	0.36
Other patterns	52	2.14	10	3.19	62	2.26
H+E	0	0.00	0	0.00	0	0.00
H+S	49	2.02	9	2.88	58	2.11
H+E+S	2	0.08	1	0.32	3	0.11
R+E	0	0.00	0	0.00	0	0.00
R+S	1	0.04	0	0.00	1	0.04
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	2190	90.12	259	82.75	2449	89.28
1 drug	171	7.04	31	9.90	202	7.36
2 drugs	54	2.22	12	3.83	66	2.41
3 drugs	11	0.45	5	1.60	16	0.58
4 drugs	4	0.16	6	1.92	10	0.36

Appendix 19 (d1)

Trend of anti-TB drug resistance (1998-2011) (Data from Programme Forms)

New cases

(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 (Jan-Jun)
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	0.25
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	0.58
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	3.87
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	6.18
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	0.33
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	8.99

Previously treated cases

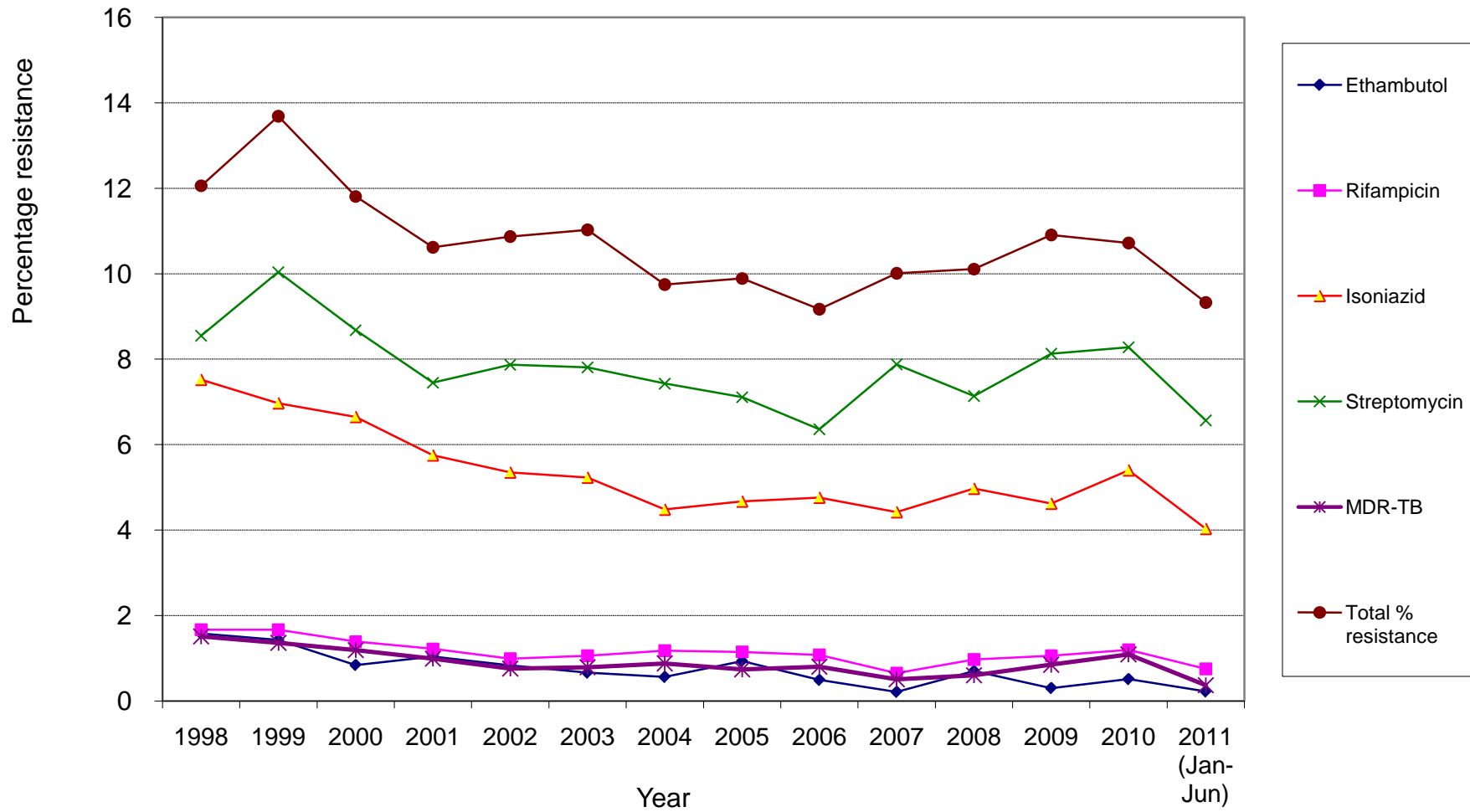
(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 (Jan-Jun)
Ethambutol	3.51	3.16	2.68	1.85	2.04	2.19	2.14	3.92	1.61	0.90	2.65	0.47	2.56	0.00
Rifampicin	4.61	6.09	5.98	3.71	4.59	3.41	4.29	3.64	2.90	2.10	3.53	1.73	4.47	2.36
Isoniazid	11.84	11.51	15.26	11.80	9.69	9.00	10.46	8.68	10.00	9.31	10.00	6.45	9.58	5.51
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	10.24
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	0.79
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	12.60

Overall

(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 (Jan-Jun)
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	0.22
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	0.75
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	4.03
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	6.57
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	0.37
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	9.33

Appendix 19 (d2)

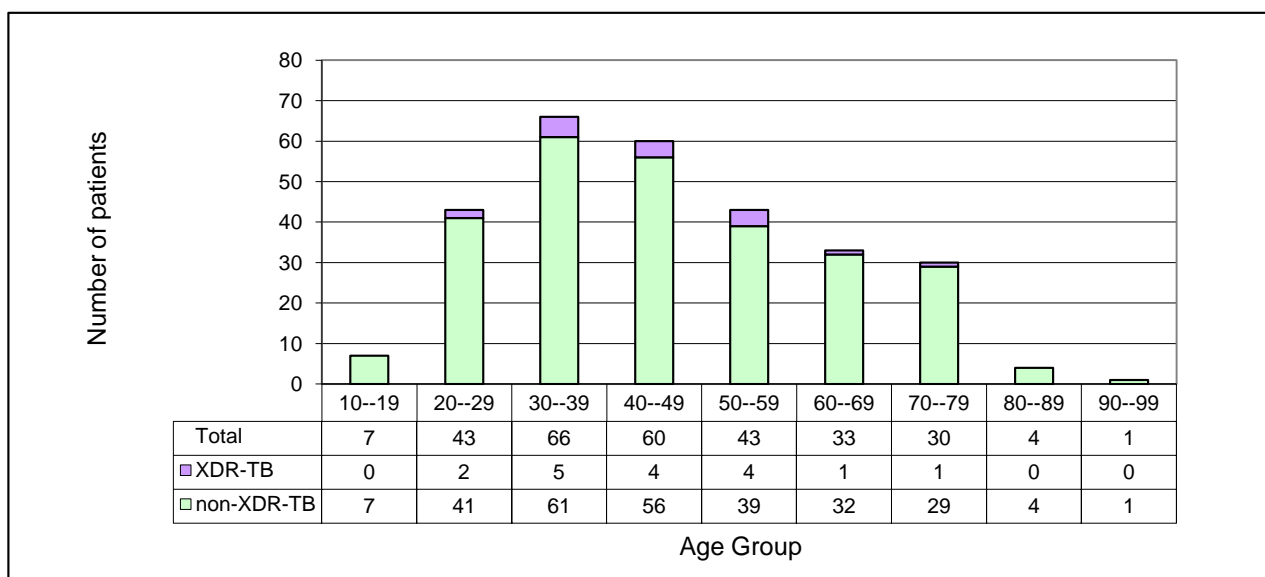
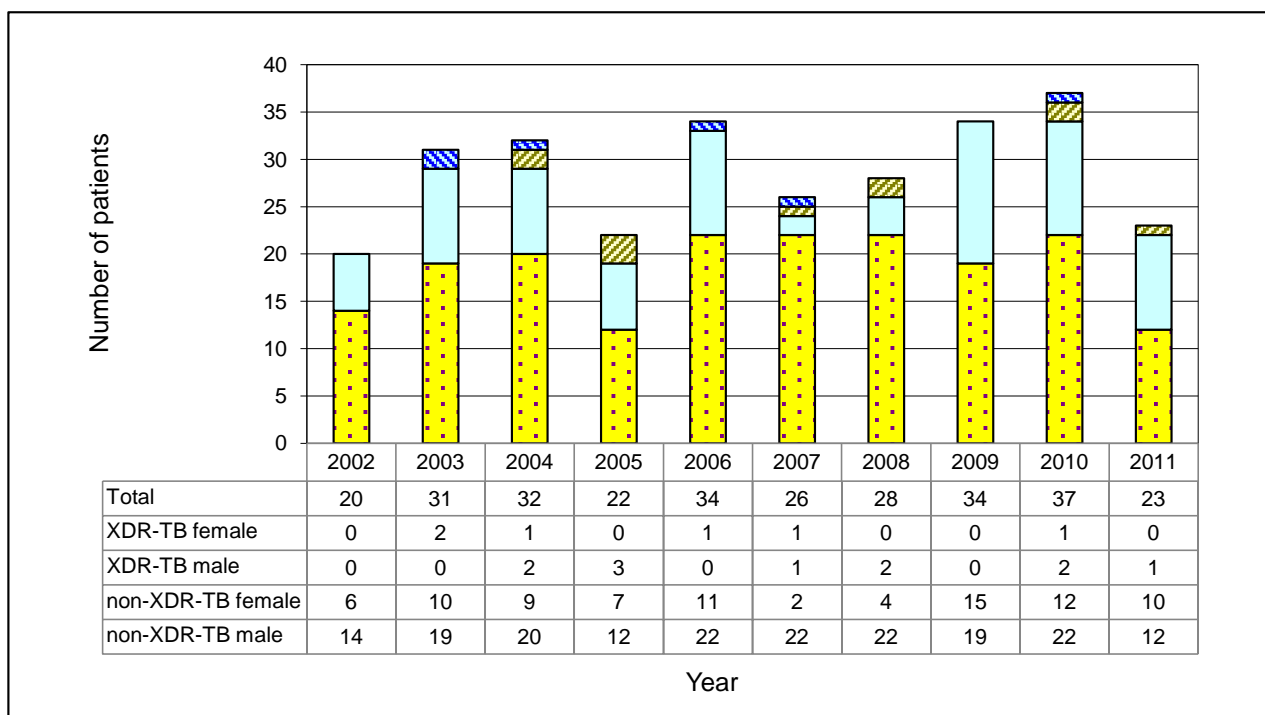
Trend of anti-TB drug resistance (1998-2011) (Overall) (Data from Programme Forms)



Appendix 19 (e)

MDR-TB and XDR-TB by Sex and Year (Upper Graph) and by Age (Lower Graph) (2002-2011)

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.



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.

Appendix 20 (a)
Treatment Return 2011

Name of Clinic/Hospital	No. put on Rx b/f	Service Regimen																									
		Bought in					Treatment completed					Transfer out to			Drop out					Complete defaulter				No. still onRx c/f	Unsup Rx	Incomp super. Rx	No. def. >2M <3M
		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	%				
		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
<u>Full Time Clinics</u>																											
East Kowloon	188	124	6	11	95	54	2	31	197	4	88.0	41	7	0	13	2	3	0	6	0	7	0	2.7	142	12	59	0
Kowloon	217	138	7	9	123	39	11	45	208	6	87.5	25	21	1	11	1	3	0	8	1	3	9	4.5	156	0	51	0
South Kwai Chung	253	176	8	8	170	72	11	65	275	11	89.9	63	19	0	20	3	5	0	4	1	2	3	1.6	176	0	44	1
Sai Ying Pun	97	77	7	5	89	48	4	38	109	9	86.0	38	8	0	11	1	8	2	2	0	1	1	1.2	102	1	46	1
Shaukeiwan	127	101	10	8	85	59	12	63	105	0	93.3	33	22	1	6	0	3	1	2	0	0	1	0.6	158	0	36	0
Shek Kip Mei	99	116	13	8	103	46	3	40	158	4	88.8	36	18	0	13	2	5	3	2	1	1	1	1.3	81	0	70	0
Tai Po	148	98	3	6	67	17	6	40	114	1	88.0	6	3	0	7	2	5	0	2	0	0	5	2.9	146	0	0	0
Wanchai	156	132	9	9	92	51	17	83	121	5	83.3	37	13	0	5	1	27	0	1	0	6	1	2.9	115	0	38	0
Yan Oi	151	194	4	7	156	49	6	109	200	1	90.4	36	18	0	16	1	8	1	5	0	0	3	0.9	154	0	117	0
Yaumatei	185	129	9	5	136	69	10	48	155	0	81.9	49	24	1	20	2	13	5	4	3	1	2	2.4	204	0	39	5
Yuen Chau Kok	131	165	10	10	105	40	12	70	192	3	93.9	21	5	1	9	1	3	1	4	0	0	0	0.0	154	2	36	3
Yung Fung Shee	271	181	8	7	151	67	18	79	225	3	88.6	65	18	0	22	1	6	2	4	1	0	5	1.7	211	0	112	0
Sub-total	2023	1631	94	93	1372	611	112	711	2059	47	88.4	450	176	4	153	17	89	15	44	7	21	31	1.9	1935	15	648	10
<u>Hosp Discharge Clinic</u>																											
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
<u>Part Time Clinics</u>																											
Castle Peak	3	1	0	0	2	1	0	0	3	0	100.0	0	2	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Cheung Chau	1	1	0	0	1	3	0	1	1	0	66.7	0	2	0	0	0	0	0	0	0	0	1	33.3	1	0	0	0
Sai Kung	8	5	0	0	4	5	0	1	10	1	100.0	0	2	0	0	0	0	0	0	0	0	0	0.0	8	0	6	0
Sheung Shui	107	58	1	7	67	23	4	25	81	0	86.9	19	11	0	5	0	4	0	3	0	0	4	3.3	113	0	84	4
Tung Chung	25	15	2	0	14	9	0	8	17	0	65.8	6	1	0	1	0	4	1	3	0	1	4	13.2	13	0	5	0
Yuen Long	160	59	3	4	82	31	3	33	119	2	83.5	19	19	0	12	0	4	2	6	0	1	7	4.4	71	0	62	0
Sub-total	304	139	6	11	170	72	7	68	231	3	83.3	44	37	0	18	0	12	3	12	0	2	16	5.0	252	0	157	4
<u>Institutions Correctional Services Dept</u>																											
Hei Ling Chau	3	2	4	0	0	0	0	2	0	0	66.7	0	4	1	0	0	1	0	0	0	0	0	0.0	1	0	0	0
Stanley Prison	21	7	0	0	0	0	5	10	0	0	100.0	0	0	0	0	0	0	0	0	0	0	0	0.0	13	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	24	9	4	0	0	0	5	12	0	0	92.3	0	4	1	0	0	1	0	0	0	0	0	0.0	14	0	0	0
Total	2351	1779	104	104	1542	683	124	791	2290	50	87.9	494	217	5	171	17	102	18	56	7	23	47	2.2	2201	15	805	14

Appendix 20 (b)
Treatment Return 2011

Name of Clinic/Hospital	Other Regimen																										
	No. put	Bought in					Treatment completed					Transfer out to		Interrup	Died	Drop out				Complete defaulter				No. still	Unsup	Incomp	No. def.
	on Rx	1	2	3	4	5	<6M	at6M	>6M	NTM	%	hosp.	other	Rx		Rx by	Leave	Def.	AMA	<2M	>2M	>3M	%	onRx	Rx	super.	>2M
	b/f	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	65	19	1	3	49	13	3	3	47	4	70.4	8	5	0	11	0	1	0	5	0	3	1	5.6	63	7	39	0
Kowloon	31	14	1	2	19	13	2	2	28	3	83.3	7	0	0	4	0	0	0	1	0	0	1	2.8	35	0	12	0
South Kwai Chung	89	24	0	3	53	25	5	1	51	3	77.6	23	1	0	9	0	3	0	1	0	2	0	3.0	98	0	27	0
Sai Ying Pun	53	7	5	2	23	10	2	3	15	6	72.0	9	2	0	7	0	0	0	0	0	0	0	0.0	62	1	8	1
Shaukeiwan	15	3	2	2	19	12	1	2	11	0	92.9	8	3	0	0	0	0	0	0	0	0	1	7.1	27	0	10	0
Shek Kip Mei	96	7	1	3	26	10	0	1	12	3	72.2	7	1	0	3	1	1	0	0	0	0	0	0.0	117	0	17	0
Tai Po	18	21	2	5	15	4	2	1	13	2	66.7	0	3	1	5	0	0	1	0	0	0	2	9.5	37	0	0	0
Wanchai	35	5	0	1	23	7	0	4	16	10	87.0	5	2	0	2	0	1	0	0	0	0	0	0.0	41	1	11	0
Yan Oi	130	15	2	3	18	13	3	5	17	4	75.9	6	3	0	4	0	1	1	2	0	0	0	0.0	139	0	10	0
Yaumatei	33	17	0	6	20	16	2	3	27	2	81.1	10	8	3	2	0	2	0	1	0	1	1	5.4	32	0	8	1
Yuen Chau Kok	52	19	3	5	16	1	1	4	25	1	87.9	2	1	0	3	0	0	0	1	0	0	0	0.0	59	0	9	0
Yung Fung Shee	27	11	2	2	17	3	3	4	14	1	78.3	5	0	0	3	0	0	0	2	0	0	0	0.0	31	0	7	0
Sub-total	644	162	19	37	298	127	24	33	276	39	77.8	90	29	4	53	1	9	2	13	0	6	6	3.0	741	9	158	2
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																											
Castle Peak	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
Cheung Chau	1	1	0	0	2	1	0	2	1	0	100.0	0	0	0	0	0	0	0	0	0	0	0	0.0	2	0	2	0
Sai Kung	1	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
Sheung Shui	9	1	1	0	14	6	1	2	6	0	72.7	6	4	0	1	0	0	0	1	0	0	1	9.1	9	0	13	0
Tung Chung	5	0	0	0	6	0	0	0	3	0	100.0	3	1	0	0	0	0	0	0	0	0	0	0.0	4	0	0	0
Yuen Long	5	1	0	2	14	9	0	1	5	0	66.7	3	2	0	2	0	0	0	1	0	0	0	0.0	17	0	14	0
Sub-total	21	3	1	2	36	16	1	5	15	0	76.9	12	8	0	3	0	0	0	2	0	0	1	3.8	32	0	29	0
Institutions Correctional Services Dept																											
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	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	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
Total	665	165	20	39	334	143	25	38	291	39	77.8	102	37	4	56	1	9	2	15	0	6	7	3.1	773	9	187	2

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
												hospital	other cc			Rx by GP	Leave HK	Def. >1x	AMA	<2M	>2M, <3M	>3M	%				
		A	B*	C*	D*	E*	F*	<6M	at 6M	>6M	NTM	%	K			L	M	N	O	P	Q	R	S				
$\% = \frac{H+I}{A+B+C+D+E+F-G-K-L-M-Q-W}$													$V = \frac{S+T+U}{A+B+C+D+E+F-G-K-L-M-Q-W}$														
$W = (A+B+C+D+E+F) - (G+H+I+K+L+M+N+O+P+Q+R+S+T+U)$																											

* 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:

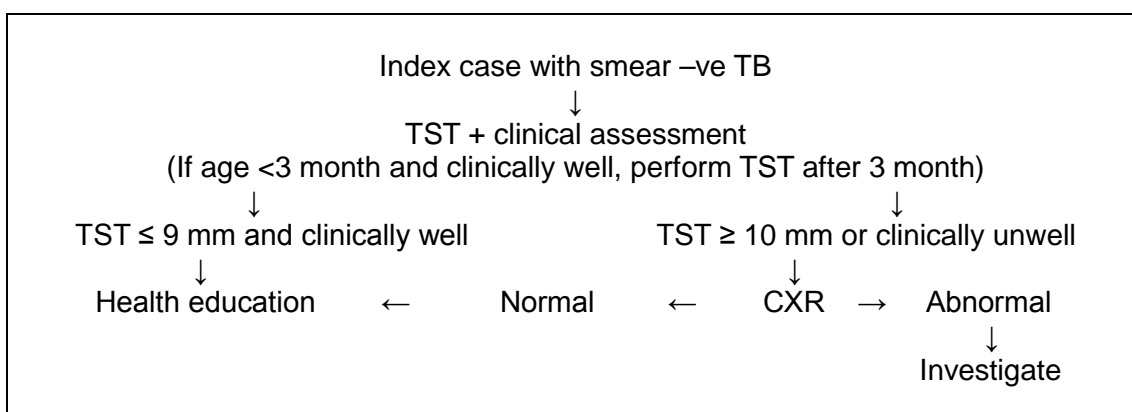
(Z) - Number of defaulters who have defaulted treatment for more than 2 months but less than 3 months, but not yet NFA in conference with MO. (NB: No cases who have been counted under this item in the last month will be counted again under this item for the subsequent months.)
This item needs to be counted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

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 10 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.

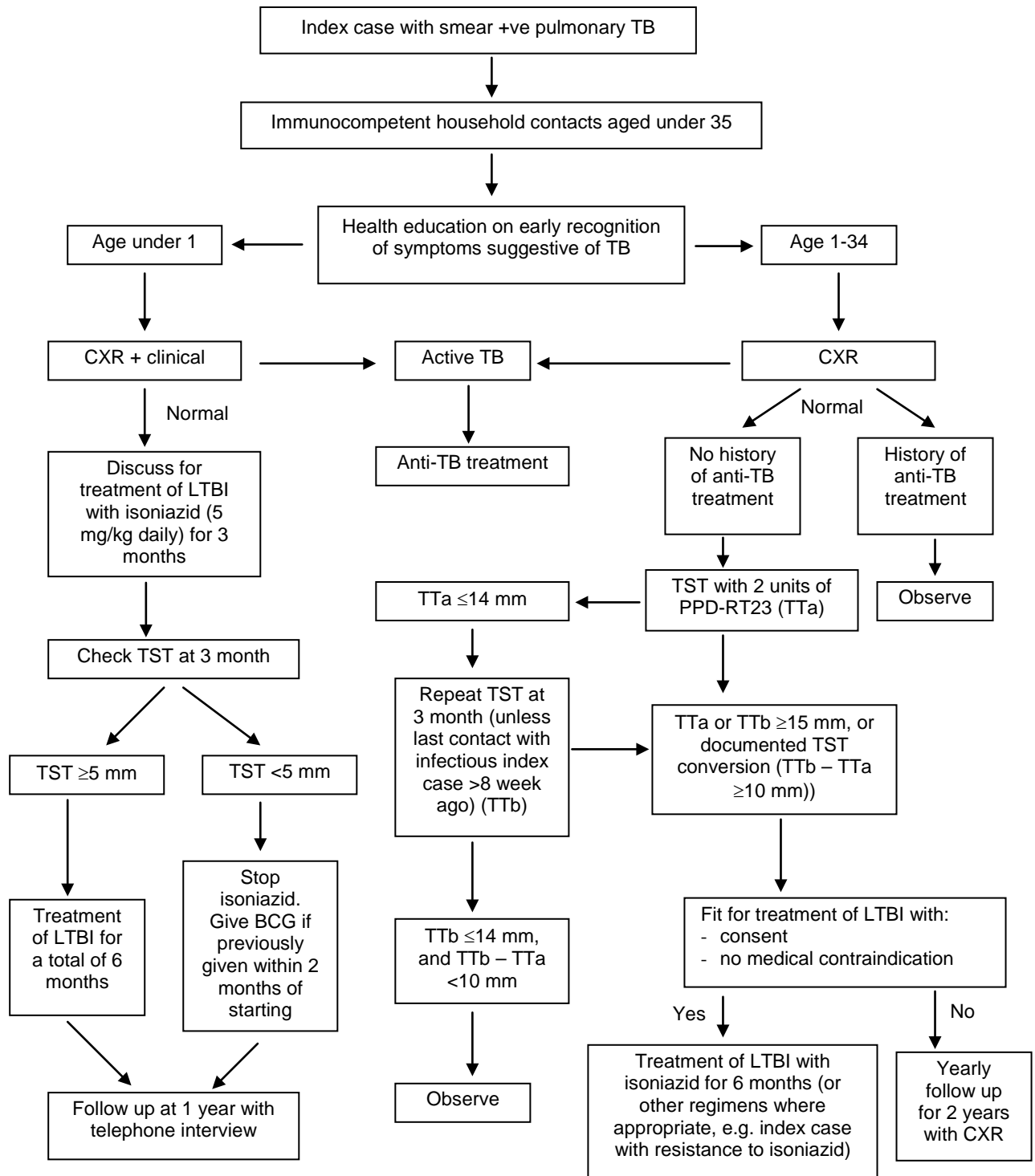
Flow chart for contact investigation of close contacts aged below 5 with smear negative index case *



* 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 9 mm or less, health education is all that is required. If the contact case is clinically unwell or the tuberculin skin test result is 10 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)

Tuberculin Testing (TST) And Treatment Of Latent Tuberculosis Infection (LTBI) Among Immunocompetent Household Contacts Aged Under 35 Of Smear-positive Pulmonary Tuberculosis (TB) Patients *



* After finding an index case with smear-positive pulmonary TB, tuberculin testing should be arranged for immunocompetent household contacts aged under 35. All of them should receive health education on early recognition of symptoms suggestive of TB in addition to chest X-ray examination. If active TB is likely, consider anti-TB treatment. If chest X-ray is normal, further management depends on the age.

For infants (aged under 1) with normal chest X-ray, if clinical assessment is also normal, discuss for treatment of latent TB infection with isoniazid 5 mg per kg daily for three months. Tuberculin skin test (TST) is to be done at 3 months. A TST response of 5 mm or more indicates that treatment of latent TB infection should be given for a total of 6 months. If TST response is below 5 mm, stop isoniazid. Additionally, repeat BCG vaccination if it has been given within 2 months before starting isoniazid. All infants are followed up at one year by telephone interview.

For contacts aged 1-34 with normal chest X-ray, consider observation in the presence of a history of anti-TB treatment. In the absence of such a history, arrange TST with 2 units of PPD-RT23 (TTa). If response to TTA is 14 mm or less, repeat TST 3 months later (TTb) unless TTA is done more than 8 weeks after the last contact with the infectious index case. If response to TTb is 14 mm or less, or the difference between TTb and TTA is less than 10 mm, consider observation. On the other hand, if response to TTA or TTb is at least 15 mm, or TST conversion is documented with a difference of at least 10 mm between TTb and TTA, consider treatment of latent TB infection with isoniazid for 6 months, after obtaining consent and excluding medical contraindications. Other alternative preventive treatment regimens may also be given where appropriate, for example, presence of bacillary resistance to isoniazid in the index case. If the contact is unfit for preventive treatment, arrange yearly follow up with chest X-ray for two years.

APPENDIX 21 (c)

Examination of Contacts in the Chest Clinics 2011

Particulars	Smear Positive Index Cases	Smear Negative Index Cases	Total
No. of patients (new & old) listed	1445	3153	4598
No. of contacts listed	3682	7817	11499
Number of contacts x-rayed	3693 (100.00%)	7827 (100.00%)	11520 (100.00%)
<u>Results</u>			
(a) NSD & Unknown	3222 (87.25%)	6916 (88.36%)	10138 (88.00%)
(b) Disease other than TB	317 (8.58%)	596 (7.61%)	913 (7.93%)
(c) Inactive respiratory TB	87 (2.36%)	202 (2.58%)	289 (2.51%)
(d) Active respiratory TB			
A (radiologically)	22 (0.60%)	19 (0.24%)	41 (0.36%)
B (bacteriologically)	8 (0.22%)	13 (0.17%)	21 (0.18%)
C (incomplete)	0 (0.00%)	2 (0.03%)	2 (0.02%)
(e) Non-respiratory TB	17 (0.46%)	6 (0.08%)	23 (0.20%)
(f) Result not yet known	20 (0.54%)	73 (0.93%)	93 (0.81%)

APPENDIX 22 (a)

Scheme for BCG Administration in Hong Kong, 2011

<u>Population Group</u>		<u>Procedures</u>
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 2011

Institution		No. of Live-births	BCG Vaccination	% Vaccinated
Hospital under HA management	P.Y. Nethersole East	4410	4376	99.2
	Queen Mary	4382	4318	98.5
Private Hospital	Canossa	2130	2105	98.8
	H.K. Adventist	1291	1268	98.2
	H.K. Sanatorium	3122	3098	99.2
	Matilda International	1255	1133	90.3
	St. Paul's	4375	4347	99.4
Total (HK Island)		20965	20645	98.5
Hospital under HA management	Kwong Wah	6211	6177	99.5
	Queen Elizabeth	6476	6572	101.5 *
	United Christian	5762	5733	99.5
Private Hospital	H.K. Baptist	13032	12866	98.7
	St. Teresa's	9036	8939	98.9
	Precious Blood	3696	3642	98.5
Total (Kowloon)		44213	43929	99.4
Hospital under HA management	Alice H.M.L. Nethersole	-	-	-
	Prince of Wales	7433	7453	100.3
	Princess Margaret	5303	5328	100.5 *
	Tuen Mun	6122	6118	99.9
Private Hospital	T.W. Adventist	3730	3708	99.4
	Shatin Int'l Medical Ctr Union	7679	7607	99.1
Total (NT Areas)		30267	30214	99.8
Mother & Child Health Centre		-	150	-
Grand Total		95445	94938	99.5

Note: * Including vaccinations of live births transferred from other maternity institutions and vaccinations of live births at end of 2010

Vaccination Method 2011	Percentage
Intradermal	100.0
Percutaneous	0.0

APPENDIX 23

TB Beds in Public Services, 2011

Hospital		No. of TB Beds
Hospital Authority	Grantham Hospital	153
	Kowloon Hospital	110
	Ruttonjee Hospital	151
	Haven of Hope Hospital	129
	Wong Tai Sin Hospital	96
	Total (Hospital Authority)	639
Custody	Stanley Prison Hospital	25
Grand Total (2011)		664
Grand Total (2010)		644
Grand Total (2009)		650

APPENDIX 24

Annual Admissions to Hospitals from Government Chest Clinics

1999 - 2011

Year	Total Admissions
1999	5012
2000	5408
2001	5317
2002	5183
2003	4603
2004	4986
2005	4435
2006	4571
2007	4038
2008	3170
2009	3345
2010	3330
2011	3142

Admissions by Clinic	Year 2011
East Kowloon	218
Kowloon	167
Sai Ying Pun	335
Shaukeiwan	212
Shaukeiwan Pneumoconiosis	76
Shek Kip Mei	130
South Kwai Chung	394
Tai Po	81
Tung Chung	30
Wanchai	215
Yan Oi	419
Yaumatei	204
Yuen Chau Kok	192
Yung Fung Shee	280
Cheung Chau	3
NT Unit	186
Total	3142

APPENDIX 25

HIV Surveillance Among TB Patients

Voluntary HIV Antibody Testing Among TB Patients in Government Chest Clinics (2005 – 2011)

Year	HIV positive		HIV negative		HIV results unknown or not done		Total	
	Number	%	Number	%	Number	%	Number	%
2005	35	0.7%	4174	80.5%	973	18.8%	5182	100%
2006	33	0.7%	4478	90.4%	445	9.0%	4956	100%
2007	41	0.9%	4034	87.8%	517	11.3%	4592	100%
2008	48	1.0%	4073	88.8%	464	10.1%	4585	100%
2009	40	0.9%	3953	88.1%	496	11.0%	4489	100%
2010	28	0.7%	3805	89.5%	418	9.8%	4251	100%
2011	33	0.8%	3623	89.7%	381	9.4%	4037	100%

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

<u>Period</u>	<u>Category</u>	<u>Sample</u>	<u>Number Tested</u> (No. +ve) (% +ve)	
1.12.90 - 31.1.91	Outpatient	Blood	1548	
5.6.91 - 5.8.91	Inpatient	Blood	485	
1.4.92 – 30.6.92	Outpatient	Blood	1469	(2) (0.14%)
1.4.93 – 30.6.93	Outpatient	Blood	1173	
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	1003	(2) (0.20%)
Oct 98 – Jan 99	Outpatient	Urine	833	(4) (0.48%)
Sep 99 – Dec 99	Outpatient	Urine	1166	(8) (0.69%)
Sep 00 – Dec 00	Outpatient	Urine	1018	(5) (0.49%)
Oct 01 – Dec 01	Outpatient	Urine	1071	(4) (0.37%)
Oct 02 – Jan 03	Outpatient	Urine	1000	(8) (0.80%)
Nov 03 – Feb 04	Outpatient	Urine	920	(6) (0.65%)
Oct 04 – Feb 05	Outpatient	Urine	1056	(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 (1993 – 2011)

Year	Number
1993	0
1994	1
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

'Confirmed' Cases of TB in Health Care Staff Notified
to Labour Department (2011) by Age and Job Title

Age Group	Doctor	Nurse	Other Allied Health Professional	Other Supporting Staff	Total
20 – 24					0
25 – 29	1		2		3
30 – 34	1				1
35 – 39		3	2		5
40 – 44	1	1			2
45 – 49		1	1	1	3
50 – 54				2	2
55 – 59				1	1
60 – 64					0
Total	3	5	5	4	17

Appendix 27
Cohorts of TB Patients

Treatment outcomes for TB cases (including both HIV-negative and HIV-positive cases) registered in 2010 calendar year (number of patients)

	Total number of cases registered		Cured		Completed		Died		Failed		Defaulted		Not evaluated	
New pulmonary smear-positive	1487	100.00%	848	57.03%	161	10.83%	221	14.86%	0	0.00%	58	3.90%	199	13.38%
New pulmonary smear-negative and extrapulmonary (or smear unknown/not done)	3094	100.00%	-	-	2044	66.06%	564	18.23%	1	0.03%	135	4.36%	350	11.31%
Re-treatment	512	100.00%	175	34.18%	175	34.18%	59	11.52%	0	0.00%	23	4.49%	80	15.63%

- NB:
- The above table shows the treatment outcomes for the cases at 12 month (from DOS, date of starting treatment).
 - "Not evaluated": includes "transferred out", "still on treatment" and any other registered cases where the treatment outcome has not been evaluated.
 - Regarding the item "new pulmonary smear-positive", the total number of cases registered is 1487, including 1243 cases under DOTS and 244 cases under non-DOTS. Among the 1243 DOTS cases, 940 had treatment completed at 12 month, representing a treatment success rate of 75.62% for "new pulmonary smear-positive cases under DOTS". On the other hand, the overall treatment success rate (for both DOTS and non-DOTS cases counted together) is 67.85% $[(848+161)/1487]$.

Treatment outcomes for HIV-positive TB cases registered in 2010 calendar year (number of patients)

	Total number of cases registered		Cured		Completed		Died		Failed		Defaulted		Not evaluated	
New pulmonary smear-positive (and/or culture positive)	5	100.00%	4	80.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	20.00%
New pulmonary smear-negative and extrapulmonary (or smear unknown/not done)	18	100.00%	-	-	12	66.67%	1	5.56%	0	0.00%	1	5.56%	4	22.22%
Re-treatment	1	100.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

NB: Overall treatment success rate (at 12 month from DOS) for new cases = 69.57% $[(4+12)/(5+18)]$

Final treatment outcomes for MDR-TB and XDR-TB cases registered in 2009 calendar year (number of patients)

	Total number of cases registered		Cured		Completed		Died		Failed		Defaulted		Not evaluated	
MDR-TB	34	100.00%	18	52.94%	0	0.00%	3	8.82%	0	0.00%	7	20.59%	6	17.65%
XDR-TB	0	0.00%	0	#DIV/0!	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

NB: Overall treatment success rate (at completion or cessation of drug treatment) = 52.94% $[(18+0)/(34+0)]$.

Part 2

PNEUMOCONIOSIS

Part 2 - Pneumoconiosis: Contents

Appendix
No.

- 1 New Cases of Suspected Pneumoconiosis attending the Pneumoconiosis
Clinic in Hong Kong 1956-2011
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APPENDIX 1

**New Cases of Suspected Pneumoconiosis attending
the Pneumoconiosis Clinic in Hong Kong 1956 - 2011**

Year	Number of New Cases Undergoing Assessment					
	Government Workers	Non-government Workers	Total	Cumulative Total	Cumulative Total Compensated	
					R1	R2
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	1017		
1978	12	207	219	1236		
1979	2	210	212	1448		
1980	12	532 (a)	544	1992	386 (a)	-
1981	8	608	616	2608	1332	162
1982	4	511	515	3123	1434	634
1983	2	292	294	3417	1469	945
1984	1	231	232	3649	1477	1140
1985	1	179	180 (b)	3829	1479	1322
1986	3	176	179 (3)	4008	1485	1513
1987	4	166	170 (2)	4178	1485	1679
1988	6	172	178 (4)	4356	1488	1877
1989	-	156	156 (1)	4512	1488	2023
1990	2	147	149 (1)	4661	1489	2142
1991	-	171	171 (1)	4832	1489	2151
1992	2	171	173 (3)	5005	1490	2340
1993	2	247	249 (4)	5254	1492	2492
1994	-	327	327 (7)	5581	1493	2770
1995	9	245	254 (9)	5835	1494	3000
1996	4	193	197 (9)	6032	1494	3119
1997	4	154	158 (7)	6190	1494	3242
1998	2	197	199 (5)	6389	1494	3351
1999	-	291	291 (15)	6680	1494	3505
2000	3	235	238 (11)	6918	1494	3619
2001	6	230	236 (9)	7154	1494	3751
2002	3	212	215 (9)	7369	1494	3868
2003	3	142	145 (6)	7514	1494	3948
2004	3	138	141 (4)	7655	1494	4021
2005	-	134	134 (2)	7789	1494	4091
2006	-	278	278 (7)	8067	1494	4207
2007	-	120	120 (2)	8187	1494	4276
2008	3	118	121 (5)	8308	1494	4348
2009	-	167	167 (5)	8475	1494	4456
2010	-	152	152 (1)	8627	1494	4518
2011	-	130	130 (c) (9)	8757	1494 (d)	4590

- Notes :
- (a) The Pneumoconiosis Compensation Scheme was initiated in 1980, before that reporting were voluntary.
 - (b) The figures in this column denote the number of patient with asbestos-related lung disease.
 - (c) Up to the moment that this report is being compiled, only 72 of the 130 cases in 2011 had been assessed and confirmed pneumoconiosis by the Pneumoconiosis Medical Board. And the following tables (Appendix 2 to Appendix 8) are compiled basing on the data of these 72 cases.
 - (d) Under Revised Ordinance 1993 : 584 out of 1494 pneumoconiotics had joined the pneumoconiosis ex-gratia scheme up to the year 2011. 117 living pneumoconiotics were each receiving a monthly ex-gratia payment of \$4730.00 in 2011.

APPENDIX 2

Age Distribution of Pneumoconiosis Cases 2011

Age	Number of Cases	%
25 - 29	1	1
30 - 34	1	1
35 - 39	1	1
40 - 44	1	1
45 - 49	1	1
50 - 54	10	14
55 - 59	15	21
60 - 64	14	20
65 - 69	10	14
70 - 74	9	13
75+	9	13
Total	72	100

APPENDIX 3

Occupation Distribution of Confirmed Pneumoconiosis 2011

Type of Occupation	Number of Cases	%
Construction	50	70
Construction/Quarry	3	4
Others	19	26
Total	72	100

APPENDIX 4

Pneumoconiosis Patients by Duration of Exposure to Dust 2011

Duration	Number of Cases	%
<5 years	2	3
5 - 9	-	-
10 - 14	2	3
15 - 19	10	14
20 - 24	10	14
25 - 29	13	18
30+	32	44
Unknown	3	4
Total	72	100

APPENDIX 5

Pneumoconiosis Patients by Degree of Incapacity 2011

Degree of Incapacity (%)	No. of New Cases Compensated under Compensation Ordinance
5	25
10	13
15	11
20	5
25	-
30	7
35	-
40	2
45	2
50	1
55	1
60	1
70	-
75	-
80	1
100	-
N. A.	3
Total	72

APPENDIX 6

Confirmed Pneumoconiosis Patients Classified by Radiological Appearance 2011

Type of Opacity	Profusion			Sub-Total
	1	2	3	
<u>Small opacities</u>				
<u>Rounded</u>				
p (up to 1.5 mm diameter)	27	2	-	29
q (1.5 to 3.0 mm diameter)	21	4	-	25
r (3.0 to 10.0 mm diameter)	-	2	-	2
<u>Irregular</u>				
s (fine irregular or linear)	9	-	-	9
t (medium irregular)	1	2	-	3
u (coarse irregular)	1	-	-	1
Sub-total	59	10	0	69
<u>Combined opacities</u>				
	-	-	-	-
<u>N. A.</u>	-	-	-	3
Total				72

1 out of the 72 patients have large opacities as follows :

<u>Large opacities</u>	
A (Single opacity 1 - 5 cm or multiple opacities > 1 cm each but sum of diameter < 5 cm)	1
B (Single or multiple opacities with combined area < the equivalent of right upper zone)	-
C (Single or multiple opacities with combined area > the equivalent of right upper zone)	-
Total	1

Appendix 7

Pneumoconiosis Patients with Tuberculosis 2011

Type of T.B.	Number of Cases	%
Bacteriological Positive	16	22
Bacteriological Negative	53	74
No T.B.	-	-
N.A.	3	4
Total	72	100

Appendix 8

Confirmed Pneumoconiosis Patients by Other Particulars 2011

Characteristics		Number of Cases	%
Smoking	Smoker/Ex-smoker	63	88
	Non-smoker	6	8
	Unknown	3	4
	Total	72	100
Still exposed to dust when seen by the Pneumoconiosis Clinic	Yes	18	25
	No	51	71
	Unknown	3	4
	Total	72	100
General Condition	Good	66	92
	Fair	3	4
	Poor	-	-
	Died	3	4
	Total	72	100

Part 3

ANNEX

Part 3 – Annex: Contents

Annex No.

- 1(a) Treatment Outcomes up to 2 year of the 2008 Cohort of TB Patients
- 1(b) Analysis for Various Age Groups
- 1(c) Analysis for Pulmonary Pretreatment Smear Positive, Pretreatment Culture Positive, and MDR-TB Cases
- 1(d) Analysis for New Pulmonary Smear Positive and Retreatment Pulmonary Smear Positive Cases
- 1(e) Analysis for Treatment Defaulters
- 1(f) Sources completing Programme Forms PFA, PFB1, PFB2, PFC, and PFD
- 1(g) Sample of the set of “Programme Forms” used since 2001
- 2(a) TB among Chinese New Immigrants
- 2(b) TB Notification and Estimated Rates among Chinese New Immigrants by Age & Sex (2007-2011)
- 2(c) TB Notification and Rates (All Cases) by Age & Sex (2007-2011)
- 3 Trend of Age-specific TB Notification Rates (1970-2011)
- 4(a) TB-HIV Registry
- 4(b) TB-HIV Registry
- 4(c) TB-HIV Registry
- 5 HBsAg Seroprevalence Survey Among TB Patients Seen At Chest Clinics
- 6 Crude and Standardised Death Rate and Notification Rate 1981-2011

Annex 1 (a)

Treatment Outcomes up to 2 year of the 2008 Cohort of TB Patients

A total of 5635 cases of TB were notified in the year 2008. Among them, 4407 were ever seen at chest clinics (ES) while 1228 were never seen at chest clinics (NS). They are categorised as follows:

Categories		ES	%	NS	%	ES/NS	%
(A)	New pulmonary, smear positive	1113	25.3	54	4.4	1167	20.7
(B)	New pulmonary, smear negative	2177	49.4	121	9.9	2298	40.8
(C)	New pulmonary, smear not done/ unknown	91	2.1	25	2.0	116	2.1
(D)	New extra-pulmonary	541	12.3	19	1.5	560	9.9
(E)	Relapse pulmonary, smear positive	125	2.8	17	1.4	142	2.5
(F)	Pulmonary smear-positive retreatment after failure or default	19	0.4	1	0.1	20	0.4
(G)	Other retreatment cases (not included in E and F) [i.e., including relapses (pulmonary, smear negative or unknown or not done; and extrapulmonary) and retreatment after failure or default (pulmonary, smear negative or unknown or not done; and extrapulmonary)]	341	7.7	991	80.7	1332	23.6
Total		4407	100.0	1228	100.0	5635	100.0

Analysis has been done on this cohort of patients and the results are shown in the following Annexes:

Annex 1 (b)	Various age groups (0-19), (20-39), (40-59), (60+), and all age groups
	for (i) ES/NS (cases ever or never seen at chest clinics) - sheet 01 to 09
	(ii) ES (cases ever seen at chest clinics) - sheet 01 to 03
Annex 1 (c)	(iii) NS (cases never seen at chest clinics) - sheet 01 to 03
	Pulmonary pretreatment smear positive, pretreatment culture positive, and MDR-TB cases for ES/NS (cases ever or never seen at chest clinics) - sheet 01 to 08
Annex 1 (d)	New pulmonary smear positive and retreatment pulmonary smear positive cases for ES/NS (cases ever or never seen at chest clinics) - sheet 01 to 02
	Treatment defaulters (outcome at 2 year = defaulting)
Annex 1 (e)	for ES/NS (cases ever or never seen at chest clinics) - sheet 01 to 05
	Annex 1 (f)
Annex 1 (g)	Sample of the set of "Programme Forms" (PFA, PFB1, PFB2, PFC, and PFD) used for the cohort of patients in 2008

Discussion

Annex 1 (b) – Various age groups

Among the total of 5635 patients, 184 (3.3%) were aged between 0 and 19, 1236 (21.9%) between 20 and 39, 1556 (27.6%) between 40 and 59, and 2659 (47.2%) above 60. 64.4% were male. 37.4%, 23.7%, and 15.2% were never smokers, ex-smokers, and current smokers respectively. 75.4% were permanent local residents while 76.2% were of Chinese ethnicity. Most of them (68.3%) presented because of symptoms. 10.3% presented as incidental finding to pre-employment, pre-immigration, other body check or incidental to other illness, while 2.0% were diagnosed through contact tracing.

74.5% of patients had pulmonary TB, 13.5% had extra-pulmonary TB and 12.1% had both. TB pleura and TB lymph node accounted for 9.2% and 7.7% of the site of involvement respectively. Among pulmonary TB patients, 33.3% had pretreatment sputum smear +ve, 69.8% had pretreatment culture +ve and 16.3% had cavitory lesion on their chest radiographs.

With regard to co-morbidity factors for TB, 12.7% of TB patients had diabetes mellitus, 5.4% of patients had coexisting malignancy, 1.1% of patients were immuno-suppressed because of either steroid or cytotoxic therapy. HIV infection was reported for 0.8% of cases. 4.0% of all TB patients were reported to be hepatitis B carrier while 0.5% had chronic active hepatitis.

60.2% of patients were on 6 months short course chemotherapy for TB or other standard regimen based on HREZS. Treatment side effect was reported in 36.5% of patients. 12.8% were GI side effects, 12.5% were skin rash, 2.9% had transient rise in liver enzyme and 8.2% had frank hepatitis.

Among the 4407 patients ever seen in chest clinic, 73.2% received >90% DOT in initial 2 months, while 62.7% received >90% DOT in subsequent 4 months. Treatment completion/cure rates at 6 months, 12 months and 24 months were: 27.0%, 78.0% and 85.6% respectively. Death rates at corresponding periods were 5.7%, 7.5% and 7.7% respectively.

Among the 1228 patients never seen in chest clinic, 1.6% received >90% DOT in initial 2 months, while 1.3% received >90% DOT in subsequent 4 months. Treatment completion/cure rates at 6 months, 12 months and 24 months were: 2.0%, 33.2% and 33.3% respectively. Death rates at corresponding periods were 9.5%, 51.4% and 51.4% respectively. However, a high percentage of the programme forms of this group of patients were not completed.

Annex 1 (c) – Pulmonary pretreatment smear +ve, culture +ve, and MDR-TB cases

Regarding patients with pulmonary TB, 1461 were pretreatment smear +ve, 3402 were pretreatment culture +ve, and 17 were MDR-TB patients.

In the initial 2 months, around 60% of pretreatment smear +ve, culture +ve patients and MDR-TB received >90% DOT. The corresponding percentages were over 50% for all three groups of patients in subsequent 4 months.

Overall sputum smear conversion rate at 2 months were 85.3% for smear +ve patients and 77.8% for MDRTB patients. Culture conversion rate at 2 months were 87.3% for culture +ve patients and 44.4% for MDR-TB patients.

Treatment success rates for smear +ve patients at 6 months, 12 months and 24 months were 16.9%, 70.6% and 78.9% respectively. Those for culture +ve patients were 21.7%, 67.1% and 73.6% respectively. Those for MDR-TB patients were 0.0%, 5.9% and 58.8% respectively. 3 out of 17 (17.6%) MDR-TB patients defaulted treatment at 24 months.

Annex 1 (d) – New and retreatment pulmonary smear +ve cases

Treatment success rates for new pulmonary smear +ve patients at 6 months, 12 months and 24 months were 20.8%, 76.0% and 84.6% respectively. The corresponding treatment success rates for retreatment pulmonary smear +ve patients were 1.4%, 49.0% and 56.1% respectively.

Annex 1 (e) – Treatment defaulters

There were 244 treatment defaulters at 24 months in the 2008 cohort. Around one-third are in each of the age groups 20 to 39, 40 to 59, and 60+. 27.5% worked full time, 2.5% part time, 16.4% retired, and 21.7% were unemployed. 88.9% were new case, 6.1% were relapse, 4.9% were retreatment after default cases, and 0.0% were retreatment after failure of previous treatment cases. 31.7% had pretreatment smear +ve and 18.0% had cavitory lesions on the chest radiograph. 36.9% of patients lost contact after default and 8.2% of patients were retreated after default.

Annex 1 (b) - (i) ES/NS (cases ever or never seen at chest clinics) - 01

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%
Female	102	55.4	673	54.4	529	34.0	703	26.4	2007	35.6
Male	82	44.6	563	45.6	1027	66.0	1956	73.6	3628	64.4
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Marital status

Single	151	82.1	615	49.8	183	11.8	122	4.6	1071	19.0
Married	1	0.5	436	35.3	1091	70.1	1700	63.9	3228	57.3
Separated	0	0.0	7	0.6	9	0.6	14	0.5	30	0.5
Divorce	0	0.0	20	1.6	56	3.6	28	1.1	104	1.8
Widowed	0	0.0	3	0.2	11	0.7	99	3.7	113	2.0
Not recorded	32	17.4	155	12.5	206	13.2	696	26.2	1089	19.3
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Smoking status

Never	125	67.9	662	53.6	632	40.6	686	25.8	2105	37.4
Ex-smoker	8	4.3	153	12.4	334	21.5	839	31.6	1334	23.7
Current smoker	9	4.9	231	18.7	347	22.3	272	10.2	859	15.2
Not recorded	42	22.8	190	15.4	243	15.6	862	32.4	1337	23.7
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Institution-related

Yes	122	66.3	129	10.4	93	6.0	315	11.8	659	11.7
No	55	29.9	967	78.2	1267	81.4	1687	63.4	3976	70.6
Not recorded	7	3.8	140	11.3	196	12.6	657	24.7	1000	17.7
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Institution

Client	82	-	81	-	43	-	277	-	483	-
Staff	0	-	25	-	32	-	3	-	60	-

Institution type

Old age home	38	-	23	-	17	-	288	-	366	-
School	93	-	69	-	23	-	166	-	351	-
Hospital	1	-	13	-	18	-	3	-	35	-
Handicapped	0	-	17	-	18	-	4	-	39	-
Prison	0	-	30	-	18	-	4	-	52	-
Others	2	-	6	-	9	-	1	-	18	-

Living situation

Street-sleeper	0	0.0	1	0.1	0	0.0	3	0.1	4	0.1
Cubicle bed space	0	0.0	1	0.1	4	0.3	13	0.5	18	0.3
Institution	2	1.1	43	3.5	47	3.0	280	10.5	372	6.6
Work quarter	0	0.0	50	4.0	12	0.8	3	0.1	65	1.2
Alone (not above)	1	0.5	73	5.9	142	9.1	261	9.8	477	8.5
With friends	1	0.5	45	3.6	26	1.7	17	0.6	89	1.6
With family	150	81.5	859	69.5	1124	72.2	1398	52.6	3531	62.7
Not recorded	30	16.3	164	13.3	201	12.9	684	25.7	1079	19.1

Residential status

Permanent resident	145	78.8	840	68.0	1296	83.3	1969	74.1	4250	75.4
Chinese immigrant	5	2.7	68	5.5	27	1.7	10	0.4	110	2.0
Imported worker	0	0.0	137	11.1	27	1.7	1	0.0	165	2.9
Tourist - 2 way permit Chinese	0	0.0	11	0.9	0	0.0	3	0.1	14	0.2
Other tourist	0	0.0	12	1.0	3	0.2	1	0.0	16	0.3
Vietnamese	0	0.0	3	0.2	0	0.0	1	0.0	4	0.1
Illegal immigrants	1	0.5	15	1.2	5	0.3	4	0.2	25	0.4
Not recorded	33	17.9	150	12.1	198	12.7	670	25.2	1051	18.7
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Annex 1 (b) - (i) ES/NS (cases ever or never seen at chest clinics) - 02

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Place of birth

Hong Kong	119	64.7	598	48.4	723	46.5	363	13.7	1803	32.0
Mainland China	28	15.2	271	21.9	558	35.9	1526	57.4	2383	42.3
Others	6	3.3	232	18.8	87	5.6	87	3.3	412	7.3
Not recorded	31	16.8	135	10.9	188	12.1	683	25.7	1037	18.4
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Ethnicity

Chinese	147	79.9	863	69.8	1296	83.3	1988	74.8	4294	76.2
Other Asian	6	3.3	218	17.6	66	4.2	26	1.0	316	5.6
Caucasian	1	0.5	5	0.4	3	0.2	0	0.0	9	0.2
Others	0	0.0	3	0.2	0	0.0	1	0.0	4	0.1
Not recorded	30	16.3	147	11.9	191	12.3	644	24.2	1012	18.0
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Previous BCG history

Yes	133	72.3	697	56.4	494	31.7	78	2.9	1402	24.9
No	3	1.6	75	6.1	227	14.6	742	27.9	1047	18.6
Unknown	48	26.1	464	37.5	835	53.7	1839	69.2	3186	56.5
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

BCG scar

Yes	113	-	710	-	474	-	94	-	1391	-
No	30	-	337	-	823	-	1661	-	2851	-

Evidence of previous BCG

BCG history +ve or scar +ve	137	74.5	779	63.0	577	37.1	113	4.2	1606	28.5
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Employment status

Full-time	15	8.2	691	55.9	638	41.0	91	3.4	1435	25.5
Part-time	3	1.6	34	2.8	65	4.2	24	0.9	126	2.2
Retired	0	0.0	3	0.2	105	6.7	1444	54.3	1552	27.5
Unemployed	18	9.8	199	16.1	348	22.4	103	3.9	668	11.9
Housewife	1	0.5	96	7.8	193	12.4	327	12.3	617	10.9
Student	114	62.0	54	4.4	0	0.0	0	0.0	168	3.0
Not recorded	33	17.9	159	12.9	207	13.3	670	25.2	1069	19.0
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Occupation

Blue collar	5	2.7	287	23.2	403	25.9	76	2.9	771	13.7
White collar	7	3.8	238	19.3	146	9.4	21	0.8	412	7.3
Medical	0	0.0	3	0.2	4	0.3	1	0.0	8	0.1
Nursing	0	0.0	5	0.4	9	0.6	1	0.0	15	0.3
Paramedical	0	0.0	1	0.1	1	0.1	0	0.0	2	0.0
Supporting health staff	0	0.0	4	0.3	7	0.4	0	0.0	11	0.2
Not applicable	113	61.4	375	30.3	625	40.2	1780	66.9	2893	51.3
Not recorded	59	32.1	323	26.1	361	23.2	780	29.3	1523	27.0
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

First presentation

Private doctor	33	17.9	318	25.7	240	15.4	131	4.9	722	12.8
Private hospital	2	1.1	23	1.9	32	2.1	28	1.1	85	1.5
GOPC	7	3.8	34	2.8	65	4.2	96	3.6	202	3.6
Chest Clinic	16	8.7	110	8.9	153	9.8	240	9.0	519	9.2
Other DH Clinic	0	0.0	31	2.5	29	1.9	21	0.8	81	1.4
HA Clinic	4	2.2	28	2.3	56	3.6	66	2.5	154	2.7
HA Hospital	93	50.5	528	42.7	767	49.3	1431	53.8	2819	50.0
Mainland	0	0.0	20	1.6	31	2.0	16	0.6	67	1.2
Overseas	0	0.0	6	0.5	2	0.1	3	0.1	11	0.2
Not recorded	29	15.8	138	11.2	181	11.6	627	23.6	975	17.3
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Annex 1 (b) - (i) ES/NS (cases ever or never seen at chest clinics) - 03

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Symptomatic on presentation

Y	133	72.3	931	75.3	1228	78.9	1738	65.4	4030	71.5
N	20	10.9	159	12.9	139	8.9	218	8.2	536	9.5
Not recorded	31	16.8	146	11.8	189	12.1	703	26.4	1069	19.0
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Chest symptoms	97	-	656	-	879	-	1327	-	2959	-
Systemic symptoms	29	-	159	-	212	-	324	-	724	-
Other site-specific symptoms	26	-	215	-	272	-	252	-	765	-

Reason for presentation

Symptom	129	70.1	897	72.6	1172	75.3	1649	62.0	3847	68.3
Contact screening	12	6.5	36	2.9	31	2.0	31	1.2	110	2.0
Pre-employment	3	1.6	54	4.4	12	0.8	3	0.1	72	1.3
Pre-emigration	0	0.0	4	0.3	1	0.1	1	0.0	6	0.1
Other body check	6	3.3	68	5.5	62	4.0	70	2.6	206	3.7
Incidental to other illness	1	0.5	25	2.0	72	4.6	173	6.5	271	4.8
Others	0	0.0	3	0.2	7	0.4	13	0.5	23	0.4
Not recorded	33	17.9	149	12.1	199	12.8	719	27.0	1100	19.5
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Contact with TB patients

Yes	30	16.3	121	9.8	101	6.5	81	3.0	333	5.9
No	123	66.8	970	78.5	1257	80.8	1861	70.0	4211	74.7
Not recorded	31	16.8	145	11.7	198	12.7	717	27.0	1091	19.4
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Contact type

Household	25	-	88	-	80	-	66	-	259	-
Work	1	-	12	-	8	-	0	-	21	-
Casual	3	-	19	-	9	-	10	-	41	-

Time of contact

Within 2 year	19	-	57	-	34	-	36	-	146	-
Over 2 year	8	-	42	-	55	-	34	-	139	-

Previous chemoprophylaxis

Yes	1	-	2	-	4	-	4	-	11	-
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Reason for chemoprophylaxis

Contact	0	-	0	-	0	-	1	-	1	-
Silicosis	1	-	1	-	0	-	1	-	3	-
HIV	0	-	1	-	1	-	0	-	2	-
Old scar on CXR	0	-	0	-	0	-	0	-	0	-
Others	0	-	0	-	1	-	2	-	3	-

Disease Classification

Pulmonary TB only	127	69.0	855	69.2	1117	71.8	2098	78.9	4197	74.5
Extrapulmonary TB only	30	16.3	211	17.1	262	16.8	255	9.6	758	13.5
Both	27	14.7	170	13.8	177	11.4	306	11.5	680	12.1
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Annex 1 (b) - (i) ES/NS (cases ever or never seen at chest clinics) - 04

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Extrapulmonary TB

Pleura	19	10.3	109	8.8	131	8.4	257	9.7	516	9.2
Lymph node	25	13.6	164	13.3	159	10.2	85	3.2	433	7.7
Meninges	2	1.1	9	0.7	10	0.6	11	0.4	32	0.6
Miliary	1	0.5	10	0.8	9	0.6	14	0.5	34	0.6
Abdomen	4	2.2	15	1.2	40	2.6	31	1.2	90	1.6
Bone and joint (not spine)	0	0.0	6	0.5	9	0.6	22	0.8	37	0.7
Spine	0	0.0	9	0.7	9	0.6	16	0.6	34	0.6
Genito-urinary tract	1	0.5	2	0.2	20	1.3	22	0.8	45	0.8
Naso/oro-pharynx	0	0.0	9	0.7	7	0.4	2	0.1	18	0.3
Larynx	0	0.0	3	0.2	4	0.3	2	0.1	9	0.2
Pericardium	0	0.0	1	0.1	3	0.2	13	0.5	17	0.3
Skin	1	0.5	17	1.4	18	1.2	10	0.4	46	0.8
Other sites	2	1.1	12	1.0	7	0.4	23	0.9	44	0.8

Case category

New case	181	98.4	1187	96.0	1409	90.6	2332	87.7	5109	90.7
Relapse	2	1.1	38	3.1	127	8.2	317	11.9	484	8.6
Treatment after default	1	0.5	11	0.9	19	1.2	10	0.4	41	0.7
Failure of previous treatment	0	0.0	0	0.0	1	0.1	0	0.0	1	0.0
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Disease characteristics (pulmonary cases)

Pretreatment smear +ve	42	27.3	348	34.0	480	37.1	755	31.4	1625	33.3
Pretreatment culture +ve	88	57.1	643	62.7	876	67.7	1795	74.7	3402	69.8
Extent = 1	56	36.4	540	52.7	623	48.1	907	37.7	2126	43.6
Extent=1 & cavity=N	51	33.1	453	44.2	540	41.7	835	34.7	1879	38.5
Extent=1 & cavity=Y	5	3.2	87	8.5	83	6.4	72	3.0	247	5.1
Extent = 2	40	26.0	201	19.6	280	21.6	466	19.4	987	20.2
Extent=2 & cavity=N	24	15.6	122	11.9	180	13.9	356	14.8	682	14.0
Extent=2 & cavity=Y	16	10.4	79	7.7	100	7.7	110	4.6	305	6.3
Extent=3	18	11.7	89	8.7	147	11.4	229	9.5	483	9.9
Extent=3 & cavity=N	8	5.2	43	4.2	59	4.6	140	5.8	250	5.1
Extent=3 & cavity=Y	10	6.5	46	4.5	88	6.8	89	3.7	233	4.8
Extent=not specified	40	26.0	195	19.0	244	18.9	802	33.4	1281	26.3
Extent=ns & cavity=N	40	26.0	194	18.9	242	18.7	797	33.2	1273	26.1
Extent=ns & cavity=Y	0	0.0	1	0.1	2	0.2	5	0.2	8	0.2
Cavity=N	123	79.9	812	79.2	1021	78.9	2128	88.5	4084	83.7
Cavity=Y	31	20.1	213	20.8	273	21.1	276	11.5	793	16.3

Mode of diagnosis

Bacteriological	111	60.3	789	63.8	1087	69.9	2108	79.3	4095	72.7
Histological	16	8.7	154	12.5	183	11.8	144	5.4	497	8.8
Clinical-radiological	40	21.7	194	15.7	182	11.7	170	6.4	586	10.4
Clinical only	0	0.0	8	0.6	2	0.1	4	0.2	14	0.2
Not recorded	17	9.2	91	7.4	102	6.6	233	8.8	443	7.9
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Histology

Typical (with caseation)	7	-	46	-	51	-	41	-	145	-
Granulomatous inflammation	10	-	134	-	175	-	153	-	472	-
Other	7	-	32	-	32	-	22	-	93	-

Ziehl-Neelsen staining

Positive	11	-	99	-	132	-	112	-	354	-
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Annex 1 (b) - (i) ES/NS (cases ever or never seen at chest clinics) - 05

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Risk factors for TB

Yes	2	1.1	82	6.6	431	27.7	962	36.2	1477	26.2
Diabetes mellitus	0	0.0	26	2.1	239	15.4	452	17.0	717	12.7
Lung cancer	0	0.0	0	0.0	21	1.3	71	2.7	92	1.6
Other malignancies	0	0.0	5	0.4	53	3.4	154	5.8	212	3.8
On cytotoxic drugs	0	0.0	0	0.0	11	0.7	12	0.5	23	0.4
On steroid	1	0.5	12	1.0	13	0.8	12	0.5	38	0.7
Chronic renal failure	0	0.0	2	0.2	16	1.0	40	1.5	58	1.0
HIV	0	0.0	17	1.4	19	1.2	8	0.3	44	0.8
Silicosis	0	0.0	0	0.0	9	0.6	21	0.8	30	0.5
Alcoholism	1	0.5	10	0.8	46	3.0	38	1.4	95	1.7
Drug abuser	0	0.0	11	0.9	37	2.4	8	0.3	56	1.0
Gastrectomy	0	0.0	0	0.0	3	0.2	16	0.6	19	0.3
General debilitation	0	0.0	0	0.0	7	0.4	310	11.7	317	5.6
Others	1	0.5	5	0.4	16	1.0	38	1.4	60	1.1

Factors affecting treatment choices

Yes	4	2.2	80	6.5	221	14.2	598	22.5	903	16.0
Hepatitis-B carrier	2	1.1	41	3.3	101	6.5	84	3.2	228	4.0
Chronic active hepatitis	0	0.0	6	0.5	11	0.7	13	0.5	30	0.5
Impaired renal function	0	0.0	2	0.2	11	0.7	56	2.1	69	1.2
Chronic renal failure	0	0.0	1	0.1	17	1.1	26	1.0	44	0.8
Impaired vision	0	0.0	7	0.6	49	3.1	348	13.1	404	7.2
Impaired hearing	0	0.0	1	0.1	10	0.6	30	1.1	41	0.7
Known drug reaction	0	0.0	0	0.0	4	0.3	7	0.3	11	0.2
Known drug resistance	0	0.0	1	0.1	2	0.1	3	0.1	6	0.1
Gout	0	0.0	1	0.1	8	0.5	57	2.1	66	1.2
Idiopathic thromb. purpura	0	0.0	0	0.0	0	0.0	2	0.1	2	0.0
Others	1	0.5	22	1.8	35	2.2	84	3.2	142	2.5

6-month short course treatment

Yes	53	28.8	358	29.0	265	17.0	215	8.1	891	15.8
2HRZE+4HR	44	23.9	318	25.7	226	14.5	167	6.3	755	13.4
2HRZS+4HR	0	0.0	3	0.2	6	0.4	7	0.3	16	0.3

Other standard regimen based on HRZES

Yes	95	51.6	560	45.3	817	52.5	1031	38.8	2503	44.4
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Treatment side effects

Yes	41	22.3	399	32.3	614	39.5	1001	37.6	2055	36.5
GI upset	16	8.7	180	14.6	193	12.4	330	12.4	719	12.8
Skin rash	12	6.5	120	9.7	235	15.1	337	12.7	704	12.5
Visual	2	1.1	18	1.5	43	2.8	80	3.0	143	2.5
Transient rise liver enzyme	1	0.5	28	2.3	45	2.9	90	3.4	164	2.9
Hepatitis	5	2.7	72	5.8	138	8.9	248	9.3	463	8.2
Vestibular	0	0.0	5	0.4	6	0.4	5	0.2	16	0.3
Arthropathy	1	0.5	13	1.1	34	2.2	41	1.5	89	1.6
Fever-chill	1	0.5	18	1.5	26	1.7	36	1.4	81	1.4
Dizziness	0	0.0	19	1.5	25	1.6	47	1.8	91	1.6
Thrombocytopenia	0	0.0	2	0.2	8	0.5	15	0.6	25	0.4
Leucopenia	0	0.0	3	0.2	2	0.1	5	0.2	10	0.2
Flush face	0	0.0	3	0.2	6	0.4	4	0.2	13	0.2
Others	4	2.2	30	2.4	60	3.9	124	4.7	218	3.9

Consequence of side effects

Rx temporarily withheld	23	12.5	193	15.6	354	22.8	643	24.2	1213	21.5
Desensitiation or drug trial	11	6.0	105	8.5	219	14.1	436	16.4	771	13.7
Change in dosage/frequency	3	1.6	72	5.8	127	8.2	228	8.6	430	7.6
Change of drugs	6	3.3	119	9.6	249	16.0	539	20.3	913	16.2

Annex 1 (b) - (i) ES/NS (cases ever or never seen at chest clinics) - 06

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%
Treatment supervision										
Under DOT at chest clinic, hospital, CNS or other health staff (initial 2 months)										
>90%	102	55.4	736	59.5	958	61.6	1451	54.6	3247	57.6
>75%	23	12.5	120	9.7	122	7.8	92	3.5	357	6.3
>50%	11	6.0	74	6.0	94	6.0	67	2.5	246	4.4
>25%	6	3.3	34	2.8	76	4.9	41	1.5	157	2.8
≤25%	4	2.2	33	2.7	41	2.6	42	1.6	120	2.1
Not recorded	38	20.7	239	19.3	265	17.0	966	36.3	1508	26.8
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	88	47.8	589	47.7	814	52.3	1290	48.5	2781	49.4
>75%	21	11.4	151	12.2	162	10.4	118	4.4	452	8.0
>50%	11	6.0	88	7.1	90	5.8	53	2.0	242	4.3
>25%	13	7.1	58	4.7	107	6.9	68	2.6	246	4.4
≤25%	9	4.9	69	5.6	67	4.3	47	1.8	192	3.4
Not recorded	42	22.8	281	22.7	316	20.3	1083	40.7	1722	30.6
Under supervision by relatives (initial 2 months)										
>90%	2	1.1	1	0.1	2	0.1	4	0.2	9	0.2
>75%	1	0.5	0	0.0	1	0.1	2	0.1	4	0.1
>50%	0	0.0	0	0.0	1	0.1	5	0.2	6	0.1
>25%	0	0.0	1	0.1	1	0.1	2	0.1	4	0.1
≤25%	101	54.9	706	57.1	856	55.0	1203	45.2	2866	50.9
Not recorded	80	43.5	528	42.7	695	44.7	1443	54.3	2746	48.7
Under supervision by relatives (subsequent 4 months)										
>90%	1	0.5	3	0.2	5	0.3	5	0.2	14	0.2
>75%	2	1.1	1	0.1	0	0.0	2	0.1	5	0.1
>50%	1	0.5	0	0.0	2	0.1	3	0.1	6	0.1
>25%	0	0.0	2	0.2	2	0.1	0	0.0	4	0.1
≤25%	98	53.3	677	54.8	816	52.4	1130	42.5	2721	48.3
Not recorded	82	44.6	553	44.7	731	47.0	1519	57.1	2885	51.2
Supplied for unsupervised treatment (initial 2 months)										
<5%	92	50.0	695	56.2	865	55.6	1267	47.6	2919	51.8
<10%	15	8.2	67	5.4	80	5.1	66	2.5	228	4.0
<15%	4	2.2	34	2.8	36	2.3	35	1.3	109	1.9
<25%	10	5.4	53	4.3	61	3.9	37	1.4	161	2.9
<50%	10	5.4	63	5.1	92	5.9	59	2.2	224	4.0
≥50%	4	2.2	33	2.7	60	3.9	67	2.5	164	2.9
Not recorded	49	26.6	291	23.5	362	23.3	1128	42.4	1830	32.5
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	80	43.5	564	45.6	734	47.2	1108	41.7	2486	44.1
<10%	24	13.0	110	8.9	97	6.2	75	2.8	306	5.4
<15%	5	2.7	54	4.4	58	3.7	49	1.8	166	2.9
<25%	9	4.9	49	4.0	85	5.5	44	1.7	187	3.3
<50%	6	3.3	53	4.3	67	4.3	38	1.4	164	2.9
≥50%	12	6.5	91	7.4	131	8.4	124	4.7	358	6.4
Not recorded	48	26.1	315	25.5	384	24.7	1221	45.9	1968	34.9
Defaulted (initial 2 months)										
<5%	118	64.1	796	64.4	1010	64.9	1423	53.5	3347	59.4
<10%	6	3.3	39	3.2	41	2.6	22	0.8	108	1.9
<15%	4	2.2	19	1.5	12	0.8	9	0.3	44	0.8
<25%	5	2.7	17	1.4	20	1.3	19	0.7	61	1.1
<50%	1	0.5	14	1.1	21	1.3	10	0.4	46	0.8
≥50%	3	1.6	16	1.3	19	1.2	19	0.7	57	1.0
Not recorded	47	25.5	335	27.1	433	27.8	1157	43.5	1972	35.0
Defaulted (subsequent 4 months)										
<5%	101	54.9	716	57.9	948	60.9	1311	49.3	3076	54.6
<10%	9	4.9	53	4.3	38	2.4	30	1.1	130	2.3
<15%	9	4.9	32	2.6	27	1.7	14	0.5	82	1.5
<25%	7	3.8	32	2.6	32	2.1	12	0.5	83	1.5
<50%	5	2.7	24	1.9	21	1.3	7	0.3	57	1.0
≥50%	4	2.2	32	2.6	35	2.2	22	0.8	93	1.7
Not recorded	49	26.6	347	28.1	455	29.2	1263	47.5	2114	37.5

Annex 1 (b) - (i) ES/NS (cases ever or never seen at chest clinics) - 07

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Outcome at 6 months

Cured/ treatment completed	58	31.5	431	34.9	336	21.6	388	14.6	1213	21.5
Still on treatment	90	48.9	510	41.3	883	56.7	1175	44.2	2658	47.2
Died	0	0.0	1	0.1	48	3.1	321	12.1	370	6.6
Transferred	4	2.2	95	7.7	30	1.9	27	1.0	156	2.8
Defaulted	2	1.1	47	3.8	54	3.5	37	1.4	140	2.5
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Revised dx/ others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	30	16.3	152	12.3	205	13.2	711	26.7	1098	19.5
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Among those cured/ treatment completed

Bacteriological conversion	27	46.6	248	57.5	188	56.0	255	65.7	718	59.2
Radiological improvement	49	84.5	361	83.8	277	82.4	265	68.3	952	78.5
Other clinical improvement	12	20.7	75	17.4	51	15.2	56	14.4	194	16.0
No evidence of response	3	5.2	18	4.2	13	3.9	14	3.6	48	4.0

Among those still on treatment

Reasons for still on treatment:

Retreatment case	0	0.0	15	2.9	76	8.6	152	12.9	243	9.1
Extrapulmonary disease	33	36.7	207	40.6	251	28.4	209	17.8	700	26.3
Extensive disease	30	33.3	104	20.4	156	17.7	152	12.9	442	16.6
Interrupted treatment	22	24.4	96	18.8	202	22.9	337	28.7	657	24.7
Drug resistance	2	2.2	32	6.3	43	4.9	50	4.3	127	4.8
Poor response	7	7.8	41	8.0	73	8.3	75	6.4	196	7.4
Others	9	10.0	100	19.6	285	32.3	516	43.9	910	34.2

Among those died - causes of death:

TB-related cause	0	-	0	0.0	3	6.3	18	5.6	21	5.7
Not TB-related	0	-	1	100.0	25	52.1	138	43.0	164	44.3
Unknown	0	-	0	0.0	20	41.7	152	47.4	172	46.5

Among those transferred, new sources of care:

GP	1	25.0	8	8.4	6	20.0	7	25.9	22	14.1
Chest Clinic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hospital	2	50.0	2	2.1	7	23.3	5	18.5	16	10.3
Outside HK	1	25.0	81	85.3	17	56.7	13	48.1	112	71.8
Not recorded	0	0.0	4	4.2	0	0.0	2	7.4	6	3.8

Among those defaulted

Never found	2	100.0	34	72.3	28	51.9	16	43.2	80	57.1
Retreated after default	0	0.0	4	8.5	4	7.4	1	2.7	9	6.4
Treatment stopped by doctor	0	0.0	5	10.6	9	16.7	9	24.3	23	16.4
Not recorded	0	0.0	4	8.5	13	24.1	11	29.7	28	20.0

Annex 1 (b) - (i) ES/NS (cases ever or never seen at chest clinics) - 08

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Outcome at 12 months

Cured/ treatment completed	158	85.9	963	77.9	1215	78.1	1508	56.7	3844	68.2
Still on treatment	11	6.0	69	5.6	113	7.3	186	7.0	379	6.7
Died	0	0.0	6	0.5	106	6.8	851	32.0	963	17.1
Transferred	8	4.3	122	9.9	37	2.4	31	1.2	198	3.5
Defaulted	7	3.8	74	6.0	84	5.4	76	2.9	241	4.3
Failure	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0
Revised dx/ others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	0	0.0	2	0.2	1	0.1	6	0.2	9	0.2
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Among those cured/ treatment completed

Bacteriological conversion	75	47.5	505	52.4	654	53.8	911	60.4	2145	55.8
Radiological improvement	112	70.9	685	71.1	830	68.3	990	65.6	2617	68.1
Other clinical improvement	46	29.1	278	28.9	329	27.1	331	21.9	984	25.6
No evidence of response	3	1.9	21	2.2	18	1.5	31	2.1	73	1.9
After treatment completed:										
No relapse	110	69.6	717	74.5	925	76.1	1096	72.7	2848	74.1
Loss to follow up	12	7.6	88	9.1	53	4.4	49	3.2	202	5.3
Died	0	0.0	0	0.0	2	0.2	29	1.9	31	0.8
<i>TB-related</i>	0		0		0		1		1	
<i>Not TB-related</i>	0		0		1		19		20	
<i>Unknown</i>	0		0		1		9		10	
Relapse	1	0.6	4	0.4	0	0.0	3	0.2	8	0.2
<i>Bacteriological</i>	0		0		0		1		1	
<i>Histological</i>	1		4		0		1		6	
<i>Clinico-radiological</i>	0		0		0		1		1	
Not recorded	33	20.9	144	15.0	205	16.9	232	15.4	614	16.0

Among those still on treatment

Reasons for still on treatment:

Retreatment case	0	0.0	1	1.4	7	6.2	9	4.8	17	4.5
Extrapulmonary disease	3	27.3	17	24.6	20	17.7	30	16.1	70	18.5
Extensive disease	3	27.3	5	7.2	8	7.1	16	8.6	32	8.4
Interrupted treatment	2	18.2	22	31.9	52	46.0	106	57.0	182	48.0
Drug resistance	1	9.1	11	15.9	19	16.8	20	10.8	51	13.5
Poor response	3	27.3	10	14.5	11	9.7	17	9.1	41	10.8
Others	1	9.1	18	26.1	33	29.2	75	40.3	127	33.5

Among those died - causes of death:

TB-related cause	0	-	0	0.0	3	2.8	22	2.6	25	2.6
Not TB-related	0	-	2	33.3	32	30.2	183	21.5	217	22.5
Unknown	0	-	1	16.7	27	25.5	169	19.9	197	20.5

Among those transferred, new sources of care:

GP	0	0.0	2	1.6	3	8.1	3	9.7	8	4.0
Chest Clinic	0	0.0	1	0.8	0	0.0	0	0.0	1	0.5
Hospital	0	0.0	2	1.6	1	2.7	2	6.5	5	2.5
Outside HK	1	12.5	66	54.1	14	37.8	10	32.3	91	46.0
Not recorded	7	87.5	51	41.8	19	51.4	16	51.6	93	47.0

Among those defaulted

Never found	2	28.6	35	47.3	38	45.2	21	27.6	96	39.8
Retreated after default	0	0.0	5	6.8	7	8.3	1	1.3	13	5.4
Treatment stopped by doctor	1	14.3	5	6.8	7	8.3	8	10.5	21	8.7
Not recorded	4	57.1	29	39.2	32	38.1	46	60.5	111	46.1

Annex 1 (b) - (i) ES/NS (cases ever or never seen at chest clinics) - 09

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Outcome at 24 months

Cured/ treatment completed	169	91.8	1021	82.6	1318	84.7	1675	63.0	4183	74.2
Still on treatment	0	0.0	4	0.3	4	0.3	4	0.2	12	0.2
Died	0	0.0	6	0.5	106	6.8	859	32.3	971	17.2
Transferred	10	5.4	120	9.7	37	2.4	28	1.1	195	3.5
Defaulted	5	2.7	75	6.1	86	5.5	78	2.9	244	4.3
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Revised dx/ others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	0	0.0	10	0.8	5	0.3	15	0.6	30	0.5
Total	184	100.0	1236	100.0	1556	100.0	2659	100.0	5635	100.0

Among those cured/ treatment completed

Bacteriological conversion	84	49.7	573	56.1	771	58.5	1087	64.9	2515	60.1
Radiological improvement	125	74.0	766	75.0	974	73.9	1206	72.0	3071	73.4
Other clinical improvement	60	35.5	349	34.2	422	32.0	414	24.7	1245	29.8
No evidence of response	2	1.2	18	1.8	25	1.9	37	2.2	82	2.0
After treatment completed:										
No relapse	107	63.3	706	69.1	991	75.2	1181	70.5	2985	71.4
Loss to follow up	33	19.5	191	18.7	154	11.7	155	9.3	533	12.7
Died	0	0.0	1	0.1	13	1.0	91	5.4	105	2.5
<i>TB-related</i>	0		0		0		3		3	
<i>Not TB-related</i>	0		1		12		57		70	
<i>Unknown</i>	0		0		1		28		29	
Relapse	2	1.2	9	0.9	10	0.8	13	0.8	34	0.8
<i>Bacteriological</i>	0		0		6		7		13	
<i>Histological</i>	2		6		2		2		12	
<i>Clinico-radiological</i>	0		2		1		4		7	
<i>Clinical only</i>	0		1		1		0		2	
Not recorded	25	14.8	103	10.1	120	9.1	136	8.1	384	9.2

Among those still on treatment

Reasons for still on treatment:

Retreatment case	0	-	0	-	0	-	0	-	0	0.0
Extrapulmonary disease	0	-	1	-	0	-	0	-	1	8.3
Extensive disease	0	-	0	-	0	-	0	-	0	0.0
Interrupted treatment	0	-	1	-	1	-	1	-	3	25.0
Drug resistance	0	-	2	-	3	-	2	-	7	58.3
Poor response	0	-	0	-	2	-	0	-	2	16.7
Others	0	-	1	-	1	-	0	-	2	16.7

Among those died - causes of death:

TB-related cause	0	-	0	0.0	3	2.8	22	2.6	25	2.6
Not TB-related	0	-	2	33.3	32	30.2	187	21.8	221	22.8
Unknown	0	-	1	16.7	27	25.5	173	20.1	201	20.7

Among those transferred, new sources of care:

GP	1	10.0	1	0.8	2	5.4	3	10.7	7	3.6
Chest Clinic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hospital	0	0.0	1	0.8	1	2.7	1	3.6	3	1.5
Outside HK	2	20.0	72	60.0	16	43.2	10	35.7	100	51.3
Not recorded	7	70.0	46	38.3	18	48.6	14	50.0	85	43.6

Among those defaulted

Never found	1	20.0	37	49.3	32	37.2	20	25.6	90	36.9
Retreated after default	1	20.0	5	6.7	10	11.6	4	5.1	20	8.2
Treatment stopped by doctor	1	20.0	7	9.3	14	16.3	9	11.5	31	12.7
Not recorded	2	40.0	26	34.7	30	34.9	45	57.7	103	42.2

Annex 1 (b) - (ii) ES (cases ever seen at chest clinics) - 01

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%
Female	85	56.3	585	54.8	455	33.8	479	26.0	1604	36.4
Male	66	43.7	482	45.2	891	66.2	1364	74.0	2803	63.6
Total	151	100.0	1067	100.0	1346	100.0	1843	100.0	4407	100.0

First presentation

Private doctor	29	19.2	314	29.4	238	17.7	124	6.7	705	16.0
Private hospital	2	1.3	20	1.9	30	2.2	22	1.2	74	1.7
GOPC	7	4.6	34	3.2	65	4.8	93	5.0	199	4.5
Chest Clinic	16	10.6	108	10.1	152	11.3	233	12.6	509	11.5
Other DH Clinic	0	0.0	15	1.4	21	1.6	19	1.0	55	1.2
HA Clinic	4	2.6	28	2.6	53	3.9	62	3.4	147	3.3
HA Hospital	93	61.6	514	48.2	743	55.2	1257	68.2	2607	59.2
Mainland	0	0.0	20	1.9	30	2.2	15	0.8	65	1.5
Overseas	0	0.0	6	0.6	2	0.1	2	0.1	10	0.2
Not recorded	0	0.0	8	0.7	12	0.9	16	0.9	36	0.8
Total	151	100.0	1067	100.0	1346	100.0	1843	100.0	4407	100.0

Symptomatic on presentation

Y	132	87.4	909	85.2	1199	89.1	1589	86.2	3829	86.9
N	19	12.6	148	13.9	134	10.0	209	11.3	510	11.6
Not recorded	0	0.0	10	0.9	13	1.0	45	2.4	68	1.5
Total	151	100.0	1067	100.0	1346	100.0	1843	100.0	4407	100.0

Chest symptoms	97	-	640	-	858	-	1217	-	2812	-
Systemic symptoms	29	-	156	-	209	-	296	-	690	-
Other site-specific symptoms	26	-	212	-	266	-	239	-	743	-

Reason for presentation

Symptom	128	84.8	879	82.4	1148	85.3	1507	81.8	3662	83.1
Contact screening	12	7.9	36	3.4	31	2.3	30	1.6	109	2.5
Pre-employment	3	2.0	52	4.9	12	0.9	3	0.2	70	1.6
Pre-emigration	0	0.0	4	0.4	1	0.1	1	0.1	6	0.1
Other body check	5	3.3	55	5.2	56	4.2	67	3.6	183	4.2
Incidental to other illness	1	0.7	25	2.3	70	5.2	166	9.0	262	5.9
Others	0	0.0	3	0.3	7	0.5	13	0.7	23	0.5
Not recorded	2	1.3	13	1.2	21	1.6	56	3.0	92	2.1
Total	151	100.0	1067	100.0	1346	100.0	1843	100.0	4407	100.0

Disease Classification

Pulmonary TB only	101	66.9	733	68.7	955	71.0	1411	76.6	3200	72.6
Extrapulmonary TB only	23	15.2	172	16.1	218	16.2	171	9.3	584	13.3
Both	27	17.9	162	15.2	173	12.9	261	14.2	623	14.1
Total	151	100.0	1067	100.0	1346	100.0	1843	100.0	4407	100.0

6-month short course treatment

Yes	52	34.4	353	33.1	261	19.4	204	11.1	870	19.7
2HRZE+4HR	43	28.5	312	29.2	223	16.6	160	8.7	738	16.7
2HRZS+4HR	0	0.0	3	0.3	5	0.4	6	0.3	14	0.3

Other standard regimen based on HRZES

Yes	94	62.3	556	52.1	812	60.3	1029	55.8	2491	56.5
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Annex 1 (b) - (ii) ES (cases ever seen at chest clinics) - 02

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%
Treatment supervision										
Under DOT at chest clinic, hospital, CNS or other health staff (initial 2 months)										
>90%	102	67.5	725	67.9	953	70.8	1447	78.5	3227	73.2
>75%	23	15.2	120	11.2	122	9.1	91	4.9	356	8.1
>50%	11	7.3	74	6.9	94	7.0	66	3.6	245	5.6
>25%	6	4.0	34	3.2	76	5.6	41	2.2	157	3.6
≤25%	4	2.6	33	3.1	41	3.0	42	2.3	120	2.7
Not recorded	5	3.3	81	7.6	60	4.5	156	8.5	302	6.9
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	88	58.3	582	54.5	809	60.1	1286	69.8	2765	62.7
>75%	21	13.9	151	14.2	162	12.0	118	6.4	452	10.3
>50%	11	7.3	88	8.2	90	6.7	53	2.9	242	5.5
>25%	13	8.6	58	5.4	107	7.9	68	3.7	246	5.6
≤25%	9	6.0	67	6.3	67	5.0	47	2.6	190	4.3
Not recorded	9	6.0	121	11.3	111	8.2	271	14.7	512	11.6
Under supervision by relatives (initial 2 months)										
>90%	2	1.3	1	0.1	2	0.1	4	0.2	9	0.2
>75%	1	0.7	0	0.0	1	0.1	1	0.1	3	0.1
>50%	0	0.0	0	0.0	1	0.1	5	0.3	6	0.1
>25%	0	0.0	1	0.1	1	0.1	2	0.1	4	0.1
≤25%	101	66.9	705	66.1	856	63.6	1201	65.2	2863	65.0
Not recorded	47	31.1	360	33.7	485	36.0	630	34.2	1522	34.5
Under supervision by relatives (subsequent 4 months)										
>90%	1	0.7	3	0.3	5	0.4	4	0.2	13	0.3
>75%	2	1.3	1	0.1	0	0.0	2	0.1	5	0.1
>50%	1	0.7	0	0.0	2	0.1	3	0.2	6	0.1
>25%	0	0.0	2	0.2	2	0.1	0	0.0	4	0.1
≤25%	98	64.9	677	63.4	816	60.6	1128	61.2	2719	61.7
Not recorded	49	32.5	384	36.0	521	38.7	706	38.3	1660	37.7
Supplied for unsupervised treatment (initial 2 months)										
<5%	92	60.9	694	65.0	865	64.3	1265	68.6	2916	66.2
<10%	15	9.9	67	6.3	80	5.9	66	3.6	228	5.2
<15%	4	2.6	34	3.2	36	2.7	35	1.9	109	2.5
<25%	10	6.6	53	5.0	61	4.5	37	2.0	161	3.7
<50%	10	6.6	63	5.9	92	6.8	59	3.2	224	5.1
≥50%	4	2.6	33	3.1	59	4.4	67	3.6	163	3.7
Not recorded	16	10.6	123	11.5	153	11.4	314	17.0	606	13.8
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	80	53.0	564	52.9	734	54.5	1106	60.0	2484	56.4
<10%	24	15.9	110	10.3	97	7.2	75	4.1	306	6.9
<15%	5	3.3	54	5.1	58	4.3	49	2.7	166	3.8
<25%	9	6.0	49	4.6	85	6.3	44	2.4	187	4.2
<50%	6	4.0	53	5.0	66	4.9	38	2.1	163	3.7
≥50%	12	7.9	91	8.5	131	9.7	124	6.7	358	8.1
Not recorded	15	9.9	146	13.7	175	13.0	407	22.1	743	16.9
Defaulted (initial 2 months)										
<5%	118	78.1	795	74.5	1010	75.0	1420	77.0	3343	75.9
<10%	6	4.0	39	3.7	41	3.0	22	1.2	108	2.5
<15%	4	2.6	19	1.8	12	0.9	9	0.5	44	1.0
<25%	5	3.3	17	1.6	20	1.5	19	1.0	61	1.4
<50%	1	0.7	14	1.3	21	1.6	10	0.5	46	1.0
≥50%	3	2.0	16	1.5	19	1.4	19	1.0	57	1.3
Not recorded	14	9.3	167	15.7	223	16.6	344	18.7	748	17.0
Defaulted (subsequent 4 months)										
<5%	101	66.9	716	67.1	948	70.4	1309	71.0	3074	69.8
<10%	9	6.0	53	5.0	38	2.8	30	1.6	130	2.9
<15%	9	6.0	32	3.0	27	2.0	14	0.8	82	1.9
<25%	7	4.6	32	3.0	32	2.4	12	0.7	83	1.9
<50%	5	3.3	24	2.2	21	1.6	7	0.4	57	1.3
≥50%	4	2.6	32	3.0	35	2.6	22	1.2	93	2.1
Not recorded	16	10.6	178	16.7	245	18.2	449	24.4	888	20.1

Annex 1 (b) - (ii) ES (cases ever seen at chest clinics) - 03

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Outcome at 6 months

Cured/ treatment completed	57	37.7	425	39.8	330	24.5	376	20.4	1188	27.0
Still on treatment	88	58.3	504	47.2	881	65.5	1169	63.4	2642	60.0
Died	0	0.0	1	0.1	34	2.5	218	11.8	253	5.7
Transferred	3	2.0	87	8.2	30	2.2	24	1.3	144	3.3
Defaulted	2	1.3	47	4.4	54	4.0	37	2.0	140	3.2
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Revised dx/ others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	1	0.7	3	0.3	17	1.3	19	1.0	40	0.9
Total	151	100.0	1067	100.0	1346	100.0	1843	100.0	4407	100.0

Outcome at 12 months

Cured/ treatment completed	135	89.4	873	81.8	1107	82.2	1321	71.7	3436	78.0
Still on treatment	11	7.3	61	5.7	109	8.1	180	9.8	361	8.2
Died	0	0.0	3	0.3	48	3.6	281	15.2	332	7.5
Transferred	0	0.0	76	7.1	19	1.4	18	1.0	113	2.6
Defaulted	5	3.3	54	5.1	63	4.7	41	2.2	163	3.7
Failure	0	0.0	0	0.0	0	0.0	1	0.1	1	0.0
Revised dx/ others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	0	0.0	0	0.0	0	0.0	1	0.1	1	0.0
Total	151	100.0	1067	100.0	1346	100.0	1843	100.0	4407	100.0

Outcome at 24 months

Cured/ treatment completed	146	96.7	931	87.3	1210	89.9	1487	80.7	3774	85.6
Still on treatment	0	0.0	3	0.3	4	0.3	4	0.2	11	0.2
Died	0	0.0	3	0.3	48	3.6	289	15.7	340	7.7
Transferred	2	1.3	75	7.0	19	1.4	14	0.8	110	2.5
Defaulted	3	2.0	55	5.2	65	4.8	44	2.4	167	3.8
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Revised dx/ others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	0	0.0	0	0.0	0	0.0	5	0.3	5	0.1
Total	151	100.0	1067	100.0	1346	100.0	1843	100.0	4407	100.0

Annex 1 (b) - (iii) NS (cases never seen at chest clinics) - 01

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%
Female	17	51.5	88	52.1	74	35.2	224	27.5	403	32.8
Male	16	48.5	81	47.9	136	64.8	592	72.5	825	67.2
Total	33	100.0	169	100.0	210	100.0	816	100.0	1228	100.0

First presentation

Private doctor	4	12.1	4	2.4	2	1.0	7	0.9	17	1.4
Private hospital	0	0.0	3	1.8	2	1.0	6	0.7	11	0.9
GOPC	0	0.0	0	0.0	0	0.0	3	0.4	3	0.2
Chest Clinic	0	0.0	2	1.2	1	0.5	7	0.9	10	0.8
Other DH Clinic	0	0.0	16	9.5	8	3.8	2	0.2	26	2.1
HA Clinic	0	0.0	0	0.0	3	1.4	4	0.5	7	0.6
HA Hospital	0	0.0	14	8.3	24	11.4	174	21.3	212	17.3
Mainland	0	0.0	0	0.0	1	0.5	1	0.1	2	0.2
Overseas	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
Not recorded	29	87.9	130	76.9	169	80.5	611	74.9	939	76.5
Total	33	100.0	169	100.0	210	100.0	816	100.0	1228	100.0

Symptomatic on presentation

Y	1	3.0	22	13.0	29	13.8	149	18.3	201	16.4
N	1	3.0	11	6.5	5	2.4	9	1.1	26	2.1
Not recorded	31	93.9	136	80.5	176	83.8	658	80.6	1001	81.5
Total	33	100.0	169	100.0	210	100.0	816	100.0	1228	100.0

Chest symptoms	0	-	16	-	21	-	110	-	147	-
Systemic symptoms	0	-	3	-	3	-	28	-	34	-
Other site-specific symptoms	0	-	3	-	6	-	13	-	22	-

Reason for presentation

Symptom	1	3.0	18	10.7	24	11.4	142	17.4	185	15.1
Contact screening	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
Pre-employment	0	0.0	2	1.2	0	0.0	0	0.0	2	0.2
Pre-emigration	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other body check	1	3.0	13	7.7	6	2.9	3	0.4	23	1.9
Incidental to other illness	0	0.0	0	0.0	2	1.0	7	0.9	9	0.7
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	31	93.9	136	80.5	178	84.8	663	81.3	1008	82.1
Total	33	100.0	169	100.0	210	100.0	816	100.0	1228	100.0

Disease Classification

Pulmonary TB only	26	78.8	122	72.2	162	77.1	687	84.2	997	81.2
Extrapulmonary TB only	7	21.2	39	23.1	44	21.0	84	10.3	174	14.2
Both	0	0.0	8	4.7	4	1.9	45	5.5	57	4.6
Total	33	100.0	169	100.0	210	100.0	816	100.0	1228	100.0

6-month short course treatment

Yes	1	3.0	5	3.0	4	1.9	11	1.3	21	1.7
2HRZE+4HR	1	3.0	6	3.6	3	1.4	7	0.9	17	1.4
2HRZS+4HR	0	0.0	0	0.0	1	0.5	1	0.1	2	0.2

Other standard regimen based on HRZES

Yes	1	3.0	4	2.4	5	2.4	2	0.2	12	1.0
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Annex 1 (b) - (iii) NS (cases never seen at chest clinics) - 02

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Treatment supervision

Under DOT at chest clinic, hospital, CNS or other health staff (initial 2 months)

>90%	0	0.0	11	6.5	5	2.4	4	0.5	20	1.6
>75%	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
>50%	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
>25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≤25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	33	100.0	158	93.5	205	97.6	810	99.3	1206	98.2

Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)

>90%	0	0.0	7	4.1	5	2.4	4	0.5	16	1.3
>75%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
>50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
>25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≤25%	0	0.0	2	1.2	0	0.0	0	0.0	2	0.2
Not recorded	33	100.0	160	94.7	205	97.6	812	99.5	1210	98.5

Under supervision by relatives (initial 2 months)

>90%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
>75%	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
>50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
>25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≤25%	0	0.0	1	0.6	0	0.0	2	0.2	3	0.2
Not recorded	33	100.0	168	99.4	210	100.0	813	99.6	1224	99.7

Under supervision by relatives (subsequent 4 months)

>90%	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
>75%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
>50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
>25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≤25%	0	0.0	0	0.0	0	0.0	2	0.2	2	0.2
Not recorded	33	100.0	169	100.0	210	100.0	813	99.6	1225	99.8

Supplied for unsupervised treatment (initial 2 months)

<5%	0	0.0	1	0.6	0	0.0	2	0.2	3	0.2
<10%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<15%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≥50%	0	0.0	0	0.0	1	0.5	0	0.0	1	0.1
Not recorded	33	100.0	168	99.4	209	99.5	814	99.8	1224	99.7

Supplied for unsupervised treatment (subsequent 4 months)

<5%	0	0.0	0	0.0	0	0.0	2	0.2	2	0.2
<10%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<15%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<50%	0	0.0	0	0.0	1	0.5	0	0.0	1	0.1
≥50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	33	100.0	169	100.0	209	99.5	814	99.8	1225	99.8

Defaulted (initial 2 months)

<5%	0	0.0	1	0.6	0	0.0	3	0.4	4	0.3
<10%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<15%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≥50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	33	100.0	168	99.4	210	100.0	813	99.6	1224	99.7

Defaulted (subsequent 4 months)

<5%	0	0.0	0	0.0	0	0.0	2	0.2	2	0.2
<10%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<15%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≥50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	33	100.0	169	100.0	210	100.0	814	99.8	1226	99.8

Annex 1 (b) - (iii) NS (cases never seen at chest clinics) - 03

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%

Outcome at 6 months

Cured/ treatment completed	1	3.0	6	3.6	6	2.9	12	1.5	25	2.0
Still on treatment	2	6.1	6	3.6	2	1.0	6	0.7	16	1.3
Died	0	0.0	0	0.0	14	6.7	103	12.6	117	9.5
Transferred	1	3.0	8	4.7	0	0.0	3	0.4	12	1.0
Defaulted	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Revised dx/ others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	29	87.9	149	88.2	188	89.5	692	84.8	1058	86.2
Total	33	100.0	169	100.0	210	100.0	816	100.0	1228	100.0

Outcome at 12 months

Cured/ treatment completed	23	69.7	90	53.3	108	51.4	187	22.9	408	33.2
Still on treatment	0	0.0	8	4.7	4	1.9	6	0.7	18	1.5
Died	0	0.0	3	1.8	58	27.6	570	69.9	631	51.4
Transferred	8	24.2	46	27.2	18	8.6	13	1.6	85	6.9
Defaulted	2	6.1	20	11.8	21	10.0	35	4.3	78	6.4
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Revised dx/ others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	0	0.0	2	1.2	1	0.5	5	0.6	8	0.7
Total	33	100.0	169	100.0	210	100.0	816	100.0	1228	100.0

Outcome at 24 months

Cured/ treatment completed	23	69.7	90	53.3	108	51.4	188	23.0	409	33.3
Still on treatment	0	0.0	1	0.6	0	0.0	0	0.0	1	0.1
Died	0	0.0	3	1.8	58	27.6	570	69.9	631	51.4
Transferred	8	24.2	45	26.6	18	8.6	14	1.7	85	6.9
Defaulted	2	6.1	20	11.8	21	10.0	34	4.2	77	6.3
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Revised dx/ others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	0	0.0	10	5.9	5	2.4	10	1.2	25	2.0
Total	33	100.0	169	100.0	210	100.0	816	100.0	1228	100.0

Annex 1 (c) - ES/NS (cases ever or never seen at chest clinics) - 01

Group (Pulmonary cases)	PreRx smear +ve		PreRx culture +ve		MDR-TB	
	N	%	N	%	N	%

Ever seen at chest clinics

Yes	1268	86.8	2724	80.1	16	94.1
No	193	13.2	678	19.9	1	5.9
Total	1461	100.0	3402	100.0	17	100.0

Age group

0 to 19	41	2.8	88	2.6	0	0.0
Female	24		49		0	
Male	17		39		0	
20 to 39	324	22.2	643	18.9	6	35.3
Female	163		315		3	
Male	161		328		3	
40 to 59	447	30.6	876	25.7	6	35.3
Female	93		218		1	
Male	354		658		5	
60+	649	44.4	1795	52.8	5	29.4
Female	133		392		1	
Male	516		1403		4	
Total	1461	100.0	3402	100.0	17	100.0
Female	413	28.3	974	28.6	5	29.4
Male	1048	71.7	2428	71.4	12	70.6

Marital status

Single	304	20.8	634	18.6	2	11.8
Married	919	62.9	2012	59.1	14	82.4
Separated	11	0.8	24	0.7	0	0.0
Divorce	43	2.9	67	2.0	1	5.9
Widowed	27	1.8	73	2.1	0	0.0
Not recorded	157	10.7	592	17.4	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Smoking status

Never	480	32.9	1082	31.8	4	23.5
Ex-smoker	455	31.1	954	28.0	9	52.9
Current smoker	318	21.8	625	18.4	4	23.5
Not recorded	208	14.2	741	21.8	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Institution-related

Yes	127	8.7	374	11.0	1	5.9
No	1200	82.1	2499	73.5	15	88.2
Not recorded	134	9.2	529	15.5	1	5.9
Total	1461	100.0	3402	100.0	17	100.0

Institution

Client	95	-	285	-	1	-
Staff	6	-	23	-	0	-

Institution type

Old age home	72	-	222	-	0	-
School	54	-	197	-	0	-
Hospital	4	-	15	-	0	-
Handicapped	7	-	12	-	0	-
Prison	10	-	39	-	1	-
Others	4	-	8	-	0	-

Annex 1 (c) - ES/NS (cases ever or never seen at chest clinics) - 02

Group (Pulmonary cases)	PreRx smear +ve		PreRx culture +ve		MDR-TB	
	N	%	N	%	N	%

Living situation

Street-sleeper	4	0.3	4	0.1	0	0.0
Cubicle bed space	0	0.0	8	0.2	1	5.9
Institution	71	4.9	232	6.8	1	5.9
Work quarter	8	0.5	25	0.7	0	0.0
Alone (not above)	170	11.6	337	9.9	1	5.9
With friends	33	2.3	58	1.7	0	0.0
With family	1023	70.0	2161	63.5	14	82.4
Not recorded	152	10.4	577	17.0	0	0.0

Residential status

Permanent resident	1233	84.4	2677	78.7	13	76.5
Chinese immigrant	34	2.3	62	1.8	4	23.5
Imported worker	31	2.1	68	2.0	0	0.0
Tourist - 2 way permit Chinese	5	0.3	8	0.2	0	0.0
Other tourist	5	0.3	7	0.2	0	0.0
Vietnamese	0	0.0	2	0.1	0	0.0
Illegal immigrants	6	0.4	17	0.5	0	0.0
Not recorded	147	10.1	561	16.5	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Place of birth

Hong Kong	540	37.0	1061	31.2	7	41.2
Mainland China	685	46.9	1583	46.5	9	52.9
Others	93	6.4	203	6.0	1	5.9
Not recorded	143	9.8	555	16.3	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Ethnicity

Chinese	1247	85.4	2716	79.8	16	94.1
Other Asian	70	4.8	146	4.3	1	5.9
Caucasian	3	0.2	6	0.2	0	0.0
Others	1	0.1	1	0.0	0	0.0
Not recorded	140	9.6	533	15.7	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Previous BCG history

Yes	418	28.6	794	23.3	6	35.3
No	298	20.4	710	20.9	4	23.5
Unknown	745	51.0	1898	55.8	7	41.2
Total	1461	100.0	3402	100.0	17	100.0

BCG scar

Yes	398	-	779	-	7	-
No	823	-	1842	-	9	-

Employment status

Full-time	405	27.7	800	23.5	5	29.4
Part-time	34	2.3	73	2.1	1	5.9
Retired	443	30.3	1111	32.7	3	17.6
Unemployed	238	16.3	437	12.8	5	29.4
Housewife	148	10.1	325	9.6	2	11.8
Student	39	2.7	86	2.5	0	0.0
Not recorded	154	10.5	570	16.8	1	5.9
Total	1461	100.0	3402	100.0	17	100.0

Annex 1 (c) - ES/NS (cases ever or never seen at chest clinics) - 03

Group (Pulmonary cases)	PreRx smear +ve		PreRx culture +ve		MDR-TB	
	N	%	N	%	N	%

Occupation

Blue collar	233	15.9	444	13.1	3	17.6
White collar	110	7.5	220	6.5	2	11.8
Medical	2	0.1	2	0.1	0	0.0
Nursing	3	0.2	8	0.2	0	0.0
Paramedical	0	0.0	2	0.1	0	0.0
Supporting health staff	1	0.1	7	0.2	0	0.0
Not applicable	847	58.0	1887	55.5	10	58.8
Not recorded	265	18.1	832	24.5	2	11.8
Total	1461	100.0	3402	100.0	17	100.0

First presentation

Private doctor	201	13.8	395	11.6	4	23.5
Private hospital	16	1.1	35	1.0	0	0.0
GOPC	80	5.5	154	4.5	1	5.9
Chest Clinic	98	6.7	337	9.9	3	17.6
Other DH Clinic	15	1.0	51	1.5	1	5.9
HA Clinic	35	2.4	71	2.1	1	5.9
HA Hospital	871	59.6	1812	53.3	6	35.3
Mainland	15	1.0	31	0.9	1	5.9
Overseas	3	0.2	5	0.1	0	0.0
Not recorded	127	8.7	511	15.0	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Symptomatic on presentation

Y	1246	85.3	2519	74.0	17	100.0
N	62	4.2	307	9.0	0	0.0
Not recorded	153	10.5	576	16.9	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Chest symptoms	1133	-	2189	-	14	-
Systemic symptoms	284	-	481	-	3	-
Other site-specific symptoms	50	-	167	-	2	-

Reason for presentation

Symptom	1210	82.8	2403	70.6	14	82.4
Contact screening	13	0.9	61	1.8	0	0.0
Pre-employment	4	0.3	29	0.9	0	0.0
Pre-emigration	22	1.5	119	3.5	0	0.0
Other body check	51	3.5	184	5.4	1	5.9
Incidental to other illness	1	0.1	14	0.4	2	11.8
Others	0	0.0	0	0.0	0	0.0
Not recorded	160	11.0	592	17.4	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Annex 1 (c) - ES/NS (cases ever or never seen at chest clinics) - 04

Group (Pulmonary cases)	PreRx smear +ve		PreRx culture +ve		MDR-TB	
	N	%	N	%	N	%

Contact with TB patients

Yes	74	5.1	190	5.6	0	0.0
No	1227	84.0	2619	77.0	17	100.0
Not recorded	160	11.0	593	17.4	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Contact type

Household	59	-	148	-	0	-
Work	2	-	9	-	0	-
Casual	9	-	28	-	0	-

Time of contact

Within 2 year	29	-	83	-	0	-
Over 2 year	37	-	87	-	0	-

Previous chemoprophylaxis

Yes	4	-	9	-	0	-
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Reason for chemoprophylaxis

Contact	1	-	1	-	0	-
Silicosis	1	-	2	-	0	-
HIV	0	-	2	-	0	-
Old scar on CXR	0	-	0	-	0	-
Others	0	-	2	-	0	-

Disease Classification

Pulmonary TB only	1368	93.6	3109	91.4	16	94.1
Both pulm & extrapulm	93	6.4	293	8.6	1	5.9
Total	1461	100.0	3402	100.0	17	100.0

Case category

New case	1299	88.9	3034	89.2	7	41.2
Relapse	142	9.7	336	9.9	9	52.9
Treatment after default	19	1.3	31	0.9	1	5.9
Failure of previous treatment	1	0.1	1	0.0	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Disease characteristics (pulmonary cases)

Extent = 1	443	30.3	1430	42.0	8	47.1
Extent=1 & cavity=N	312	21.4	1224	36.0	5	29.4
Extent=1 & cavity=Y	131	9.0	206	6.1	3	17.6
Extent = 2	502	34.4	836	24.6	5	29.4
Extent=2 & cavity=N	285	19.5	559	16.4	3	17.6
Extent=2 & cavity=Y	217	14.9	277	8.1	2	11.8
Extent=3	329	22.5	427	12.6	4	23.5
Extent=3 & cavity=N	136	9.3	209	6.1	2	11.8
Extent=3 & cavity=Y	193	13.2	218	6.4	2	11.8
Extent=not specified	187	12.8	709	20.8	0	0.0
Extent=ns & cavity=N	185	12.7	705	20.7	0	0.0
Extent=ns & cavity=Y	2	0.1	4	0.1	0	0.0
Cavity=N	918	62.8	2697	79.3	10	58.8
Cavity=Y	543	37.2	705	20.7	7	41.2

6-month short course treatment

Yes	161	11.0	536	15.8	0	0.0
2HRZE+4HR	123	8.4	442	13.0	0	0.0
2HRZS+4HR	0	0.0	8	0.2	0	0.0

Other standard regimen based on HRZES

Yes	839	57.4	1554	45.7	2	11.8
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Annex 1 (c) - ES/NS (cases ever or never seen at chest clinics) - 05

Group (Pulmonary cases)	PreRx smear +ve		PreRx culture +ve		MDR-TB	
	N	%	N	%	N	%

Treatment supervision

Under DOT at chest clinic, hospital, CNS or other health staff (initial 2 months)

>90%	945	64.7	2030	59.7	11	64.7
>75%	116	7.9	224	6.6	2	11.8
>50%	82	5.6	156	4.6	0	0.0
>25%	46	3.1	90	2.6	0	0.0
≤25%	29	2.0	67	2.0	0	0.0
Not recorded	243	16.6	835	24.5	4	23.5

Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)

>90%	803	55.0	1759	51.7	11	64.7
>75%	148	10.1	262	7.7	0	0.0
>50%	70	4.8	152	4.5	0	0.0
>25%	86	5.9	158	4.6	0	0.0
≤25%	64	4.4	114	3.4	1	5.9
Not recorded	290	19.8	957	28.1	5	29.4

Under supervision by relatives (initial 2 months)

>90%	1	0.1	4	0.1	0	0.0
>75%	0	0.0	2	0.1	0	0.0
>50%	0	0.0	2	0.1	0	0.0
>25%	1	0.1	2	0.1	0	0.0
≤25%	840	57.5	1774	52.1	11	64.7
Not recorded	619	42.4	1618	47.6	6	35.3

Under supervision by relatives (subsequent 4 months)

>90%	3	0.2	8	0.2	0	0.0
>75%	1	0.1	3	0.1	0	0.0
>50%	0	0.0	2	0.1	0	0.0
>25%	1	0.1	2	0.1	0	0.0
≤25%	810	55.4	1693	49.8	10	58.8
Not recorded	646	44.2	1694	49.8	7	41.2

Supplied for unsupervised treatment (initial 2 months)

<5%	849	58.1	1832	53.9	12	70.6
<10%	73	5.0	141	4.1	0	0.0
<15%	41	2.8	65	1.9	0	0.0
<25%	48	3.3	95	2.8	0	0.0
<50%	76	5.2	138	4.1	0	0.0
≥50%	45	3.1	95	2.8	0	0.0
Not recorded	329	22.5	1036	30.5	5	29.4

Supplied for unsupervised treatment (subsequent 4 months)

<5%	745	51.0	1581	46.5	11	64.7
<10%	76	5.2	169	5.0	0	0.0
<15%	52	3.6	97	2.9	0	0.0
<25%	62	4.2	104	3.1	0	0.0
<50%	49	3.4	100	2.9	0	0.0
≥50%	120	8.2	229	6.7	0	0.0
Not recorded	357	24.4	1122	33.0	6	35.3

Defaulted (initial 2 months)

<5%	976	66.8	2057	60.5	9	52.9
<10%	32	2.2	69	2.0	0	0.0
<15%	17	1.2	33	1.0	2	11.8
<25%	21	1.4	44	1.3	0	0.0
<50%	11	0.8	29	0.9	0	0.0
≥50%	20	1.4	38	1.1	0	0.0
Not recorded	384	26.3	1132	33.3	6	35.3

Defaulted (subsequent 4 months)

<5%	893	61.1	1905	56.0	9	52.9
<10%	48	3.3	87	2.6	0	0.0
<15%	21	1.4	44	1.3	0	0.0
<25%	37	2.5	59	1.7	0	0.0
<50%	22	1.5	39	1.1	0	0.0
≥50%	31	2.1	57	1.7	1	5.9
Not recorded	409	28.0	1211	35.6	7	41.2

Annex 1 (c) - ES/NS (cases ever or never seen at chest clinics) - 06

Group (Pulmonary cases)	PreRx smear +ve		PreRx culture +ve		MDR-TB	
	N	%	N	%	N	%

Outcome at 6 months

Cured/ treatment completed	247	16.9	737	21.7	0	0.0
Still on treatment	903	61.8	1669	49.1	12	70.6
Died	89	6.1	262	7.7	0	0.0
Transferred	30	2.1	75	2.2	1	5.9
Defaulted	24	1.6	77	2.3	4	23.5
Failure	0	0.0	0	0.0	0	0.0
Not recorded	168	11.5	582	17.1	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Outcome at 12 months

Cured/ treatment completed	1031	70.6	2284	67.1	1	5.9
Still on treatment	138	9.4	246	7.2	12	70.6
Died	202	13.8	644	18.9	1	5.9
Transferred	40	2.7	101	3.0	3	17.6
Defaulted	48	3.3	122	3.6	0	0.0
Failure	0	0.0	0	0.0	0	0.0
Not recorded	2	0.1	5	0.1	0	0.0
Total	1461	100.0	3402	100.0	17	100.0

Annex 1 (c) - ES/NS (cases ever or never seen at chest clinics) - 07

Group (Pulmonary cases)	PreRx smear +ve		PreRx culture +ve		MDR-TB	
	N	%	N	%	N	%

Outcome at 24 months

Cured/ treatment completed	1152	78.9	2503	73.6	10	58.8
Still on treatment	5	0.3	9	0.3	2	11.8
Died	207	14.2	651	19.1	1	5.9
Transferred	40	2.7	99	2.9	0	0.0
Defaulted	49	3.4	125	3.7	3	17.6
Failure	0	0.0	0	0.0	0	0.0
Not recorded	8	0.5	15	0.4	1	5.9
Total	1461	100.0	3402	100.0	17	100.0

Among those cured/ treatment completed

Bacteriological conversion	1081	93.8	2238	89.4	8	80.0
Radiological improvement	1065	92.4	2145	85.7	9	90.0
Other clinical improvement	224	19.4	491	19.6	1	10.0
No evidence of response	2	0.2	13	0.5	0	0.0

After treatment completed:

No relapse	875	76.0	1829	73.1	8	80.0
Loss to follow up	173	15.0	342	13.7	0	0.0
Died	28	2.4	71	2.8	0	0.0
<i>TB-related</i>	1		1		0	
<i>Not TB-related</i>	17		48		0	
<i>Unknown</i>	10		21		0	
Relapse	9	0.8	19	0.8	1	10.0
<i>Bacteriological</i>	2		7		1	
<i>Histological</i>	4		6		0	
<i>Clinico-radiological</i>	3		6		0	
Not recorded	55	4.8	150	6.0	0	0.0

Among those still on treatment

Reasons for still on treatment:

Retreatment case	0	-	0	-	0	-
Extrapulmonary disease	0	-	0	-	0	-
Extensive disease	0	-	0	-	0	-
Interrupted treatment	0	-	1	-	0	-
Drug resistance	5	-	7	-	2	-
Poor response	1	-	1	-	0	-
Others	0	-	0	-	0	-

Among those died - causes of death:

TB-related cause	9	4.3	18	2.8	0	-
Not TB-related	52	25.1	157	24.1	0	-
Unknown	146	70.5	476	73.1	1	-

Among those transferred, new sources of care:

GP	2	5.0	4	4.0	0	-
Chest Clinic	0	0.0	0	0.0	0	-
Hospital	0	0.0	2	2.0	0	-
Outside HK	26	65.0	52	52.5	0	-
Not recorded	12	30.0	41	41.4	0	-

Among those defaulted

Never found	19	38.8	48	38.4	2	66.7
Retreated after default	8	16.3	14	11.2	0	0.0
Treatment stopped by doctor	9	18.4	18	14.4	1	33.3
Not recorded	13	26.5	45	36.0	0	0.0

Annex 1 (c) - ES/NS (cases ever or never seen at chest clinics) - 08

Group (Pulmonary cases)	PreRx smear +ve		PreRx culture +ve		MDR-TB	
	N	%	N	%	N	%

Drug susceptibility pattern

Streptomycin - R	95	7.9	191	7.4	12	70.6
Streptomycin - S	1109	92.1	2374	92.6	5	29.4

Isoniazid - R	71	5.9	133	5.2	17	100.0
Isoniazid - S	1136	94.1	2436	94.8	0	0.0

Rifampicin - R	19	1.6	28	1.1	17	100.0
Rifampicin - S	1188	98.4	2542	98.9	0	0.0

Ethambutol - R	15	1.2	21	0.8	9	52.9
Ethambutol - S	1192	98.8	2549	99.2	8	47.1

Pyrazinamide - R	9	27.3	14	24.6	10	76.9
Pyrazinamide - S	24	72.7	43	75.4	3	23.1

Ofloxacin - R	9	18.8	13	14.4	7	43.8
Ofloxacin - S	39	81.3	77	85.6	9	56.3

Smear conversion rates

1. Smear at 2 month = N (a)	769				7	
2. Smear at 2 month = P (b)	133				2	
2. Sm 2m (P); Sm 3m (N) (c)	60				0	
2. Sm 2m (P); Sm 3m (P) (d)	52				0	
2. Sm 2m (P); Sm 3m (U) (e)	21				2	
3. Smear at 2 month = U (f)	559				8	
3. Sm 2m (U); Sm 3m (N) (g)	167				3	
3. Sm 2m (U); Sm 3m (P) (h)	14				0	
3. Sm 2m (U); Sm 3m (U) (i)	378				5	

Overall percentage of smear conversion at 2m = (a)/ [(a)+(b)]

85.3		-		77.8	
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Overall percentage of smear conversion at 3m = [(a)+(c)+(g)]/ [(a)+(c)+(d)+(g)+(h)]

93.8		-		100.0	
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Culture conversion rates

1. Culture at 2 month = N (a)		1482		4	
2. Culture at 2 month = P (b)		215		5	
2. Cu 2m (P); Cu 3m (N) (c)		113		1	
2. Cu 2m (P); Cu 3m (P) (d)		32		1	
2. Cu 2m (P); Cu 3m (U) (e)		70		3	
3. Culture at 2 month = U (f)		1705		8	
3. Cu 2m (U); Cu 3m (N) (g)		419		1	
3. Cu 2m (U); Cu 3m (P) (h)		20		2	
3. Cu 2m (U); Cu 3m (U) (i)		1266		5	

Overall percentage of culture conversion at 2m = (a)/ [(a)+(b)]

-		87.3		44.4	
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Overall percentage of culture conversion at 3m = [(a)+(c)+(g)]/ [(a)+(c)+(d)+(g)+(h)]

-		97.5		66.7	
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Annex 1 (d) - ES/NS (cases ever or never seen at chest clinics) - 01

Group	New pulmonary smear +ve		ReRx pulmonary smear +ve	
	N	%	N	%

Ever seen at chest clinics

Yes	1113	95.4	155	52.7
No	54	4.6	139	47.3
Total	1167	100.0	294	100.0

Age group

0 to 19	36	3.1	5	1.7
Female	20		4	
Male	16		1	
20 to 39	293	25.1	31	10.5
Female	144		19	
Male	149		12	
40 to 59	366	31.4	81	27.6
Female	74		19	
Male	292		62	
60+	472	40.4	177	60.2
Female	107		26	
Male	365		151	
Total	1167	100.0	294	100.0
Female	345	29.6	68	23.1
Male	822	70.4	226	76.9

Disease Classification

Pulmonary TB only	1088	93.2	280	95.2
Both pulmon and extrapulm	79	6.8	14	4.8
Total	1167	100.0	294	100.0

6-month short course treatment

Yes	158	13.5	3	1.0
2HRZE+4HR	121	10.4	2	0.7
2HRZS+4HR	0	0.0	0	0.0

Other standard regimen based on HRZES

Yes	744	63.8	95	32.3
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Outcome at 6 months

Cured/ treatment completed	243	20.8	4	1.4
Still on treatment	773	66.2	130	44.2
Died	62	5.3	27	9.2
Transferred	24	2.1	6	2.0
Defaulted	19	1.6	5	1.7
Failure	0	0.0	0	0.0
Not recorded	46	3.9	122	41.5
Total	1167	100.0	294	100.0

Outcome at 12 months

Cured/ treatment completed	887	76.0	144	49.0
Still on treatment	113	9.7	25	8.5
Died	108	9.3	94	32.0
Transferred	23	2.0	17	5.8
Defaulted	36	3.1	12	4.1
Failure	0	0.0	0	0.0
Not recorded	0	0.0	2	0.7
Total	1167	100.0	294	100.0

Annex 1 (d) - ES/NS (cases ever or never seen at chest clinics) - 02

Group	New pulmonary smear +ve		ReRx pulmonary smear +ve	
	N	%	N	%

Outcome at 24 months

Cured/ treatment completed	987	84.6	165	56.1
Still on treatment	3	0.3	2	0.7
Died	113	9.7	94	32.0
Transferred	24	2.1	16	5.4
Defaulted	36	3.1	13	4.4
Failure	0	0.0	0	0.0
Not recorded	4	0.3	4	1.4
Total	1167	100.0	294	100.0

Among those cured/ treatment completed

Bacteriological conversion	956	96.9	125	75.8
Radiological improvement	948	96.0	117	70.9
Other clinical improvement	198	20.1	26	15.8
No evidence of response	1	0.1	1	0.6

After treatment completed:

No relapse	769	77.9	106	64.2
Loss to follow up	157	15.9	16	9.7
Died	26	2.6	2	1.2
<i>TB-related</i>	1		0	
<i>Not TB-related</i>	17		0	
<i>Unknown</i>	8		2	
Relapse	7	0.7	2	1.2
<i>Bacteriological</i>	1		1	
<i>Histological</i>	4		0	
<i>Clinico-radiological</i>	2		1	
Not recorded	24	2.4	31	18.8

Among those still on treatment

Reasons for still on treatment:

Retreatment case	0	-	0	-
Extrapulmonary disease	0	-	0	-
Extensive disease	0	-	0	-
Interrupted treatment	0	-	0	-
Drug resistance	3	-	2	-
Poor response	0	-	1	-
Others	0	-	0	-

Among those died - causes of death:

TB-related cause	8	7.1	1	1.1
Not TB-related	42	37.2	10	10.6
Unknown	39	34.5	18	19.1

Among those transferred, new sources of care:

GP	0	0.0	2	12.5
Chest Clinic	0	0.0	0	0.0
Hospital	0	0.0	0	0.0
Outside HK	21	87.5	5	31.3
Not recorded	3	12.5	9	56.3

Among those defaulted

Never found	17	47.2	2	15.4
Retreated after default	5	13.9	3	23.1
Treatment stopped by doctor	7	19.4	2	15.4
Not recorded	7	19.4	6	46.2

Annex 1 (e) - Treatment defaulters - 01

Ever seen at chest clinics	N	%
Yes	167	68.4
No	77	31.6
Total	244	100.0

Age group

0 to 19	5	2.0
Female	3	
Male	2	
20 to 39	75	30.7
Female	30	
Male	45	
40 to 59	86	35.2
Female	17	
Male	69	
60+	78	32.0
Female	18	
Male	60	
Total	244	100.0
Female	68	27.9
Male	176	72.1

Marital status

Single	56	23.0
Married	117	48.0
Separated	2	0.8
Divorce	6	2.5
Widowed	2	0.8
Not recorded	61	25.0
Total	244	100.0

Smoking status

Never	58	23.8
Ex-smoker	42	17.2
Current smoker	82	33.6
Not recorded	62	25.4
Total	244	100.0

Institution-related

Yes	18	7.4
No	169	69.3
Not recorded	57	23.4
Total	244	100.0

Institution

Client	16	-
Staff	1	-

Institution type

Old age home	3	-
School	11	-
Hospital	0	-
Handicapped	0	-
Prison	15	-
Others	1	-

Annex 1 (e) - Treatment defaulters - 02

Living situation	N	%
Street-sleeper	1	0.4
Cubicle bed space	1	0.4
Institution	13	5.3
Work quarter	7	2.9
Alone (not above)	47	19.3
With friends	3	1.2
With family	112	45.9
Not recorded	60	24.6

Residential status

Permanent resident	161	66.0
Chinese immigrant	6	2.5
Imported worker	14	5.7
Tourist - 2 way permit Chinese	0	0.0
Other tourist	1	0.4
Vietnamese	0	0.0
Illegal immigrants	5	2.0
Not recorded	57	23.4
Total	244	100.0

Place of birth

Hong Kong	71	29.1
Mainland China	86	35.2
Others	26	10.7
Not recorded	61	25.0
Total	244	100.0

Ethnicity

Chinese	159	65.2
Other Asian	25	10.2
Caucasian	0	0.0
Others	1	0.4
Not recorded	59	24.2
Total	244	100.0

Employment status

Full-time	67	27.5
Part-time	6	2.5
Retired	40	16.4
Unemployed	53	21.7
Housewife	15	6.1
Student	2	0.8
Not recorded	61	25.0
Total	244	100.0

Occupation

Blue collar	46	18.9
White collar	8	3.3
Medical	0	0.0
Nursing	0	0.0
Paramedical	0	0.0
Supporting health staff	1	0.4
Not applicable	110	45.1
Not recorded	79	32.4
Total	244	100.0

Annex 1 (e) - Treatment defaulters - 03

First presentation	N	%
Private doctor	17	7.0
Private hospital	5	2.0
GOPC	5	2.0
Chest Clinic	28	11.5
Other DH Clinic	18	7.4
HA Clinic	6	2.5
HA Hospital	101	41.4
Mainland	5	2.0
Overseas	1	0.4
Not recorded	58	23.8
Total	244	100.0

Symptomatic on presentation

Y	160	65.6
N	25	10.2
Not recorded	59	24.2
Total	244	100.0

Chest symptoms	105	-
Systemic symptoms	28	-
Other site-specific symptoms	51	-

Reason for presentation

Symptom	148	60.7
Contact screening	4	1.6
Pre-employment	5	2.0
Pre-emigration	0	0.0
Other body check	14	5.7
Incidental to other illness	12	4.9
Others	3	1.2
Not recorded	58	23.8
Total	244	100.0

Contact with TB patients

Yes	11	4.5
No	174	71.3
Not recorded	59	24.2
Total	244	100.0

Contact type

Household	6	-
Work	1	-
Casual	3	-

Time of contact

Within 2 year	7	-
Over 2 year	2	-

Annex 1 (e) - Treatment defaulters - 04

Previous chemoprophylaxis	N	%
Yes	1	-

Reason for chemoprophylaxis

Contact	0	-
Silicosis	0	-
HIV	1	-
Old scar on CXR	0	-
Others	0	-

Disease Classification

Pulmonary TB only	182	74.6
Extrapulmonary TB only	39	16.0
Both	23	9.4
Total	244	100.0

Case category

New case	217	88.9
Relapse	15	6.1
Treatment after default	12	4.9
Failure of previous treatment	0	0.0
Total	244	100.0

Disease characteristics (pulmonary cases)

Pretreatment smear +ve	65	31.7
Pretreatment culture +ve	125	61.0
Extent = 1	87	42.4
Extent=1 & cavity=N	77	37.6
Extent=1 & cavity=Y	10	4.9
Extent = 2	36	17.6
Extent=2 & cavity=N	23	11.2
Extent=2 & cavity=Y	13	6.3
Extent=3	24	11.7
Extent=3 & cavity=N	12	5.9
Extent=3 & cavity=Y	12	5.9
Extent=not specified	58	28.3
Extent=ns & cavity=N	56	27.3
Extent=ns & cavity=Y	2	1.0
Cavity=N	168	82.0
Cavity=Y	37	18.0

6-month short course treatment

Yes	9	3.7
2HRZE+4HR	6	2.5
2HRZS+4HR	0	0.0

Other standard regimen based on HRZES

Yes	76	31.1
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Among those defaulted

Never found	90	36.9
Retreated after default	20	8.2
Treatment stopped by doctor	31	12.7
Not recorded	103	42.2

Annex 1 (e) - Treatment defaulters - 05

Treatment supervision	N	%
Under DOT at chest clinic, hospital, CNS or other health staff (initial 2 months)		
>90%	47	19.3
>75%	21	8.6
>50%	23	9.4
>25%	8	3.3
≤25%	29	11.9
Not recorded	116	47.5
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)		
>90%	18	7.4
>75%	12	4.9
>50%	13	5.3
>25%	14	5.7
≤25%	35	14.3
Not recorded	152	62.3
Under supervision by relatives (initial 2 months)		
>90%	0	0.0
>75%	0	0.0
>50%	0	0.0
>25%	0	0.0
≤25%	76	31.1
Not recorded	168	68.9
Under supervision by relatives (subsequent 4 months)		
>90%	0	0.0
>75%	0	0.0
>50%	0	0.0
>25%	0	0.0
≤25%	53	21.7
Not recorded	191	78.3
Supplied for unsupervised treatment (initial 2 months)		
<5%	78	32.0
<10%	12	4.9
<15%	6	2.5
<25%	7	2.9
<50%	4	1.6
≥50%	7	2.9
Not recorded	130	53.3
Supplied for unsupervised treatment (subsequent 4 months)		
<5%	52	21.3
<10%	7	2.9
<15%	9	3.7
<25%	5	2.0
<50%	5	2.0
≥50%	7	2.9
Not recorded	159	65.2
Defaulted (initial 2 months)		
<5%	52	21.3
<10%	10	4.1
<15%	5	2.0
<25%	15	6.1
<50%	12	4.9
≥50%	24	9.8
Not recorded	126	51.6
Defaulted (subsequent 4 months)		
<5%	26	10.7
<10%	2	0.8
<15%	4	1.6
<25%	6	2.5
<50%	14	5.7
≥50%	46	18.9
Not recorded	146	59.8

Annex 1 (f) Sources completing Programme Forms

Sources completing Programme Forms	PFA	PFB1	PFB2	PFC	PFD
Chest Clinics	3846	4440	4450	4450	4430
Hospital Authority	824	90	82	82	77
Private Practitioners/ Private Hospitals	0	0	0	0	0
Correctional Services and Others	51	23	22	17	7
Not Recorded	914	1082	1081	1086	1121
Total	5635	5635	5635	5635	5635

Breakdown for Hospital Authority:

Alice Ho Miu Ling Nethersole Hospital	0	1	2	2	2
Caritas Medical Centre	12	12	12	12	10
Castle Peak Hospital	4	3	1	2	1
Duchess of Kent Children Hospital	0	0	0	0	0
Fung Yiu King Hospital	0	0	0	0	0
Grantham Hospital	203	2	1	1	0
Haven of Hope Hospital	45	1	1	1	2
Kowloon Hospital	55	5	1	1	1
Kwong Wah Hospital	38	4	4	4	4
North District Hospital	82	7	7	6	6
Nam Long Hospital	0	0	0	0	0
Our Lady of Maryknoll Hospital	2	0	0	0	0
Pamela Youde Nethersole Eastern Hospital	0	0	0	0	0
Pok Oi Hospital	2	1	2	1	2
Prince of Wales Hospital	12	12	12	12	12
Princess Margaret Hospital	1	2	1	1	1
Queen Elizabeth Hospital	27	13	11	11	9
Queen Mary Hospital	37	0	0	0	0
Ruttonjee Hospital	174	1	1	1	1
Shatin Hospital	0	0	0	0	0
Tai Po Hospital	0	0	0	0	0
Tseung Kwan O Hosital	13	0	0	0	0
Tuen Mun Hospital	9	9	9	9	9
Tung Wah Eastern Hospital	0	0	0	0	0
Tung Wah Hospital	0	0	0	2	2
United Christian Hospital	68	10	9	9	8
Wong Tai Sin Hospital	34	1	2	1	1
Wong Chuk Hang Hospital	0	0	0	0	0
Yan Chai Hospital	6	6	6	6	6
Total	824	90	82	82	77

HKID/ Passport/ Birth certificate no.: _____ Clinic/ Hospital no.: _____

Name: _____

DOS: __/__/____

PFA - To be completed at around DOS (for TB patients)*[DOS = date of starting treatment (or, if patient defaulted > 2 months before starting anti-TB treatment, put down the date of diagnosis)]***Part (A) Basic information**

TB notified: N / Y : Date: __/__/____ Sex: M / F Age: __ years Date of birth : __/__/____

Marital status: ₁single/ ₂married/ ₃separated/ ₄divorce/ ₅widowed Smoking status: ₁never/ ₂ex-smoker/ ₃current smokersInstitution-related: N / Y : ₁Client / ₂Staff Type: ₁Old age home/ ₂School/ ₃Hospital/ ₄Handicapped/ ₅Prison/ ₆Others

Name of institution: _____

Living situation: ₁street-sleeper/ ₂cubicle bed space/ ₃institution/ ₄work quarter/ ₅alone (but not 1. to 4.)/ ₆with friends/ ₇with familyResident status: ₁PermanentResident/ ₂ChineseNewImmigrant(inHK<7yr)/ ₃ImportedWorker/ ₄Tourist-2wayPermitChinese/ ₅OtherTourist/
₆Vietnamese/ ₇IllegalImmigrantsPlace of birth: ₁Hong Kong / ₂Mainland/ ₃Others _____Ethnicity: ₁Chinese/ ₂Other Asian/ ₃Caucasian/ ₄Other _____

Previous BCG history: N / Y / Unknown BCG scar: N / Y

Employment status (including self-employment) at DOS: ₁Full-time/ ₂Part-time/ ₃Retired/ ₄Unemployed/ ₅Housewife/ ₆StudentOccupation (current or last): ₁Blue collar/ ₂White collar/ ₃Medical/ ₄Nursing/ ₅Paramedical/ ₆Supporting health staff/ ₇Not applicable

Job title: _____

Part (B) Information on this episode of TB:First presentation to: ₁ Private doctor / ₂Private Hospital / ₃GOPC / ₄Chest Clinic / ₅Other DH Clinic / ₆ HA Clinic / ₇ HA Hospital /
₈ Mainland / ₉OverseasSymptomatic on presentation: N / Y : ₁Chest symptoms / ₂Systemic Symptoms / ₃Other site-specific symptomsReason for presentation: ₁ Symptom / ₂Contact Screening / ₃ Pre-employment / ₄Pre-emigration/ ₅Other body check /
₆ Incidental to other illness / ₇ Others: _____Contact with TB patients: N / Y : ₁Household / ₂Work / ₃Casual
₁ within 2 year / ₂ over 2 yearPrevious chemoprophylaxis: N / Y : reason: ₁ Contact / ₂ Silicosis / ₃ HIV / ₄ Old scar on CXR / ₅ Others _____

Drugs & duration: _____

Part (C) Case category (choose 1 item only):

1. New case (<1m previous Rx)
 2. Relapse case.
 3. Treatment after default.
 4. Failure of previous treatment.
 5. Others, specify: _____
- Date of last treatment (mm/yyyy): __/____ Duration of last treatment: __ months

Part (D) Disease classification: (please circle ≥1 item)

1. Pulmonary tuberculosis
Extent of disease: ₁minimal (total area < RUL)/ ₂moderate (> RUL)/ ₃advanced (> 1 lung) Cavity: N / Y
- Extra-pulmonary tuberculosis:

2. Pleura	7. Bone and joint (other than spine)	12. Pericardium
3. Lymph node	8. Spine	13. Skin
4. Meninges	9. Genito-urinary tract	14. Other site(1), specify _____
5. Miliary	10. Naso/oro-pharynx	15. Other site(2), specify _____
6. Abdomen	11. Larynx	16. Other site(3), specify _____

Completed by: _____ (name) Tel: _____ Fax: _____

Institution: ₁Chest Clinic/ ₂Chest Hospital/ ₃General Hospital/ ₄Private Practice. ; Name (and ward) of institution: _____
(After completion, this form should be sent to Consultant Chest Physician i/c, Wanchai Chest Clinic, 99 Kennedy Road, Hong Kong. Fax: (852) 28346627)
(If patient is transferred, a copy of this completed form should also be sent to the new source of care for information.)

HKID/ Passport/ Birth certificate no.: _____ Clinic/ Hospital no.: _____

Name: _____ DOS: __/__/____

PFB1 – To be completed at 6 month from DOS (for TB patients)**Part (E) Mode of TB diagnosis:** ₁ Bacteriological/ ₂ Histological/ ₃ Clinical-radiological/ ₄ Clinical only (choose 1 item, priority from left to right)**Bacteriological examination for MTB:** P (positive), N (negative), U (not done), NTM (Non-tuberculous Mycobacteria)

	Sputum			Other type of specimen: ₁ gastric aspirate/ ₂ pleural fluid/ ₃ bronchial washing/ ₄ urine/ ₅ biopsy or others, specify: _____		
	Pre-treatment	2 months	3 months	Pre-treatment	2 months	3 months
Smear	P / N / U	P / N / U	P / N / U	P / N / U	P / N / U	P / N / U
Culture	P / N / U / NTM	P / N / U / NTM	P / N / U / NTM	P / N / U / NTM	P / N / U / NTM	P / N / U / NTM

- Histological result from (site) _____: ₁ Typical (with caseation) / ₂ Granulomatous inflammation / ₃ other
Ziehl-Neelzen staining: P / N / U

- If pre-treatment culture is positive for MTB, is the ST favourable? (i.e., sensitive to HRES): N / Y / U (ST not done)

If unfavourable ST, please mark S (sensitive) or R (resistant) for all ST done:

Isoniazid (H) : S / R	Pyrazinamide : S / R	Cycloserine : S / R
Rifampicin (R) : S / R	Ofloxacin : S / R	Other (1) _____ : S / R
Ethambutol (E) : S / R	Ethionamide : S / R	Other (2) _____ : S / R
Streptomycin (S) : S / R	Kanamycin : S / R	_____

Part (F) Risk factors for TB: N / Y (If Y, please circle whichever applicable)

- | | |
|--------------------------|---|
| 1. Diabetes mellitus | 9. Alcoholism |
| 2. Lung cancer | 10. Drug abuser |
| 3. Other malignancies | 11. Gastrectomy |
| 4. On cytotoxic drugs | 12. General debilitation (e.g., due to old age, immobility, stroke, etc.) |
| 5. On steroid | 13. Other(1), specify _____ |
| 6. Chronic renal failure | 14. Other(2), specify _____ |
| 7. HIV | 15. Other(3), specify _____ |
| 8. Silicosis | |

Part (G) Factors affecting treatment choices: N / Y (If Y, please circle whichever applicable)

- | | |
|---|---|
| 1. Hepatitis-B carrier | 8. Known drug resistance |
| 2. Chronic active hepatitis | 9. Gout |
| 3. Impaired renal function | 10. Idiopathic thrombocytopenic purpura |
| 4. Chronic renal failure (require dialysis, etc.) | 11. Other(1), specify _____ |
| 5. Impaired vision | 12. Other(2), specify _____ |
| 6. Impaired hearing | 13. Other(3), specify _____ |
| 7. Known drug reaction | |

Part (H) Other co-morbidities: N / Y: 1. _____ 2. _____ 3. _____**Part (I) Treatment regimen:**6-month short course treatment: N / Y: ₁ [2HRZE+4HR] / ₂ [2HRZS+4HR]

If neither of the above 2 regimens, please complete the following two questions:

Other standard regimens based on HRZES (at least HRZ in initial and HR in continuation phase): N / Y

Drugs that have been used (for at least over 1 month): ₁ Isoniazid (H) / ₂ Rifampicin (R) / ₃ Ethambutol (E) / ₄ Streptomycin (S) / ₅ Pyrazinamide (Z) / ₆ Ofloxacin / ₇ Levofloxacin / ₈ Ethionamide / ₉ Prothionamide / ₁₀ Kanamycin / ₁₁ Cycloserine / ₁₂ PAS /₁₂ Other(1) _____ / ₁₃ Other(2) _____ / ₁₄ Other (3) _____

Completed by: _____ (name) Tel: _____ Fax: _____

Institution: ₁ Chest Clinic/ ₂ Chest Hospital/ ₃ General Hospital/ ₄ Private Practice. ; Name (and ward) of institution: _____
(After completion, this form should be sent to Consultant Chest Physician i/c, Wanchai Chest Clinic, 99 Kennedy Road, Hong Kong. Fax: (852) 28346627)
(If patient is transferred, a copy of this completed form should also be sent to the new source of care for information.)

HKID/ Passport/ Birth certificate no.: _____ Clinic/ Hospital no.: _____

Name: _____

DOS: __/__/____

PFB2 – To be completed at 6 month from DOS (for TB patients)**Part (J) Treatment side effects:** N / Y (If Y, please circle)

₁ GI upset/ ₂ skin rash/ ₃ visual/ ₄ transient rise of liver enzyme/ ₅ hepatitis/ ₆ vestibular/ ₇ arthropathy/ ₈ fever-chill/ ₉ dizziness/ ₁₀ thrombocytopenia/
₁₁ leucopenia/ ₁₂ flush face/ ₁₃ other(1) _____ / ₁₄ other(2) _____ / ₁₅ other(3) _____

Treatment temporarily withheld for side effects: N / Y

Desensitisation or drug trial required: N / Y

Change in dosage or frequency required: N / Y

Change of drugs required: N / Y

Part (K) Treatment Supervision:

Proportion of doses:	Initial 2 month	Subsequent 4 months (up to 6 month from DOS)
Under DOT at chest clinic, hospital, CNS or other health staff	>90% >75% >50% >25% ≤25%	>90% >75% >50% >25% ≤25%
Under supervision by relatives	>90% >75% >50% >25% ≤25%	>90% >75% >50% >25% ≤25%
Supplied for unsupervised treatment	<5% <10% <15% <25% <50% ≥50%	<5% <10% <15% <25% <50% ≥50%
Defaulted	<5% <10% <15% <25% <50% ≥50%	<5% <10% <15% <25% <50% ≥50%

Part (L) Outcome at 6 months (please ✓, circle and/ or fill in the spaces provided as appropriate)(1) Cured/ treatment completed

Date treatment stopped (mm/yyyy): ____/____/____

Status at completion:

- Bacteriological conversion
- Radiological improvement
- Other clinical improvement
- No available evidence of response

(2) Treatment incomplete

- Still on treatment, reason: ₁ retreatment/ ₂ extrapulm./ ₃ extensive/ ₄ interrupted treatment/ ₅ drug resistance/ ₆ poor response/
₇ others, specify: _____

- Died Cause: ₁ TB-related/ ₂ Not TB-related/ ₃ Unknown

Date of death (mm/yyyy): ____/____/____

(3) Transferred to: ₁ GP/ ₂ Chest Clinic/ ₃ Hospital/ ₄ Outside HK

Details: _____

Last treatment date (mm/yyyy): ____/____/____

(4) Defaulted (defaulted treatment for a continuous period > 2m)

- Never found
- Retreated after default
- Treatment stopped by doctor

Last visit date (mm/yyyy): ____/____/____

Date treatment re-started (mm/yyyy): ____/____/____

Last treatment date (mm/yyyy): ____/____/____

(5) Failure (persistent positive bacteriology and treatment stopped) (6) Wrong/ revised diagnosis

Last treatment date (mm/yyyy): ____/____/____

- New diagnosis: _____

(7) Others , specify: _____

Completed by: _____ (name) Tel: _____ Fax: _____

Institution: ₁ Chest Clinic/ ₂ Chest Hospital/ ₃ General Hospital/ ₄ Private Practice; Name (and ward) of institution: _____

(After completion, this form should be sent to Consultant Chest Physician i/c, Wanchai Chest Clinic, 99 Kennedy Road, Hong Kong. Fax: (852) 28346627)
 (If patient is transferred, a copy of this completed form should also be sent to the new source of care for information.)

HKID/ Passport/ Birth certificate no.: _____ Clinic/ Hospital no.: _____
 Name: _____ DOS: __/__/____

PFC – To be completed at 12 month from DOS (for TB patients)

Part (M) Bacteriological examination for MTB: P (positive), N (negative), U (not done), NTM (Non-tuberculous Mycobacteria)

	Sputum		Other type of specimen: ₁ gastric aspirate/ ₂ pleural fluid/ ₃ bronchial washing/ ₄ urine/ ₅ biopsy or others, specify: _____	
	5-6 months	7-12 months	5-6 months	7-12 months
Smear	P / N / U	P / N / U	P / N / U	P / N / U
Culture	P / N / U / NTM	P / N / U / NTM	P / N / U / NTM	P / N / U / NTM

Part (N) Outcome at 12 months (please ✓, circle and/ or fill in the spaces provided as appropriate)

- (1) Cured/ treatment completed Date treatment completed (mm/yyyy): ____/____/____
- (a) Status at completion:
- Bacteriological conversion
 - Radiological improvement
 - Other clinical improvement
 - No available evidence of response
- (b) After treatment completed:
- No relapse
- Loss to follow-up
- Died Cause: ₁TB-related/ ₂Not TB-related/ ₃Unknown
- Relapse
- ₁Bacteriological / ₂Histological / ₃Clinical-radiological (choose 1 item, priority from left to right)
- Last visit date (mm/yyyy): ____/____/____
- Date of death (mm/yyyy): ____/____/____
- Date relapse (mm/yyyy): ____/____/____
- (2) Treatment incomplete (including death while on treatment)
- Still on treatment, reason: ₁retreatment/ ₂extrapulm./ ₃extensive/ ₄interrupted treatment/ ₅drug resistance/ ₆poor response/
₇others, specify: _____
 - Died Cause: ₁TB-related/ ₂Not TB-related/ ₃Unknown
- Date of death (mm/yyyy): ____/____/____
- (3) Transferred to: ₁GP/ ₂Chest Clinic/ ₃Hospital/ ₄Outside HK
- Details: _____
- Last treatment date (mm/yyyy): ____/____/____
- (4) Defaulted (defaulted treatment for a continuous period > 2m)
- Never found
 - Retreated after default
 - Treatment stopped by doctor
- Last visit date (mm/yyyy): ____/____/____
- Date treatment re-started (mm/yyyy): ____/____/____
- Last treatment date (mm/yyyy): ____/____/____
- (5) Failure (persistent positive bacteriology and treatment stopped)
- (6) Wrong/ revised diagnosis
- Last treatment date (mm/yyyy): ____/____/____
- New diagnosis: _____
- (7) Others , specify: _____

Completed by: _____ (name) Tel: _____ Fax: _____

Institution: ₁Chest Clinic/ ₂Chest Hospital/ ₃General Hospital/ ₄Private Practice; Name (and ward) of institution: _____
 (After completion, this form should be sent to Consultant Chest Physician i/c, Wanchai Chest Clinic, 99 Kennedy Road, Hong Kong. Fax: (852) 28346627)
 (If patient is transferred, a copy of this completed form should also be sent to the new source of care for information.)

HKID/ Passport/ Birth certificate no.: _____ Clinic/ Hospital no.: _____
 Name: _____ DOS: __/__/____

PFD – To be completed at 24 month from DOS (for TB patients)

Part (O) Outcome at 24 months (please ✓, circle and/ or fill in the spaces provided as appropriate)

- (1) Cured/ treatment completed Date treatment completed (mm/yyyy): ____/____/____
 (a) Status at completion:
 • Bacteriological conversion
 • Radiological improvement
 • Other clinical improvement
 • No available evidence of response
 (b) After treatment completed:
 No relapse
 Loss to follow-up Last visit date (mm/yyyy): ____/____/____
 Died Cause: ₁TB-related/ ₂Not TB-related/ ₃Unknown Date of death (mm/yyyy): ____/____/____
 Relapse Date relapse (mm/yyyy): ____/____/____
 • ₁Bacteriological / ₂Histological / ₃Clinical-radiological / ₄Clinical only (choose 1 item, priority from left to right)
- (2) Treatment incomplete (including death while on treatment)
 • Still on treatment, reason: ₁retreatment/ ₂extrapulm./ ₃extensive/ ₄interrupted treatment/ ₅drug resistance/ ₆poor response/
₇others, specify: _____
 • Died Cause: ₁TB-related/ ₂Not TB-related/ ₃Unknown Date of death (mm/yyyy): ____/____/____
- (3) Transferred to: ₁GP/ ₂Chest Clinic/ ₃Hospital/ ₄Outside HK
 Details: _____
 Last treatment date (mm/yyyy): ____/____/____
- (4) Defaulted (defaulted treatment for a continuous period > 2m)
 • Never found Last visit date (mm/yyyy): ____/____/____
 • Retreated after default Date treatment re-started (mm/yyyy): ____/____/____
 • Treatment stopped by doctor Last treatment date (mm/yyyy): ____/____/____
- (5) Failure (persistent positive bacteriology and treatment stopped)
- (6) Wrong/ revised diagnosis Last treatment date (mm/yyyy): ____/____/____
 • New diagnosis: _____
- (7) Others , specify: _____

Completed by: _____ (name) Tel: _____ Fax: _____

Institution: ₁Chest Clinic/ ₂Chest Hospital/ ₃General Hospital/ ₄Private Practice; Name (and ward) of institution: _____
 (After completion, this form should be sent to Consultant Chest Physician i/c, Wanchai Chest Clinic, 99 Kennedy Road, Hong Kong. Fax: (852) 28346627)
 (If patient is transferred, a copy of this completed form should also be sent to the new source of care for information.)

Annex 2 (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	2007	2008	2009	2010	2011
Notified TB cases who are Chinese New Immigrants (with years of arrival in Hong Kong)	≤1 year	14	9	16	13	14
	≤2 year	12	8	11	13	18
	≤3 year	8	17	10	17	10
	≤4 year	9	6	10	12	8
	≤5 year	7	14	10	11	10
	≤6 year	3	6	7	5	11
	≤7 year	3	7	4	9	10
	Total	56	67	68	80	81
Overall notified TB cases		5463	5635	5193	5093	4794

The above table shows the number of all notified TB cases in Hong Kong from 2007 to 2011 and the number of TB cases among the Chinese new immigrants (staying in Hong Kong less than 7 years) according to the number of years they have arrived in Hong Kong. The numbers are in general higher in the first one to two years of arrival. This phenomenon has also been observed in the immigrants of some other countries. The exact reason is unknown although some postulate that the stress experienced by the new immigrants upon arrival may be a factor.

In Annex 2 (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 2 (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 2 (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 2007 to 2011 are 79.0, 81.0, 74.5, 72.5 and 67.8 respectively.

From Annex 2 (b), the overall estimated rates (per 100,000) among the new immigrants from 2007 to 2011 are 16.8, 20.8, 20.9, 25.5 and 25.4 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 2 (b)

TB Notification and Estimated Rates Among Chinese New Immigrants By Age & Sex (2007-2011)

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

	2007	2007	2007	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	2	6	8	2	1	3	3	5	8	8	9	17	3	4	7
20-39	6	26	32	6	36	42	7	32	39	13	29	42	3	37	40
40-59	5	9	14	9	12	21	6	11	17	2	13	15	14	10	24
60+	0	2	2	1	0	1	3	1	4	2	4	6	5	5	10
Total	13	43	56	18	49	67	19	49	68	25	55	80	25	56	81

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

	2007	2007	2007	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	3.2	10.1	6.6	3.3	1.7	2.6	5.1	9.0	7.0	14.3	17.1	15.6	5.4	7.8	6.6
20-39	24.3	18.7	19.6	28.4	26.8	27.0	32.6	23.1	24.4	58.4	22.0	27.2	12.4	28.0	25.6
40-59	37.4	33.9	35.1	64.3	44.3	51.1	40.3	37.8	38.6	13.0	43.5	33.2	80.5	29.9	47.2
60+	0.0	32.1	23.6	47.2	0.0	13.3	146.3	21.7	60.0	101.3	103.6	102.8	240.0	136.4	173.9
Total	12.7	18.6	16.8	18.5	21.8	20.8	19.6	21.5	20.9	26.1	25.2	25.5	25.3	25.4	25.4

Annex 2 (c)

TB Notification and Rates (All Cases) By Age & Sex (2007-2011)

All TB cases by age and sex

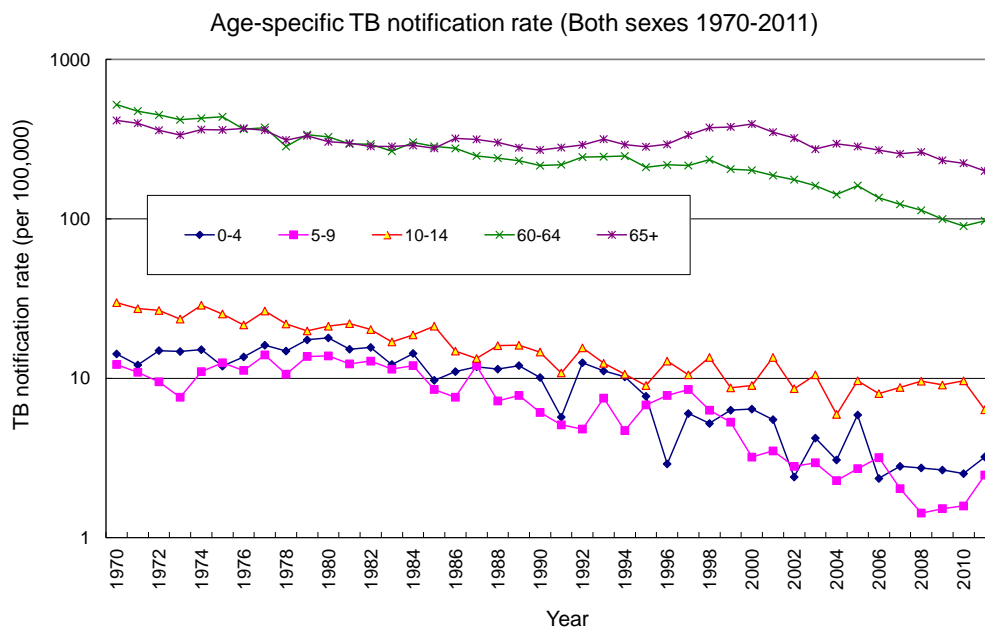
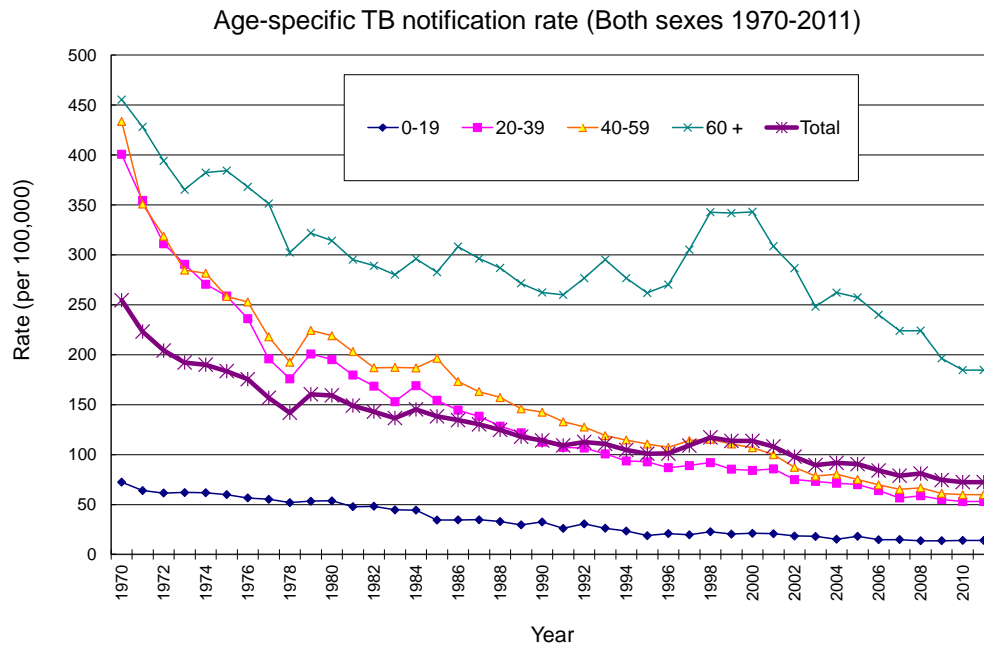
	2007	2007	2007	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	108	96	204	82	102	184	92	87	179	94	85	179	94	63	157
20-39	520	674	1194	563	673	1236	489	663	1152	496	615	1111	445	605	1050
40-59	1014	491	1505	1027	529	1556	936	502	1438	900	514	1414	842	468	1310
60+	1853	707	2560	1956	703	2659	1734	690	2424	1740	649	2389	1711	566	2277
Total	3495	1968	5463	3628	2007	5635	3251	1942	5193	3230	1863	5093	3092	1702	4794

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

	2007	2007	2007	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	15.4	14.5	15.0	11.8	15.7	13.7	13.6	13.7	13.7	14.3	13.8	14.1	14.6	10.4	12.6
20-39	56.0	57.1	56.6	61.1	56.6	58.5	53.3	55.6	54.6	54.4	51.9	53.0	48.8	51.0	50.0
40-59	91.1	41.0	65.1	91.8	43.4	66.6	83.5	40.6	61.0	81.1	41.0	59.9	76.2	36.8	55.2
60+	341.1	117.8	223.9	348.2	113.4	225.0	297.4	107.2	197.6	282.5	95.8	184.7	266.0	80.0	168.5
Total	106.3	54.1	78.9	110.0	54.5	80.8	98.6	52.4	74.1	98.0	49.9	72.5	93.6	45.2	67.8

Annex 3

Trend of age-specific TB notification rates (1970-2011)



- 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 4(a)

TB-HIV Registry

A total of 28 cases with TB-HIV co-infection were reported to the TB-HIV Registry in 2011. The cumulative number of cases reported to the TB-HIV Registry as in 2011 was 520 (Table 1).

The number of TB as primary AIDS-defining illness in the Hong Kong HIV/AIDS reporting system for the years 1996-2011 is shown in Table 2. Out of a total of 82 AIDS cases newly diagnosed in 2011, 22 (27.0%) had TB as a primary AIDS-defining illness, compared to 37 (45.0%) for *Pneumocystis jiroveci* pneumonia. As in 2009 and 2010, TB was second to *Pneumocystis jiroveci* pneumonia as the most common primary AIDS-defining illness in Hong Kong in 2011.

Table 3 shows the distribution of ADI criteria among 325 cases reported from chest clinics and SPP for the years 1996-2011 with TB as the primary AIDS-defining illness. In Hong Kong, both pulmonary TB with a CD₄ count below 200/μL and extra-pulmonary TB are included in the AIDS case definition. Relatively more patients have pulmonary TB with a low CD₄ count as primary AIDS-defining illness compared to extra-pulmonary TB.

The pre-treatment drug sensitivity pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996-2011 is shown in Table 4. Of the 16 cases with a positive sputum or other specimen culture reported to TB-HIV Registry in 2011, 12 (75.0%) had disease due to *Mycobacterium tuberculosis* with favourable sensitivity pattern. Two (12.5%) had bacillary resistance to streptomycin and another two (12.5%) had bacillary resistance to isoniazid. Among all the 353 cases reported to TB-HIV Registry with a positive sputum or other specimen culture between 1996 and 2011, 4 (1.1%) had MDRTB. This figure is comparable to the MDRTB rate in general population. There is no XDR-TB cases detected among the reported TB-HIV cases. DH will continue to monitor prevalence of drug resistance in the context of HIV.

Table 5 shows the characteristics of 28 patients reported from chest clinics and SPP in 2011. The characteristics of these patients are similar to those of the 2010 cohort, namely, there are greater proportions of young males and non-Chinese Asians among TB-HIV co-infected patients as compared to non-HIV infected TB patients. CD₄ count was generally low at time of TB diagnosis. Extra-pulmonary involvement is common, with over sixty percent of patients having TB involving one or more extra-pulmonary sites.

Annex 4(b)

Table 1. Total number of TB-HIV cases reported to TB-HIV Registry (1996-2011)*

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
Total	520

* Including cases reported from chest clinics, SPP, HA hospitals and private centres.

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

Table 2. TB as primary ADI in Hong Kong HIV/AIDS reporting system, all sources (1996-2011)*

Year	Number of cases with TB as primary AIDS-defining illness	Total number of reported AIDS cases	% of reported AIDS cases with TB as primary AIDS-defining illness
Pre-1996	21	175	12.00%
1996	21	70	30.00%
1997	17	64	26.56%
1998	18	63	28.57%
1999	13	61	21.31%
2000	19	67	28.36%
2001	17	60	28.33%
2002	9	53	16.98%
2003	15	56	26.79%
2004	13	49	26.53%
2005	25	64	39.06%**
2006	26	73	35.62%
2007	32	79	40.51%**
2008	31	96	32.29%
2009	24	76	31.58%
2010	20	79	25.30%
2011	22	82	27.00%
Total	343	1267	27.00%

* An expanded case definition was adopted in 1995 to include pulmonary TB cases with a CD4 count less than 200/ μ L.

** TB overtook *Pneumocystis jiroveci* pneumonia as the most common AIDS-defining illness in 2005 and 2007.

Annex 4(c)

Table 3. Criteria for TB as AIDS-defining illness among 325 cases reported from chest clinics and SPP (1996-2011)*

Year	TB as AIDS-defining illness			Total
	Yes		No	
	Extra-pulmonary	Pulmonary and TB cervical lymph node with CD4 < 200 µL		
1996	1	7	1	9
1997	2	3	2	7
1998	6	3	3	12
1999	7	6	3	16
2000	3	4	5	12
2001	4	6	7	17
2002	4	9	2	15
2003	1	10	5	16
2004	5	7	11	23
2005	8	14	7	29
2006	9	19	7	35
2007	10	17	8	37**
2008	14	13	6	33
2009	9	3	6	23***
2010	4	10	5	19****
2011	6	8	8	22*****
Total	93	139	86	325

* Of all the cases reported to the TB-HIV Registry from 1996 to 2011, 325 cases were seen at chest clinics and/or SPP. The table is compiled basing on data of these 325 cases.

** Information on TB as AIDS-defining illness not available in two patients.

*** Information on TB as AIDS-defining illness not available in five patients.

**** Information on TB as AIDS-defining illness not available in three patients.

***** Information on TB as AIDS-defining illness not available in six patients.

Table 4. Pre-treatment drug sensitivity pattern among culture positive (sputum and/or other specimens) TB-HIV cases from TB-HIV Registry (1996-2011)*

Year	Susceptible to SHRE	Any resistance** (non-MDR/XDR)	MDR	XDR	Total number of culture positive cases
1996	7	1	0	0	8
1997	5	1	0	0	6
1998	13	1	0	0	14
1999	16	4	1	0	21
2000	13	2	0	0	15
2001	23	5	0	0	28
2002	11	3	1	0	15
2003	18	3***	0 (+1)***	0	21
2004	20	6	0	0	26
2005	29	5	0	0	34
2006	32	3	0	0	35
2007	30	7	1	0	38
2008	30	3	0	0	33
2009	22	7	0	0	29
2010	12	2	0	0	14
2011	12	4	0	0	16
Total	293	57	3 (+1)***	0	353

* Of all the cases reported to the TB-HIV Registry from 1996 to 2011, 353 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 353 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.

Annex 4(d)

Table 5: Characteristics of 28 TB-HIV cases reported from chest clinics and SPP in 2011

	Number	Proportion
Age distribution		
0 to 19	0	0.00%
20 to 39	9	32.14%
40 to 59	15	53.57%
60+	4	14.29%
Sex distribution		
Male	20	71.43%
Female	8	28.57%
Ethnicity		
Chinese	18	64.29%
Asians, non-Chinese	7	25.00%
African	2	7.14%
Others	1	3.57%
Case category		
New case	26	92.86%
Relapse	1	3.57%
Treatment after default	0	0.00%
Failure of previous treatment	0	0.00%
Others	1	3.57%
TB as primary AIDS defining illness*		
Yes	14	63.64%
No	8	36.36%
CD4 count at time of co-infection (median, IQR)**	127.0 (48.3-302.3)/ μ L	
Anti-retroviral therapy at time of co-infection		
Yes	7	25.00%
No	20	71.43%
Unknown	1	3.57%
Presence of extra-pulmonary TB		
Yes	18	64.29%
No	10	35.71%
Extent of Respiratory TB***		
Minimal	10	52.63%
Moderate	5	26.32%
Extensive	4	21.05%
Sputum bacteriological status (pre-treatment)		
Smear + culture +	9	32.14%
Smear - culture +	7	25.00%
Smear + culture -	0	0.00%
Smear - culture -	9	32.14%
Incomplete	3	10.71%
Drug resistance pattern (pre-treatment)****		
Susceptible to SHRE	12	75.00%
Resistant to streptomycin	2	12.50%
Resistant to isoniazid	2	12.50%
Resistant to rifampicin	0	0.00%
MDR	0	0.00%
XDR	0	0.00%

* Information on TB as primary AIDS-defining illness unknown in 6 patients.

** Information on CD4 count unknown in 4 patients.

*** 19 out of the 28 cases had lung parenchymal lesion on CXR.

**** 16 out of the 28 cases had a positive sputum or other specimen culture.

Annex 5

HBsAg Seroprevalence Survey Among TB Patients Seen at Chest Clinics (2011)

In a sample survey conducted by the TB & Chest Service of the Department of Health in 2011 (2-month period from 1.3.2011 to 31.5.2011), the overall HBsAg seropositive rate among TB patients seen at chest clinics was 10.33%.

Sex/Age group	HBsAg status			HBsAg seropositive rate (%)*	Total
	Positive	Negative	Unknown		
Male					
0-19	0	15	1	0.00	16
20-39	11	101	4	9.82	116
40-59	31	163	3	15.98	197
≥60	35	297	13	10.54	345
Female					
0-19	0	17	2	0.00	19
20-39	7	135	1	4.93	143
40-59	14	89	3	13.59	106
≥60	8	103	3	7.21	114
Total	106	920	16	10.33	1056

* *HBsAg seropositivity rate = number of HBsAg positive patients/ (number of HBsAg positive patients + number of HBsAg negative patients)*

HBsAg Seroprevalence Survey 2010-2011

Sex/Age group	HBsAg seropositive rate (%)	
	2010	2011
Male		
0-19	0.00	0.00
20-39	6.31	9.82
40-59	15.08	15.98
≥60	8.08	10.54
Female		
0-19	0.00	0.00
20-39	7.21	4.93
40-59	8.18	13.59
≥60	4.55	7.21
Total	8.55	10.33

Annex 6

Crude and Standardised Death Rate and Notification Rate 1981 - 2011 (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

* 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 2011 Population Census.

Part 4

SUPPLEMENT

Part 4 – Supplement: Contents

Supplement

- 1 Form for notification of TB under the Prevention and Control of Disease Ordinance (Cap. 599) – DH1A(s)(Rev. Jul 2008) (for notification to Department of Health)
- 2 TB denotification form
- 3 Form for notification of occupational diseases under the Occupational Safety and Health Ordinance (Cap. 509) – LD483(Rev.8.2.2005) (for notification of occupational TB and other notifiable occupational diseases to Labour Department)

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.:			
Name and address of workplace / school / other institution:						(Home) :			
Job title / Class attended :						(Mobile) :			
Hospital / Clinic sent to (if any):						Patient :			
Hospital No.:						Family member :			
Hospital / Clinic sent to (if any):						(Office / school / others):			
Site of TB (please ✓ all applicable)				Sputum (please ✓ and attach laboratory report if available)			Other specimens (specify and ✓ below):		
<input type="checkbox"/> Lung	<input type="checkbox"/> Meninges								
<input type="checkbox"/> Pleura	<input type="checkbox"/> Bone & Joint								
<input type="checkbox"/> Lymph node	<input type="checkbox"/> Urinary system								
<input type="checkbox"/> Miliary	<input type="checkbox"/> Genital system								
<input type="checkbox"/> Other(s) (please specify):									
				Positive	Smear	Culture	PCR test	Smear	Culture
				Negative					
				Unknown					
				Not done					
Duration of stay in Hong Kong: _____ Years				Disposal (please ✓ in front boxes and specify):					
History of past treatment for TB (delete whichever not applicable): Yes / No				<input type="checkbox"/> Treatment started on: _____ (Date: dd/mm/yyyy)					
If yes, YEAR first receiving treatment: _____				<input type="checkbox"/> On observation					
				<input type="checkbox"/> Referred to _____ Hospital / Clinic / Private Practitioner					
				<input type="checkbox"/> 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)

To: Statistics Unit, Wanchai Chest Clinic
99 Kennedy Road, Hong Kong
(Fax: 28346627)

Date:

Denotification of previously notified TB cases

Clinic:

Name:

ID number:

Clinic number:

Date notified:

Revised Diagnosis:

Smear: positive / negative / unknown

Culture: negative / M. tuberculosis / atypical mycobacteria / unknown

Denotification request by: _____

To Statistics Unit: Please confirm receiving TB de-notification form of the following patient:

Name: _____ Clinic no.: _____

HKID no.: _____ Chest Clinic: _____

It is confirmed that the TB de-notification form of the above named has been received by the Statistics Unit, TB&CS.

Chop or signature: _____ Date: _____

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)

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