

ANNUAL REPORT 2009

TUBERCULOSIS & CHEST SERVICE

OF THE

DEPARTMENT OF HEALTH

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PREFACE

Tuberculosis (TB) is still a major infectious disease worldwide. According to World Health Organization, there were 9.4 million new TB cases globally in 2009, and 1.7 million people died from TB. The estimated global incidence rate fell to 137/100 000 in 2009, after peaking in 2004 at 142/100 000. 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. Notwithstanding the increasing coverage of Directly Observed Treatment Short course (DOTS), anti-TB drug resistance remains a grave concern. The problem is most acute in areas with HIV co-epidemic or gross social inequities, but increasing movement of populations has rendered it a global crisis affecting all countries. 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. The mortality reached >90% among HIV-coinfected patients in a recent report from South Africa. Significant epidemiological clustering was also observed, probably reflecting the prolonged period of infectiousness with ineffective treatment, especially in the nosocomial settings.

With the implementation of effective case-finding and treatment, the notification rate of TB in Hong Kong has shown an overall downward trend in the past 50 years. The rate decreased from a peak of 697 per 100,000 in 1952 to 80.8 per 100,000 in 2008. Fluctuations did occur from time to time, possibly related to changes in attendance and/ or notification patterns. In 2009, the TB notification declined further to 74.1 per 100,000. With ageing of the population, 40.8% 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 in 2009 were aged 65 or above, while the corresponding figure for females was 30.9%. Multiple factors probably underlined such disparity, but smoking likely accounted for a substantial portion of the difference, as suggested by a previous study.

With the effective implementation of DOTS and DOTS-plus in Hong Kong, the overall TB situation and drug resistance problem have been brought under progressive control. However, ageing of the TB epidemic and the global emergence of MDR- and XDR-TB are posing increasing difficulties in the control of TB locally, especially in view of frequent population movement and high rates of drug-resistant TB in some of our

neighbouring areas. New initiatives are therefore called for to address these new challenges.

In 2008, a new Prevention and Control of Disease Ordinance (CAP 599) was introduced 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. Under the Prevention and Control of Disease Regulation (CAP 599A) of that Ordinance, XDR-TB was included as one of the specified diseases. 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 2009, a few XDR-TB patients were intercepted at the border and sent to an infectious hospital or other designated places for assessment.

Collaborative efforts have also been made in the development of new diagnostic tools and drugs/ regimens to meet these new challenges. New interferon-gamma release assays are being compared with the traditional tuberculin skin test in the targeted screening of latent TB infection among close TB contacts, silicosis patients, HIV-infected subjects, and other immuno-compromised individuals including those under treatment with anti-TNF agents. As these new assays are not affected by previous BCG vaccination, they may also play an adjunctive role in the diagnosis of active TB, especially among children with a low background prevalence of latent TB infection. Shorter regimens than those currently available are required to facilitate the treatment of both latent TB infection and active TB disease. Multi-centered clinical trials are underway to explore some of these new treatment-shortening regimens in different parts of the world. 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 joined the Tuberculosis Trial Consortium in 2009 as one of the new study sites for the development and evaluation of new TB treatment regimens. It is hoped that some of these researches will translate into effective, safe, and affordable tools suitable for large-scale application to control, and ultimately eliminate, this major killer in the history of mankind.

In 2009, a new strain of influenza, the H1N1 human swine influenza, emerged in Central and North America and spread to other parts of the world in the form of a new pandemic. The chest clinics were designated as centres for medical surveillance and directly observed chemoprophylaxis (MSDOC) for the new H1N1 virus during the pandemic period. With the coordinated efforts of different sectors, the local spread of the new H1N1 virus started to subside towards the end of the year.

A number of scientific papers were published by the TB&CS in collaboration with other investigators from different sectors in 2009.¹⁻¹⁰ 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, 88,860 patients attended the TB&CS as compared to 100,600 in 2008, and the total attendance was 755,875 in comparison with 763,288 in 2008. Among the 88,860 patients, 21,592 patients were new attendants, of whom 18.6% were found free of any chest diseases. The diagnoses among other new patients included active pulmonary tuberculosis (12.8%), active tuberculosis of other forms (3.2%), inactive tuberculosis (6.7%), bronchitis not specified as acute or chronic (12.9%), acute respiratory infection (5.9%), pneumonia (5.1%), malignant neoplasm of trachea and bronchus (1.5%), bronchiectasis (1.3%), asthma (0.6%) and emphysema (0.1%). Among all the attendance, 3,345 hospital admissions were arranged.

Part 1: Tuberculosis

The number of tuberculosis notifications in 2009 was 5,193, making a notification rate of 74.1 per 100,000 population. The corresponding figures in 2008 were 5,635 and 80.8 respectively.

The number of tuberculosis deaths was 204 in 2009 as compared with 229 in 2008. The corresponding tuberculosis mortality rates were both 2.9 per 100,000 population.

Tuberculosis stayed outside the top ten causes of death in 2009. Tuberculosis deaths accounted for 0.5% of the total registered deaths in Hong Kong. The average age of tuberculosis deaths was 73.7.

In 2009, 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 in 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 8,187 in 2009 compared with 8,501 in 2008. In 2009, 167 new cases of pneumoconiosis were registered in the TB&CS, and 108 new cases (including 5 cases of asbestos-related lung diseases) were confirmed by the Pneumoconiosis Medical Board. Up to the end of 2009, a total of 5,950 patients had been compensated.

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Part 1

TUBERCULOSIS

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APPENDIX 1

TB Notifications & Death Rate of Tuberculosis (All Forms)

1947 - 2009

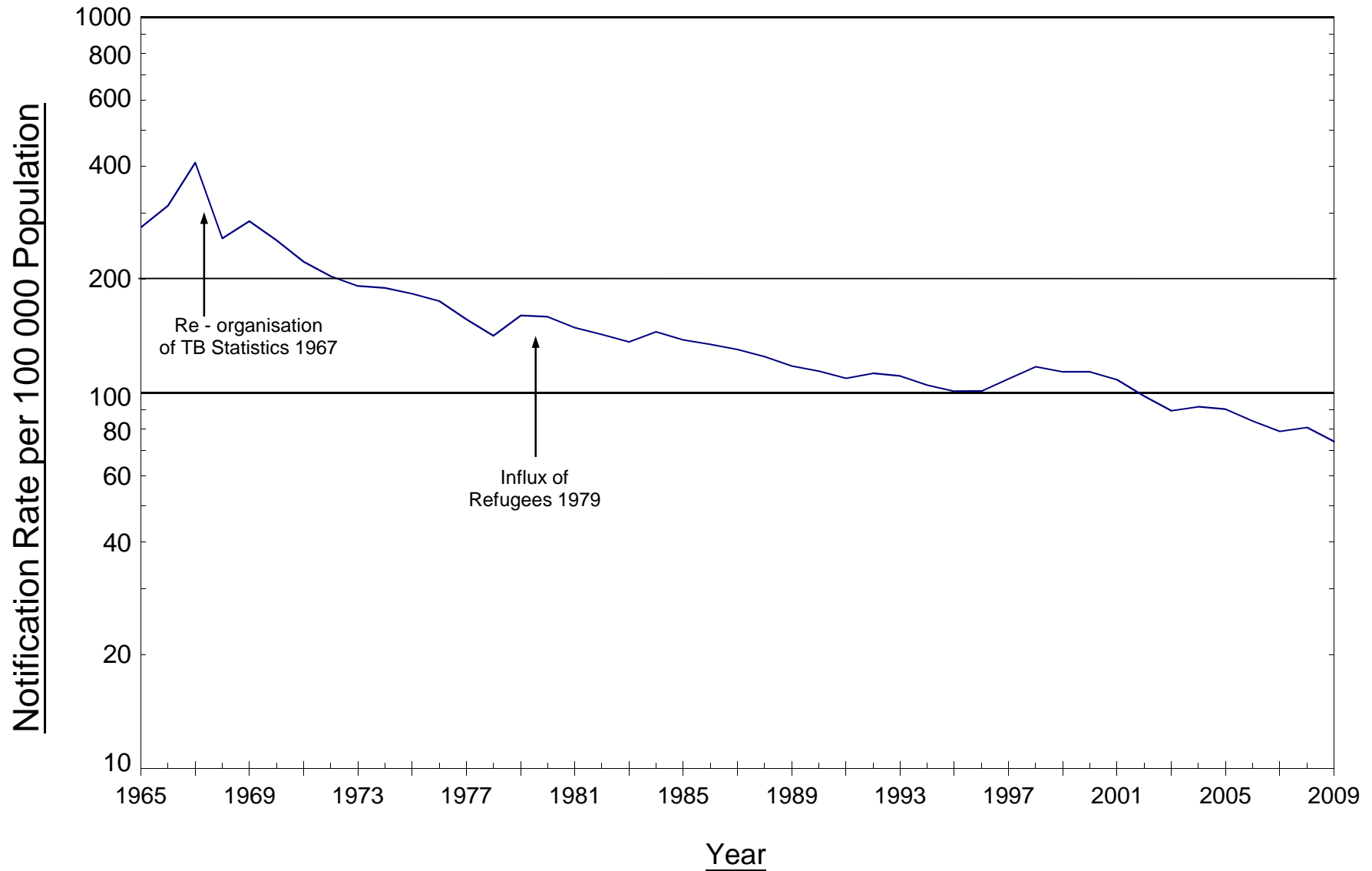
Year	TB Notifications		Notification Rate per 100,000 Pop	TB Deaths	Death Rate per 100,000 Pop	Ratio (Notifications/ Deaths)	Deaths ----- Notifications x 100%
1947	4855		277.4	1861	106.3	2.61	38.33
1948	6279		348.8	1961	108.9	3.20	31.23
1949	7510		404.4	2611	140.6	2.88	34.77
1950	9067		405.3	3263	145.9	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)	89	396	6.7	16.51	6.06
1994	6319	(230)	87	409	6.8	15.45	6.47
1995	6212	(175)	102	418	6.8	14.86	6.73
1996	6501	(88)	162	292	4.5	22.26	4.49
1997	7072	(34)	156	252	3.9	28.06	3.56
1998	7673	(7)	169	270	4.1	28.42	3.52
1999	7512	(5)	166	312	4.7	24.08	4.15
2000	7578	(7)	152	299	4.5	25.34	3.95
2001	7262	(0)	192	311	4.6	23.35	4.28
2002	6602	(0)	186	267	4.0	24.73	4.04
2003	6024	(0)	177	275	4.1	21.91	4.57
2004	6226	(0)	110	286	4.2	21.77	4.59
2005	6160	(0)	77	271	4.0	22.73	4.40
2006	5766	(0)	58	294	4.3	19.61	5.10
2007	5463	(0)	56	231	3.3	23.65	4.23
2008	5635	(0)	67	229	3.3	24.61	4.06
2009	5193	(0)	68	204	2.9	25.46	3.93

* 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.

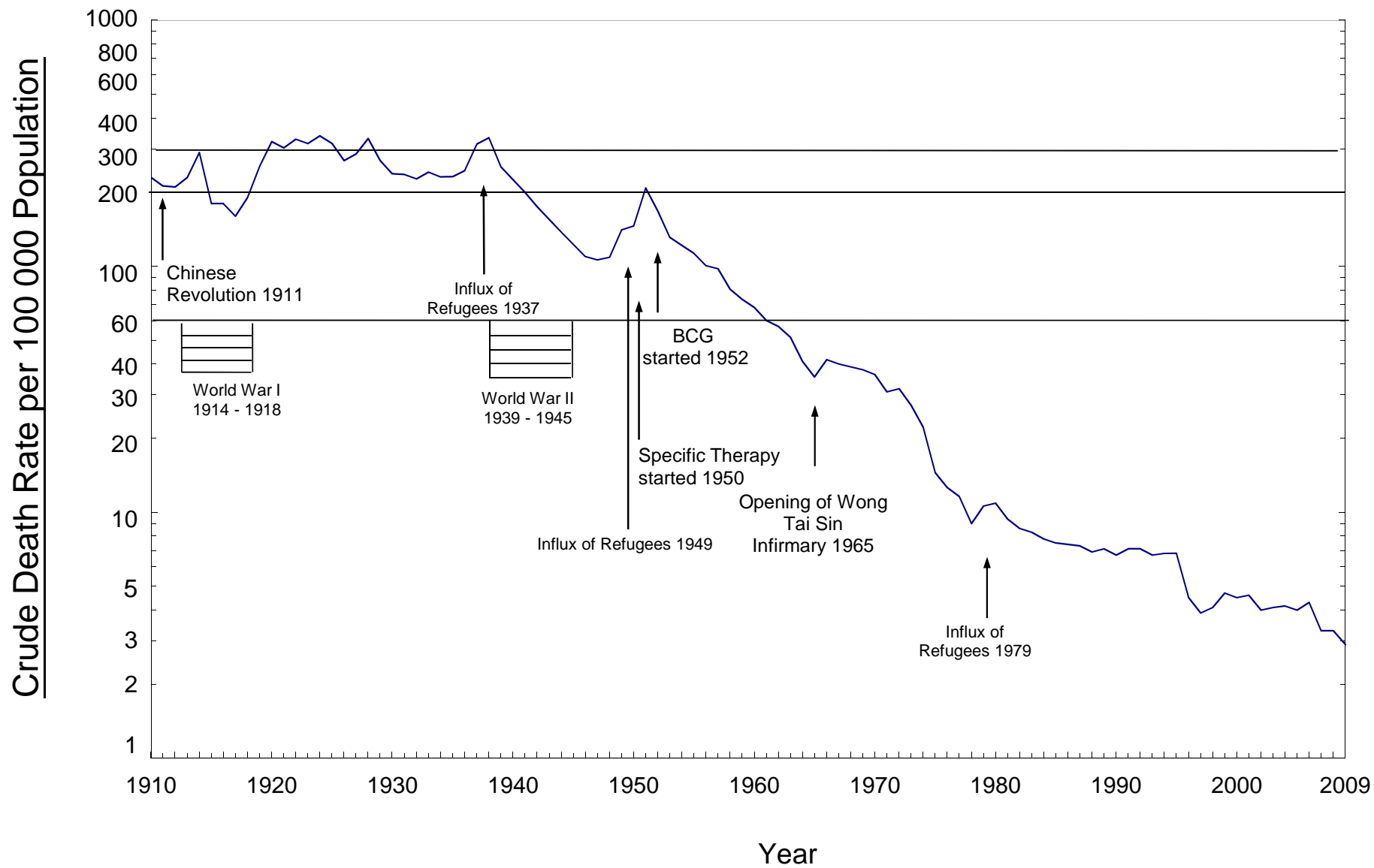
APPENDIX 2

TB Notification Rate (All Forms) 1965-2009



APPENDIX 3

Crude Death Rate due to Tuberculosis (All Forms) 1910-2009



APPENDIX 4 (a)

Tuberculosis Notifications (All Forms) & Rate by Age & Sex 2009

Age Group	Tuberculosis Notifications (All Forms)			Tuberculosis Notifications Rate (per 100,000 population)		
	Male	Female	Total	Male	Female	Total
Under 1	0	0	0	1.67	3.65	2.62
1	1	1	2			
2	0	1	1			
3	1	1	2			
4	0	1	1			
5-9	2	2	4	1.45	1.57	1.51
10-14	13	21	34	6.70	11.36	8.97
15-19	75	60	135	33.50	28.38	31.01
20-24	109	114	223	49.64	47.72	48.64
25-29	125	220	345	54.11	71.97	64.28
30-34	121	177	298	53.56	56.41	55.22
35-39	134	152	286	55.67	45.50	49.76
40-44	150	132	282	56.78	39.33	47.02
45-49	198	128	326	62.34	36.00	48.43
50-54	285	133	418	94.53	43.22	68.61
55-59	303	109	412	127.69	45.63	86.52
60-64	244	90	334	144.21	54.81	100.18
65-69	260	80	340	222.03	76.19	153.08
70-74	321	94	415	280.35	79.46	178.26
75-79	366	150	516	385.26	143.95	259.04
80-84	298	105	403	569.79	138.71	314.84
85 & over	245	171	416	700.00	223.82	373.43
Total	3251	1942	5193	98.63	52.38	74.15

Appendix 4 (b)

Pulmonary TB Notifications by Age & Sex 2009**

Age Group	Pulmonary TB			Bacteriologically *			Smear		
	M	F	T	M	F	T	M	F	T
Under 1	0	0	0	0	0	0	0	0	0
1	1	1	2	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	1	1	2	0	0	0	0	0	0
4	0	1	1	0	0	0	0	0	0
5-9	0	1	1	0	0	0	0	0	0
10-14	10	19	29	7	10	17	3	7	10
15-19	66	53	119	40	36	76	24	22	46
20-24	95	95	190	60	60	120	32	31	63
25-29	105	163	268	55	97	152	35	64	99
30-34	101	138	239	64	85	149	30	48	78
35-39	116	116	232	78	69	147	43	41	84
40-44	133	105	238	82	61	143	48	41	89
45-49	172	92	264	119	49	168	73	26	99
50-54	258	88	346	196	51	247	120	29	149
55-59	278	82	360	201	52	253	117	29	146
60-64	223	53	276	163	38	201	97	14	111
65-69	239	54	293	181	37	218	95	15	110
70-74	299	70	369	237	52	289	110	28	138
75-79	346	117	463	268	84	352	113	35	148
80-84	274	87	361	231	54	285	95	15	110
85 & over	232	152	384	190	119	309	68	35	103
Total	2949	1488	4437	2172	954	3126	1103	480	1583

** Pulmonary TB with or without extrapulmonary TB

* Either smear or culture positive

Appendix 4(c)

Rate of Pulmonary TB Notifications by Age & Sex 2009**

(Rate per 100,000 Population)

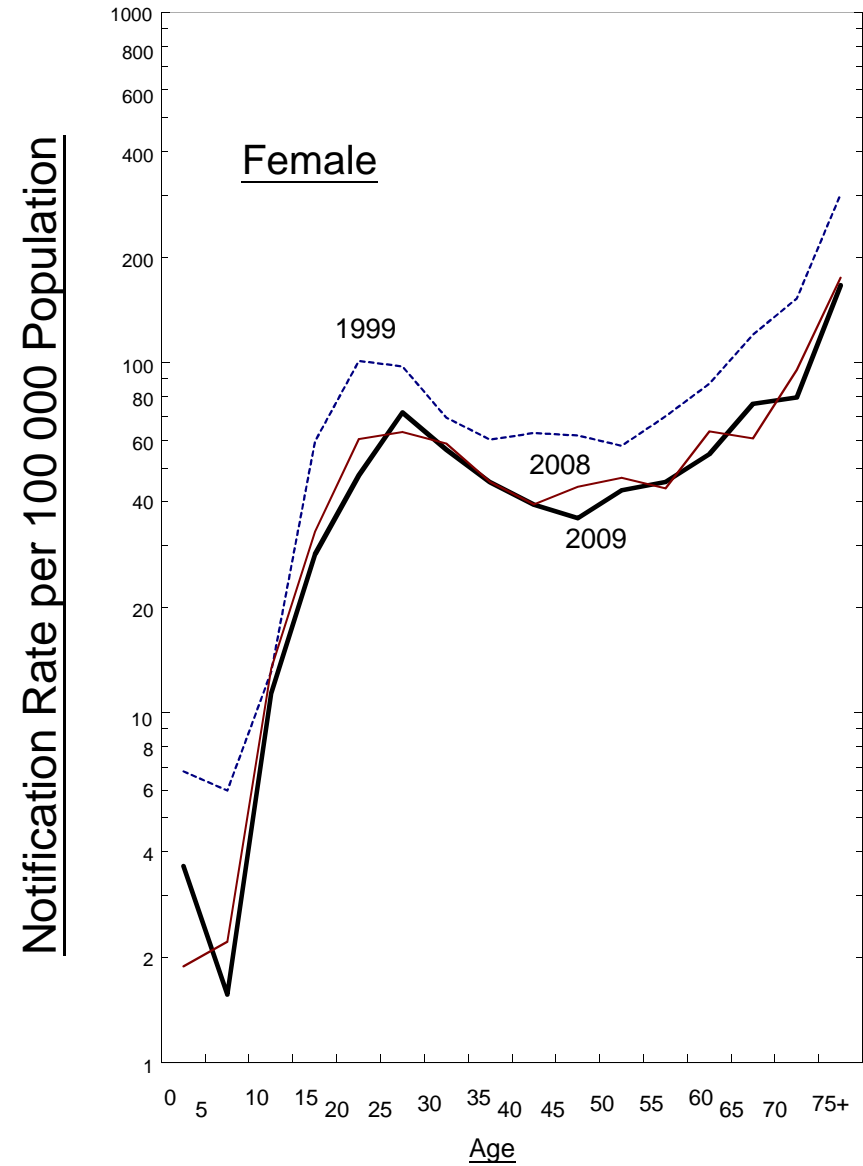
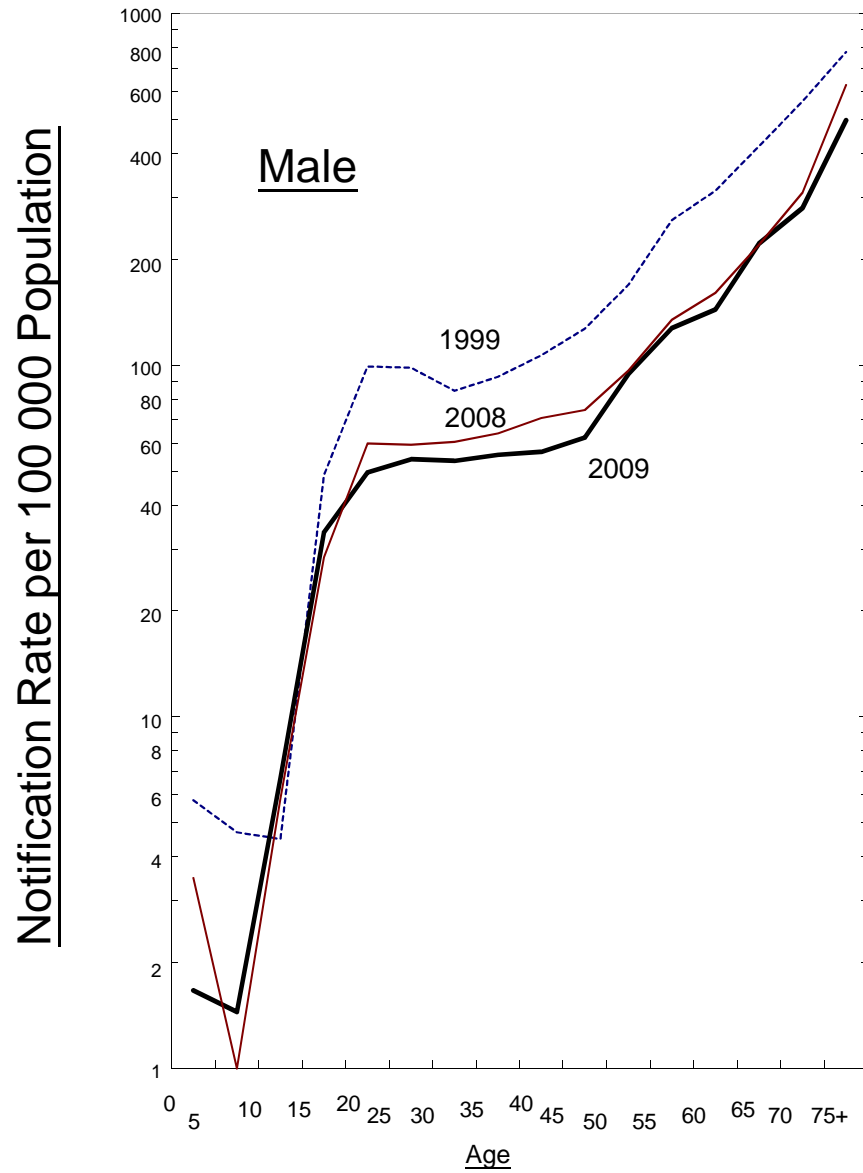
Age Group	Pulmonary TB			Bacteriologically * Positive Pulmonary TB			Smear Positive Pulmonary TB		
	M	F	T	M	F	T	M	F	T
0-4	1.7	2.7	2.2	0.0	0.0	0.0	0.0	0.0	0.0
5-9	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0
10-14	5.2	10.3	7.7	3.6	5.4	4.5	1.5	3.8	2.6
15-19	29.5	25.1	27.3	17.9	17.0	17.5	10.7	10.4	10.6
20-24	43.3	39.8	41.4	27.3	25.1	26.2	14.6	13.0	13.7
25-29	45.5	53.3	49.9	23.8	31.7	28.3	15.2	20.9	18.4
30-34	44.7	44.0	44.3	28.3	27.1	27.6	13.3	15.3	14.5
35-39	48.2	34.7	40.4	32.4	20.7	25.6	17.9	12.3	14.6
40-44	50.3	31.3	39.7	31.0	18.2	23.8	18.2	12.2	14.8
45-49	54.2	25.9	39.2	37.5	13.8	25.0	23.0	7.3	14.7
50-54	85.6	28.6	56.8	65.0	16.6	40.5	39.8	9.4	24.5
55-59	117.2	34.3	75.6	84.7	21.8	53.1	49.3	12.1	30.7
60-64	131.8	32.3	82.8	96.3	23.1	60.3	57.3	8.5	33.3
65-69	204.1	51.4	131.9	154.6	35.2	98.2	81.1	14.3	49.5
70-74	261.1	59.2	158.5	207.0	44.0	124.1	96.1	23.7	59.3
75-79	364.2	112.3	232.4	282.1	80.6	176.7	118.9	33.6	74.3
80-84	523.9	114.9	282.0	441.7	71.3	222.7	181.6	19.8	85.9
85 & over	662.9	199.0	344.7	542.9	155.8	277.4	194.3	45.8	92.5
Total	89.5	40.1	63.4	65.9	25.7	44.6	33.5	12.9	22.6

** Pulmonary TB with or without extrapulmonary TB

* Either smear or culture positive

APPENDIX 5

TB Notification Rate by Age & Sex 1999, 2008 & 2009



Appendix 6

Notifications of Tuberculosis by Type by Age & Sex 2009

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	2
2	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
3	-	1	1	-	-	-	-	-	-	-	-	-	1	-	1
4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
5-9	-	1	1	-	-	-	-	-	-	-	-	-	2	1	3
10-14	6	12	18	-	-	-	-	-	-	-	-	-	7	9	16
15-19	23	27	50	1	-	1	1	-	1	3	-	3	47	33	80
20-24	52	52	104	1	2	3	1	1	2	1	2	3	54	57	111
25-29	50	92	142	1	2	3	-	3	3	4	-	4	70	123	193
30-34	57	71	128	3	1	4	-	2	2	2	1	3	59	102	161
35-39	57	66	123	3	1	4	3	2	5	2	-	2	69	83	152
40-44	84	56	140	2	2	4	2	3	5	3	1	4	59	70	129
45-49	89	43	132	-	2	2	2	-	2	5	2	7	102	81	183
50-54	119	51	170	1	2	3	3	1	4	4	4	8	158	75	233
55-59	129	39	168	1	2	3	5	-	5	2	4	6	166	64	230
60-64	88	23	111	2	1	3	2	3	5	2	3	5	150	60	210
65-69	88	26	114	4	-	4	2	1	3	6	5	11	160	48	208
70-74	109	26	135	2	2	4	3	1	4	3	4	7	204	61	265
75-79	104	29	133	4	1	5	-	1	1	4	4	8	254	115	369
80-84	64	20	84	-	4	4	3	2	5	2	3	5	229	76	305
85 & over	52	31	83	2	4	6	1	1	2	1	1	2	189	134	323
Total	1171	666	1837	27	26	53 (a)	28	22	50 (b)	44	34	78 (c)	1981	1194	3175 (d)*

* Including	TB lymph node	435
	TB urogenital system	48
	TB peritonitis, intestines, mesenteric, appendicitis	106
	TB pleuritis, pleural effusion	2496
	TB laryngitis	10
	TB skin	46
	TB other sites	33
	Unspecified	1

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

- (a) All miliary TB cases has coexisting pulmonary TB; also include 33 cases with coexisting TB of other extrapulmonary sites (among which 1 is meningis/CNS and 1 is bones & joints).
- (b) Including 11 cases with coexisting pulmonary TB; also include 4 cases with coexisting TB of other extrapulmonary sites (among which 1 is bones & joints).
- (c) Including 18 cases with coexisting pulmonary TB; also include 1 case with coexisting TB of other extrapulmonary sites.
- (d) Including 2518 cases with coexisting pulmonary TB.

Pulmonary TB only, without extrapulmonary site involvement

(NB: The significant increase in number of cases of TB pleuritis/pleural effusion in 2009 is probably related to the change in the format of the TB notification form since 2008 with inclusion of "Pleura" as a separate item.)

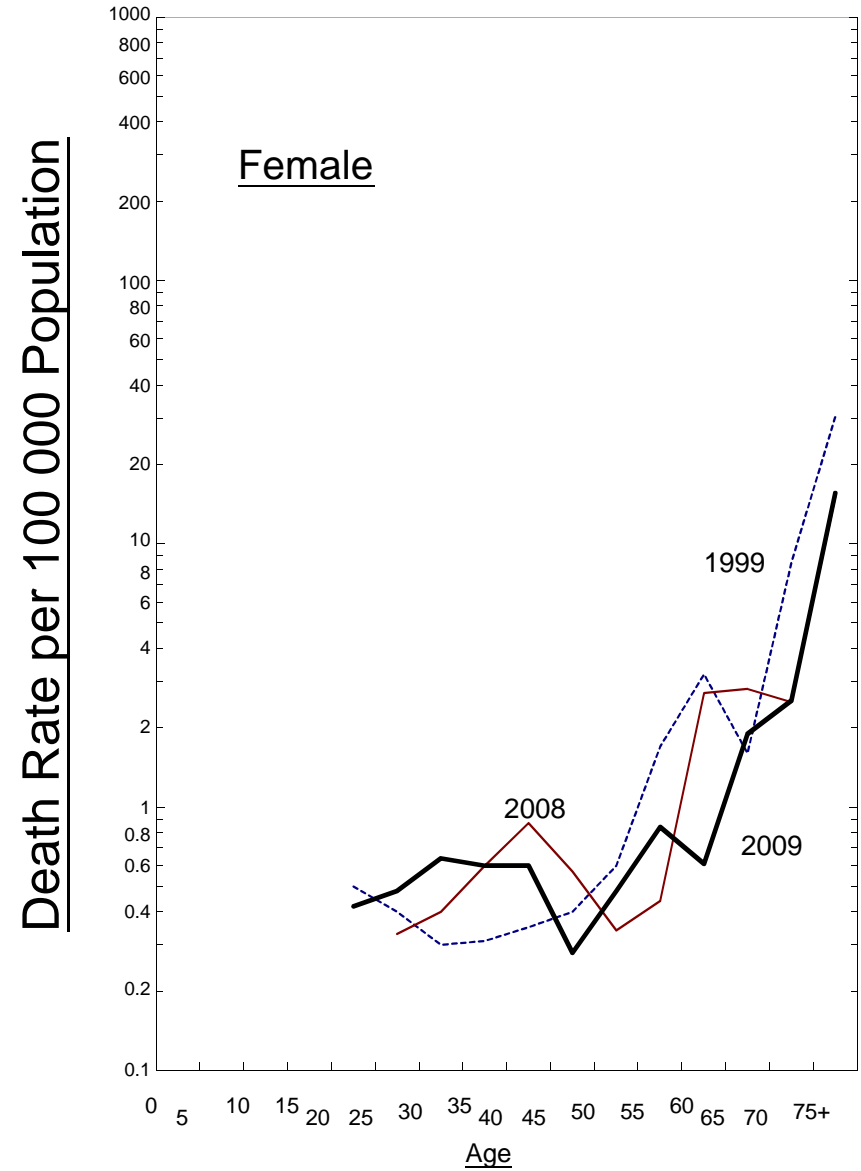
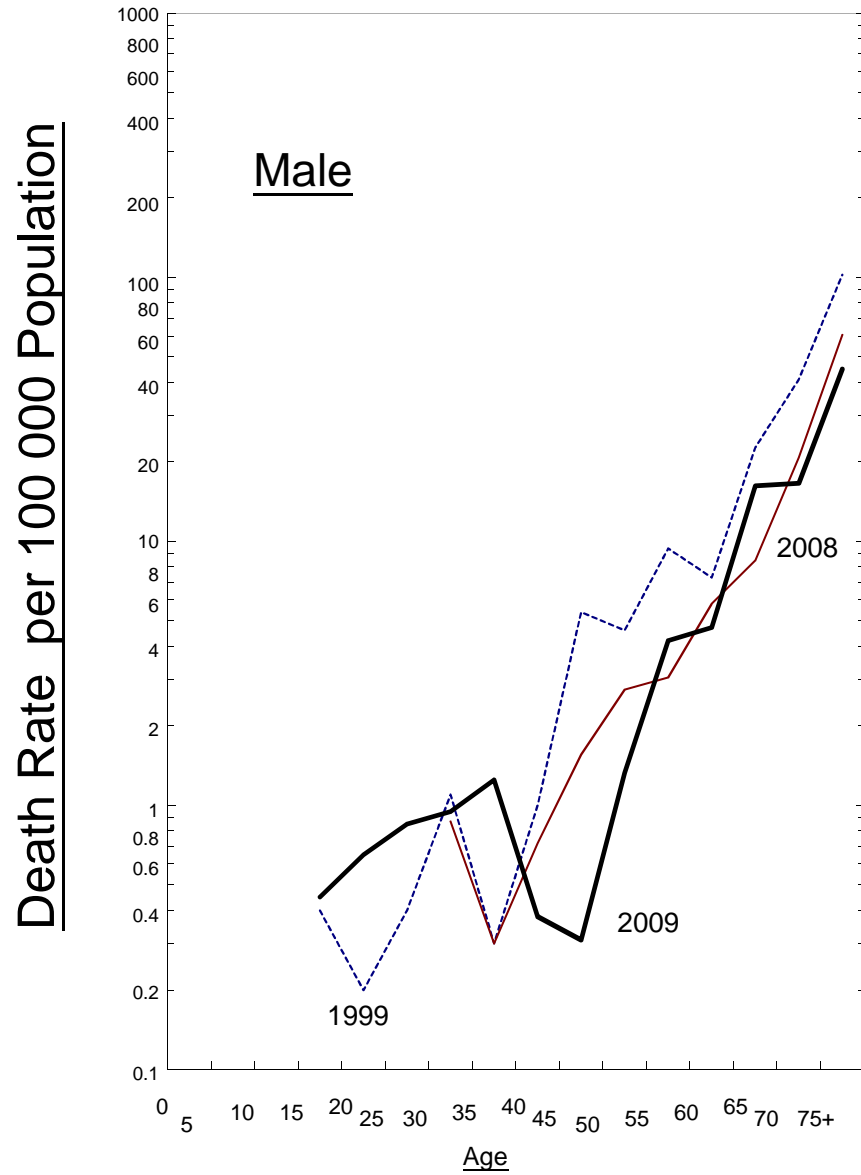
APPENDIX 7

TB Death (All Forms) & Death Rate by Age & Sex 2009

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	1	0	1	0.45	0.00	0.23
20-24	0	1	1	0.00	0.42	0.22
25-29	0	0	0	0.00	0.00	0.00
30-34	0	2	2	0.00	0.64	0.37
35-39	3	2	5	1.25	0.60	0.87
40-44	1	2	3	0.38	0.60	0.50
45-49	1	1	2	0.31	0.28	0.30
50-54	4	0	4	1.33	0.00	0.66
55-59	10	2	12	4.21	0.84	2.52
60-64	8	1	9	4.73	0.61	2.70
65-69	19	2	21	16.23	1.90	9.46
70-74	19	3	22	16.59	2.54	9.45
75-79	27	8	35	28.42	7.68	17.57
80-84	24	10	34	45.89	13.21	26.56
85 & over	31	22	53	88.57	28.80	47.58
Total	148	56	204	4.49	1.51	2.91

APPENDIX 8

TB Mortality Rate by Age & Sex 1999, 2008 & 2009



Appendix 9

TB Deaths by Type by Age & Sex 2009

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	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
20-24	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-
35-39	3	1	4	-	-	-	-	-	-	-	-	-	-	1	1
40-44	-	2	2	-	-	-	-	-	-	-	-	-	1	-	1
45-49	-	1	1	1	-	1	-	-	-	-	-	-	-	-	-
50-54	3	-	3	-	-	-	1	-	1	-	-	-	-	-	-
55-59	8	1	9	1	1	2	-	-	-	-	-	-	1	-	1
60-64	7	-	7	1	-	1	-	1	1	-	-	-	-	-	-
65-69	10	-	10	4	-	4	2	-	2	1	1	2	2	1	3
70-74	17	2	19	-	-	-	2	-	2	-	-	-	-	1	1
75-79	24	5	29	2	3	5	-	-	-	-	-	-	1	-	1
80-84	22	7	29	1	3	4	-	-	-	-	-	-	1	-	1
85 & over	30	20	50	-	1	1	1	1	2	-	-	-	-	-	-
Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	124	42	166	10	8	18	6	2	8	1	1	2	7	3	10 *

* Breakdown of Deaths from other forms of TB:-	Number
Tuberculosis of intestines, peritoneum & mesenteric glands	3
Tuberculosis of other organ	1
Late effects of Tuberculosis	6
Total	<u>10</u>

Pulmonary TB only, without extrapulmonary site involvement.

APPENDIX 10**1950 - 2009**

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

APPENDIX 11

Top Ten Causes of Death 2009

Rank	Causes of Death	Detailed List No.	2009		
		ICD 10th Revision	Male	Female	Total
	All Causes		22859	18183	41047 (5)
1	Malignant neoplasms	C00-C97	7682	5157	12839
2	Diseases of heart	I00-I09, I11 I13, I20-I51	3344	3070	6414
3	Pneumonia	J12-J18	2876	2436	5312
4	Cerebrovascular diseases	I60-I69	1764	1679	3443
5	External causes of morbidity and mortality #	V01-Y89	1189	749	1938
6	Chronic lower respiratory diseases *	J40-J47	1372	540	1912
7	Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	717	731	1448
8	Septicaemia	A40-A41	367	369	736
9	Dementia	F01-F03	257	381	638
10	Diabetes mellitus	E10-E14	214	278	492
	Tuberculosis (including late effects of tuberculosis)		148	56	204
	All other causes	Residues of all causes	2929	2737	5671 (5)

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
1999 - 2009**

Origin	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
East Kowloon Chest Clinic	118	192	173	144	123	121	132	86	121	129	100
Kowloon Chest Clinic	608	477	413	420	432	330	287	231	220	184	171
Sai Ying Pun Chest Clinic (a)	198	196	194	142	133	148	112	92	108	86	69
Shaukiwan Chest Clinic	158	169	158	148	122	138	111	104	128	105	80
Shaukiwan Pneumoconiosis	29	25	23	27	12	29	10	15	13	13	16
Shek Kip Mei Chest Clinic	266	232	208	180	162	157	140	96	111	127	92
South Kwai Chung Chest Clinic	439	342	339	279	300	261	282	224	187	200	158
Tai Po Chest Clinic	92	88	84	96	111	112	101	92	79	81	63
Wanchai Chest Clinic	365	375	384	279	264	223	214	191	169	168	170
Yan Oi Chest Clinic	440	425	396	355	320	290	263	238	165	179	172
Yaumatei Chest Clinic	344	339	373	271	233	203	249	204	151	137	139
Yuen Chau Kok Chest Clinic	395	308	288	223	226	181	148	136	122	116	124
Yung Fung Shee Chest Clinic	331	222	213	218	197	178	174	148	120	147	118
Castle Peak Hospital (Chest Clinic)						5	3	3	4	5	0
Cheung Chau Chest Clinic					2	2	3	1	1	2	1
Sai Kung Chest Clinic	8	4	4	11	7	7	4	9	5	9	1
Sheung Shui Chest Clinic	97	103	81	96	59	54	64	61	53	45	42
Tung Chung Chest Clinic	13	26	24	35	22	16	11	15	12	9	7
Yuen Long Chest Clinic	94	111	96	103	75	80	93	69	64	67	73
Sub-total	3995	3634	3451	3027	2800	2535	2401	2015	1833	1809	1596
Grantham Hospital	296	358	259	249	252	257	165	176	215	209	214
Haven of Hope Hospital	105	141	116	147	119	137	127	124	124	87	103
Kowloon Hospital	426	443	322	237	220	205	113	142	108	120	84
Ruttonjee Hospital	324	326	305	236	223	263	256	264	218	165	183
Wong Tai Sin Hospital	431	352	330	263	166	189	184	140	90	104	82
Other Govt. Institutions (b)	42	43	113	107	84	87	84	60	66	78	54
Other H.A. Hospitals	1682	2081	2176	2133	1937	2301	2543	2538	2530	2648	2472
Private Practitioners	157	121	125	130	159	136	156	164	90	83	57
Private Hospitals	54	79	65	73	64	116	131	143	189	332	348
Total	7512	7578	7262	6602	6024	6226	6160	5766	5463	5635	5193
% of cases from Chest Clinics among the total	53.2	48.0	47.5	45.8	46.5	40.7	39.0	34.9	33.6	32.1	30.7
% from Chest Hospitals (c)	21.1	21.4	18.3	17.1	16.3	16.9	13.7	14.7	13.8	12.2	12.8
% from Other Public Hospitals	22.9	28.0	31.5	33.9	33.5	38.4	42.6	45.1	47.5	48.4	48.6
% from Private Sector	2.8	2.6	2.6	3.1	3.7	4.0	4.7	5.3	5.1	7.4	7.8

Notes : (a) Including notifications from Cheung Chau Chest Clinic (1999-2002)

(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" 2009

Name of Hospital	No. of TB Notification
Alice Ho Miu Ling Nethersole Hospital	84
Caritas Medical Centre	159
Fung Yiu King Hospital	3
Hong Kong Buddhist Hospital	9
Kwai Chung Hospital	1
Kwong Wah Hospital	178
North District Hospital	161
Our Lady of Maryknoll Hospital	24
Pamela Youde Nethersole Eastern Hospital	164
Pok Oi Hospital	30
Prince of Wales Hospital	229
Princess Margaret Hospital	198
Queen Elizabeth Hospital	269
Queen Mary Hospital	110
Shatin Hospital	10
St John Hospital	2
Tai Po Hospital	13
Tseung Kwan O Hospital	119
Tuen Mun Hospital	255
Tung Wah Eastern Hospital	11
Tung Wah Hospital	10
United Christian Hospital	304
Wong Chuk Hang Hospital	1
Yan Chai Hospital	128
Total	2472

Appendix 13

Tuberculosis Notifications & Notification Rates by District Council District 2009

District Council District	Notification	Notification Rate (per 100,000 pop.)
<u>Hong Kong Island</u>	935	72.3
Central & Western	183	70.5
Wanchai	408	253.3
Eastern	221	37.3
Southern	123	44.0
<u>Kowloon</u>	1850	89.6
Kowloon City	274	74.2
Kwun Tong	568	94.9
Sham Shui Po	361	96.7
Wong Tai Sin	378	89.9
Yau Tsim Mong	269	89.1
<u>NT (East)</u>	1114	62.5
Islands	79	52.1
Northern	212	69.5
Sai Kung/Tseung Kwan O	253	60.1
Shatin	399	65.1
Tai Po	171	58.5
<u>NT (West)</u>	1255	67.4
Kwai Tsing	393	76.0
Tsuen Wan	181	61.1
Tuen Mun	315	63.3
Yuen Long	366	66.4
Marine	0	
Unknown	9	
Others	30	
Total	5193	74.1

APPENDIX 14

Establishment & Strength of TB & Chest Service

As at 31.12.2009

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	12
Registered Nurse	71	70
Enrolled Nurse	80	83
Senior Dispenser	9	8
Dispenser	1	2
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	52
Project Assistant	1	1
Office Assistant	11	10
Workman II	46	44
General Worker	3	3
Senior Radiographer	3	3
Radiographer I	7	7
Radiographer II	21	21
Radiographic Technician	5	5
Darkroom Technician	11	11

APPENDIX 15
Total Attendances at Chest Clinics
1999 - 2009

Clinic/Hospital	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
East Kowloon Chest Clinic	56317	64102	64820	60729	56132	58535	61835	56737	63191	59670	56566
Kowloon Chest Clinic	112291	119624	106321	98403	97223	86502	77337	73627	67093	62017	56658
Sai Ying Pun Chest Clinic	58380	57916	53854	51808	45437	46974	45159	42034	42770	40126	36036
Shaukiwan Chest Clinic	52446	53011	57215	57968	47541	50828	50699	49667	48207	50618	45028
Shaukiwan Pneumoconiosis	12182	11023	10889	9120	8008	8098	9144	8866	8359	8501	8187
Shek Kip Mei Chest Clinic	68971	70941	71134	65572	60461	60382	60789	57848	58679	52161	54933
South Kwai Chung Chest Clinic	108654	99012	90448	85221	78998	75487	80015	79455	78238	81441	82044
Tai Po Chest Clinic (Full Time)	-	-	-	7866	33518	30879	35347	35728	34769	33297	35492
Tung Chung (Full Time)	4687	4601	6241	6129	6807	1928	-	-	-	-	-
Wanchai Chest Clinic	85109	84960	79212	70500	62322	60406	57906	58545	56790	50465	50461
Yan Oi Chest Clinic	78840	79188	72982	66905	66084	70168	72078	72144	70643	66058	63411
Yaumatei Chest Clinic	108226	111959	114499	95700	71378	70294	80708	72180	69549	68587	70439
Yuen Chau Kok Chest Clinic	71273	66192	65190	64748	60339	56322	59328	57680	55454	57211	60481
Yung Fung Shee Chest Clinic	74735	73255	73663	77078	77516	71269	78279	72570	73944	71767	74196
Castle Peak Hospital	1151	868	1010	416	372	373	317	241	240	192	146
Cheung Chau Chest Clinic	2706	2611	1640	2404	1944	2032	2066	1589	2318	1411	869
Sai Kung Chest Clinic	1905	2141	1945	2119	2372	2495	2382	2542	2280	1885	1745
Sheung Shui Chest Clinic	21256	22383	24271	24273	22933	23211	22601	21765	22333	21909	22468
Tai Po Chest Clinic (Part Time)	20758	24688	25636	17761	-	-	-	-	-	-	-
Tung Chung (Part Time)	-	-	-	-	-	2802	5173	4447	4086	4263	5137
Yuen Long Chest Clinic	24075	27603	27208	29393	28702	31054	33056	29344	27960	29979	29935
Hei Ling Chau ATC	1855	3726	2474	2302	2352	1670	585	472	282	290	344
Lai Chi Kok Reception Centre	-	-	-	-	-	723	479	356	519	412	379
Shek Pik Prison Hospital	266	241	291	277	203	211	141	157	188	232	201
Stanley Prison Hospital	9062	10468	10532	11977	8829	7459	527	603	665	796	719
Total	975145	990513	961475	908669	839471	820102	835951	798597	788557	763288	755875

Appendix 16

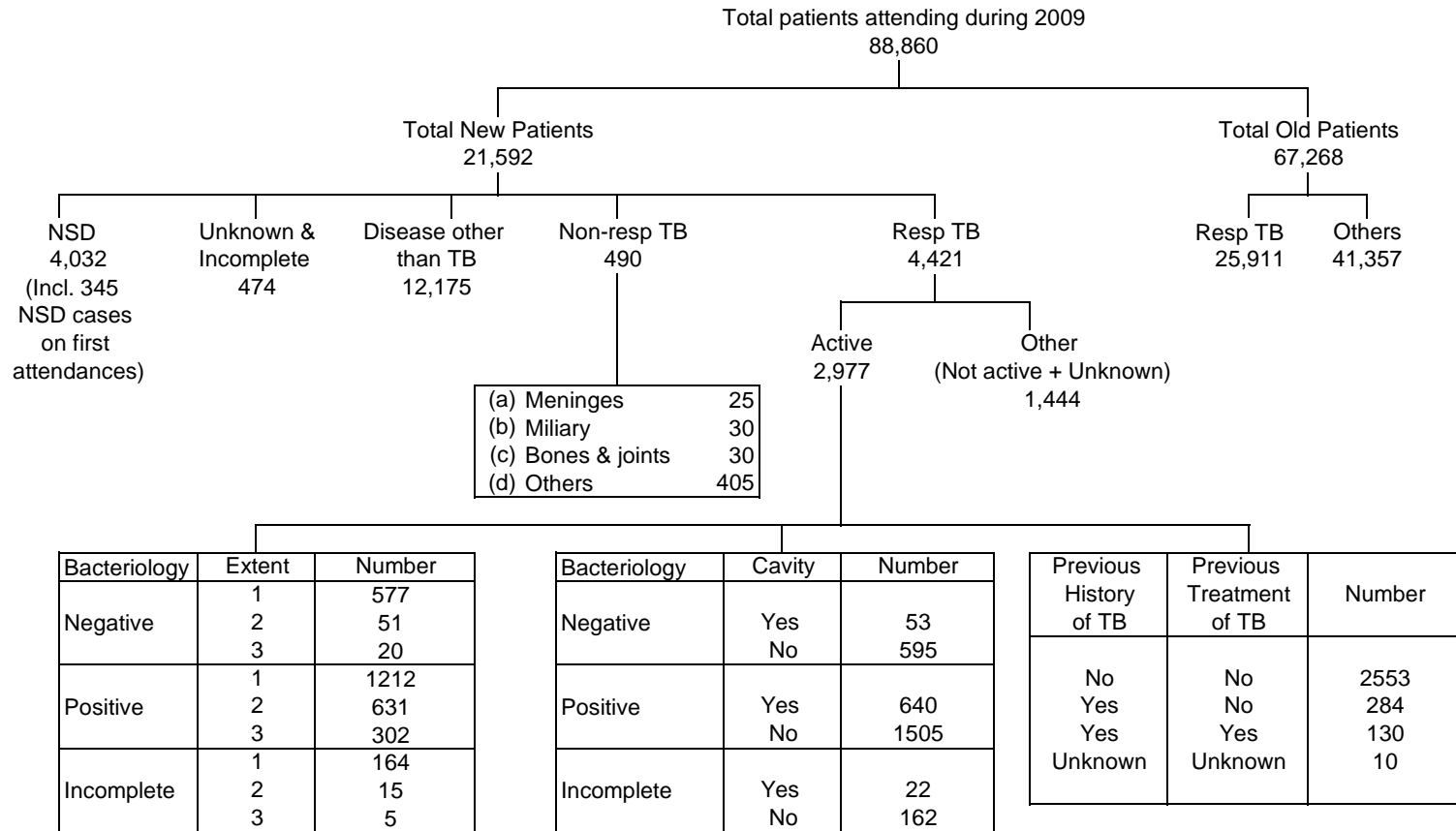
No. of Doctor Sessions, Cases Seen by Doctor and Patient/ Doctor Session 2009

Clinic/Hospital	Doctor Sessions	Cases Seen by Doctor	Patient/Doctor Session
<u>Full Time Clinics</u>			
East Kowloon	550	14677	27
Kowloon	873	20542	24
Pneumoconiosis	528	7970	15
Sai Ying Pun	545	13134	24
Shaukeiwan	498	12387	25
Shek Kip Mei	551	14103	26
South Kwai Chung	993	26661	27
Tai Po	500	9244	18
Wanchai	997	17757	18
Yan Oi	815	20658	25
Yaumatei	927	17504	19
Yuen Chau Kok	749	17292	23
Yung Fung Shee	653	16128	25
Sub-total	9179	208057	23
<u>Part Time Clinics</u>			
Castle Peak	27	145	5
Cheung Chau	26	394	15
Sai Kung	51	652	13
Sheung Shui	296	5972	20
Tung Chung	149	1793	12
Yuen Long	372	7590	20
Sub-total	921	16546	18
<u>Institutions Correctional Ser Dept</u>			
Hei Ling Chau	13	344	26
Lai Chi Kok Reception Center	52	345	7
Shek Pik	13	201	15
Stanley Prison	26	719	28
Sub-total	104	1609	15
Total	10204	226212	22

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

APPENDIX 17

Flow Chart of Patients Attending Chest Clinics 2009 *



* A total of 88860 patients attended, comprising 67268 old cases and 21592 new cases. Among old cases, 25911 had respiratory TB. Among new cases, 4421 had respiratory TB with 2977 being active, 490 had non-respiratory TB, 12175 had diseases other than TB, 474 had unknown and incomplete diagnoses, and 4032 had NSD (no specific diagnosis). Of the 490 new cases with non-respiratory TB, 25 had TB affecting meninges, 30 had miliary TB, 30 had TB affecting bones and joints, and 405 had TB affecting other sites.

Among the 2977 new cases with active respiratory TB, 2553 had neither previous history of TB nor previous treatment of TB, 284 had previous history of TB but no previous treatment, 130 had previous history of TB with treatment, and 10 had unknown status. In terms of bacteriology (negative, positive, or incomplete) and cavity, 53 were negative with cavity, 595 were negative without cavity, 640 were positive with cavity, 1505 were positive without cavity, 22 were incomplete with cavity, and 162 were incomplete without cavity. In terms of bacteriology and extent of disease (1, 2, or 3), 577 were negative with extent 1, 51 were negative with extent 2, 20 were negative with extent 3, 1212 were positive with extent 1, 631 were positive with extent 2, 302 were positive with extent 3, 164 were incomplete with extent 1, 15 were complete with extent 2, and 5 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 2009

Code	Classification	Total
010	Primary Tuberculosis Infection	13
011	Pulmonary Tuberculosis	2755
012	Other Respiratory Tuberculosis	209
013	Tuberculosis of Meninges	25
014	Tuberculosis of Intestines	54
015	Tuberculosis of Bones & Joints	30
016	Tuberculosis of Genito-urinary System	34
017	Tuberculosis of Other Organs	317
018	Miliary Tuberculosis	30
137	Late effects of Tuberculosis	1444
160-165	Malignant Neoplasm of Respiratory System	319
212	Benign Neoplasm of Respiratory System	1
460-466	Acute Respiratory Infection	1270
470-478	Other Diseases of Upper Resp Tract	57
480-486	Pneumonia	1110
487	Influenza	2
490-491	Bronchitis, (not specified as acute or chronic) & chronic brochitis	2777
492	Emphysema	31
493	Asthma	133
494	Bronchiectasis	276
495-496	Others	208
501	Asbestosis	0
502	Silicosis	4
505	Pneumoconiosis, unspecified	0
506-508	Others	1
510	Empyema	7
511	Pleurisy	91
512	Pneumothorax	20
513-519	Other Diseases of Respiratory System	308
786	Unknown	2140
V71	N.S.D.	1451
	Diseases Other than TB & Resp System	5560
Total		20677

Appendix 19 (a)

Extent of Active Respiratory TB in First Attenders at Chest Clinics

2007-2009

Extent *	2007		2008		2009	
	No.	%	No.	%	No.	%
1. Minimal	1965	62.5	1923	64.1	1953	65.6
2. Moderate	778	24.8	705	23.5	697	23.4
3. Extensive	400	12.7	373	12.4	327	11.0
Total	3143	100.0	3001	100.0	2977	100.0
No. of first attenders	24625		24012		21592	
% of active TB	12.8		12.5		13.8	

- * 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 2009

	Number	%
Smear +	1266	42.5
Smear - Culture +	787	26.4
Smear - Culture -	701	23.5
Incomplete	223	7.5
Total	2977	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 2009 (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	6.98	4.65	6.98	2.33	0.00	0.00	9.30	43
	Previously treated cases	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Overall	0.00	0.00	6.98	4.65	6.98	2.33	0.00	0.00	9.30	43
20 - 39	New cases	0.94	3.46	7.86	11.32	9.75	2.20	2.83	3.46	14.78	318
	Previously treated cases	6.67	6.67	6.67	6.67	0.00	0.00	6.67	6.67	6.67	15
	Overall	1.20	3.60	7.81	11.11	9.31	2.10	3.00	3.60	14.41	333
40 - 59	New cases	0.00	0.53	3.97	9.26	8.20	2.38	0.26	0.26	10.85	378
	Previously treated cases	0.00	0.00	8.70	17.39	26.09	0.00	0.00	0.00	26.09	23
	Overall	0.00	0.48	4.05	9.29	8.81	2.14	0.24	0.24	11.19	420
60 up	New cases	0.00	0.18	3.39	6.96	8.39	1.07	0.00	0.00	9.46	560
	Previously treated cases	0.00	0.54	10.22	20.97	25.27	3.23	0.00	0.00	28.49	186
	Overall	0.00	0.30	3.51	7.62	8.84	1.07	0.15	0.15	10.06	656
All	New cases	0.23	1.08	4.77	8.62	8.62	1.77	0.77	0.92	11.16	1299
	Previously treated cases	0.65	1.31	4.58	10.46	11.11	0.65	1.31	1.31	13.07	153
	Overall	0.28	1.10	4.75	8.82	8.88	1.65	0.83	0.96	11.36	1452

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 2009:

	New case		Previously treated cases		Combined	
	N	%	N	%	N	%
Total number of strains tested	1299	100	153	100	1452	100
Susceptible to all 4 drugs	1154	88.84	133	86.93	1287	88.64
Any resistance	145	11.16	20	13.07	165	11.36
H	62	4.77	7	4.58	69	4.75
R	14	1.08	2	1.31	16	1.10
E	3	0.23	1	0.65	4	0.28
S	112	8.62	16	10.46	128	8.82
Monoresistance	112	8.62	17	11.11	129	8.88
H	29	2.23	4	2.61	33	2.27
R	2	0.15	0	0.00	2	0.14
E	0	0.00	0	0.00	0	0.00
S	81	6.24	13	8.50	94	6.47
Multidrug resistance	12	0.92	2	1.31	14	0.96
H+R	2	0.15	0	0.00	2	0.14
H+R+E	0	0.00	0	0.00	0	0.00
H+R+S	7	0.54	1	0.65	8	0.55
H+R+E+S	3	0.23	1	0.65	4	0.28
Other patterns	21	1.62	1	0.65	22	1.52
H+E	0	0.00	0	0.00	0	0.00
H+S	21	1.62	1	0.65	22	1.52
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	0	0.00	0	0.00	0	0.00
R+E+S	0	0.00	0	0.00	0	0.00
E+S	0	0.00	0	0.00	0	0.00
Number of drugs resistant to:						
0 drug	1154	88.84	133	86.93	1287	88.64
1 drug	112	8.62	17	11.11	129	8.88
2 drugs	23	1.77	1	0.65	24	1.65
3 drugs	7	0.54	1	0.65	8	0.55
4 drugs	3	0.23	1	0.65	4	0.28

APPENDIX 19 (c1)

Rate of Drug-resistant Tuberculosis

Among cases (mainly cases seen at chest clinics) registered during the period January to December 2008 (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	2.17	5.43	5.43	1.09	0.00	0.00	6.52	92
	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	0.00	2.15	5.38	5.38	1.08	0.00	0.00	6.45	93
20 - 39	New cases	0.64	1.28	4.63	7.99	8.79	1.76	0.64	0.48	11.18	626
	Previously treated cases	15.15	18.18	24.24	15.15	6.06	12.12	12.12	12.12	30.30	33
	Overall	1.37	2.12	5.61	8.35	8.65	2.28	1.21	1.06	12.14	659
40 - 59	New cases	0.51	0.89	4.58	7.38	7.38	2.16	0.51	0.38	10.05	786
	Previously treated cases	3.41	3.41	10.23	13.64	11.36	5.68	2.27	3.41	19.32	88
	Overall	0.80	1.14	5.15	8.01	7.78	2.52	0.69	0.69	10.98	874
60 up	New cases	0.35	0.17	4.16	6.07	6.07	1.91	0.26	0.17	8.24	1153
	Previously treated cases	0.46	1.38	7.80	6.42	9.17	1.83	0.92	1.38	11.93	218
	Overall	0.36	0.36	4.74	6.13	6.56	1.90	0.36	0.36	8.83	1371
All	New cases	0.45	0.64	4.33	6.89	7.08	1.92	0.41	0.30	9.41	2657
	Previously treated cases	2.65	3.53	10.00	9.12	9.41	3.82	2.35	2.94	15.59	340
	Overall	0.70	0.97	4.97	7.14	7.34	2.14	0.63	0.60	10.11	2997

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 2008:

	New case		Previously treated cases		Combined	
	N	%	N	%	N	%
Total number of strains tested	2657	100	340	100	2997	100
Susceptible to all 4 drugs	2407	90.59	287	84.41	2694	89.89
Any resistance	250	9.41	53	15.59	303	10.11
H	115	4.33	34	10.00	149	4.97
R	17	0.64	12	3.53	29	0.97
E	12	0.45	9	2.65	21	0.70
S	183	6.89	31	9.12	214	7.14
Monoresistance	188	7.08	32	9.41	220	7.34
H	55	2.07	15	4.41	70	2.34
R	7	0.26	0	0.00	7	0.23
E	1	0.04	0	0.00	1	0.03
S	125	4.70	17	5.00	142	4.74
Multidrug resistance	8	0.30	10	2.94	18	0.60
H+R	1	0.04	2	0.59	3	0.10
H+R+E	0	0.00	2	0.59	2	0.07
H+R+S	3	0.11	2	0.59	5	0.17
H+R+E+S	4	0.15	4	1.18	8	0.27
Other patterns	54	2.03	11	3.24	65	2.17
H+E	3	0.11	1	0.29	4	0.13
H+S	47	1.77	8	2.35	55	1.84
H+E+S	2	0.08	0	0.00	2	0.07
R+E	0	0.00	2	0.59	2	0.07
R+S	0	0.00	0	0.00	0	0.00
R+E+S	2	0.08	0	0.00	2	0.07
E+S	0	0.00	0	0.00	0	0.00
Number of drugs resistant to:						
0 drug	2407	90.59	287	84.41	2694	89.89
1 drug	188	7.08	32	9.41	220	7.34
2 drugs	51	1.92	13	3.82	64	2.14
3 drugs	7	0.26	4	1.18	11	0.37
4 drugs	4	0.15	4	1.18	8	0.27

Appendix 19 (d)

Trend of anti-TB drug resistance (1998-2009) (Data from Programme Forms)

New cases

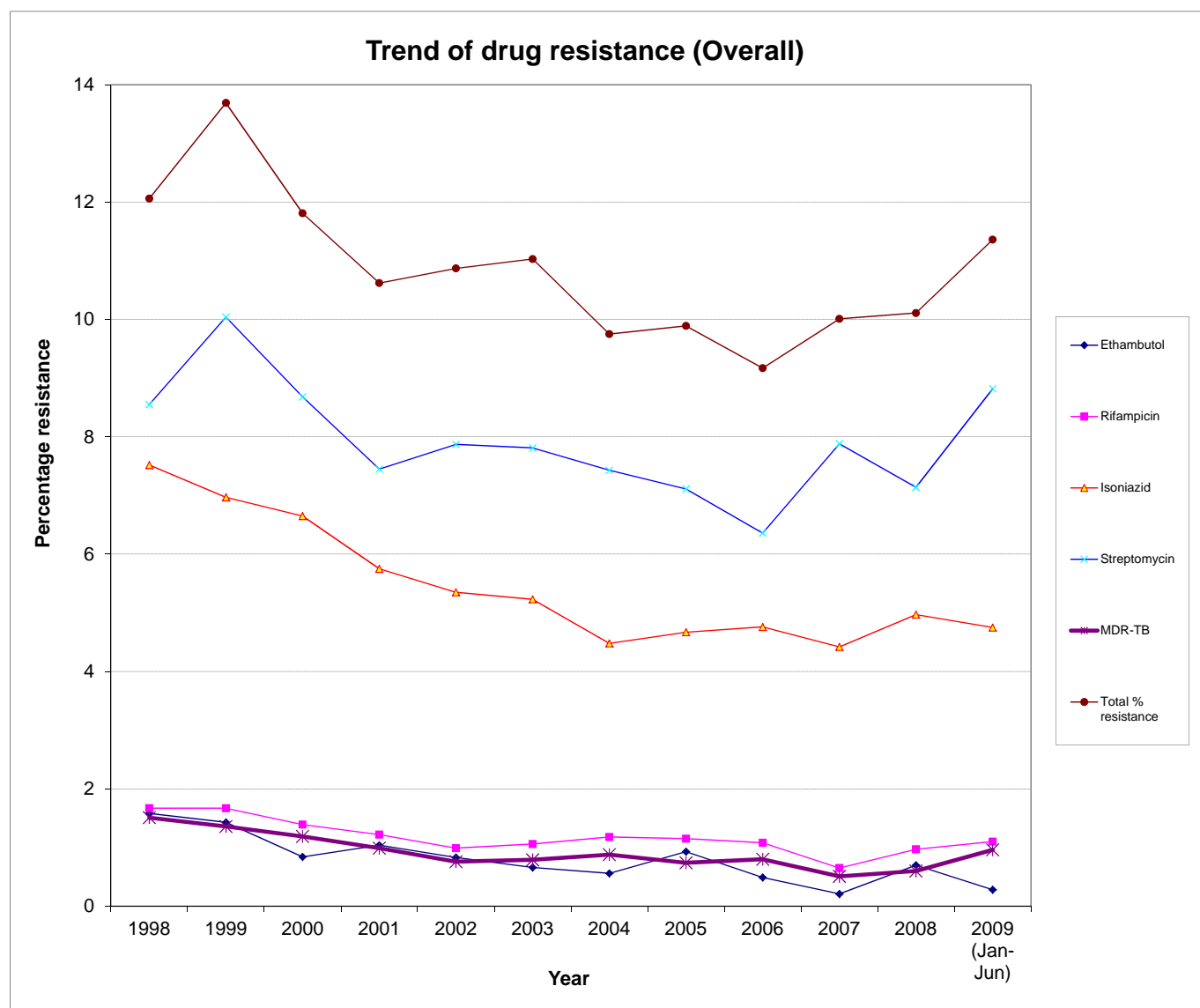
(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 (Jan-Jun)
Ethambutol	1.24	1.11	0.54	0.96	0.65	0.42	0.34	0.54	0.35	0.12	0.45	0.23
Rifampicin	1.17	0.97	0.61	0.83	0.46	0.69	0.75	0.83	0.86	0.46	0.64	1.08
Isoniazid	6.78	6.22	5.21	5.02	4.71	4.64	3.65	4.16	4.13	3.79	4.33	4.77
Streptomycin	7.65	9.34	7.78	7.39	7.40	7.59	6.90	6.72	6.00	7.47	6.89	8.62
MDR-TB	1.06	0.75	0.47	0.55	0.34	0.46	0.48	0.51	0.55	0.31	0.30	0.92
Total % resistance	10.89	12.61	10.35	10.39	10.22	10.54	8.84	9.33	8.64	9.32	9.41	11.16

Previously treated cases

(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 (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	0.65
Rifampicin	4.61	6.09	5.98	3.71	4.59	3.41	4.29	3.64	2.90	2.10	3.53	1.31
Isoniazid	11.84	11.51	15.26	11.80	9.69	9.00	10.46	8.68	10.00	9.31	10.00	4.58
Streptomycin	13.82	14.45	13.81	10.96	10.97	9.25	11.26	10.08	9.35	11.11	9.12	10.46
MDR-TB	4.17	5.19	5.36	3.54	3.57	2.92	3.75	2.52	2.90	2.10	2.94	1.31
Total % resistance	18.86	20.32	20.41	16.36	16.58	14.11	16.35	14.29	13.55	15.32	15.59	13.07

Overall

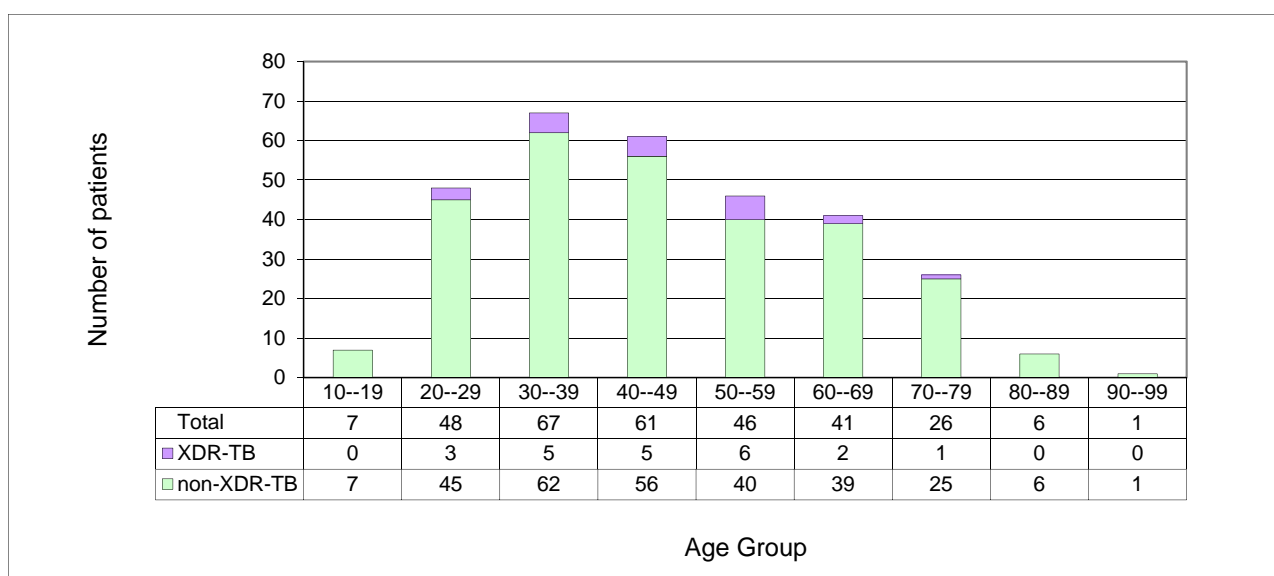
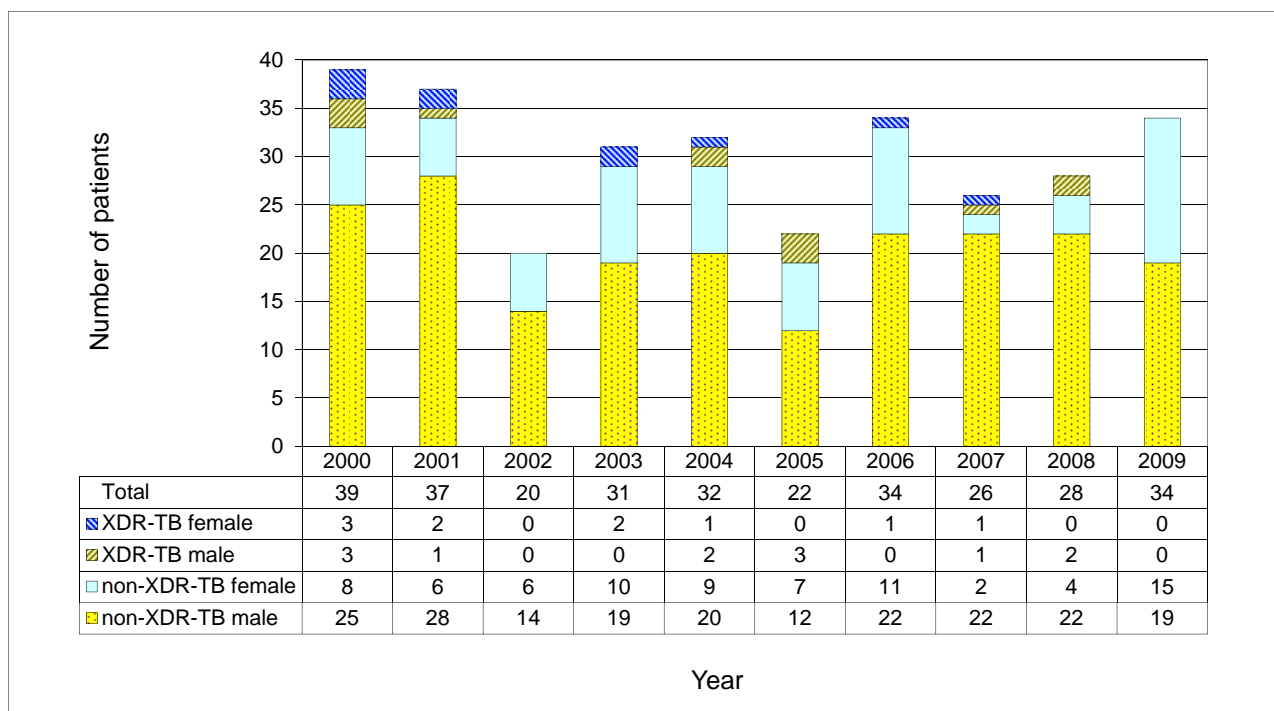
(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 (Jan-Jun)
Ethambutol	1.58	1.43	0.84	1.04	0.83	0.66	0.56	0.93	0.49	0.21	0.70	0.28
Rifampicin	1.67	1.67	1.39	1.22	0.99	1.06	1.18	1.15	1.08	0.65	0.97	1.10
Isoniazid	7.52	6.97	6.65	5.75	5.35	5.23	4.48	4.67	4.76	4.42	4.97	4.75
Streptomycin	8.55	10.04	8.68	7.45	7.87	7.81	7.43	7.11	6.36	7.88	7.14	8.82
MDR-TB	1.51	1.36	1.19	0.99	0.76	0.79	0.88	0.74	0.80	0.51	0.60	0.96
Total % resistance	12.06	13.69	11.81	10.62	10.87	11.03	9.75	9.89	9.17	10.01	10.11	11.36



Appendix 19 (e)

MDR-TB and XDR-TB by Sex and Year (Upper Graph) and by Age (Lower Graph) (2000-2009)

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 2009

Name of Clinic/Hospital	No. put on Rx b/f	Service Regimen																									
		Bought in					Treatment completed				Transfer out to		Interrup	Drop out						Complete defaulter				No. still	Unsup	Incomp	No. def.
		1	2	3	4	5	<6M	at 6M	>6M	%	hosp.	other	Rx	Died	Rx by	Leave	Def.	AMA	<2M	>2M	>3M	%	onRx	Rx	Incomp	No. def.	
		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	177	152	10	11	111	70	15	52	180	88.2	48	14	0	12	1	7	0	4	0	7	0	2.7	191	10	88	0	
Kowloon	263	184	9	6	176	66	18	59	217	85.2	61	48	0	17	3	13	3	6	1	0	8	2.8	250	0	74	3	
South Kwai Chung	292	219	5	11	191	96	19	76	317	89.9	80	9	0	24	0	7	0	7	1	3	2	1.4	269	0	55	0	
Sai Ying Pun	101	71	12	7	89	70	3	46	105	88.8	68	16	0	8	0	4	1	3	0	2	2	2.4	92	0	41	0	
Shaukeiwan	158	104	5	9	101	69	14	56	153	90.9	29	23	0	12	1	7	2	1	0	0	0	0.0	148	0	37	4	
Shek Kip Mei	105	134	14	8	131	76	11	54	150	81.3	55	20	0	17	1	7	4	6	3	9	4	6.4	127	0	74	0	
Tai Po	155	98	0	5	65	28	5	48	113	89.9	7	9	0	11	2	1	0	2	0	0	2	1.1	151	0	0	0	
Wanchai	143	163	17	17	89	89	17	104	130	86.0	65	23	1	3	1	24	0	2	1	5	2	2.9	140	0	22	0	
Yan Oi	184	206	8	18	175	65	19	115	228	86.6	48	25	0	26	1	10	0	3	2	0	11	3.3	168	7	157	0	
Yaumatei	211	142	8	16	130	71	10	55	193	82.1	45	29	0	20	1	9	3	4	7	11	2	6.6	189	1	47	8	
Yuen Chau Kok	159	147	17	15	133	30	3	98	169	88.1	32	19	0	11	0	12	0	8	0	1	4	1.7	144	19	20	0	
Yung Fung Shee	288	193	18	8	160	87	9	123	219	84.7	52	32	0	24	4	9	0	5	3	1	16	5.0	257	9	104	4	
Sub-total	2236	1813	123	131	1551	817	143	886	2174	86.7	590	267	1	185	15	110	13	51	18	39	53	3.1	2126	46	719	19	
Hosp Discharge Clinic																											
East Kowloon	1	0	0	0	0	0	0	0	1	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	
Part Time Clinics																											
Castle Peak	4	2	0	0	1	0	0	1	5	100.0	0	1	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	
Cheung Chau	4	1	0	0	3	2	0	2	2	80.0	0	0	0	0	0	0	0	1	0	0	0	0.0	5	0	7	0	
Sai Kung	12	3	1	0	9	2	0	3	5	57.1	3	0	0	0	0	4	0	2	0	0	0	0.0	10	0	0	0	
Sheung Shui	123	79	0	3	76	29	3	37	80	84.2	28	11	0	4	1	1	1	4	1	0	11	8.6	128	0	136	0	
Tung Chung	26	7	1	0	18	5	1	11	22	97.1	2	3	0	0	0	1	0	0	0	0	0	0.0	17	0	0	0	
Yuen Long	128	94	7	2	93	33	5	34	97	78.9	26	12	0	18	3	2	1	2	0	0	10	6.0	147	0	124	0	
Sub-total	297	186	9	5	200	71	9	88	211	82.1	59	27	0	22	4	8	2	9	1	0	21	6.0	307	0	267	0	
Institutions Correctional Services Dept																											
Hei Ling Chau	3	2	13	0	0	0	0	1	1	100.0	1	11	0	0	0	0	0	0	0	0	0	0.0	4	0	0	0	
Stanley Prison	15	0	0	0	0	0	4	1	0	100.0	0	9	0	0	0	0	0	0	0	0	0	0.0	1	0	0	0	
Shek Pik Prison	17	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	17	0	0	0	
Sub-total	35	2	13	0	0	0	4	2	1	100.0	1	20	0	0	0	0	0	0	0	0	0	0.0	22	0	0	0	
Total	2569	2001	145	136	1751	888	156	976	2387	86.3	650	314	1	207	19	118	15	60	19	39	74	3.4	2455	46	986	19	

Appendix 20 (b)
Treatment Return 2009

Name of Clinic/Hospital	No. put on Rx b/f	Other Regimen																									
		Bought in					Treatment completed				Transfer out to		Interrup	Died	Drop out				Complete defaulter				No. still onRx	Unsup Rx	Incomp super. Rx	No. def. >2M <3M	
		1	2	3	4	5	<6M	at6M	>6M	%	hosp.	other cc	Rx temp		Rx by GP	Leave HK	Def. >1x	AMA	<2M	>2M <3M	>3M	%	onRx c/f	Rx	super. Rx	>2M <3M	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
<u>Full Time Clinics</u>																											
East Kowloon	71	10	3	6	45	18	3	6	52	81.7	13	3	0	10	0	0	0	1	0	2	0	2.8	63	7	37	0	
Kowloon	45	12	2	1	28	15	2	5	31	78.3	10	5	0	7	0	1	0	1	0	0	1	2.2	40	0	16	0	
South Kwai Chung	72	4	2	4	40	15	0	2	26	66.7	17	1	0	13	0	0	0	0	0	1	0	2.4	77	0	15	0	
Sai Ying Pun	38	2	1	0	35	14	1	2	22	80.0	22	1	0	5	0	1	0	0	0	0	0	0.0	36	0	14	0	
Shaukeiwan	36	10	1	2	20	18	1	1	33	85.0	14	1	0	5	0	0	0	0	1	0	0	2.5	31	0	9	0	
Shek Kip Mei	92	3	2	3	35	1	1	1	22	71.9	8	5	0	7	0	0	0	0	1	0	1	6.3	90	2	12	0	
Tai Po	19	5	0	1	21	6	0	2	11	56.5	4	0	1	6	3	0	0	0	0	0	1	4.3	24	0	0	0	
Wanchai	43	13	3	5	28	15	4	11	30	85.4	13	3	0	3	1	1	0	0	0	2	0	4.2	39	0	16	0	
Yan Oi	106	1	0	2	15	5	1	0	11	78.6	6	1	0	2	0	0	0	0	0	0	1	7.1	107	0	8	0	
Yaumatei	37	12	6	7	24	17	1	3	33	73.5	13	6	0	6	1	3	1	0	0	2	1	6.1	33	0	15	3	
Yuen Chau Kok	50	9	2	2	16	1	3	1	28	96.7	5	1	0	1	0	0	0	0	0	0	0	0.0	41	6	8	0	
Yung Fung Shee	20	15	3	2	19	8	5	3	23	96.3	7	3	1	1	0	0	0	0	0	0	0	0.0	24	2	14	0	
Sub-total	629	96	25	35	326	133	22	37	322	79.4	132	30	2	66	5	6	1	2	2	7	5	3.1	605	17	164	3	
<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	
<u>Part Time Clinics</u>																											
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	
Cheung Chau	1	0	0	0	2	1	0	1	1	100.0	1	0	0	0	0	0	0	0	0	0	0	0.0	1	0	1	0	
Sai Kung	0	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	
Sheung Shui	5	3	2	1	6	2	2	0	3	75.0	2	0	0	0	1	0	2	0	0	0	0	0.0	9	0	13	1	
Tung Chung	1	1	0	2	2	0	1	1	2	75.0	0	0	0	1	0	0	0	0	0	0	0	0.0	1	0	0	0	
Yuen Long	8	7	0	0	8	2	2	2	5	77.8	2	1	0	1	0	0	0	0	0	0	1	11.1	11	0	6	0	
Sub-total	15	12	2	3	18	5	5	4	11	75.0	5	1	0	3	1	0	2	0	0	0	1	5.0	22	0	20	1	
<u>Institutions Correctional Services Dept</u>																											
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	
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	
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	
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	
Total	644	108	27	38	344	138	27	41	333	79.2	137	31	2	69	6	6	3	2	2	7	6	3.2	627	17	184	4	

APPENDIX 20 (c)

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

Disease	Hospital	Service regimen / Other regimens *																								
		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
											hospi- tal	other cc			Rx by GP	Leave HK	Def. >1x	AMA	<2M	>2M, <3M	>3M	%				
A	B*	C*	D*	E*	F*	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	

* 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) % = (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.)

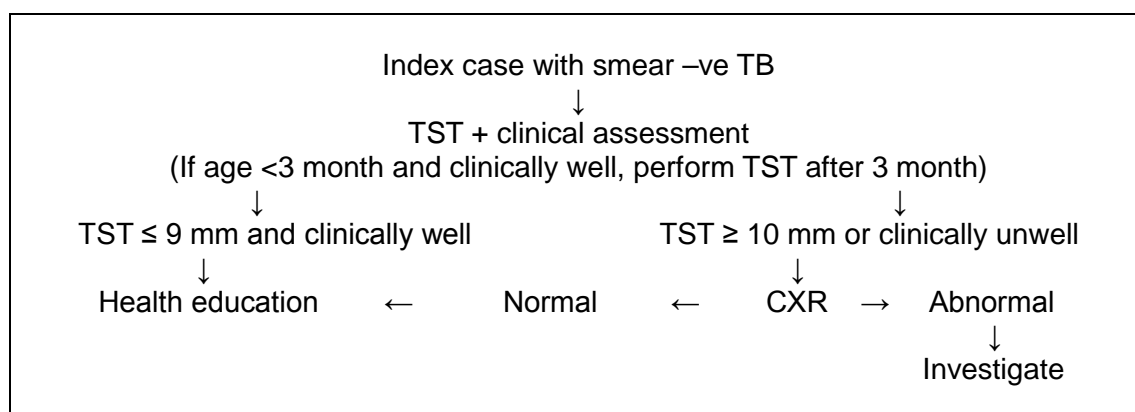
This item needs to be counted only on the last working day of the month when completing the monthly treatment return.

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.

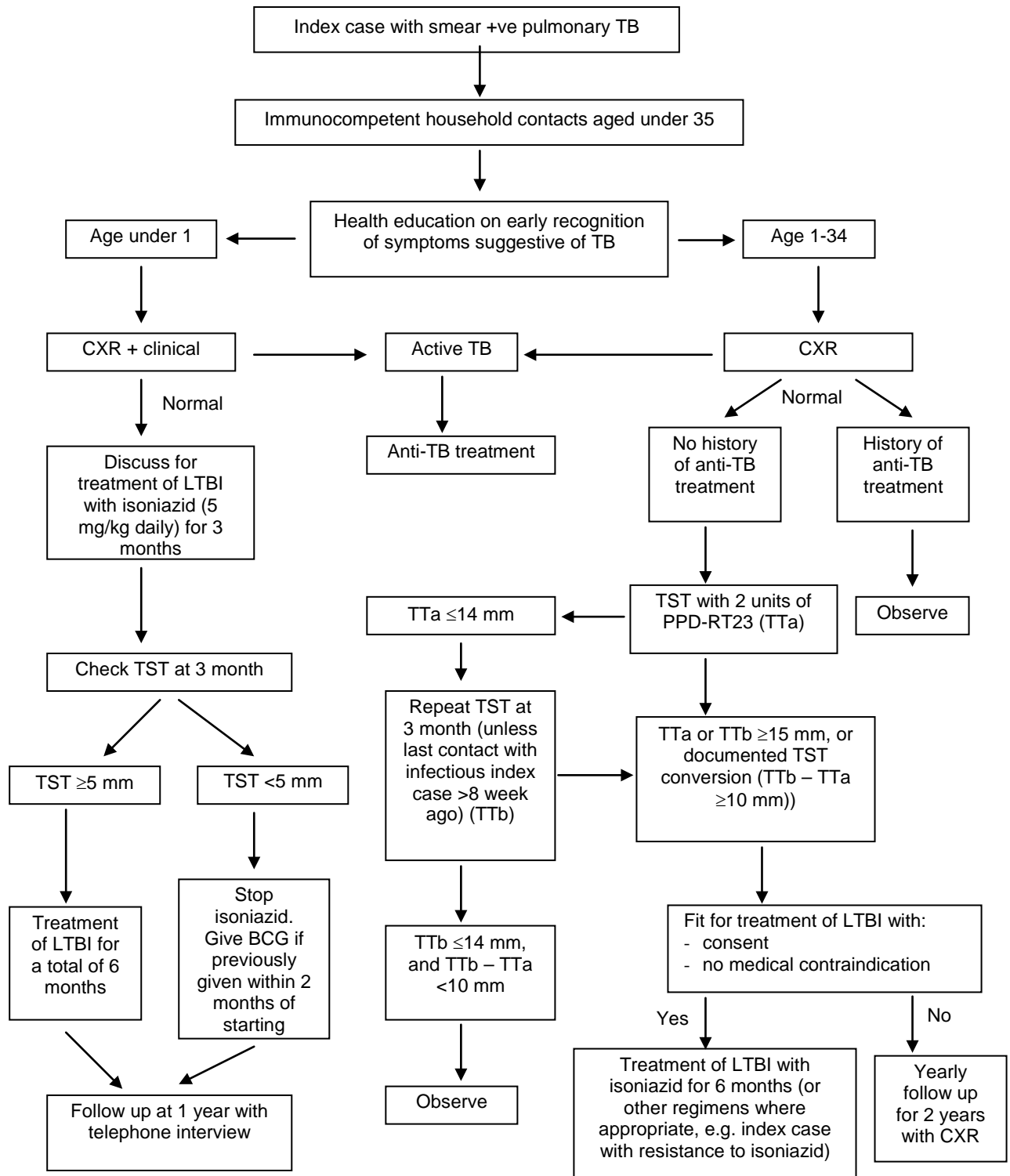
Flow chart for contact investigation of close contacts aged below 5 with smear negative index case *



* 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 2009

Particulars	Smear Positive Index Cases	Smear Negative Index Cases	Total
No. of patients (new & old) listed	1455	3643	5098
No. of contacts listed	3797	9384	13181
Number of contacts x-rayed	3805 (100.00%)	9489 (100.00%)	13294 (100.00%)
<u>Results</u>			
(a) NSD & Unknown	3338 (87.73%)	8257 (87.02%)	11595 (87.22%)
(b) Disease other than TB	275 (7.23%)	893 (9.41%)	1168 (8.79%)
(c) Inactive respiratory TB	98 (2.58%)	209 (2.20%)	307 (2.31%)
(d) Active respiratory TB			
(radiologically)	37 (0.97%)	31 (0.33%)	68 (0.51%)
A (bacteriologically)	16 (0.42%)	14 (0.15%)	30 (0.23%)
B (incomplete)	1 (0.03%)	18 (0.19%)	19 (0.14%)
(e) Non-respiratory TB	10 (0.26%)	8 (0.08%)	18 (0.14%)
(f) Result not yet known	30 (0.79%)	59 (0.62%)	89 (0.67%)

APPENDIX 22 (a)

Scheme for BCG Administration in Hong Kong, 2009

<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 2009

Institution		No. of Live-births	BCG Vaccination	% Vaccinated
Hospital under HA management	P.Y. Nethersole East	3624	3601	99.4
	Queen Mary	3928	3858	98.2
Private Hospital	Canossa	1951	1929	98.9
	H.K. Adventist	1228	1215	98.9
	H.K. Sanatorium	2075	2064	99.5
	Matilda International	1191	1041	87.4
	St. Paul's	3997	3951	98.8
Total (HK Island)		17994	17659	98.1
Hospital under HA management	Kwong Wah	5760	5722	99.3
	Queen Elizabeth	5871	6016	102.5 *
	United Christian	4990	4978	99.8
Private Hospital	H.K. Baptist	13034	12773	98.0
	St. Teresa's	7767	7642	98.4
	Precious Blood	342	330	96.5
Total (Kowloon)		37764	37461	99.2
Hospital under HA management	Alice H.M.L. Nethersole	-	-	-
	Prince of Wales	6577	6637	100.9 *
	Princess Margaret	4684	4717	100.7 *
	Tuen Mun	5733	5738	100.1 *
Private Hospital	T.W. Adventist	2515	2486	98.8
	Shatin Int'l Medical Ctr Union	6835	6732	98.5
Total (NT Areas)		26344	26310	99.9
Mother & Child Health Centre		-	288	-
Grand Total		82102	81718	99.5

Note: * Including vaccinations of live births transferred from other maternity institutions and vaccinations of live births at end of 2008

Vaccination Method 2008	Percentage
Intradermal	100.0
Percutaneous	0.0

APPENDIX 23

TB Beds in Public Services, 2009

Hospital		No. of TB Beds
Hospital Authority	Grantham Hospital	154
	Kowloon Hospital	114
	Ruttonjee Hospital	153
	Haven of Hope Hospital	127
	Wong Tai Sin Hospital	82
	Total (Hospital Authority)	630
Custody	Stanley Prison Hospital	20
Grand Total (2009)		650
Grand Total (2008)		656
Grand Total (2007)		659

APPENDIX 24

Annual Admissions to Hospitals from Government Chest Clinics 1998 - 2009

Year	Total Admissions
1998	4709
1999	5012
2000	5408
2001	5317
2002	5183
2003	4603
2004	4986
2005	4435
2006	4571
2007	4038
2008	3170
2009	3345

Admissions by Clinic	Year 2009
East Kowloon	236
Kowloon	241
Sai Ying Pun	369
Shaukeiwan	248
Shaukeiwan Pneumoconiosis	59
Shek Kip Mei	257
South Kwai Chung	404
Tai Po	56
Tung Chung	23
Wanchai	224
Yan Oi	367
Yaumatei	228
Yuen Chau Kok	189
Yung Fung Shee	273
Cheung Chau	5
NT Unit	166
Total	3345

APPENDIX 25

HIV Surveillance Among TB Patients

Voluntary HIV Antibody Testing Among TB Patients in Government Chest Clinics (2005 – 2009)

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%

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 – 2009)

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

'Confirmed' Cases of TB in Health Care Staff Notified
to Labour Department (2009) by Age and Job Title

Age Group	Doctor	Nurse	Other Allied Health Professional	Other Supporting Staff	Total
20 – 24		1			1
25 – 29		2	1	1	4
30 – 34		1			1
35 – 39		2			2
40 – 44			2	2	4
45 – 49		1	1		2
50 – 54		2		1	3
55 – 59				1	1
60 – 64					
Total	0	9	4	5	18

Appendix 27
Cohorts of TB Patients

Treatment outcomes for TB cases (including both HIV-negative and HIV-positive cases) registered in 2008 calendar year (number of patients)

	Total number of cases registered	Cured	Completed	Died	Failed	Defaulted	Not evaluated
New pulmonary smear-positive	1448	841	147	247	0	53	160
New pulmonary smear-negative and extrapulmonary (or smear unknown/not done)	3661	-	2514	651	1	160	335
Re-treatment	526	112	237	71	0	24	82

- 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 1448, including 1173 cases under DOTS and 275 cases under non-DOTS. Among the 1173 DOTS cases, 921 had treatment completed at 12 month, representing a treatment success rate of 78.52% 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 68.23% [(841+147)/1448].

Treatment outcomes for HIV-positive TB cases registered in 2008 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)	15	9	0	1	0	1	4
New pulmonary smear-negative and extrapulmonary (or smear unknown/not done)	28	-	21	0	0	4	3
Re-treatment	5	1	0	1	0	2	1

NB: Overall treatment success rate (at 12 month from DOS) for new cases = 69.77% [(9+21)/(15+28)]

Final treatment outcomes for MDR-TB cases registered in 2007 calendar year (number of patients)

	Total number of cases registered	Cured	Completed	Died	Failed	Defaulted	Still on treatment	Not evaluated
New cases	20	12	0	0	0	1	2	5
Re-treatment cases	6	4	0	0	0	0	1	1
Other cases	0	0	0	0	0	0	0	0

NB: Treatment success rate (at completion or cessation of drug treatment) for new cases = 60.00% (12/20). Treatment success rate for re-treatment cases = 66.67% (4/6).

Part 2

PNEUMOCONIOSIS

Part 2 - Pneumoconiosis: Contents

Appendix
No.

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APPENDIX 1

**New Cases of Suspected Pneumoconiosis attending
the Pneumoconiosis Clinic in Hong Kong 1956 - 2009**

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 (c) (5)	8475	1494 (d)	4456

- 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 108 of the 167 cases in 2009 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 108 cases.
 - (d) Under Revised Ordinance 1993 : 584 out of 1494 pneumoconiotics had joined the pneumoconiosis ex-gratia scheme up to the year 2009. 151 living pneumoconiotics were each receiving a monthly ex-gratia payment of \$4710.00 in 2009.

APPENDIX 2

Age Distribution of Pneumoconiosis Cases 2009

Age	Number of Cases	%
25 - 29	-	-
30 - 34	-	-
35 - 39	1	1
40 - 44	-	-
45 - 49	2	2
50 - 54	15	14
55 - 59	21	19
60 - 64	17	16
65 - 69	16	16
70 - 74	17	16
75+	19	17
Total	108	100

APPENDIX 3

Occupation Distribution of Confirmed Pneumoconiosis 2009

Type of Occupation	Number of Cases	%
Construction	68	63
Construction/Quarry	3	3
Others	37	34
Total	108	100

APPENDIX 4

Pneumoconiosis Patients by Duration of Exposure to Dust 2009

Duration	Number of Cases	%
<5 years	3	3
5 - 9	3	3
10 - 14	4	4
15 - 19	6	6
20 - 24	23	21
25 - 29	19	17
30+	36	33
Unknown	14	13
Total	108	100

APPENDIX 5

Pneumoconiosis Patients by Degree of Incapacity 2009

Degree of Incapacity (%)	No. of New Cases Compensated under Compensation Ordinance
5	39
10	31
15	6
20	4
25	4
30	-
35	1
40	1
45	2
50	-
55	-
60	-
70	2
75	-
80	1
100	3
N. A.	14
Total	108

APPENDIX 6

Confirmed Pneumoconiosis Patients Classified by Radiological Appearance 2009

Type of Opacity	Profusion			Sub-Total
	1	2	3	
<u>Small opacities</u>				
<u>Rounded</u>				
p (up to 1.5 mm diameter)	28	1	-	29
q (1.5 to 3.0 mm diameter)	44	4	-	48
r (3.0 to 10.0 mm diameter)	2	-	-	2
<u>Irregular</u>				
s (fine irregular or linear)	3	-	-	3
t (medium irregular)	4	-	-	4
u (coarse irregular)	-	-	-	-
Sub-total	81	5	-	86
<u>Combined opacities</u>				
	-	-	-	-
<u>N. A.</u>	-	-	-	22
Total				108

8 out of the 108 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)	4
B (Single or multiple opacities with combined area < the equivalent of right upper zone)	3
C (Single or multiple opacities with combined area > the equivalent of right upper zone)	1
Total	8

Appendix 7

Pneumoconiosis Patients with Tuberculosis 2009

Type of T.B.	Number of Cases	%
Bacteriological Positive	28	26
Bacteriological Negative	48	44
No T.B.	18	17
N.A.	14	13
Total	108	100

Appendix 8

Confirmed Pneumoconiosis Patients by Other Particulars 2009

Characteristics		Number of Cases	%
Smoking	Smoker/Ex-smoker	81	75
	Non-smoker	13	12
	Unknown	14	13
	Total	108	100
Still exposed to dust when seen by the Pneumoconiosis Clinic	Yes	21	19
	No	73	68
	Unknown	14	13
	Total	108	100
General Condition	Good	75	69
	Fair	19	18
	Poor	-	-
	Died	14	13
	Total	108	100

Part 3

ANNEX

Part 3 – Annex: Contents

Annex No.

- 1(a) Treatment Outcomes up to 2 year of the 2006 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 (2005-2009)
- 2(c) TB Notification and Rates (All Cases) by Age & Sex (2005-2009)
- 3 Trend of Age-specific TB Notification Rates (1970-2009)
- 4(a) TB-HIV Registry
- 4(b) TB-HIV Registry
- 4(c) TB-HIV Registry
- 4(d) TB-HIV Registry
- 5 HBsAg Seroprevalence Survey Among TB Patients Seen At Chest Clinics
- 6 Crude and Standardised Death Rate and Notification Rate 1981-2009

Annex 1 (a)

Treatment Outcomes up to 2 year of the 2006 Cohort of TB Patients

A total of 5766 cases of TB were notified in the year 2006. Among them, 4611 were ever seen at chest clinics (ES) while 1155 were never seen at chest clinics (NS). They are categorised as follows:

Categories	ES	%	NS	%	ES/NS	%
(A) New pulmonary, smear positive	1165	25.3	264	22.9	1429	24.8
(B) New pulmonary, smear negative	2239	48.6	520	45.0	2759	47.8
(C) New pulmonary, smear not done/unknown	141	3.1	117	10.1	258	4.5
(D) New extra-pulmonary	550	11.9	146	12.6	696	12.1
(E) Relapse pulmonary, smear positive	139	3.0	33	2.9	172	3.0
(F) Pulmonary smear-positive retreatment after failure or default	11	0.2	2	0.2	13	0.2
(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)]	366	7.9	73	6.3	439	7.6
Total	4611	100.0	1155	100.0	5766	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
Annex 1 (e)	Treatment defaulters (outcome at 2 year = defaulting) for ES/NS (cases ever or never seen at chest clinics) - sheet 01 to 05
Annex 1 (f)	Sources completing Programme Forms PFA, PFB1, PFB2, PFC, and PFD

Annex 1 (g)	Sample of the set of "Programme Forms" (PFA, PFB1, PFB2, PFC, and PFD) used for the cohort of patients in 2006
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Discussion

Annex 1 (b) – Various age groups

Among the total of 5766 patients, 203 (3.5%) were aged between 0 and 19, 1344 (23.3%) between 20 and 39, 1590 (27.6%) between 40 and 59, and 2629 (45.6%) above 60. 65.2% were male. 38.8%, 25.0%, and 17.5% were never smokers, ex-smokers, and current smokers respectively. 78.8% were permanent local residents while 79.4% were of Chinese ethnicity. Most of them (71.6%) presented because of symptoms. 11.7% presented as incidental finding to pre-employment, pre-immigration, other body check or incidental to other illness, while 1.7% were diagnosed through contact tracing.

74.1% of patients had pulmonary TB, 12.9% had extra-pulmonary TB and 13.0% had both. TB pleura and TB lymph node accounted for 9.6% and 7.8% of the site of involvement respectively. Among pulmonary TB patients, 35.0% had pretreatment sputum smear +ve, 70.0% had pretreatment culture +ve and 15.8% had cavitory lesion on their chest radiographs.

With regard to co-morbidity factors for TB, 11.6% of TB patients had diabetes mellitus, 5.1% of patients had coexisting malignancy, 0.76% of patients were immuno-suppressed because of either steroid or cytotoxic therapy. HIV infection was reported for 0.7% of cases. 4.4% of all TB patients were reported to be hepatitis B carrier while 0.4% had chronic active hepatitis.

61.6% of patients were on 6 months short course chemotherapy for TB or other standard regimen based on HREZS. Treatment side effect was reported in 42.2% of patients. 14.9% were GI side effects, 13.3% were skin rash, 4.1% had transient rise in liver enzyme and 7.7% had frank hepatitis.

Among the 4611 patients ever seen in chest clinic, 76.0% received >90% DOT in initial 2 months, while 64.7% received >90% DOT in subsequent 4 months. Treatment completion/cure rates at 6 months, 12 months and 24 months were: 28.6%, 77.3% and 86.6% respectively. Death rates at corresponding periods were 3.6%, 5.1% and 5.4% respectively.

Among the 1155 patients never seen in chest clinic, 1.8% received >90% DOT in initial 2 months, while 1.6% received >90% DOT in subsequent 4 months. Treatment completion/cure rates at 6 months, 12 months and 24 months were: 6.1%, 7.6% and 8.1% respectively. Death rates at corresponding periods were 3.4%, 3.5% and 3.6% 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, 1614 were pretreatment smear +ve, 3515 were pretreatment culture +ve, and 19 were MDR-TB patients.

In the initial 2 months, over 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 84.2% for smear +ve patients and 77.8% for MDRTB patients. Culture conversion rate at 2 months were 87.1% for culture +ve patients and 55.6% for MDR-TB patients.

Treatment success rates for smear +ve patients at 6 months, 12 months and 24 months were 18.6%, 64.3% and 72.7% respectively. Those for culture +ve patients were 23.4%, 61.6% and 69.2% respectively. Those for MDR-TB patients were 5.3%, 5.3% and 63.2% respectively. 3 out of 19 (15.8%) 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 20.2%, 64.7% and 73.0% respectively. The corresponding treatment success rates for retreatment pulmonary smear +ve patients were 6.5%, 61.6% and 70.8% respectively.

Annex 1 (e) – Treatment defaulters

There were 195 treatment defaulters at 24 months in the 2006 cohort. Most (58.5%) were aged between 20 to 59, 29.2% worked full time, 2.6% part time, 26.7% retired, and 29.2% unemployed. 80.5% were new case, 13.3% were relapse, 6.2% were retreatment after default cases, and 0.0% were retreatment after failure of previous treatment cases. 36.0% had pretreatment smear +ve and 22.1% had cavitory lesions on the chest radiograph. 63.1% of patients lost contact after default and 13.8% 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	97	47.8	728	54.2	513	32.3	669	25.4	2007	34.8
Male	106	52.2	616	45.8	1077	67.7	1960	74.6	3759	65.2
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Marital status

Single	173	85.2	680	50.6	171	10.8	115	4.4	1139	19.8
Married	0	0.0	475	35.3	1136	71.4	1795	68.3	3406	59.1
Separated	0	0.0	12	0.9	14	0.9	10	0.4	36	0.6
Divorce	0	0.0	24	1.8	75	4.7	24	0.9	123	2.1
Widowed	0	0.0	3	0.2	10	0.6	114	4.3	127	2.2
Not recorded	30	14.8	150	11.2	184	11.6	571	21.7	935	16.2
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Smoking status

Never	138	68.0	749	55.7	633	39.8	719	27.3	2239	38.8
Ex-smoker	15	7.4	170	12.6	319	20.1	935	35.6	1439	25.0
Current smoker	15	7.4	245	18.2	422	26.5	325	12.4	1007	17.5
Not recorded	35	17.2	180	13.4	216	13.6	650	24.7	1081	18.7
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Institution-related

Yes	160	78.8	191	14.2	118	7.4	440	16.7	909	15.8
No	35	17.2	1022	76.0	1308	82.3	1749	66.5	4114	71.3
Not recorded	8	3.9	131	9.7	164	10.3	440	16.7	743	12.9
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Institution

Client	104	-	102	-	52	-	283	-	541	-
Staff	1	-	40	-	24	-	2	-	67	-

Institution type

Old age home	48	-	22	-	14	-	286	-	370	-
School	111	-	89	-	28	-	124	-	352	-
Hospital	1	-	16	-	12	-	4	-	33	-
Handicapped	0	-	14	-	14	-	5	-	33	-
Prison	0	-	36	-	26	-	3	-	65	-
Others	0	-	6	-	18	-	4	-	28	-

Living situation

Street-sleeper	0	0.0	2	0.1	4	0.3	6	0.2	12	0.2
Cubicle bed space	0	0.0	1	0.1	3	0.2	17	0.6	21	0.4
Institution	0	0.0	47	3.5	61	3.8	294	11.2	402	7.0
Work quarter	0	0.0	50	3.7	9	0.6	4	0.2	63	1.1
Alone (not above)	0	0.0	97	7.2	157	9.9	258	9.8	512	8.9
With friends	2	1.0	51	3.8	21	1.3	25	1.0	99	1.7
With family	172	84.7	937	69.7	1154	72.6	1488	56.6	3751	65.1
Not recorded	29	14.3	159	11.8	181	11.4	537	20.4	906	15.7

Residential status

Permanent resident	155	76.4	958	71.3	1357	85.3	2072	78.8	4542	78.8
Chinese immigrant	14	6.9	66	4.9	25	1.6	15	0.6	120	2.1
Imported worker	0	0.0	144	10.7	28	1.8	5	0.2	177	3.1
Tourist - 2 way permit Chinese	0	0.0	6	0.4	0	0.0	1	0.0	7	0.1
Other tourist	1	0.5	8	0.6	0	0.0	1	0.0	10	0.2
Vietnamese	0	0.0	8	0.6	3	0.2	1	0.0	12	0.2
Illegal immigrants	0	0.0	9	0.7	2	0.1	1	0.0	12	0.2
Not recorded	33	16.3	145	10.8	175	11.0	533	20.3	886	15.4
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	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	118	58.1	697	51.9	748	47.0	347	13.2	1910	33.1
Mainland China	49	24.1	284	21.1	572	36.0	1617	61.5	2522	43.7
Others	5	2.5	228	17.0	96	6.0	103	3.9	432	7.5
Not recorded	31	15.3	135	10.0	174	10.9	562	21.4	902	15.6
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Ethnicity

Chinese	166	81.8	992	73.8	1360	85.5	2087	79.4	4605	79.9
Other Asian	5	2.5	208	15.5	51	3.2	22	0.8	286	5.0
Caucasian	1	0.5	4	0.3	6	0.4	2	0.1	13	0.2
Others	0	0.0	4	0.3	1	0.1	1	0.0	6	0.1
Not recorded	31	15.3	136	10.1	172	10.8	517	19.7	856	14.8
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Previous BCG history

Yes	151	74.4	834	62.1	560	35.2	100	3.8	1645	28.5
No	6	3.0	81	6.0	253	15.9	870	33.1	1210	21.0
Unknown	46	22.7	429	31.9	777	48.9	1659	63.1	2911	50.5
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

BCG scar

Yes	132	-	826	-	534	-	114	-	1606	-
No	34	-	325	-	834	-	1804	-	2997	-

Evidence of previous BCG

BCG history +ve or scar +ve	155	76.4	907	67.5	644	40.5	133	5.1	1839	31.9
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Employment status

Full-time	18	8.9	765	56.9	648	40.8	93	3.5	1524	26.4
Part-time	6	3.0	36	2.7	65	4.1	23	0.9	130	2.3
Retired	0	0.0	1	0.1	105	6.6	1556	59.2	1662	28.8
Unemployed	15	7.4	208	15.5	391	24.6	87	3.3	701	12.2
Housewife	0	0.0	111	8.3	197	12.4	328	12.5	636	11.0
Student	132	65.0	64	4.8	1	0.1	0	0.0	197	3.4
Not recorded	32	15.8	159	11.8	183	11.5	542	20.6	916	15.9
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Occupation

Blue collar	11	5.4	353	26.3	458	28.8	97	3.7	919	15.9
White collar	6	3.0	305	22.7	151	9.5	20	0.8	482	8.4
Medical	0	0.0	2	0.1	2	0.1	0	0.0	4	0.1
Nursing	0	0.0	8	0.6	4	0.3	0	0.0	12	0.2
Paramedical	0	0.0	4	0.3	1	0.1	0	0.0	5	0.1
Supporting health staff	1	0.5	1	0.1	5	0.3	0	0.0	7	0.1
Not applicable	114	56.2	417	31.0	693	43.6	1910	72.7	3134	54.4
Not recorded	71	35.0	254	18.9	276	17.4	602	22.9	1203	20.9
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

First presentation

Private doctor	22	10.8	314	23.4	230	14.5	122	4.6	688	11.9
Private hospital	0	0.0	42	3.1	27	1.7	13	0.5	82	1.4
GOPC	10	4.9	37	2.8	72	4.5	88	3.3	207	3.6
Chest Clinic	39	19.2	128	9.5	228	14.3	282	10.7	677	11.7
Other DH Clinic	3	1.5	36	2.7	41	2.6	27	1.0	107	1.9
HA Clinic	3	1.5	51	3.8	68	4.3	80	3.0	202	3.5
HA Hospital	93	45.8	580	43.2	732	46.0	1485	56.5	2890	50.1
Mainland	4	2.0	17	1.3	26	1.6	27	1.0	74	1.3
Overseas	1	0.5	9	0.7	2	0.1	3	0.1	15	0.3
Not recorded	28	13.8	130	9.7	164	10.3	502	19.1	824	14.3
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	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	158	77.8	1046	77.8	1256	79.0	1876	71.4	4336	75.2
N	18	8.9	166	12.4	172	10.8	247	9.4	603	10.5
Not recorded	27	13.3	132	9.8	162	10.2	506	19.2	827	14.3
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Chest symptoms	115	-	741	-	935	-	1445	-	3236	-
Systemic symptoms	27	-	179	-	226	-	359	-	791	-
Other site-specific symptoms	34	-	241	-	248	-	228	-	751	-

Reason for presentation

Symptom	147	72.4	1014	75.4	1209	76.0	1758	66.9	4128	71.6
Contact screening	18	8.9	29	2.2	27	1.7	24	0.9	98	1.7
Pre-employment	3	1.5	49	3.6	17	1.1	0	0.0	69	1.2
Pre-emigration	1	0.5	6	0.4	1	0.1	3	0.1	11	0.2
Other body check	3	1.5	83	6.2	95	6.0	90	3.4	271	4.7
Incidental to other illness	3	1.5	21	1.6	71	4.5	230	8.7	325	5.6
Others	0	0.0	2	0.1	2	0.1	5	0.2	9	0.2
Not recorded	28	13.8	140	10.4	168	10.6	519	19.7	855	14.8
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Contact with TB patients

Yes	33	16.3	109	8.1	98	6.2	74	2.8	314	5.4
No	142	70.0	1101	81.9	1325	83.3	2032	77.3	4600	79.8
Not recorded	28	13.8	134	10.0	167	10.5	523	19.9	852	14.8
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Contact type

Household	27	-	66	-	57	-	56	-	206	-
Work	1	-	11	-	11	-	4	-	27	-
Casual	1	-	21	-	13	-	5	-	40	-

Time of contact

Within 2 year	13	-	40	-	27	-	25	-	105	-
Over 2 year	9	-	43	-	45	-	33	-	130	-

Previous chemoprophylaxis

Yes	0	-	0	-	5	-	12	-	17	-
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Reason for chemoprophylaxis

Contact	0	-	0	-	1	-	0	-	1	-
Silicosis	0	-	0	-	0	-	4	-	4	-
HIV	0	-	0	-	0	-	2	-	2	-
Old scar on CXR	0	-	0	-	1	-	0	-	1	-
Others	0	-	0	-	0	-	2	-	2	-

Disease Classification

Pulmonary TB only	156	76.8	905	67.3	1142	71.8	2067	78.6	4270	74.1
Extrapulmonary TB only	22	10.8	221	16.4	244	15.3	258	9.8	745	12.9
Both	25	12.3	218	16.2	204	12.8	304	11.6	751	13.0
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	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	13	6.4	131	9.7	148	9.3	261	9.9	553	9.6
Lymph node	19	9.4	181	13.5	152	9.6	98	3.7	450	7.8
Meninges	3	1.5	12	0.9	14	0.9	7	0.3	36	0.6
Miliary	1	0.5	17	1.3	15	0.9	20	0.8	53	0.9
Abdomen	0	0.0	24	1.8	27	1.7	27	1.0	78	1.4
Bone and joint (not spine)	2	1.0	11	0.8	16	1.0	18	0.7	47	0.8
Spine	1	0.5	6	0.4	9	0.6	14	0.5	30	0.5
Genito-urinary tract	0	0.0	13	1.0	25	1.6	29	1.1	67	1.2
Naso/oro-pharynx	0	0.0	11	0.8	9	0.6	8	0.3	28	0.5
Larynx	0	0.0	0	0.0	2	0.1	3	0.1	5	0.1
Pericardium	0	0.0	4	0.3	2	0.1	8	0.3	14	0.2
Skin	5	2.5	18	1.3	21	1.3	13	0.5	57	1.0
Other sites	1	0.5	16	1.2	13	0.8	15	0.6	45	0.8

Case category

New case	199	98.0	1274	94.8	1428	89.8	2241	85.2	5142	89.2
Relapse	4	2.0	59	4.4	146	9.2	376	14.3	585	10.1
Treatment after default	0	0.0	11	0.8	16	1.0	10	0.4	37	0.6
Failure of previous treatment	0	0.0	0	0.0	0	0.0	2	0.1	2	0.0
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Disease characteristics (pulmonary cases)

Pretreatment smear +ve	60	33.1	375	33.4	523	38.9	801	33.8	1759	35.0
Pretreatment culture +ve	123	68.0	690	61.4	903	67.1	1799	75.9	3515	70.0
Extent = 1	80	44.2	587	52.3	632	47.0	899	37.9	2198	43.8
Extent=1 & cavity=N	72	39.8	500	44.5	537	39.9	829	35.0	1938	38.6
Extent=1 & cavity=Y	8	4.4	87	7.7	95	7.1	70	3.0	260	5.2
Extent = 2	43	23.8	222	19.8	315	23.4	568	24.0	1148	22.9
Extent=2 & cavity=N	29	16.0	143	12.7	201	14.9	478	20.2	851	16.9
Extent=2 & cavity=Y	14	7.7	79	7.0	114	8.5	90	3.8	297	5.9
Extent=3	18	9.9	126	11.2	162	12.0	255	10.8	561	11.2
Extent=3 & cavity=N	7	3.9	61	5.4	82	6.1	178	7.5	328	6.5
Extent=3 & cavity=Y	11	6.1	65	5.8	80	5.9	77	3.2	233	4.6
Extent=not specified	40	22.1	188	16.7	237	17.6	649	27.4	1114	22.2
Extent=ns & cavity=N	39	21.5	185	16.5	236	17.5	649	27.4	1109	22.1
Extent=ns & cavity=Y	1	0.6	3	0.3	1	0.1	0	0.0	5	0.1
Cavity=N	147	81.2	889	79.2	1056	78.5	2134	90.0	4226	84.2
Cavity=Y	34	18.8	234	20.8	290	21.5	237	10.0	795	15.8

Mode of diagnosis

Bacteriological	138	68.0	857	63.8	1107	69.6	2092	79.6	4194	72.7
Histological	8	3.9	156	11.6	169	10.6	161	6.1	494	8.6
Clinical-radiological	42	20.7	259	19.3	226	14.2	239	9.1	766	13.3
Clinical only	1	0.5	3	0.2	7	0.4	5	0.2	16	0.3
Not recorded	14	6.9	69	5.1	81	5.1	132	5.0	296	5.1
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Histology

Typical (with caseation)	2	-	63	-	62	-	40	-	167	-
Granulomatous inflammation	14	-	136	-	163	-	166	-	479	-
Other	4	-	31	-	30	-	42	-	107	-

Ziehl-Neelsen staining

Positive	7	-	111	-	131	-	122	-	371	-
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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	1.0	85	6.3	425	26.7	905	34.4	1417	24.6
Diabetes mellitus	0	0.0	24	1.8	231	14.5	416	15.8	671	11.6
Lung cancer	0	0.0	0	0.0	18	1.1	83	3.2	101	1.8
Other malignancies	0	0.0	4	0.3	39	2.5	150	5.7	193	3.3
On cytotoxic drugs	0	0.0	1	0.1	5	0.3	4	0.2	10	0.2
On steroid	0	0.0	10	0.7	14	0.9	10	0.4	34	0.6
Chronic renal failure	0	0.0	1	0.1	15	0.9	34	1.3	50	0.9
HIV	0	0.0	18	1.3	16	1.0	6	0.2	40	0.7
Silicosis	0	0.0	0	0.0	9	0.6	27	1.0	36	0.6
Alcoholism	1	0.5	15	1.1	63	4.0	58	2.2	137	2.4
Drug abuser	0	0.0	14	1.0	45	2.8	13	0.5	72	1.2
Gastrectomy	0	0.0	0	0.0	1	0.1	13	0.5	14	0.2
General debilitation	0	0.0	0	0.0	4	0.3	241	9.2	245	4.2
Others	1	0.5	2	0.1	20	1.3	20	0.8	43	0.7

Factors affecting treatment choices

Yes	8	3.9	95	7.1	237	14.9	590	22.4	930	16.1
Hepatitis-B carrier	2	1.0	54	4.0	112	7.0	85	3.2	253	4.4
Chronic active hepatitis	0	0.0	1	0.1	14	0.9	6	0.2	21	0.4
Impaired renal function	0	0.0	5	0.4	12	0.8	79	3.0	96	1.7
Chronic renal failure	0	0.0	1	0.1	8	0.5	18	0.7	27	0.5
Impaired vision	3	1.5	16	1.2	43	2.7	341	13.0	403	7.0
Impaired hearing	1	0.5	3	0.2	7	0.4	38	1.4	49	0.8
Known drug reaction	0	0.0	1	0.1	3	0.2	6	0.2	10	0.2
Known drug resistance	0	0.0	2	0.1	2	0.1	3	0.1	7	0.1
Gout	1	0.5	2	0.1	14	0.9	50	1.9	67	1.2
Idiopathic thromb. purpura	0	0.0	0	0.0	2	0.1	2	0.1	4	0.1
Others	2	1.0	12	0.9	41	2.6	67	2.5	122	2.1

6-month short course treatment

Yes	50	24.6	395	29.4	264	16.6	206	7.8	915	15.9
2HRZE+4HR	45	22.2	360	26.8	241	15.2	166	6.3	812	14.1
2HRZS+4HR	0	0.0	6	0.4	9	0.6	11	0.4	26	0.5

Other standard regimen based on HRZES

Yes	107	52.7	612	45.5	834	52.5	1084	41.2	2637	45.7
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Treatment side effects

Yes	56	27.6	479	35.6	773	48.6	1123	42.7	2431	42.2
GI upset	27	13.3	190	14.1	230	14.5	411	15.6	858	14.9
Skin rash	16	7.9	134	10.0	268	16.9	351	13.4	769	13.3
Visual	1	0.5	35	2.6	62	3.9	107	4.1	205	3.6
Transient rise liver enzyme	2	1.0	41	3.1	91	5.7	105	4.0	239	4.1
Hepatitis	4	2.0	61	4.5	135	8.5	243	9.2	443	7.7
Vestibular	1	0.5	8	0.6	17	1.1	18	0.7	44	0.8
Arthropathy	1	0.5	24	1.8	43	2.7	78	3.0	146	2.5
Fever-chill	5	2.5	18	1.3	42	2.6	31	1.2	96	1.7
Dizziness	5	2.5	26	1.9	48	3.0	83	3.2	162	2.8
Thrombocytopenia	0	0.0	4	0.3	13	0.8	15	0.6	32	0.6
Leucopenia	0	0.0	4	0.3	5	0.3	9	0.3	18	0.3
Flush face	0	0.0	6	0.4	7	0.4	4	0.2	17	0.3
Others	7	3.4	46	3.4	79	5.0	125	4.8	257	4.5

Consequence of side effects

Rx temporarily withheld	25	12.3	235	17.5	411	25.8	721	27.4	1392	24.1
Desensitiation or drug trial	8	3.9	129	9.6	273	17.2	441	16.8	851	14.8
Change in dosage/frequency	8	3.9	80	6.0	161	10.1	192	7.3	441	7.6
Change of drugs	13	6.4	143	10.6	312	19.6	604	23.0	1072	18.6

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%	128	63.1	871	64.8	1025	64.5	1502	57.1	3526	61.2
>75%	19	9.4	112	8.3	143	9.0	107	4.1	381	6.6
>50%	8	3.9	62	4.6	91	5.7	82	3.1	243	4.2
>25%	10	4.9	37	2.8	58	3.6	55	2.1	160	2.8
≤25%	5	2.5	19	1.4	35	2.2	65	2.5	124	2.2
Not recorded	33	16.3	243	18.1	238	15.0	818	31.1	1332	23.1

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

>90%	101	49.8	701	52.2	886	55.7	1313	49.9	3001	52.0
>75%	35	17.2	157	11.7	167	10.5	132	5.0	491	8.5
>50%	12	5.9	104	7.7	101	6.4	69	2.6	286	5.0
>25%	10	4.9	62	4.6	83	5.2	88	3.3	243	4.2
≤25%	11	5.4	48	3.6	69	4.3	89	3.4	217	3.8
Not recorded	34	16.7	272	20.2	284	17.9	938	35.7	1528	26.5

Under supervision by relatives (initial 2 months)

>90%	0	0.0	1	0.1	3	0.2	8	0.3	12	0.2
>75%	1	0.5	0	0.0	1	0.1	1	0.0	3	0.1
>50%	0	0.0	1	0.1	1	0.1	0	0.0	2	0.0
>25%	0	0.0	1	0.1	1	0.1	3	0.1	5	0.1
≤25%	119	58.6	843	62.7	970	61.0	1357	51.6	3289	57.0
Not recorded	83	40.9	498	37.1	614	38.6	1260	47.9	2455	42.6

Under supervision by relatives (subsequent 4 months)

>90%	1	0.5	1	0.1	2	0.1	8	0.3	12	0.2
>75%	1	0.5	1	0.1	1	0.1	1	0.0	4	0.1
>50%	0	0.0	1	0.1	2	0.1	5	0.2	8	0.1
>25%	0	0.0	2	0.1	2	0.1	2	0.1	6	0.1
≤25%	118	58.1	819	60.9	934	58.7	1268	48.2	3139	54.4
Not recorded	83	40.9	520	38.7	649	40.8	1345	51.2	2597	45.0

Supplied for unsupervised treatment (initial 2 months)

<5%	108	53.2	756	56.3	886	55.7	1377	52.4	3127	54.2
<10%	8	3.9	55	4.1	67	4.2	42	1.6	172	3.0
<15%	7	3.4	35	2.6	52	3.3	32	1.2	126	2.2
<25%	11	5.4	57	4.2	57	3.6	34	1.3	159	2.8
<50%	3	1.5	34	2.5	64	4.0	62	2.4	163	2.8
≥50%	8	3.9	38	2.8	53	3.3	64	2.4	163	2.8
Not recorded	58	28.6	369	27.5	411	25.8	1018	38.7	1856	32.2

Supplied for unsupervised treatment (subsequent 4 months)

<5%	95	46.8	603	44.9	728	45.8	1184	45.0	2610	45.3
<10%	10	4.9	88	6.5	101	6.4	76	2.9	275	4.8
<15%	12	5.9	63	4.7	67	4.2	42	1.6	184	3.2
<25%	7	3.4	71	5.3	65	4.1	50	1.9	193	3.3
<50%	7	3.4	65	4.8	69	4.3	42	1.6	183	3.2
≥50%	14	6.9	71	5.3	121	7.6	131	5.0	337	5.8
Not recorded	58	28.6	383	28.5	439	27.6	1104	42.0	1984	34.4

Defaulted (initial 2 months)

<5%	141	69.5	950	70.7	1134	71.3	1575	59.9	3800	65.9
<10%	8	3.9	21	1.6	28	1.8	29	1.1	86	1.5
<15%	3	1.5	13	1.0	18	1.1	10	0.4	44	0.8
<25%	0	0.0	28	2.1	26	1.6	24	0.9	78	1.4
<50%	4	2.0	16	1.2	23	1.4	14	0.5	57	1.0
≥50%	2	1.0	10	0.7	17	1.1	27	1.0	56	1.0
Not recorded	45	22.2	306	22.8	344	21.6	950	36.1	1645	28.5

Defaulted (subsequent 4 months)

<5%	122	60.1	868	64.6	1098	69.1	1492	56.8	3580	62.1
<10%	13	6.4	42	3.1	19	1.2	18	0.7	92	1.6
<15%	3	1.5	26	1.9	23	1.4	11	0.4	63	1.1
<25%	9	4.4	29	2.2	23	1.4	23	0.9	84	1.5
<50%	3	1.5	29	2.2	22	1.4	9	0.3	63	1.1
≥50%	7	3.4	23	1.7	30	1.9	33	1.3	93	1.6
Not recorded	46	22.7	327	24.3	375	23.6	1043	39.7	1791	31.1

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	83	40.9	462	34.4	373	23.5	473	18.0	1391	24.1
Still on treatment	84	41.4	576	42.9	916	57.6	1209	46.0	2785	48.3
Died	0	0.0	2	0.1	20	1.3	185	7.0	207	3.6
Transferred	4	2.0	87	6.5	42	2.6	38	1.4	171	3.0
Defaulted	7	3.4	40	3.0	51	3.2	60	2.3	158	2.7
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	25	12.3	177	13.2	188	11.8	664	25.3	1054	18.3
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Among those cured/ treatment completed

Bacteriological conversion	47	56.6	243	52.6	201	53.9	271	57.3	762	54.8
Radiological improvement	70	84.3	387	83.8	284	76.1	296	62.6	1037	74.6
Other clinical improvement	9	10.8	98	21.2	62	16.6	72	15.2	241	17.3
No evidence of response	1	1.2	18	3.9	20	5.4	23	4.9	62	4.5

Among those still on treatment

Reasons for still on treatment:

Retreatment case	2	2.4	40	6.9	94	10.3	169	14.0	305	11.0
Extrapulmonary disease	34	40.5	241	41.8	261	28.5	207	17.1	743	26.7
Extensive disease	26	31.0	116	20.1	155	16.9	138	11.4	435	15.6
Interrupted treatment	16	19.0	124	21.5	235	25.7	367	30.4	742	26.6
Drug resistance	3	3.6	38	6.6	38	4.1	46	3.8	125	4.5
Poor response	7	8.3	46	8.0	69	7.5	65	5.4	187	6.7
Others	14	16.7	99	17.2	294	32.1	499	41.3	906	32.5

Among those died - causes of death:

TB-related cause	0	-	0	0.0	1	5.0	15	8.1	16	7.7
Not TB-related	0	-	2	100.0	12	60.0	106	57.3	120	58.0
Unknown	0	-	0	0.0	7	35.0	64	34.6	71	34.3

Among those transferred, new sources of care:

GP	2	50.0	9	10.3	8	19.0	5	13.2	24	14.0
Chest Clinic	0	0.0	0	0.0	1	2.4	0	0.0	1	0.6
Hospital	1	25.0	5	5.7	8	19.0	19	50.0	33	19.3
Outside HK	1	25.0	70	80.5	22	52.4	11	28.9	104	60.8
Not recorded	0	0.0	3	3.4	3	7.1	3	7.9	9	5.3

Among those defaulted

Never found	4	57.1	35	87.5	29	56.9	30	50.0	98	62.0
Retreated after default	1	14.3	1	2.5	6	11.8	6	10.0	14	8.9
Treatment stopped by doctor	2	28.6	2	5.0	6	11.8	6	10.0	16	10.1
Not recorded	0	0.0	2	5.0	10	19.6	18	30.0	30	19.0

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	147	72.4	934	69.5	1115	70.1	1455	55.3	3651	63.3
Still on treatment	14	6.9	93	6.9	162	10.2	173	6.6	442	7.7
Died	0	0.0	4	0.3	30	1.9	243	9.2	277	4.8
Transferred	5	2.5	89	6.6	43	2.7	37	1.4	174	3.0
Defaulted	13	6.4	59	4.4	61	3.8	70	2.7	203	3.5
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	24	11.8	165	12.3	179	11.3	651	24.8	1019	17.7
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Among those cured/ treatment completed

Bacteriological conversion	90	61.2	504	54.0	662	59.4	948	65.2	2204	60.4
Radiological improvement	123	83.7	734	78.6	838	75.2	1042	71.6	2737	75.0
Other clinical improvement	34	23.1	343	36.7	372	33.4	362	24.9	1111	30.4
No evidence of response	2	1.4	28	3.0	44	3.9	48	3.3	122	3.3
After treatment completed:										
No relapse	120	81.6	758	81.2	932	83.6	1169	80.3	2979	81.6
Loss to follow up	14	9.5	97	10.4	66	5.9	73	5.0	250	6.8
Died	0	0.0	0	0.0	4	0.4	31	2.1	35	1.0
<i>TB-related</i>	0		0		1		4		5	
<i>Not TB-related</i>	0		0		3		21		24	
<i>Unknown</i>	0		0		0		6		6	
Relapse	0	0.0	1	0.1	4	0.4	2	0.1	7	0.2
<i>Bacteriological</i>	0		0		2		2		4	
<i>Histological</i>	0		1		1		0		2	
<i>Clinico-radiological</i>	0		0		1		0		1	
Not recorded	13	8.8	78	8.4	109	9.8	180	12.4	380	10.4

Among those still on treatment

Reasons for still on treatment:

Retreatment case	1	7.1	5	5.4	5	3.1	10	5.8	21	4.8
Extrapulmonary disease	4	28.6	24	25.8	35	21.6	32	18.5	95	21.5
Extensive disease	1	7.1	11	11.8	21	13.0	19	11.0	52	11.8
Interrupted treatment	6	42.9	30	32.3	83	51.2	106	61.3	225	50.9
Drug resistance	3	21.4	19	20.4	25	15.4	18	10.4	65	14.7
Poor response	3	21.4	22	23.7	19	11.7	9	5.2	53	12.0
Others	5	35.7	30	32.3	71	43.8	90	52.0	196	44.3

Among those died - causes of death:

TB-related cause	0	-	1	25.0	2	6.7	18	7.4	21	7.6
Not TB-related	0	-	2	50.0	21	70.0	146	60.1	169	61.0
Unknown	0	-	0	0.0	5	16.7	68	28.0	73	26.4

Among those transferred, new sources of care:

GP	2	40.0	9	10.1	8	18.6	5	13.5	24	13.8
Chest Clinic	0	0.0	0	0.0	2	4.7	1	2.7	3	1.7
Hospital	1	20.0	5	5.6	5	11.6	14	37.8	25	14.4
Outside HK	1	20.0	71	79.8	26	60.5	14	37.8	112	64.4
Not recorded	1	20.0	4	4.5	2	4.7	3	8.1	10	5.7

Among those defaulted

Never found	10	76.9	44	74.6	37	60.7	34	48.6	125	61.6
Retreated after default	1	7.7	7	11.9	8	13.1	9	12.9	25	12.3
Treatment stopped by doctor	2	15.4	5	8.5	7	11.5	9	12.9	23	11.3
Not recorded	0	0.0	3	5.1	9	14.8	18	25.7	30	14.8

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	160	78.8	1025	76.3	1279	80.4	1623	61.7	4087	70.9
Still on treatment	0	0.0	7	0.5	5	0.3	6	0.2	18	0.3
Died	0	0.0	4	0.3	32	2.0	255	9.7	291	5.0
Transferred	4	2.0	88	6.5	41	2.6	34	1.3	167	2.9
Defaulted	15	7.4	58	4.3	56	3.5	66	2.5	195	3.4
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	24	11.8	162	12.1	177	11.1	645	24.5	1008	17.5
Total	203	100.0	1344	100.0	1590	100.0	2629	100.0	5766	100.0

Among those cured/ treatment completed

Bacteriological conversion	96	60.0	581	56.7	790	61.8	1105	68.1	2572	62.9
Radiological improvement	134	83.8	815	79.5	982	76.8	1234	76.0	3165	77.4
Other clinical improvement	49	30.6	453	44.2	522	40.8	520	32.0	1544	37.8
No evidence of response	3	1.9	26	2.5	32	2.5	47	2.9	108	2.6
After treatment completed:										
No relapse	111	69.4	737	71.9	1044	81.6	1229	75.7	3121	76.4
Loss to follow up	40	25.0	245	23.9	160	12.5	184	11.3	629	15.4
Died	0	0.0	1	0.1	16	1.3	106	6.5	123	3.0
<i>TB-related</i>	0		0		0		4		4	
<i>Not TB-related</i>	0		1		14		66		81	
<i>Unknown</i>	0		0		2		36		38	
Relapse	1	0.6	7	0.7	12	0.9	4	0.2	24	0.6
<i>Bacteriological</i>	0		1		7		3		11	
<i>Histological</i>	0		5		2		0		7	
<i>Clinico-radiological</i>	1		1		2		1		5	
<i>Clinical only</i>	0		0		1		0		1	
Not recorded	8	5.0	35	3.4	47	3.7	100	6.2	190	4.6

Among those still on treatment

Reasons for still on treatment:

Retreatment case	0	-	0	-	1	-	0	-	1	5.6
Extrapulmonary disease	0	-	2	-	1	-	1	-	4	22.2
Extensive disease	0	-	0	-	0	-	0	-	0	0.0
Interrupted treatment	0	-	1	-	1	-	2	-	4	22.2
Drug resistance	0	-	2	-	4	-	2	-	8	44.4
Poor response	0	-	3	-	1	-	1	-	5	27.8
Others	0	-	1	-	0	-	3	-	4	22.2

Among those died - causes of death:

TB-related cause	0	-	1	25.0	3	9.4	19	7.5	23	7.9
Not TB-related	0	-	3	75.0	22	68.8	156	61.2	181	62.2
Unknown	0	-	0	0.0	5	15.6	69	27.1	74	25.4

Among those transferred, new sources of care:

GP	2	50.0	8	9.1	8	19.5	5	14.7	23	13.8
Chest Clinic	0	0.0	0	0.0	1	2.4	0	0.0	1	0.6
Hospital	0	0.0	5	5.7	5	12.2	9	26.5	19	11.4
Outside HK	1	25.0	72	81.8	22	53.7	12	35.3	107	64.1
Not recorded	1	25.0	3	3.4	5	12.2	8	23.5	17	10.2

Among those defaulted

Never found	10	66.7	37	63.8	31	55.4	24	36.4	102	52.3
Retreated after default	0	0.0	7	12.1	8	14.3	11	16.7	26	13.3
Treatment stopped by doctor	5	33.3	8	13.8	2	3.6	11	16.7	26	13.3
Not recorded	0	0.0	6	10.3	15	26.8	20	30.3	41	21.0

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	82	47.7	623	53.5	443	32.0	473	25.0	1621	35.2
Male	90	52.3	541	46.5	940	68.0	1419	75.0	2990	64.8
Total	172	100.0	1164	100.0	1383	100.0	1892	100.0	4611	100.0

First presentation

Private doctor	22	12.8	312	26.8	228	16.5	115	6.1	677	14.7
Private hospital	0	0.0	41	3.5	27	2.0	12	0.6	80	1.7
GOPC	10	5.8	36	3.1	70	5.1	88	4.7	204	4.4
Chest Clinic	39	22.7	122	10.5	222	16.1	275	14.5	658	14.3
Other DH Clinic	3	1.7	20	1.7	35	2.5	24	1.3	82	1.8
HA Clinic	3	1.7	49	4.2	63	4.6	75	4.0	190	4.1
HA Hospital	89	51.7	559	48.0	703	50.8	1263	66.8	2614	56.7
Mainland	3	1.7	15	1.3	26	1.9	23	1.2	67	1.5
Overseas	1	0.6	8	0.7	2	0.1	3	0.2	14	0.3
Not recorded	2	1.2	2	0.2	7	0.5	14	0.7	25	0.5
Total	172	100.0	1164	100.0	1383	100.0	1892	100.0	4611	100.0

Symptomatic on presentation

Y	153	89.0	1002	86.1	1218	88.1	1651	87.3	4024	87.3
N	18	10.5	158	13.6	160	11.6	224	11.8	560	12.1
Not recorded	1	0.6	4	0.3	5	0.4	17	0.9	27	0.6
Total	172	100.0	1164	100.0	1383	100.0	1892	100.0	4611	100.0

Chest symptoms	112	-	708	-	908	-	1278	-	3006	-
Systemic symptoms	26	-	174	-	220	-	318	-	738	-
Other site-specific symptoms	31	-	235	-	245	-	216	-	727	-

Reason for presentation

Symptom	143	83.1	974	83.7	1173	84.8	1550	81.9	3840	83.3
Contact screening	17	9.9	28	2.4	27	2.0	24	1.3	96	2.1
Pre-employment	3	1.7	47	4.0	17	1.2	0	0.0	67	1.5
Pre-emigration	1	0.6	5	0.4	1	0.1	2	0.1	9	0.2
Other body check	3	1.7	76	6.5	85	6.1	84	4.4	248	5.4
Incidental to other illness	3	1.7	21	1.8	69	5.0	205	10.8	298	6.5
Others	0	0.0	2	0.2	2	0.1	4	0.2	8	0.2
Not recorded	2	1.2	11	0.9	9	0.7	23	1.2	45	1.0
Total	172	100.0	1164	100.0	1383	100.0	1892	100.0	4611	100.0

Disease Classification

Pulmonary TB only	130	75.6	777	66.8	978	70.7	1450	76.6	3335	72.3
Extrapulmonary TB only	18	10.5	184	15.8	211	15.3	180	9.5	593	12.9
Both	24	14.0	203	17.4	194	14.0	262	13.8	683	14.8
Total	172	100.0	1164	100.0	1383	100.0	1892	100.0	4611	100.0

6-month short course treatment

Yes	50	29.1	394	33.8	261	18.9	204	10.8	909	19.7
2HRZE+4HR	45	26.2	359	30.8	238	17.2	164	8.7	806	17.5
2HRZS+4HR	0	0.0	6	0.5	9	0.7	11	0.6	26	0.6

Other standard regimen based on HRZES

Yes	107	62.2	606	52.1	829	59.9	1076	56.9	2618	56.8
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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%	128	74.4	863	74.1	1020	73.8	1494	79.0	3505	76.0
>75%	19	11.0	112	9.6	142	10.3	106	5.6	379	8.2
>50%	8	4.7	62	5.3	91	6.6	82	4.3	243	5.3
>25%	10	5.8	37	3.2	58	4.2	55	2.9	160	3.5
≤25%	5	2.9	19	1.6	34	2.5	65	3.4	123	2.7
Not recorded	2	1.2	71	6.1	38	2.7	90	4.8	201	4.4
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	101	58.7	694	59.6	882	63.8	1306	69.0	2983	64.7
>75%	35	20.3	157	13.5	167	12.1	130	6.9	489	10.6
>50%	12	7.0	104	8.9	100	7.2	69	3.6	285	6.2
>25%	10	5.8	62	5.3	83	6.0	88	4.7	243	5.3
≤25%	11	6.4	48	4.1	68	4.9	89	4.7	216	4.7
Not recorded	3	1.7	99	8.5	83	6.0	210	11.1	395	8.6
Under supervision by relatives (initial 2 months)										
>90%	0	0.0	1	0.1	3	0.2	8	0.4	12	0.3
>75%	1	0.6	0	0.0	1	0.1	1	0.1	3	0.1
>50%	0	0.0	1	0.1	1	0.1	0	0.0	2	0.0
>25%	0	0.0	1	0.1	1	0.1	3	0.2	5	0.1
≤25%	119	69.2	843	72.4	968	70.0	1352	71.5	3282	71.2
Not recorded	52	30.2	318	27.3	409	29.6	528	27.9	1307	28.3
Under supervision by relatives (subsequent 4 months)										
>90%	1	0.6	1	0.1	2	0.1	8	0.4	12	0.3
>75%	1	0.6	1	0.1	1	0.1	1	0.1	4	0.1
>50%	0	0.0	1	0.1	2	0.1	5	0.3	8	0.2
>25%	0	0.0	2	0.2	2	0.1	2	0.1	6	0.1
≤25%	118	68.6	819	70.4	933	67.5	1263	66.8	3133	67.9
Not recorded	52	30.2	340	29.2	443	32.0	613	32.4	1448	31.4
Supplied for unsupervised treatment (initial 2 months)										
<5%	108	62.8	756	64.9	883	63.8	1371	72.5	3118	67.6
<10%	8	4.7	55	4.7	67	4.8	42	2.2	172	3.7
<15%	7	4.1	35	3.0	52	3.8	32	1.7	126	2.7
<25%	11	6.4	57	4.9	57	4.1	34	1.8	159	3.4
<50%	3	1.7	34	2.9	63	4.6	62	3.3	162	3.5
≥50%	8	4.7	38	3.3	53	3.8	64	3.4	163	3.5
Not recorded	27	15.7	189	16.2	208	15.0	287	15.2	711	15.4
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	95	55.2	603	51.8	726	52.5	1179	62.3	2603	56.5
<10%	10	5.8	88	7.6	101	7.3	76	4.0	275	6.0
<15%	12	7.0	63	5.4	67	4.8	41	2.2	183	4.0
<25%	7	4.1	71	6.1	65	4.7	50	2.6	193	4.2
<50%	7	4.1	65	5.6	69	5.0	42	2.2	183	4.0
≥50%	14	8.1	71	6.1	120	8.7	131	6.9	336	7.3
Not recorded	27	15.7	203	17.4	235	17.0	373	19.7	838	18.2
Defaulted (initial 2 months)										
<5%	141	82.0	950	81.6	1131	81.8	1571	83.0	3793	82.3
<10%	8	4.7	21	1.8	28	2.0	28	1.5	85	1.8
<15%	3	1.7	13	1.1	18	1.3	10	0.5	44	1.0
<25%	0	0.0	28	2.4	26	1.9	23	1.2	77	1.7
<50%	4	2.3	16	1.4	23	1.7	14	0.7	57	1.2
≥50%	2	1.2	10	0.9	17	1.2	27	1.4	56	1.2
Not recorded	14	8.1	126	10.8	140	10.1	219	11.6	499	10.8
Defaulted (subsequent 4 months)										
<5%	122	70.9	868	74.6	1096	79.2	1488	78.6	3574	77.5
<10%	13	7.6	42	3.6	19	1.4	17	0.9	91	2.0
<15%	3	1.7	26	2.2	23	1.7	11	0.6	63	1.4
<25%	9	5.2	29	2.5	23	1.7	22	1.2	83	1.8
<50%	3	1.7	29	2.5	22	1.6	9	0.5	63	1.4
≥50%	7	4.1	23	2.0	30	2.2	33	1.7	93	2.0
Not recorded	15	8.7	147	12.6	170	12.3	312	16.5	644	14.0

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	78	45.3	455	39.1	360	26.0	427	22.6	1320	28.6
Still on treatment	84	48.8	570	49.0	912	65.9	1203	63.6	2769	60.1
Died	0	0.0	2	0.2	15	1.1	151	8.0	168	3.6
Transferred	2	1.2	81	7.0	35	2.5	29	1.5	147	3.2
Defaulted	7	4.1	40	3.4	51	3.7	59	3.1	157	3.4
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	1	0.6	16	1.4	10	0.7	23	1.2	50	1.1
Total	172	100.0	1164	100.0	1383	100.0	1892	100.0	4611	100.0

Outcome at 12 months

Cured/ treatment completed	142	82.6	920	79.0	1097	79.3	1404	74.2	3563	77.3
Still on treatment	14	8.1	92	7.9	158	11.4	172	9.1	436	9.5
Died	0	0.0	4	0.3	25	1.8	208	11.0	237	5.1
Transferred	3	1.7	83	7.1	36	2.6	28	1.5	150	3.3
Defaulted	13	7.6	59	5.1	61	4.4	69	3.6	202	4.4
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	6	0.5	6	0.4	11	0.6	23	0.5
Total	172	100.0	1164	100.0	1383	100.0	1892	100.0	4611	100.0

Outcome at 24 months

Cured/ treatment completed	155	90.1	1009	86.7	1258	91.0	1572	83.1	3994	86.6
Still on treatment	0	0.0	7	0.6	5	0.4	6	0.3	18	0.4
Died	0	0.0	4	0.3	27	2.0	218	11.5	249	5.4
Transferred	2	1.2	82	7.0	34	2.5	25	1.3	143	3.1
Defaulted	15	8.7	58	5.0	56	4.0	65	3.4	194	4.2
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	0	0.0	4	0.3	3	0.2	6	0.3	13	0.3
Total	172	100.0	1164	100.0	1383	100.0	1892	100.0	4611	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	15	48.4	105	58.3	70	33.8	196	26.6	386	33.4
Male	16	51.6	75	41.7	137	66.2	541	73.4	769	66.6
Total	31	100.0	180	100.0	207	100.0	737	100.0	1155	100.0

First presentation

Private doctor	0	0.0	2	1.1	2	1.0	7	0.9	11	1.0
Private hospital	0	0.0	1	0.6	0	0.0	1	0.1	2	0.2
GOPC	0	0.0	1	0.6	2	1.0	0	0.0	3	0.3
Chest Clinic	0	0.0	6	3.3	6	2.9	7	0.9	19	1.6
Other DH Clinic	0	0.0	16	8.9	6	2.9	3	0.4	25	2.2
HA Clinic	0	0.0	2	1.1	5	2.4	5	0.7	12	1.0
HA Hospital	4	12.9	21	11.7	29	14.0	222	30.1	276	23.9
Mainland	1	3.2	2	1.1	0	0.0	4	0.5	7	0.6
Overseas	0	0.0	1	0.6	0	0.0	0	0.0	1	0.1
Not recorded	26	83.9	128	71.1	157	75.8	488	66.2	799	69.2
Total	31	100.0	180	100.0	207	100.0	737	100.0	1155	100.0

Symptomatic on presentation

Y	5	16.1	44	24.4	38	18.4	225	30.5	312	27.0
N	0	0.0	8	4.4	12	5.8	23	3.1	43	3.7
Not recorded	26	83.9	128	71.1	157	75.8	489	66.4	800	69.3
Total	31	100.0	180	100.0	207	100.0	737	100.0	1155	100.0

Chest symptoms	3	-	33	-	27	-	167	-	230	-
Systemic symptoms	1	-	5	-	6	-	41	-	53	-
Other site-specific symptoms	3	-	6	-	3	-	12	-	24	-

Reason for presentation

Symptom	4	12.9	40	22.2	36	17.4	208	28.2	288	24.9
Contact screening	1	3.2	1	0.6	0	0.0	0	0.0	2	0.2
Pre-employment	0	0.0	2	1.1	0	0.0	0	0.0	2	0.2
Pre-emigration	0	0.0	1	0.6	0	0.0	1	0.1	2	0.2
Other body check	0	0.0	7	3.9	10	4.8	6	0.8	23	2.0
Incidental to other illness	0	0.0	0	0.0	2	1.0	25	3.4	27	2.3
Others	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
Not recorded	26	83.9	129	71.7	159	76.8	496	67.3	810	70.1
Total	31	100.0	180	100.0	207	100.0	737	100.0	1155	100.0

Disease Classification

Pulmonary TB only	26	83.9	128	71.1	164	79.2	617	83.7	935	81.0
Extrapulmonary TB only	4	12.9	37	20.6	33	15.9	78	10.6	152	13.2
Both	1	3.2	15	8.3	10	4.8	42	5.7	68	5.9
Total	31	100.0	180	100.0	207	100.0	737	100.0	1155	100.0

6-month short course treatment

Yes	0	0.0	1	0.6	3	1.4	2	0.3	6	0.5
2HRZE+4HR	0	0.0	1	0.6	3	1.4	2	0.3	6	0.5
2HRZS+4HR	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Other standard regimen based on HRZES

Yes	0	0.0	6	3.3	5	2.4	8	1.1	19	1.6
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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	8	4.4	5	2.4	8	1.1	21	1.8
>75%	0	0.0	0	0.0	1	0.5	1	0.1	2	0.2
>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	1	0.5	0	0.0	1	0.1
Not recorded	31	100.0	172	95.6	200	96.6	728	98.8	1131	97.9
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	0	0.0	7	3.9	4	1.9	7	0.9	18	1.6
>75%	0	0.0	0	0.0	0	0.0	2	0.3	2	0.2
>50%	0	0.0	0	0.0	1	0.5	0	0.0	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	1	0.5	0	0.0	1	0.1
Not recorded	31	100.0	173	96.1	201	97.1	728	98.8	1133	98.1
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	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	2	1.0	5	0.7	7	0.6
Not recorded	31	100.0	180	100.0	205	99.0	732	99.3	1148	99.4
Under supervision by relatives (subsequent 4 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	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	2	1.0	5	0.7	7	0.6
Not recorded	31	100.0	180	100.0	205	99.0	732	99.3	1148	99.4
Supplied for unsupervised treatment (initial 2 months)										
<5%	0	0.0	0	0.0	3	1.4	6	0.8	9	0.8
<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	31	100.0	180	100.0	203	98.1	731	99.2	1145	99.1
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	0	0.0	0	0.0	2	1.0	5	0.7	7	0.6
<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	1	0.1	1	0.1
<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	31	100.0	180	100.0	204	98.6	731	99.2	1146	99.2
Defaulted (initial 2 months)										
<5%	0	0.0	0	0.0	3	1.4	4	0.5	7	0.6
<10%	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
<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	1	0.1	1	0.1
<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	31	100.0	180	100.0	204	98.6	731	99.2	1146	99.2
Defaulted (subsequent 4 months)										
<5%	0	0.0	0	0.0	2	1.0	4	0.5	6	0.5
<10%	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
<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	1	0.1	1	0.1
<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	31	100.0	180	100.0	205	99.0	731	99.2	1147	99.3

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	5	16.1	7	3.9	13	6.3	46	6.2	71	6.1
Still on treatment	0	0.0	6	3.3	4	1.9	6	0.8	16	1.4
Died	0	0.0	0	0.0	5	2.4	34	4.6	39	3.4
Transferred	2	6.5	6	3.3	7	3.4	9	1.2	24	2.1
Defaulted	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
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	24	77.4	161	89.4	178	86.0	641	87.0	1004	86.9
Total	31	100.0	180	100.0	207	100.0	737	100.0	1155	100.0

Outcome at 12 months

Cured/ treatment completed	5	16.1	14	7.8	18	8.7	51	6.9	88	7.6
Still on treatment	0	0.0	1	0.6	4	1.9	1	0.1	6	0.5
Died	0	0.0	0	0.0	5	2.4	35	4.7	40	3.5
Transferred	2	6.5	6	3.3	7	3.4	9	1.2	24	2.1
Defaulted	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
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	24	77.4	159	88.3	173	83.6	640	86.8	996	86.2
Total	31	100.0	180	100.0	207	100.0	737	100.0	1155	100.0

Outcome at 24 months

Cured/ treatment completed	5	16.1	16	8.9	21	10.1	51	6.9	93	8.1
Still on treatment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Died	0	0.0	0	0.0	5	2.4	37	5.0	42	3.6
Transferred	2	6.5	6	3.3	7	3.4	9	1.2	24	2.1
Defaulted	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
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	24	77.4	158	87.8	174	84.1	639	86.7	995	86.1
Total	31	100.0	180	100.0	207	100.0	737	100.0	1155	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	1315	81.5	2747	78.2	18	94.7
No	299	18.5	768	21.8	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Age group

0 to 19	59	3.7	123	3.5	1	5.3
Female	24		59		1	
Male	35		64		0	
20 to 39	353	21.9	690	19.6	5	26.3
Female	176		346		4	
Male	177		344		1	
40 to 59	477	29.6	903	25.7	8	42.1
Female	108		220		0	
Male	369		683		8	
60+	725	44.9	1799	51.2	5	26.3
Female	147		404		0	
Male	578		1395		5	
Total	1614	100.0	3515	100.0	19	100.0
Female	455	28.2	1029	29.3	5	26.3
Male	1159	71.8	2486	70.7	14	73.7

Marital status

Single	339	21.0	658	18.7	3	15.8
Married	971	60.2	2077	59.1	15	78.9
Separated	16	1.0	25	0.7	0	0.0
Divorce	34	2.1	69	2.0	0	0.0
Widowed	30	1.9	87	2.5	0	0.0
Not recorded	224	13.9	599	17.0	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Smoking status

Never	540	33.5	1178	33.5	5	26.3
Ex-smoker	460	28.5	971	27.6	7	36.8
Current smoker	340	21.1	664	18.9	6	31.6
Not recorded	274	17.0	702	20.0	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Institution-related

Yes	222	13.8	586	16.7	2	10.5
No	1227	76.0	2474	70.4	15	78.9
Not recorded	165	10.2	455	12.9	2	10.5
Total	1614	100.0	3515	100.0	19	100.0

Institution

Client	148	-	357	-	1	-
Staff	12	-	32	-	0	-

Institution type

Old age home	91	-	247	-	0	-
School	86	-	232	-	2	-
Hospital	6	-	16	-	0	-
Handicapped	4	-	17	-	0	-
Prison	20	-	42	-	0	-
Others	5	-	11	-	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	5	0.3	7	0.2	0	0.0
Cubicle bed space	9	0.6	15	0.4	0	0.0
Institution	93	5.8	267	7.6	0	0.0
Work quarter	14	0.9	27	0.8	0	0.0
Alone (not above)	165	10.2	326	9.3	2	10.5
With friends	41	2.5	63	1.8	0	0.0
With family	1074	66.5	2235	63.6	16	84.2
Not recorded	213	13.2	575	16.4	1	5.3

Residential status

Permanent resident	1326	82.2	2784	79.2	16	84.2
Chinese immigrant	23	1.4	58	1.7	1	5.3
Imported worker	36	2.2	71	2.0	1	5.3
Tourist - 2 way permit Chinese	1	0.1	1	0.0	0	0.0
Other tourist	5	0.3	7	0.2	0	0.0
Vietnamese	6	0.4	11	0.3	0	0.0
Illegal immigrants	3	0.2	8	0.2	0	0.0
Not recorded	214	13.3	575	16.4	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Place of birth

Hong Kong	595	36.9	1138	32.4	4	21.1
Mainland China	703	43.6	1588	45.2	12	63.2
Others	105	6.5	211	6.0	2	10.5
Not recorded	211	13.1	578	16.4	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Ethnicity

Chinese	1339	83.0	2831	80.5	16	84.2
Other Asian	76	4.7	132	3.8	2	10.5
Caucasian	6	0.4	8	0.2	0	0.0
Others	1	0.1	1	0.0	0	0.0
Not recorded	192	11.9	543	15.4	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Previous BCG history

Yes	489	30.3	908	25.8	9	47.4
No	349	21.6	784	22.3	2	10.5
Unknown	776	48.1	1823	51.9	8	42.1
Total	1614	100.0	3515	100.0	19	100.0

BCG scar

Yes	461	-	878	-	8	-
No	872	-	1889	-	10	-

Employment status

Full-time	410	25.4	822	23.4	4	21.1
Part-time	34	2.1	67	1.9	0	0.0
Retired	514	31.8	1154	32.8	4	21.1
Unemployed	246	15.2	446	12.7	8	42.1
Housewife	137	8.5	323	9.2	1	5.3
Student	64	4.0	123	3.5	1	5.3
Not recorded	209	12.9	580	16.5	1	5.3
Total	1614	100.0	3515	100.0	19	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	266	16.5	504	14.3	0	0.0
White collar	114	7.1	240	6.8	1	5.3
Medical	0	0.0	2	0.1	0	0.0
Nursing	4	0.2	9	0.3	0	0.0
Paramedical	1	0.1	2	0.1	0	0.0
Supporting health staff	1	0.1	4	0.1	0	0.0
Not applicable	944	58.5	2013	57.3	16	84.2
Not recorded	284	17.6	741	21.1	2	10.5
Total	1614	100.0	3515	100.0	19	100.0

First presentation

Private doctor	196	12.1	372	10.6	4	21.1
Private hospital	18	1.1	34	1.0	0	0.0
GOPC	70	4.3	137	3.9	1	5.3
Chest Clinic	160	9.9	399	11.4	2	10.5
Other DH Clinic	30	1.9	65	1.8	0	0.0
HA Clinic	36	2.2	92	2.6	1	5.3
HA Hospital	896	55.5	1851	52.7	8	42.1
Mainland	21	1.3	34	1.0	2	10.5
Overseas	4	0.2	7	0.2	0	0.0
Not recorded	183	11.3	524	14.9	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Symptomatic on presentation

Y	1362	84.4	2703	76.9	15	78.9
N	71	4.4	288	8.2	3	15.8
Not recorded	181	11.2	524	14.9	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Chest symptoms	1205	-	2312	-	13	-
Systemic symptoms	317	-	533	-	6	-
Other site-specific symptoms	59	-	154	-	0	-

Reason for presentation

Symptom	1303	80.7	2567	73.0	14	73.7
Contact screening	11	0.7	43	1.2	0	0.0
Pre-employment	8	0.5	27	0.8	0	0.0
Pre-emigration	0	0.0	6	0.2	0	0.0
Other body check	25	1.5	120	3.4	0	0.0
Incidental to other illness	75	4.6	209	5.9	3	15.8
Others	2	0.1	5	0.1	0	0.0
Not recorded	190	11.8	538	15.3	2	10.5
Total	1614	100.0	3515	100.0	19	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	72	4.5	168	4.8	0	0.0
No	1351	83.7	2808	79.9	18	94.7
Not recorded	191	11.8	539	15.3	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Contact type

Household	50	-	106	-	0	-
Work	4	-	14	-	0	-
Casual	13	-	24	-	0	-

Time of contact

Within 2 year	24	-	55	-	0	-
Over 2 year	32	-	72	-	0	-

Previous chemoprophylaxis

Yes	5	-	12	-	0	-
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Reason for chemoprophylaxis

Contact	0	-	0	-	0	-
Silicosis	2	-	4	-	0	-
HIV	0	-	2	-	0	-
Old scar on CXR	0	-	1	-	0	-
Others	1	-	2	-	0	-

Disease Classification

Pulmonary TB only	1497	92.8	3123	88.8	18	94.7
Both pulm & extrapulm	117	7.2	392	11.2	1	5.3
Total	1614	100.0	3515	100.0	19	100.0

Case category

New case	1429	88.5	3130	89.0	11	57.9
Relapse	172	10.7	358	10.2	7	36.8
Treatment after default	13	0.8	26	0.7	1	5.3
Failure of previous treatment	0	0.0	1	0.0	0	0.0
Total	1614	100.0	3515	100.0	19	100.0

Disease characteristics (pulmonary cases)

Extent = 1	476	29.5	1369	38.9	8	42.1
Extent=1 & cavity=N	347	21.5	1163	33.1	6	31.6
Extent=1 & cavity=Y	129	8.0	206	5.9	2	10.5
Extent = 2	535	33.1	921	26.2	5	26.3
Extent=2 & cavity=N	323	20.0	657	18.7	1	5.3
Extent=2 & cavity=Y	212	13.1	264	7.5	4	21.1
Extent=3	359	22.2	474	13.5	5	26.3
Extent=3 & cavity=N	180	11.2	263	7.5	2	10.5
Extent=3 & cavity=Y	179	11.1	211	6.0	3	15.8
Extent=not specified	244	15.1	751	21.4	1	5.3
Extent=ns & cavity=N	242	15.0	748	21.3	1	5.3
Extent=ns & cavity=Y	2	0.1	3	0.1	0	0.0
Cavity=N	1092	67.7	2831	80.5	10	52.6
Cavity=Y	522	32.3	684	19.5	9	47.4

6-month short course treatment

Yes	160	9.9	502	14.3	0	0.0
2HRZE+4HR	138	8.6	440	12.5	0	0.0
2HRZS+4HR	3	0.2	16	0.5	0	0.0

Other standard regimen based on HRZES

Yes	843	52.2	1587	45.1	3	15.8
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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%	1055	65.4	2160	61.5	16	84.2
>75%	100	6.2	212	6.0	1	5.3
>50%	68	4.2	143	4.1	2	10.5
>25%	36	2.2	86	2.4	0	0.0
≤25%	22	1.4	63	1.8	0	0.0
Not recorded	333	20.6	851	24.2	0	0.0

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

>90%	887	55.0	1834	52.2	15	78.9
>75%	139	8.6	277	7.9	1	5.3
>50%	81	5.0	160	4.6	1	5.3
>25%	68	4.2	139	4.0	0	0.0
≤25%	48	3.0	130	3.7	1	5.3
Not recorded	391	24.2	975	27.7	1	5.3

Under supervision by relatives (initial 2 months)

>90%	1	0.1	5	0.1	0	0.0
>75%	2	0.1	2	0.1	0	0.0
>50%	0	0.0	1	0.0	0	0.0
>25%	1	0.1	1	0.0	0	0.0
≤25%	962	59.6	1958	55.7	15	78.9
Not recorded	648	40.1	1548	44.0	4	21.1

Under supervision by relatives (subsequent 4 months)

>90%	3	0.2	6	0.2	0	0.0
>75%	0	0.0	1	0.0	0	0.0
>50%	2	0.1	6	0.2	0	0.0
>25%	0	0.0	0	0.0	0	0.0
≤25%	912	56.5	1861	52.9	15	78.9
Not recorded	697	43.2	1641	46.7	4	21.1

Supplied for unsupervised treatment (initial 2 months)

<5%	947	58.7	1887	53.7	16	84.2
<10%	40	2.5	100	2.8	0	0.0
<15%	34	2.1	75	2.1	0	0.0
<25%	41	2.5	84	2.4	0	0.0
<50%	47	2.9	90	2.6	0	0.0
≥50%	35	2.2	96	2.7	0	0.0
Not recorded	470	29.1	1183	33.7	3	15.8

Supplied for unsupervised treatment (subsequent 4 months)

<5%	793	49.1	1578	44.9	14	73.7
<10%	74	4.6	161	4.6	1	5.3
<15%	52	3.2	103	2.9	0	0.0
<25%	51	3.2	113	3.2	1	5.3
<50%	47	2.9	102	2.9	0	0.0
≥50%	88	5.5	199	5.7	0	0.0
Not recorded	509	31.5	1259	35.8	3	15.8

Defaulted (initial 2 months)

<5%	1104	68.4	2277	64.8	14	73.7
<10%	19	1.2	45	1.3	1	5.3
<15%	15	0.9	28	0.8	1	5.3
<25%	21	1.3	49	1.4	1	5.3
<50%	18	1.1	32	0.9	1	5.3
≥50%	10	0.6	31	0.9	0	0.0
Not recorded	427	26.5	1053	30.0	1	5.3

Defaulted (subsequent 4 months)

<5%	1038	64.3	2146	61.1	14	73.7
<10%	20	1.2	42	1.2	1	5.3
<15%	22	1.4	37	1.1	1	5.3
<25%	22	1.4	45	1.3	0	0.0
<50%	21	1.3	41	1.2	1	5.3
≥50%	26	1.6	57	1.6	1	5.3
Not recorded	465	28.8	1147	32.6	1	5.3

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	300	18.6	823	23.4	1	5.3
Still on treatment	909	56.3	1684	47.9	17	89.5
Died	54	3.3	157	4.5	0	0.0
Transferred	38	2.4	78	2.2	0	0.0
Defaulted	34	2.1	85	2.4	1	5.3
Failure	0	0.0	0	0.0	0	0.0
Not recorded	279	17.3	688	19.6	0	0.0
Total	1614	100.0	3515	100.0	19	100.0

Outcome at 12 months

Cured/ treatment completed	1038	64.3	2164	61.6	1	5.3
Still on treatment	150	9.3	283	8.1	15	78.9
Died	73	4.5	213	6.1	0	0.0
Transferred	36	2.2	76	2.2	0	0.0
Defaulted	50	3.1	113	3.2	3	15.8
Failure	0	0.0	0	0.0	0	0.0
Not recorded	267	16.5	666	18.9	0	0.0
Total	1614	100.0	3515	100.0	19	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	1174	72.7	2434	69.2	12	63.2
Still on treatment	8	0.5	11	0.3	3	15.8
Died	76	4.7	222	6.3	0	0.0
Transferred	36	2.2	76	2.2	1	5.3
Defaulted	56	3.5	114	3.2	3	15.8
Failure	0	0.0	0	0.0	0	0.0
Not recorded	264	16.4	658	18.7	0	0.0
Total	1614	100.0	3515	100.0	19	100.0

Among those cured/ treatment completed

Bacteriological conversion	1131	96.3	2253	92.6	9	75.0
Radiological improvement	1079	91.9	2133	87.6	9	75.0
Other clinical improvement	329	28.0	700	28.8	1	8.3
No evidence of response	3	0.3	10	0.4	0	0.0

After treatment completed:

No relapse	899	76.6	1849	76.0	11	91.7
Loss to follow up	202	17.2	379	15.6	0	0.0
Died	24	2.0	85	3.5	1	8.3
<i>TB-related</i>	2		2		0	
<i>Not TB-related</i>	13		56		0	
<i>Unknown</i>	9		27		1	
Relapse	11	0.9	14	0.6	0	0.0
<i>Bacteriological</i>	9		11		0	
<i>Histological</i>	0		0		0	
<i>Clinico-radiological</i>	2		3		0	
Not recorded	38	3.2	107	4.4	0	0.0

Among those still on treatment

Reasons for still on treatment:

Retreatment case	0	-	0	-	0	-
Extrapulmonary disease	1	-	1	-	0	-
Extensive disease	0	-	0	-	0	-
Interrupted treatment	2	-	3	-	0	-
Drug resistance	6	-	7	-	3	-
Poor response	1	-	2	-	0	-
Others	0	-	1	-	0	-

Among those died - causes of death:

TB-related cause	6	7.9	18	8.1	0	-
Not TB-related	46	60.5	136	61.3	0	-
Unknown	24	31.6	68	30.6	0	-

Among those transferred, new sources of care:

GP	3	8.3	9	11.8	0	0.0
Chest Clinic	0	0.0	1	1.3	0	0.0
Hospital	2	5.6	9	11.8	0	0.0
Outside HK	20	55.6	44	57.9	1	100.0
Not recorded	11	30.6	13	17.1	0	0.0

Among those defaulted

Never found	28	50.0	60	52.6	1	33.3
Retreated after default	11	19.6	19	16.7	2	66.7
Treatment stopped by doctor	10	17.9	14	12.3	0	0.0
Not recorded	7	12.5	21	18.4	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	94	7.7	166	6.6	16	84.2
Streptomycin - S	1130	92.3	2344	93.4	3	15.8

Isoniazid - R	56	4.6	119	4.7	19	100.0
Isoniazid - S	1171	95.4	2395	95.3	0	0.0

Rifampicin - R	15	1.2	26	1.0	19	100.0
Rifampicin - S	1210	98.8	2486	99.0	0	0.0

Ethambutol - R	8	0.7	14	0.6	9	47.4
Ethambutol - S	1218	99.3	2499	99.4	10	52.6

Pyrazinamide - R	4	10.5	6	9.8	4	23.5
Pyrazinamide - S	34	89.5	55	90.2	13	76.5

Ofloxacin - R	5	11.9	7	9.5	4	21.1
Ofloxacin - S	37	88.1	67	90.5	15	78.9

Smear conversion rates

1. Smear at 2 month = N (a)	785				7	
2. Smear at 2 month = P (b)	147				2	
2. Sm 2m (P); Sm 3m (N) (c)	75				1	
2. Sm 2m (P); Sm 3m (P) (d)	44				1	
2. Sm 2m (P); Sm 3m (U) (e)	28				0	
3. Smear at 2 month = U (f)	682				10	
3. Sm 2m (U); Sm 3m (N) (g)	200				4	
3. Sm 2m (U); Sm 3m (P) (h)	16				2	
3. Sm 2m (U); Sm 3m (U) (i)	466				4	

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

84.2		-		77.8	
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Overall percentage of smear conversion at 3m = [(a)+(c)+(g)]/ [(a)+(c)+(d)+(g)+(h)]

94.6		-		80.0	
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Culture conversion rates

1. Culture at 2 month = N (a)			1441		5	
2. Culture at 2 month = P (b)			214		4	
2. Cu 2m (P); Cu 3m (N) (c)			104		1	
2. Cu 2m (P); Cu 3m (P) (d)			31		1	
2. Cu 2m (P); Cu 3m (U) (e)			79		2	
3. Culture at 2 month = U (f)			1860		10	
3. Cu 2m (U); Cu 3m (N) (g)			455		2	
3. Cu 2m (U); Cu 3m (P) (h)			14		4	
3. Cu 2m (U); Cu 3m (U) (i)			1391		4	

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

-		87.1		55.6	
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Overall percentage of culture conversion at 3m = [(a)+(c)+(g)]/ [(a)+(c)+(d)+(g)+(h)]

-		97.8		61.5	
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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	1165	81.5	150	81.1
No	264	18.5	35	18.9
Total	1429	100.0	185	100.0

Age group

0 to 19	59	4.1	0	0.0
Female	24		0	
Male	35		0	
20 to 39	335	23.4	18	9.7
Female	169		7	
Male	166		11	
40 to 59	430	30.1	47	25.4
Female	100		8	
Male	330		39	
60+	605	42.3	120	64.9
Female	133		14	
Male	472		106	
Total	1429	100.0	185	100.0
Female	426	29.8	29	15.7
Male	1003	70.2	156	84.3

Disease Classification

Pulmonary TB only	1323	92.6	174	94.1
Both pulmon and extrapulm	106	7.4	11	5.9
Total	1429	100.0	185	100.0

6-month short course treatment

Yes	158	11.1	2	1.1
2HRZE+4HR	136	9.5	2	1.1
2HRZS+4HR	3	0.2	0	0.0

Other standard regimen based on HRZES

Yes	739	51.7	104	56.2
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Outcome at 6 months

Cured/ treatment completed	288	20.2	12	6.5
Still on treatment	785	54.9	124	67.0
Died	47	3.3	7	3.8
Transferred	31	2.2	7	3.8
Defaulted	26	1.8	8	4.3
Failure	0	0.0	0	0.0
Not recorded	252	17.6	27	14.6
Total	1429	100.0	185	100.0

Outcome at 12 months

Cured/ treatment completed	924	64.7	114	61.6
Still on treatment	132	9.2	18	9.7
Died	65	4.5	8	4.3
Transferred	29	2.0	7	3.8
Defaulted	38	2.7	12	6.5
Failure	0	0.0	0	0.0
Not recorded	241	16.9	26	14.1
Total	1429	100.0	185	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	1043	73.0	131	70.8
Still on treatment	8	0.6	0	0.0
Died	68	4.8	8	4.3
Transferred	29	2.0	7	3.8
Defaulted	42	2.9	14	7.6
Failure	0	0.0	0	0.0
Not recorded	239	16.7	25	13.5
Total	1429	100.0	185	100.0

Among those cured/ treatment completed

Bacteriological conversion	1010	96.8	121	92.4
Radiological improvement	972	68.0	107	57.8
Other clinical improvement	299	20.9	30	16.2
No evidence of response	3	0.2	0	0.0

After treatment completed:

No relapse	797	55.8	102	55.1
Loss to follow up	187	13.1	15	8.1
Died	19	1.3	5	2.7
<i>TB-related</i>	0		2	
<i>Not TB-related</i>	11		2	
<i>Unknown</i>	8		1	
Relapse	11	0.8	0	0.0
<i>Bacteriological</i>	9		0	
<i>Histological</i>	0		0	
<i>Clinico-radiological</i>	2		0	
Not recorded	29	2.0	9	4.9

Among those still on treatment

Reasons for still on treatment:

Retreatment case	0	-	0	-
Extrapulmonary disease	1	-	0	-
Extensive disease	0	-	0	-
Interrupted treatment	2	-	0	-
Drug resistance	6	-	0	-
Poor response	1	-	0	-
Others	0	-	0	-

Among those died - causes of death:

TB-related cause	4	5.9	2	25.0
Not TB-related	44	64.7	2	25.0
Unknown	20	29.4	4	50.0

Among those transferred, new sources of care:

GP	2	6.9	1	14.3
Chest Clinic	0	0.0	0	0.0
Hospital	2	6.9	0	0.0
Outside HK	18	62.1	2	28.6
Not recorded	7	24.1	4	57.1

Among those defaulted

Never found	23	54.8	5	35.7
Retreated after default	5	11.9	6	42.9
Treatment stopped by doctor	10	23.8	0	0.0
Not recorded	4	9.5	3	21.4

Annex 1 (e) - Treatment defaulters - 01

Ever seen at chest clinics	N	%
Yes	194	99.5
No	1	0.5
Total	195	100.0

Age group

0 to 19	15	7.7
Female	6	
Male	9	
20 to 39	58	29.7
Female	27	
Male	31	
40 to 59	56	28.7
Female	8	
Male	48	
60+	66	33.8
Female	10	
Male	56	
Total	195	100.0
Female	51	26.2
Male	144	73.8

Marital status

Single	58	29.7
Married	117	60.0
Separated	1	0.5
Divorce	11	5.6
Widowed	3	1.5
Not recorded	5	2.6
Total	195	100.0

Smoking status

Never	59	30.3
Ex-smoker	45	23.1
Current smoker	84	43.1
Not recorded	7	3.6
Total	195	100.0

Institution-related

Yes	17	8.7
No	174	89.2
Not recorded	4	2.1
Total	195	100.0

Institution

Client	11	-
Staff	0	-

Institution type

Old age home	7	-
School	3	-
Hospital	1	-
Handicapped	0	-
Prison	3	-
Others	0	-

Annex 1 (e) - Treatment defaulters - 02

Living situation	N	%
Street-sleeper	1	0.5
Cubicle bed space	2	1.0
Institution	10	5.1
Work quarter	4	2.1
Alone (not above)	29	14.9
With friends	11	5.6
With family	133	68.2
Not recorded	5	2.6

Residential status	N	%
Permanent resident	168	86.2
Chinese immigrant	6	3.1
Imported worker	11	5.6
Tourist - 2 way permit Chinese	0	0.0
Other tourist	0	0.0
Vietnamese	0	0.0
Illegal immigrants	2	1.0
Not recorded	8	4.1
Total	195	100.0

Place of birth	N	%
Hong Kong	79	40.5
Mainland China	96	49.2
Others	18	9.2
Not recorded	2	1.0
Total	195	100.0

Ethnicity	N	%
Chinese	178	91.3
Other Asian	15	7.7
Caucasian	1	0.5
Others	1	0.5
Not recorded	0	0.0
Total	195	100.0

Employment status	N	%
Full-time	57	29.2
Part-time	5	2.6
Retired	52	26.7
Unemployed	57	29.2
Housewife	17	8.7
Student	5	2.6
Not recorded	2	1.0
Total	195	100.0

Occupation	N	%
Blue collar	45	23.1
White collar	10	5.1
Medical	0	0.0
Nursing	0	0.0
Paramedical	0	0.0
Supporting health staff	0	0.0
Not applicable	128	65.6
Not recorded	12	6.2
Total	195	100.0

Annex 1 (e) - Treatment defaulters - 03

First presentation	N	%
Private doctor	13	6.7
Private hospital	2	1.0
GOPC	9	4.6
Chest Clinic	41	21.0
Other DH Clinic	5	2.6
HA Clinic	6	3.1
HA Hospital	111	56.9
Mainland	5	2.6
Overseas	2	1.0
Not recorded	1	0.5
Total	195	100.0

Symptomatic on presentation

Y	166	85.1
N	28	14.4
Not recorded	1	0.5
Total	195	100.0

Chest symptoms	125	-
Systemic symptoms	22	-
Other site-specific symptoms	36	-

Reason for presentation

Symptom	158	81.0
Contact screening	7	3.6
Pre-employment	3	1.5
Pre-emigration	0	0.0
Other body check	11	5.6
Incidental to other illness	15	7.7
Others	0	0.0
Not recorded	1	0.5
Total	195	100.0

Contact with TB patients

Yes	14	7.2
No	180	92.3
Not recorded	1	0.5
Total	195	100.0

Contact type

Household	14	-
Work	0	-
Casual	0	-

Time of contact

Within 2 year	7	-
Over 2 year	4	-

Annex 1 (e) - Treatment defaulters - 04

Previous chemoprophylaxis	N	%
Yes	0	-

Reason for chemoprophylaxis

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

Disease Classification

Pulmonary TB only	150	76.9
Extrapulmonary TB only	23	11.8
Both	22	11.3
Total	195	100.0

Case category

New case	157	80.5
Relapse	26	13.3
Treatment after default	12	6.2
Failure of previous treatment	0	0.0
Total	195	100.0

Disease characteristics (pulmonary cases)

Pretreatment smear +ve	62	36.0
Pretreatment culture +ve	114	66.3
Extent = 1	91	52.9
Extent=1 & cavity=N	83	48.3
Extent=1 & cavity=Y	8	4.7
Extent = 2	45	26.2
Extent=2 & cavity=N	30	17.4
Extent=2 & cavity=Y	15	8.7
Extent=3	28	16.3
Extent=3 & cavity=N	13	7.6
Extent=3 & cavity=Y	15	8.7
Extent=not specified	8	4.7
Extent=ns & cavity=N	8	4.7
Extent=ns & cavity=Y	0	0.0
Cavity=N	134	77.9
Cavity=Y	38	22.1

6-month short course treatment

Yes	12	6.2
2HRZE+4HR	10	5.1
2HRZS+4HR	0	0.0

Other standard regimen based on HRZES

Yes	78	40.0
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Among those defaulted

Never found	123	63.1
Retreated after default	27	13.8
Treatment stopped by doctor	32	16.4
Not recorded	46	23.6

Annex 1 (e) - Treatment defaulters - 05

Treatment supervision	N	%
Under DOT at chest clinic, hospital, CNS or other health staff (initial 2 months)		
>90%	56	28.7
>75%	26	13.3
>50%	31	15.9
>25%	20	10.3
≤25%	30	15.4
Not recorded	32	16.4
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)		
>90%	20	10.3
>75%	10	5.1
>50%	28	14.4
>25%	14	7.2
≤25%	47	24.1
Not recorded	76	39.0
Under supervision by relatives (initial 2 months)		
>90%	0	0.0
>75%	0	0.0
>50%	0	0.0
>25%	0	0.0
≤25%	112	57.4
Not recorded	83	42.6
Under supervision by relatives (subsequent 4 months)		
>90%	0	0.0
>75%	0	0.0
>50%	0	0.0
>25%	0	0.0
≤25%	84	43.1
Not recorded	111	56.9
Supplied for unsupervised treatment (initial 2 months)		
<5%	101	51.8
<10%	11	5.6
<15%	6	3.1
<25%	8	4.1
<50%	7	3.6
≥50%	9	4.6
Not recorded	53	27.2
Supplied for unsupervised treatment (subsequent 4 months)		
<5%	82	42.1
<10%	4	2.1
<15%	2	1.0
<25%	6	3.1
<50%	9	4.6
≥50%	6	3.1
Not recorded	86	44.1
Defaulted (initial 2 months)		
<5%	72	36.9
<10%	6	3.1
<15%	8	4.1
<25%	17	8.7
<50%	24	12.3
≥50%	29	14.9
Not recorded	39	20.0
Defaulted (subsequent 4 months)		
<5%	30	15.4
<10%	5	2.6
<15%	4	2.1
<25%	8	4.1
<50%	24	12.3
≥50%	54	27.7
Not recorded	70	35.9

Annex 1 (f) Sources completing Programme Forms

Sources completing Programme Forms	PFA	PFB1	PFB2	PFC	PFD
Chest Clinics	3494	4679	4712	4707	4633
Hospital Authority	1454	11	10	12	7
Private Practitioners/ Private Hospitals	4	0	0	0	0
Correctional Services and Others	47	8	8	12	5
Not Recorded	767	1068	1036	1035	1121
Total	5766	5766	5766	5766	5766

Breakdown for Hospital Authority:

Alice Ho Miu Ling Nethersole Hospital	11	0	0	0	0
Caritas Medical Centre	0	0	0	0	0
Castle Peak Hospital	2	1	1	2	0
Duchess of Kent Children Hospital	0	0	0	0	0
Fung Yiu King Hospital	0	0	0	0	0
Grantham Hospital	157	0	0	0	0
Haven of Hope Hospital	91	0	0	0	1
Kowloon Hospital	114	0	0	0	0
Kwong Wah Hospital	114	0	0	0	0
North District Hospital	101	1	1	1	1
Nam Long Hospital	0	0	0	0	0
Our Lady of Maryknoll Hospital	4	0	0	0	0
Pamela Youde Nethersole Eastern Hospital	1	0	0	0	0
Pok Oi Hospital	6	0	0	0	0
Prince of Wales Hospital	80	0	0	0	0
Princess Margaret Hospital	42	0	0	0	0
Queen Elizabeth Hospital	127	1	1	2	1
Queen Mary Hospital	34	0	0	1	0
Ruttonjee Hospital	280	3	2	1	0
Shatin Hospital	0	0	0	0	0
Tai Po Hospital	0	0	0	0	0
Tseung Kwan O Hosital	23	1	1	1	1
Tuen Mun Hospital	124	2	2	1	1
Tung Wah Eastern Hospital	0	0	0	0	0
Tung Wah Hospital	4	1	1	2	2
United Christian Hospital	88	1	1	1	0
Wong Tai Sin Hospital	51	0	0	0	0
Wong Chuk Hang Hospital	0	0	0	0	0
Yan Chai Hospital	0	0	0	0	0
Total	1454	11	10	12	7

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

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.
- Date of last treatment (mm/yyyy): __/____ Duration of last treatment: __ months
5. Others, specify: _____

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-Neelsen 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: _____ Date of death (mm/yyyy): ____/____/____
 • Died Cause: ₁TB-related/ ₂Not TB-related/ ₃Unknown
- (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	2005	2006	2007	2008	2009
Notified TB cases who are Chinese New Immigrants (with years of arrival in Hong Kong)	≤1 year	14	8	14	9	16
	≤2 year	11	4	12	8	11
	≤3 year	11	10	8	17	10
	≤4 year	7	8	9	6	10
	≤5 year	9	10	7	14	10
	≤6 year	13	7	3	6	7
	≤7 year	12	11	3	7	4
	Total	77	58	56	67	68
Overall notified TB cases		6160	5766	5463	5635	5193

The above table shows the number of all notified TB cases in Hong Kong from 2005 to 2009 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 year 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 2005 to 2009 are 90.4, 84.1, 78.9, 80.8 and 74.1 respectively.

From Annex 2 (b), the overall estimated rates (per 100,000) among the new immigrants from 2005 to 2009 are 21.5, 16.2, 16.8, 20.8 and 20.9 respectively. The rates are lower than those of the general Hong Kong population. Although Mainland China has been classified by the World Health Organization as among one of the high TB burden countries in the world, the new immigrants coming to Hong Kong are likely to be a "selected" group. Their demographics and health condition may be quite different from and not representative of the whole population in China. For example, they may be younger, more 'fit', or with better socioeconomic condition. Hence, the rate of TB among this group may be lower.

Annex 2 (b)

TB Notification and Estimated Rates Among Chinese New Immigrants By Age & Sex (2005-2009)

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

	2005	2005	2005	2006	2006	2006	2007	2007	2007	2008	2008	2008	2009	2009	2009
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	3	6	9	6	4	10	2	6	8	2	1	3	3	5	8
20-39	4	38	42	5	25	30	6	26	32	6	36	42	7	32	39
40-59	5	14	19	4	10	14	5	9	14	9	12	21	6	11	17
60+	3	4	7	2	2	4	0	2	2	1	0	1	3	1	4
Total	15	62	77	17	41	58	13	43	56	18	49	67	19	49	68

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

	2005	2005	2005	2006	2006	2006	2007	2007	2007	2008	2008	2008	2009	2009	2009
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	4.4	9.0	6.7	9.0	6.2	7.6	3.2	10.1	6.6	3.3	1.7	2.6	5.1	9.0	7.0
20-39	16.0	26.0	24.5	19.0	17.1	17.4	24.3	18.7	19.6	28.4	26.8	27.0	32.6	23.1	24.4
40-59	50.4	47.6	48.3	31.5	34.4	33.5	37.4	33.9	35.1	64.3	44.3	51.1	40.3	37.8	38.6
60+	121.4	40.9	57.1	79.6	21.9	34.4	0.0	32.1	23.6	47.2	0.0	13.3	146.3	21.7	60.0
Total	14.2	24.6	21.5	15.7	16.5	16.2	12.7	18.6	16.8	18.5	21.8	20.8	19.6	21.5	20.9

Annex 2 (c)

TB Notification and Rates (All Cases) By Age & Sex (2005-2009)

All TB cases by age and sex

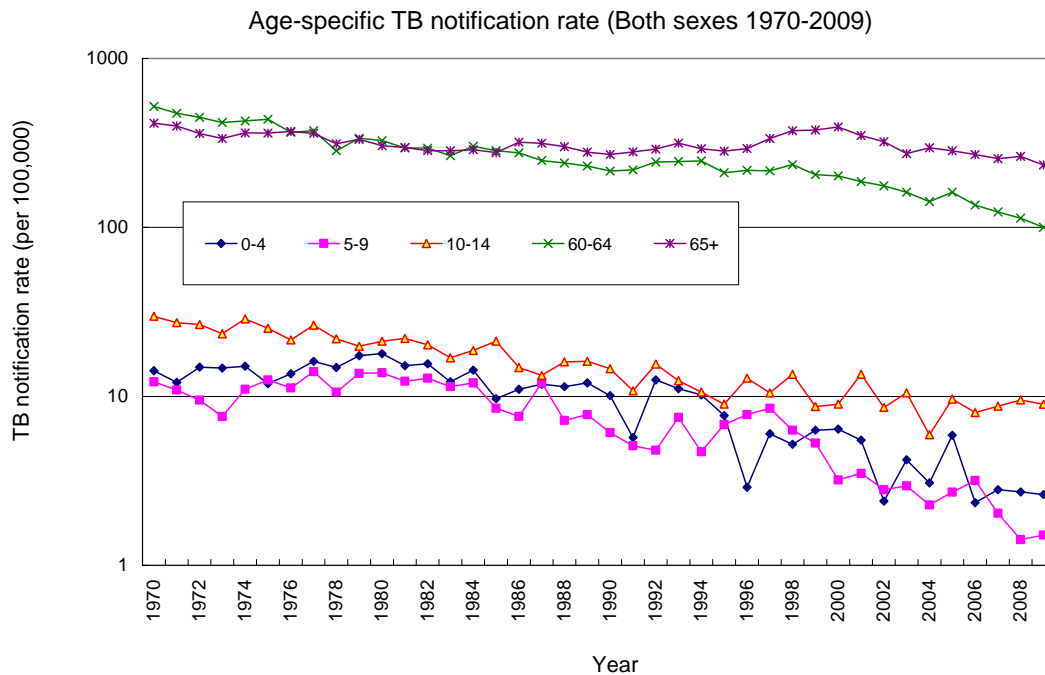
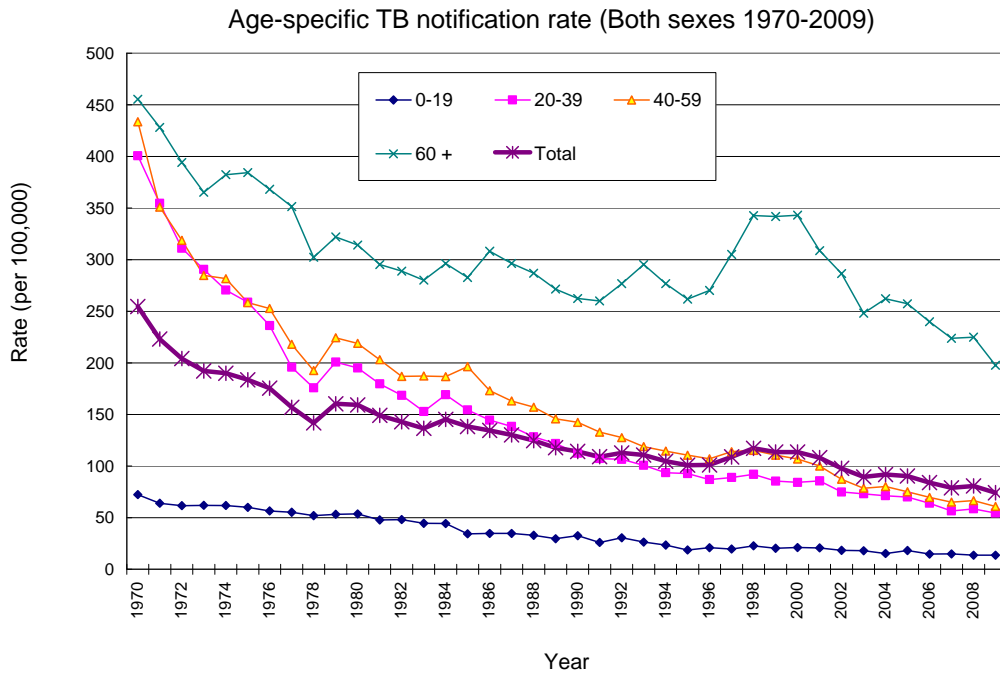
	2005	2005	2005	2006	2006	2006	2007	2007	2007	2008	2008	2008	2009	2009	2009
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	137	118	255	106	97	203	108	96	204	82	102	184	92	87	179
20-39	690	782	1472	616	728	1344	520	674	1194	563	673	1236	489	663	1152
40-59	1105	575	1680	1077	513	1590	1014	491	1505	1027	529	1556	936	502	1438
60+	2041	712	2753	1960	669	2629	1853	707	2560	1956	703	2659	1734	690	2424
Total	3973	2187	6160	3759	2007	5766	3495	1968	5463	3628	2007	5635	3251	1942	5193

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

	2005	2005	2005	2006	2006	2006	2007	2007	2007	2008	2008	2008	2009	2009	2009
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	19.1	17.2	18.2	15.0	14.5	14.8	15.4	14.5	15.0	11.8	15.7	13.7	13.6	13.7	13.7
20-39	73.0	67.4	69.9	65.8	62.4	63.9	56.0	57.1	56.6	61.1	56.6	58.5	53.3	55.6	54.6
40-59	101.4	50.2	75.2	97.3	43.6	69.6	91.1	41.0	65.1	91.8	43.4	66.6	83.5	40.6	61.0
60+	400.3	127.2	257.3	376.3	116.3	239.9	341.1	117.8	223.9	348.2	113.4	225.0	297.4	107.2	197.6
Total	121.7	61.6	90.4	115.0	56.0	84.1	106.3	54.1	78.9	110.0	54.5	80.8	98.6	52.4	74.1

Annex 3

Trend of age-specific TB notification rates (1970-2009)



- 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 38 cases with TB-HIV co-infection were reported from various sources to the TB-HIV Registry in 2009. Twenty three (60.5%) were under the care of TB & Chest Service (TB&CS) and/or Special Preventive Programme (SPP), Public Health Services Branch, Department of Health (DH). Most of the remaining cases attended dual follow up at chest clinics and one of the hospitals under Hospital Authority (HA).

Table 1 shows the total number of TB-HIV cases reported to the TB-HIV Registry for the years 1996-2009. The number of cases reported to the TB-HIV Registry has dropped in 2009 compared to the past few years.

Table 2 shows the data on TB as primary AIDS-defining illness in the Hong Kong HIV/AIDS reporting system for the years 1996-2009. Out of a total of 76 AIDS cases newly diagnosed in 2009, 24 (31.6%) had TB as a primary AIDS-defining illness, compared to 32 (42.1%) for *Pneumocystis jiroveci* pneumonia (previously named *Pneumocystis carinii* pneumonia). TB was second to *Pneumocystis jiroveci* pneumonia as the most common primary AIDS-defining illness in Hong Kong in 2009.

Table 3 shows the distribution of ADI criteria among 284 cases reported from chest clinics and SPP for the years 1996-2009 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. The relative proportion of extra-pulmonary TB as primary AIDS-defining illness has somewhat increased in 2009 compared to past few years.

The pre-treatment drug sensitivity pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996-2009 is shown in **Table 4**. Of the 29 cases with a positive sputum or other specimen culture reported to TB-HIV Registry in 2009, 22 (75.9%) had disease due to *Mycobacterium tuberculosis* with favourable sensitivity pattern. Seven had bacillary resistance to at least one anti-TB drug (but not MDR or XDRTB). Three cases had bacillary resistance to streptomycin. Three cases had bacillary resistance to isoniazid, while one case had bacillary resistance to both streptomycin and isoniazid. Among all the 323 cases reported to TB-HIV Registry with a positive sputum or other specimen culture between 1996 and 2009, 4 (1.2%) 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 23 patients reported from chest clinics and SPP in 2009. The characteristics of these patients are similar to that of the 2008 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 more than half 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 (1996-2009)*

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
Total	467

* 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 (1996-2009)*

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%
Total	301	1106	27.22%

* 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.

Annex 4(c)

Table 3. Criteria for TB as AIDS-defining illness among 284 cases reported from chest clinics and SPP (1996-2009)*

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***
Total	83	121	73	284

* Of all the cases reported to the TB-HIV Registry from 1996 to 2009, 284 cases were seen at chest clinics and/or SPP. The table is compiled basing on data of these 284 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.

Table 4. Pre-treatment drug sensitivity pattern among culture positive (sputum and/or other specimens) TB-HIV cases from TB-HIV Registry (1996-2009)*

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
Total	269	51	3 (+1)***	0	323

* Of all the cases reported to the TB-HIV Registry from 1996 to 2009, 323 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 323 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 23 TB-HIV cases reported from chest clinics and SPP in 2009*

	Number	Proportion
Age distribution		
0 to 19	0	0.00%
20 to 39	10	43.48%
40 to 59	10	43.48%
60+	3	13.04%
Sex distribution		
Male	20	86.96%
Female	3	13.04%
Ethnicity		
Chinese	13	56.52%
Asians, non-Chinese	9	39.13%
African	1	4.35%
Others	0	0.00%
Case category		
New case	20	86.96%
Relapse	2	8.70%
Treatment after default	1	4.35%
Failure of previous treatment	0	0.00%
TB as primary AIDS defining illness**		
Yes	12	66.67%
No	6	33.33%
HIV stage		
A1	0	0.00%
A2	2	8.70%
A3	0	0.00%
B1	2	8.70%
B2	2	8.70%
B3	0	0.00%
C1	0	0.00%
C2	0	0.00%
C3	9	39.13%
Unknown	8	34.78%
CD4 count at time of co-infection (median, range)	182 (8-684)/ μ L	
Viral load at time of co-infection (median, range)	150000 (1700-550000) copies/mL	
Anti-retroviral therapy at time of co-infection		
Yes	0	0.00%
No	19	82.61%
Unknown	4	17.39%
Presence of extra-pulmonary TB		
Yes	12	52.17%
No	11	47.83%
Extent of Respiratory TB***		
Minimal	11	64.71%
Moderate	3	17.65%
Extensive	3	17.65%
Sputum bacteriological status (pre-treatment)		
Smear + culture +	10	43.48%
Smear - culture +	4	17.39%
Smear + culture -	0	0.00%
Smear - culture -	6	26.09%
Incomplete	3	13.04%
Drug resistance pattern (pre-treatment)****		
Susceptible to SHRE	12	70.59%
Resistant to streptomycin	2	11.76%
Resistant to isoniazid	2	11.76%
Resistant to streptomycin and isoniazid	1	5.88%
MDR	0	0.00%
XDR	0	0.00%

* Among 38 cases reported to TB-HIV Registry in 2009, 23 were managed at chest clinics and/or SPP. The table is compiled basing on data of these 23 cases.

** Information on TB as primary AIDS-defining illness unknown in 5 patients.

*** 17 out of the 23 cases had lung parenchymal lesion on CXR.

**** 17 out of the 23 cases had a positive sputum or other specimen culture.

Annex 5

HBsAg Seroprevalence Survey Among TB Patients Seen at Chest Clinics (2009)

In a sample survey conducted by the TB & Chest Service of the Department of Health in 2009 (2-month period from 1.3.2009 to 31.5.2009), the overall HBsAg seropositive rate among TB patients seen at chest clinics was 8.70%.

Sex/Age group	HBsAg status			HBsAg seropositive rate (%)*	Total
	Positive	Negative	Unknown		
Male					
0-19	0	22	1	0.00	23
20-39	11	110	4	9.09	125
40-59	43	193	8	18.22	244
≥60	19	345	8	5.22	372
Female					
0-19	0	23	0	0.00	23
20-39	11	136	5	7.48	152
40-59	13	114	2	10.24	129
≥60	5	128	3	3.76	136
Total	102	1071	31	8.70	1204

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

HBsAg Seroprevalence Survey 2008-2009

Sex/Age group	HBsAg seropositive rate (%)	
	2008	2009
Male		
0-19	0.00	0.00
20-39	4.96	9.09
40-59	15.46	18.22
≥60	8.15	5.22
Female		
0-19	8.33	0.00
20-39	5.93	7.48
40-59	9.84	10.24
≥60	7.96	3.76
Total	8.93	8.70

Annex 6

Crude and Standardised Death Rate and Notification Rate 1981 - 2009 (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	78.9	58.4
2008	3.3	1.8	80.8	59.2
2009	2.9	1.6	74.1	53.9

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

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):								
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.