ANNUAL REPORT 2005

TUBERCULOSIS & CHEST SERVICE

OF THE

DEPARTMENT OF HEALTH

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PREFACE

Despite the availability of effective treatment, tuberculosis (TB) remains a major health problem in many parts of the world. With its resurgence alongside rampant drug resistance and HIV co-infection, the World Health Organization (WHO) declared TB as a global emergency in April 1993. In May 1998, a resolution in the 51st World Health Assembly urged all member states to turn their policies into action and to make strong political commitment on TB control. Notwithstanding the increasing coverage of DOTS and DOTS-plus, drug resistance remains a grave concern in areas with poorly organized or inefficient health care infrastructure. The problem is most acute in areas with a HIV co-epidemic or gross social inequities, but the increasing movement of populations has rendered it a global crisis affecting all countries.

In September 1999, “TB crisis” was declared in the Western Pacific Region and the project of “Stop TB in the Western Pacific Region” was initiated. In Hong Kong, Singapore, Malaysia, Japan, and Brunei, which are classified together by WHO as “places with intermediate TB burden and a good health infrastructure”, a relatively stagnant or fluctuating TB trend has been observed in the past decade. The observation of such a trend was probably multifactorial: more intensive surveillance measures, ageing of the TB epidemic, ageing of the population, and busy population movement.

Major restructuring of the public health services occurred locally after the establishment of the Centre for Health Protection (CHP) in June 2004. The Tuberculosis and Chest Service (TB&CS), Social Hygiene Service and Special Preventive Programme were incorporated into the Public Health Services Branch (PHSB) of this newly formed centre. Besides providing direct clinical services for TB, sexually transmitted infections (STIs), and human immunodeficiency virus infection (HIV), the PHSB also plays the key role in their surveillance and control. After the transient rise of TB notification rate from 88.5 per 100,000 in 2003 to 90.5 per 100,000 in 2004, the figure dropped again to 88.8 per 100,000 in 2005. Changes in healthcare seeking behaviour at the time of the 2003 SARS crisis and intensified surveillance afterwards could have accounted for the previous increase. Further observation is however warranted.

With the mounting evidences of the relationship between smoking and tuberculosis in recent years, increasing attention is being paid to anti-smoking measures in the local TB control programme. The interaction between smoking and the huge pool of latently infected individuals in our aging population is a serious concern. The rising smoking prevalence among the females is another significant problem. Thus, it is desirable that anti-smoking

messages be incorporated into the health education programmes for TB. Opportunistic intervention is likely to be more effective in the health care settings, as most of the clients are coming forward with symptoms. Smoking cessation activities are therefore actively promoted to assist the smokers to quit within the TB&CS.

In 2005, a number of important studies were published by the TB&CS in collaboration with other investigators from different sectors.[1-6] These studies 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.

In this Annual Report, there are a few newly added/ modified items. The scheme for contact tracing and treatment of latent TB infection has been updated. The format of reporting treatment outcomes for the 2004 cohort has been modified to keep in line with that reported to WHO. In addition, surveillance data from the TB-HIV registry and the results of HBsAg seroprevalence survey among TB patients seen at chest clinics are also incorporated.

During the year, 100,663 patients attended the TB&CS as compared to 102,209 in 2004, and the total attendance was 835,951 in comparison with 820,102 in 2004. Among the 100,663 patients, 29,082 patients were new attendants, of whom 23.9% were found free of any chest diseases. The diagnoses among other new patients included active pulmonary tuberculosis (11.9%), active tuberculosis of other forms (2.3%), inactive tuberculosis (9.9%), bronchitis not specified as acute or chronic (9.1%), acute respiratory infection (8.7%), pneumonia (6.4%), malignant neoplasm of trachea and bronchus (1.6%), bronchiectasis (1.3%), asthma (0.7%) and emphysema (0.4%). Among all the attendance, 4,435 hospital admissions were arranged.

Part 1: Tuberculosis

The number of tuberculosis notifications in 2005 was 6,160, making a notification rate of 90.4 per 100,000 population. The corresponding figures in 2004 were 6,226 and 90.5 respectively.

The number of tuberculosis deaths was 271 in 2005 as compared with 286 in 2004. The corresponding tuberculosis mortality rates were 4.0 and 4.2 per 100,000 respectively.

Tuberculosis stayed outside the top ten causes of death in 2005. Tuberculosis deaths accounted for 0.7% of the total registered deaths in Hong Kong. The average age of tuberculosis deaths was 74.3.

In 2005, 99.3% 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. Besides this, unlinked anonymous screening (UAS) continued to be carried out among a consecutive sample of TB patients annually.

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.

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 9,144 in 2005 compared with 8,098 in 2004. In 2005, 134 new cases of pneumoconiosis were registered in the TB&CS, and 70 new cases (including 2 cases of asbestos-related lung diseases) were confirmed by the Pneumoconiosis Medical Board. Up to the end of 2005, a total of 5,585 patients had been compensated.

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Part 1

TUBERCULOSIS

Part 1 - Tuberculosis: Contents

APPENDIX 1

TB Notifications & Death Rate of Tuberculosis (All Forms)
1947 - 2005

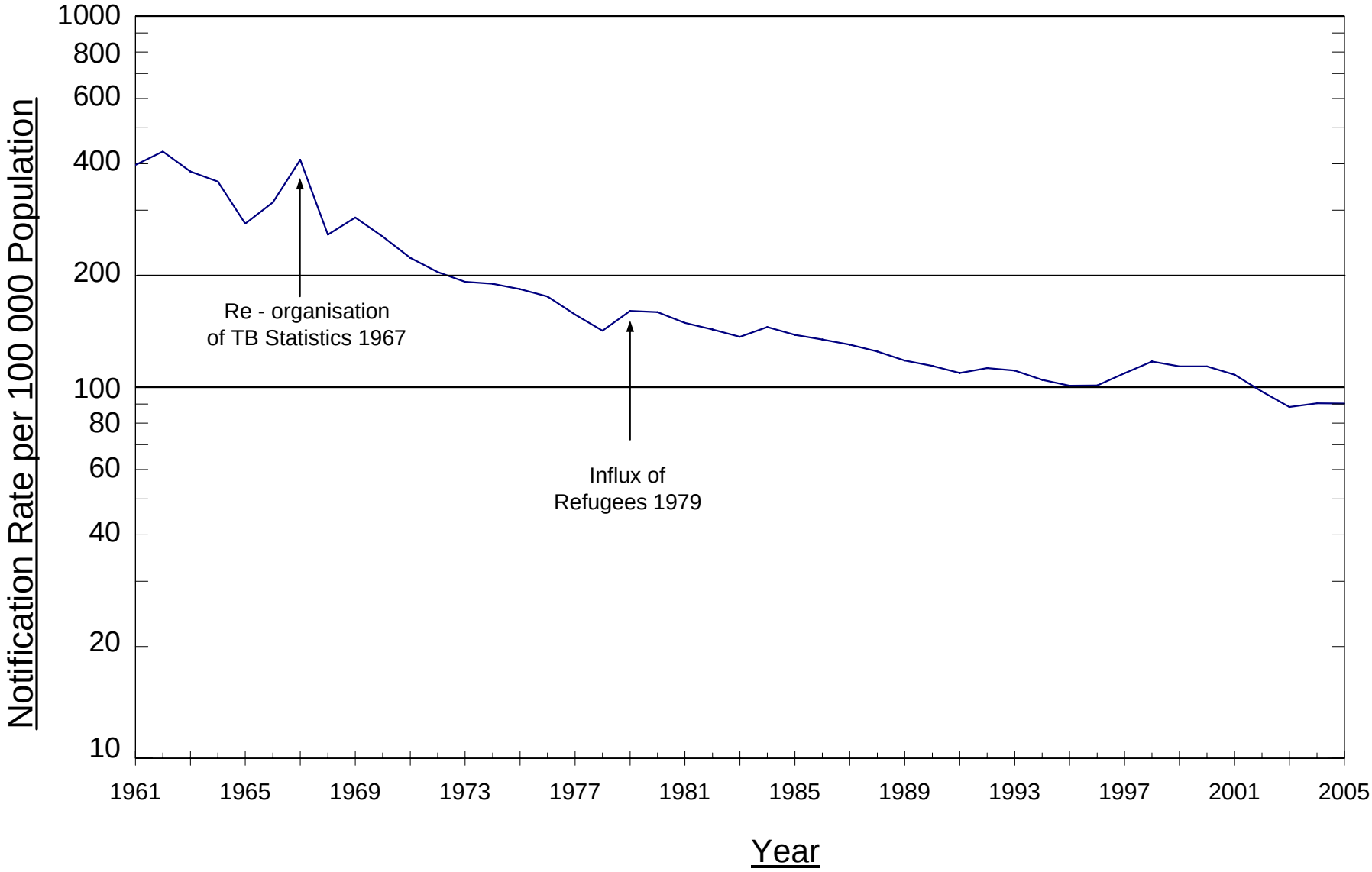
Year	TB Notifications		Notification Rate per 100,000 Pop	TB Deaths	Death Rate per 100,000 Pop	Ratio (Notifications/ Deaths)	Deaths ---------- x 100% Notifications
1947	4855		277.4	1861	106.3	2.61	38.33
1948	6279		348.8	1961	108.9	3.20	31.23
1949	7510		404.4	2611	140.6	2.88	34.77
1950	9067		405.3	3263	145.9	2.78	35.99
1951	13886		689.0	4190	207.9	3.31	30.17
1952	14821		697.2	3573	168.1	4.15	24.11
1953	11900		530.7	2939	131.1	4.05	24.70
1954	12508		528.9	2876	121.6	4.35	22.99
1955	14148		568.1	2810	112.8	5.03	19.86
1956	12155		464.9	2629	100.6	4.62	21.63
1957	13665		499.4	2675	97.8	5.11	19.58
1958	13485		472.5	2302	80.7	5.86	17.07
1959	14302		482.0	2178	73.4	6.57	15.23
1960	12425		405.5	2085	68.0	5.96	16.78
1961	12584		397.2	1907	60.2	6.60	15.15
1962	14263		431.5	1881	56.9	7.58	13.19
1963	13031		380.9	1762	51.5	7.40	13.52
1964	12557		358.3	1441	41.1	8.71	11.48
1965	9927		275.9	1278	35.5	7.77	12.87
1966	11427		314.8	1515	41.7	7.54	13.26
1967	15253		409.7	1493	40.1	10.22	9.79
1968	9792		257.5	1483	39.0	6.60	15.15
1969	11072		286.5	1470	38.0	7.53	13.28
1970	10077		254.5	1436	36.3	7.02	14.25
1971	9028		223.2	1250	30.9	7.22	13.85
1972	8420		204.2	1312	31.8	6.42	15.58
1973	8152		192.2	1154	27.2	7.06	14.16
1974	8320		190.0	974	22.2	8.54	11.71
1975	8192		183.6	646	14.5	12.68	7.89
1976	7928		175.5	568	12.6	13.96	7.16
1977	7191		156.9	532	11.6	13.52	7.40
1978	6623		141.9	420	9.0	15.77	6.34
1979	7907	(498) *	160.4	523	10.6	15.12	6.61
1980	8065	(712)	159.3	551	10.9	14.64	6.83
1981	7729	(254)	149.1	489	9.4	15.81	6.33
1982	7527	(112)	143.0	454	8.6	16.58	6.03
1983	7301	(73)	136.6	446	8.3	16.37	6.11
1984	7843	(69)	145.3	420	7.8	18.67	5.36
1985	7545	(59) 580 #	138.3	409	7.5	18.45	5.42
1986	7432	(46) 544	134.5	407	7.4	18.26	5.48
1987	7269	(41) 495	130.3	405	7.3	17.95	5.57
1988	7021	(121) 433	124.8	388	6.9	18.10	5.53
1989	6704	(226) 387	117.9	403	7.1	16.64	6.01
1990	6510	(288) 341	114.1	382	6.7	17.04	5.87
1991	6283	(281) 293	109.2	409	7.1	15.36	6.51
1992	6534	(309) 264	112.6	410	7.1	15.94	6.27
1993	6537	(264) 89	110.8	396	6.7	16.51	6.06
1994	6319	(230) 87	104.7	409	6.8	15.45	6.47
1995	6212	(175) 102	100.9	418	6.8	14.86	6.73
1996	6501	(88) 162	101.0	292	4.5	22.26	4.49
1997	7072	(34) 156	109.0	252	3.9	28.06	3.56
1998	7673	(7) 169	117.3	270	4.1	28.42	3.52
1999	7512	(5) 166	113.7	312	4.7	24.08	4.15
2000	7578	(7) 152	113.7	299	4.5	25.34	3.95
2001	7262	(0) 192	108.0	311	4.6	23.35	4.28
2002	6602	(0) 186	97.3	267	3.9	24.73	4.04
2003	6024	(0) 177	88.5	275	4.0	21.91	4.57
2004	6226	(0) 110	90.5	286	4.2	21.77	4.59
2005	6160	(0) 77	90.4	271	4.0	22.73	4.40

* 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.

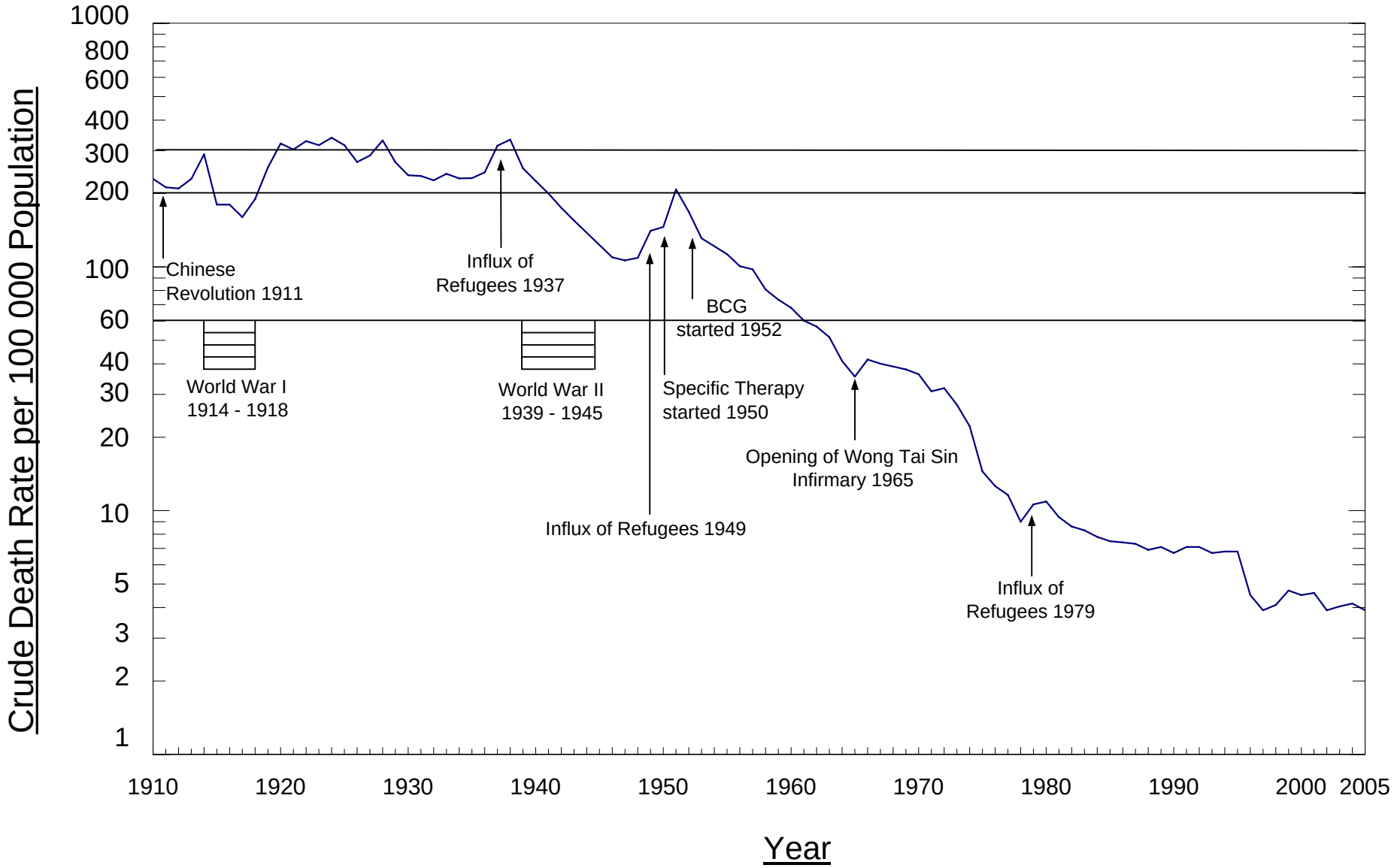
APPENDIX 2

TB Notification Rate (All Forms) 1961-2005



APPENDIX 3

Crude Death Rate due to Tuberculosis (All Forms) 1910-2005



APPENDIX 4 (a)

Tuberculosis Notifications (All Forms) & Rate by Age & Sex 2005

Age Group	Tuberculosis Notifications (All Forms)			Tuberculosis Notifications Rate (per 100,000 population)		
	Male	Female	Total	Male	Female	Total
Under 1	4	3	7	5.24	6.56	5.88
1	0	1	1			
2	0	1	1			
3	2	1	3			
4	0	1	1			
5-9	5	4	9	2.92	2.48	2.70
10-14	24	16	40	11.26	7.92	9.64
15-19	102	91	193	46.32	42.52	44.45
20-24	186	184	370	82.16	75.26	78.57
25-29	149	207	356	67.57	77.76	73.15
30-34	183	218	401	75.68	69.29	72.07
35-39	172	173	345	67.03	51.75	58.39
40-44	232	171	403	72.86	46.12	58.47
45-49	297	156	453	92.96	47.46	69.89
50-54	281	143	424	110.67	55.86	83.15
55-59	295	105	400	148.99	55.23	103.07
60-64	304	76	380	242.81	69.15	161.63
65-69	372	91	463	294.54	75.90	188.06
70-74	384	136	520	340.73	117.65	227.77
75-79	429	130	559	554.26	140.69	329.21
80-84	315	129	444	739.44	198.16	412.26
85 & over	237	150	387	922.18	263.16	467.96
Total	**3973**	**2187**	**6160**	**121.72**	**61.62**	**90.41**

Appendix 4 (b)

Pulmonary TB Notifications by Age & Sex 2005**

Age Group	Pulmonary TB			Bacteriologically * Positive Pulmonary TB			Smear Positive Pulmonary TB		
	M	F	T	M	F	T	M	F	T
Under 1	1	1	2	1	0	1	0	0	0
1	0	1	1	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	1	0	1	0	0	0	0	0	0
4	0	1	1	0	1	1	0	0	0
5-9	3	2	5	2	1	3	0	0	0
10-14	18	12	30	9	9	18	3	3	6
15-19	95	85	180	62	47	109	32	21	53
20-24	167	156	323	102	101	203	46	47	93
25-29	132	164	296	86	100	186	36	46	82
30-34	157	168	325	94	103	197	55	40	95
35-39	156	138	294	102	84	186	50	49	99
40-44	204	116	320	137	75	212	76	49	125
45-49	268	103	371	191	62	253	114	30	144
50-54	266	100	366	189	61	250	113	33	146
55-59	272	75	347	203	46	249	102	21	123
60-64	287	58	345	217	38	255	113	19	132
65-69	336	72	408	256	45	301	122	19	141
70-74	367	109	476	302	80	382	132	29	161
75-79	417	108	525	349	80	429	143	30	173
80-84	304	115	419	256	91	347	96	36	132
85 & over	231	141	372	199	113	312	68	34	102
Total	**3682**	**1725**	**5407**	**2757**	**1137**	**3894**	**1301**	**506**	**1807**

** Pulmonary TB with or without extrapulmonary TB

* Either smear or culture positive

Appendix 4 (c)

Rate of Pulmonary TB Notifications by Age & Sex 2005**

(Rate per 100,000 Population)

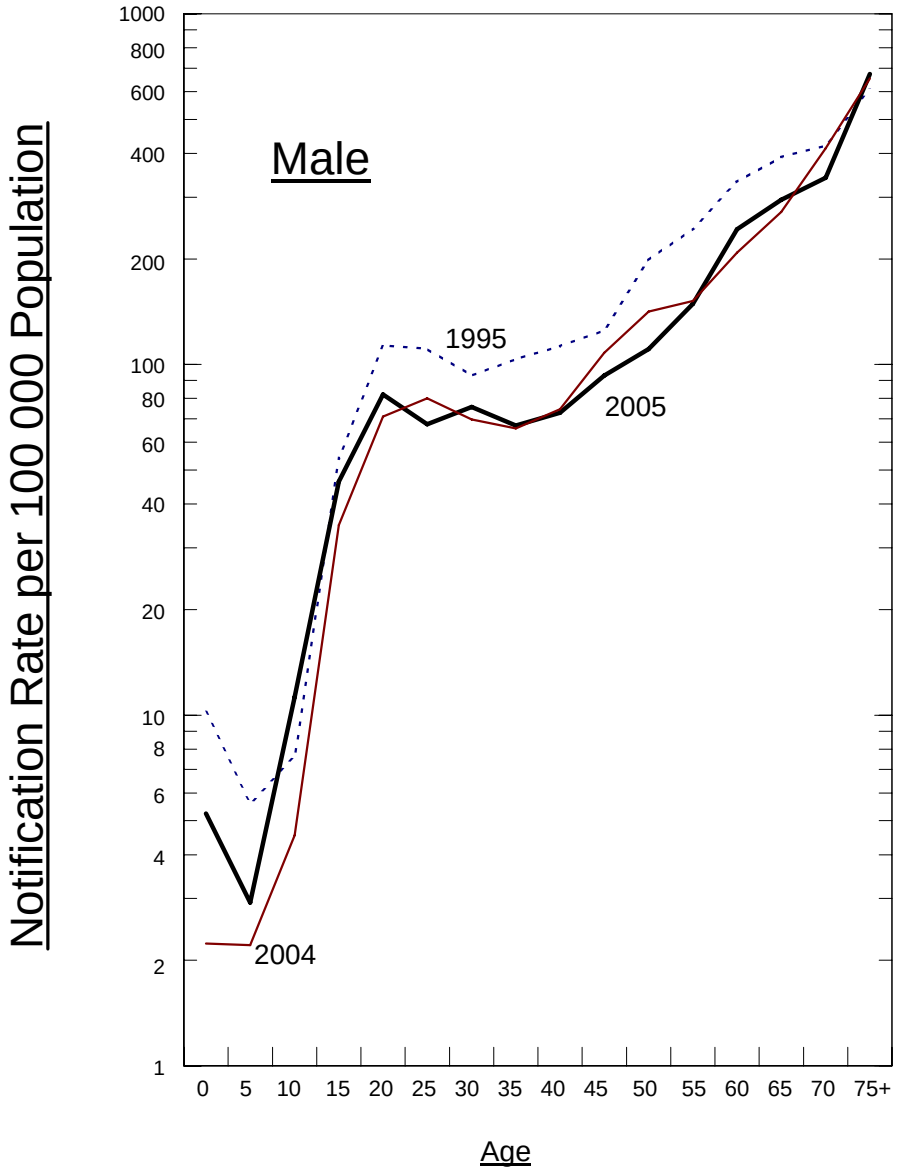
Age Group	Pulmonary TB			Bacteriologically * Positive Pulmonary TB			Smear Positive Pulmonary TB		
	M	F	T	M	F	T	M	F	T
0-4	1.7	2.8	2.3	0.9	0.9	0.9	0.0	0.0	0.0
5-9	1.8	1.2	1.5	1.2	0.6	0.9	0.0	0.0	0.0
10-14	8.4	5.9	7.2	4.2	4.5	4.3	1.4	1.5	1.4
15-19	43.1	39.7	41.5	28.2	22.0	25.1	14.5	9.8	12.2
20-24	73.8	63.8	68.6	45.1	41.3	43.1	20.3	19.2	19.7
25-29	59.9	61.6	60.8	39.0	37.6	38.2	16.3	17.3	16.8
30-34	64.9	53.4	58.4	38.9	32.7	35.4	22.7	12.7	17.1
35-39	60.8	41.3	49.8	39.8	25.1	31.5	19.5	14.7	16.8
40-44	64.1	31.3	46.4	43.0	20.2	30.8	23.9	13.2	18.1
45-49	83.9	31.3	57.2	59.8	18.9	39.0	35.7	9.1	22.2
50-54	104.8	39.1	71.8	74.4	23.8	49.0	44.5	12.9	28.6
55-59	137.4	39.5	89.4	102.5	24.2	64.2	51.5	11.0	31.7
60-64	229.2	52.8	146.7	173.3	34.6	108.5	90.3	17.3	56.1
65-69	266.0	60.1	165.7	202.7	37.5	122.3	96.6	15.8	57.3
70-74	325.6	94.3	208.5	268.0	69.2	167.3	117.1	25.1	70.5
75-79	538.8	116.9	309.2	450.9	86.6	252.7	184.8	32.5	101.9
80-84	713.6	176.7	389.0	600.9	139.8	322.2	225.4	55.3	122.6
85 & over	898.8	247.4	449.8	774.3	198.2	377.3	264.6	59.6	123.3
Total	**112.8**	**48.6**	**79.4**	**84.5**	**32.0**	**57.2**	**39.9**	**14.3**	**26.5**

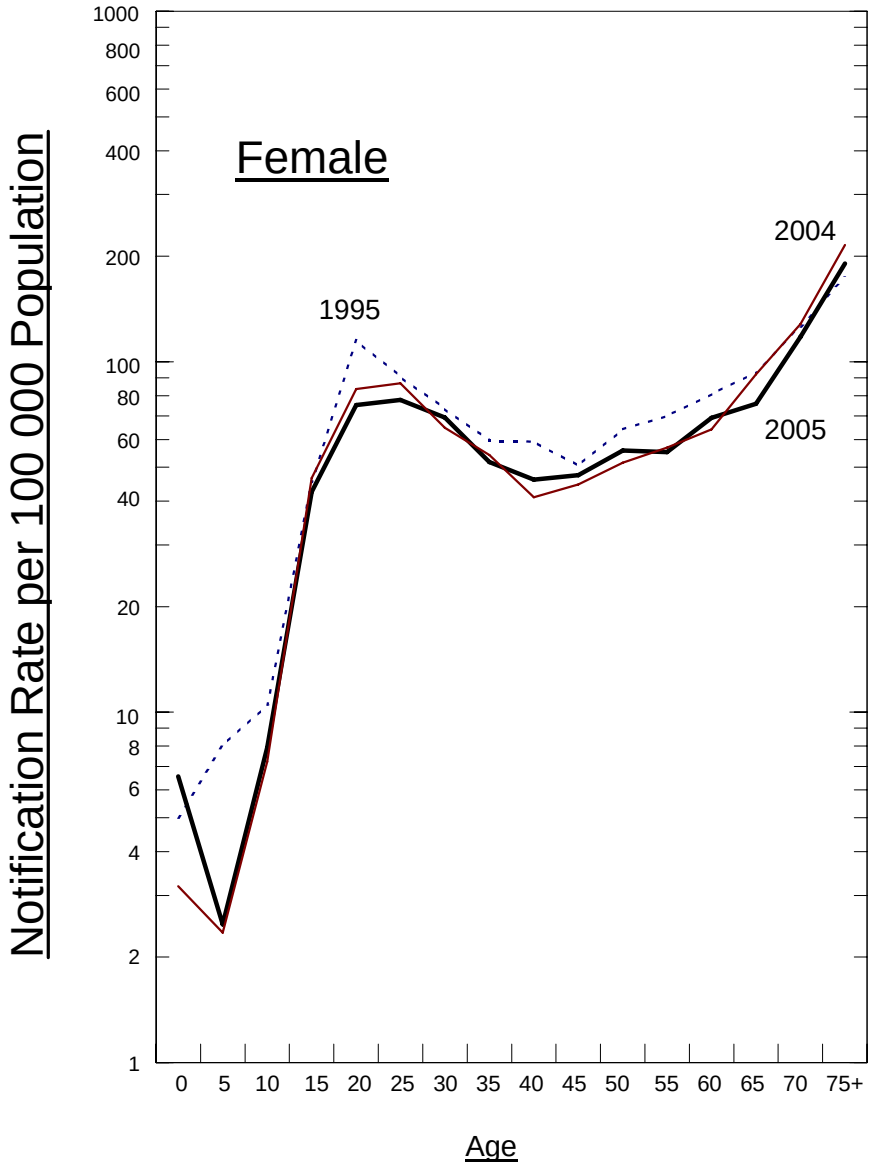
** Pulmonary TB with or without extrapulmonary TB

* Either smear or culture positive

APPENDIX 5

TB Notification Rate by Age & Sex 1995, 2004 & 2005





Appendix 6

Notifications of Tuberculosis by Type by Age & Sex 2005

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	-	-	-	-	-	-	-	-	-	4	2	6
1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
3	1	-	1	-	-	-	-	-	-	-	-	-	1	1	2
4	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
5-9	3	2	5	-	-	-	-	-	-	-	-	-	2	2	4
10-14	17	12	29	-	-	-	-	-	-	1	-	1	6	4	10
15-19	89	68	157	1	-	1	-	-	-	1	-	1	11	23	34
20-24	160	137	297	-	-	-	1	-	1	3	1	4	22	46	68
25-29	124	146	270	1	-	1	-	1	1	2	2	4	22	58	80
30-34	146	155	301	1	-	1	2	3	5	2	1	3	32	59	91
35-39	144	126	270	2	3	5	1	1	2	1	-	1	24	43	67
40-44	189	108	297	4	-	4	3	1	4	1	1	2	35	61	96
45-49	261	99	360	2	2	4	2	1	3	3	1	4	29	53	82
50-54	257	89	346	1	3	4	2	1	3	1	4	5	20	46	66
55-59	259	71	330	4	1	5	1	1	2	2	2	4	29	30	59
60-64	278	57	335	-	-	-	-	-	-	2	2	4	24	17	41
65-69	324	70	394	3	-	3	3	1	4	3	4	7	39	16	55
70-74	361	104	465	-	5	5	-	2	2	2	2	4	21	23	44
75-79	406	103	509	5	2	7	-	1	1	-	4	4	18	20	38
80-84	291	110	401	5	1	6	-	-	-	3	2	5	16	16	32
85 & over	217	138	355	-	1	1	-	-	-	2	4	6	18	7	25
Total	3527	1597	5124	29	19	48 (a)	15	14	29 (b)	29	30	59 (c)	373	527	900 (d)*

* Including

TB lymph node	483
TB urogenital system	56
TB peritonitis, intestines, mesenteric, appendicitis	79
TB pleural effusion	142
TB laryngitis	6
TB skin	57
Others	64
Unspecified	13

(a) All miliary TB cases has coexisting pulmonary TB; also include 5 cases with coexisting TB of other extrapulmonary sites (among which 2 are meninges/CNS and 2 are bones & joints).

(b) Including 4 cases with coexisting pulmonary TB; also include 2 cases with coexisting TB of other extrapulmonary sites (among which 1 is bones & joints).

(c) Including 12 cases with coexisting pulmonary TB and 3 cases with coexisting TB of other extrapulmonary sites.

(d) Including 219 cases with coexisting pulmonary TB.

\# Pulmonary TB only, without extrapulmonary site involvement

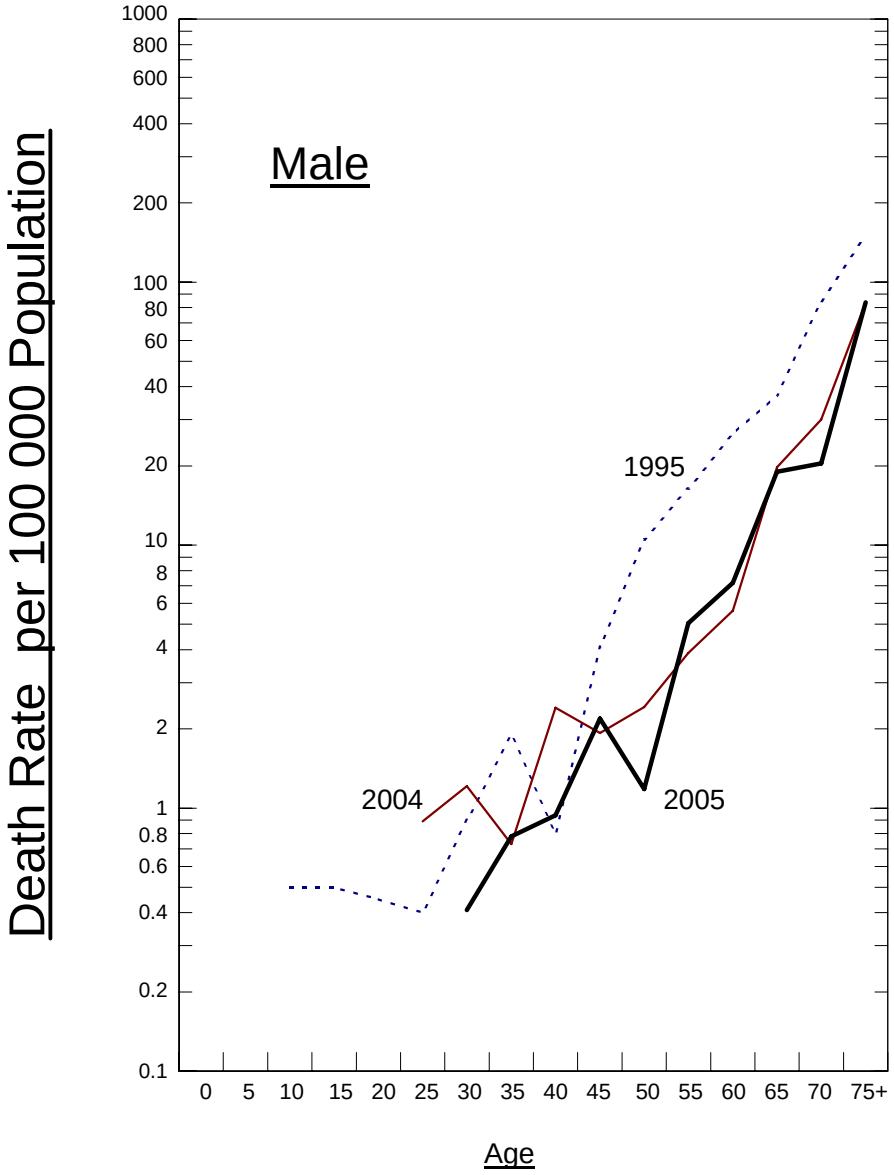
APPENDIX 7

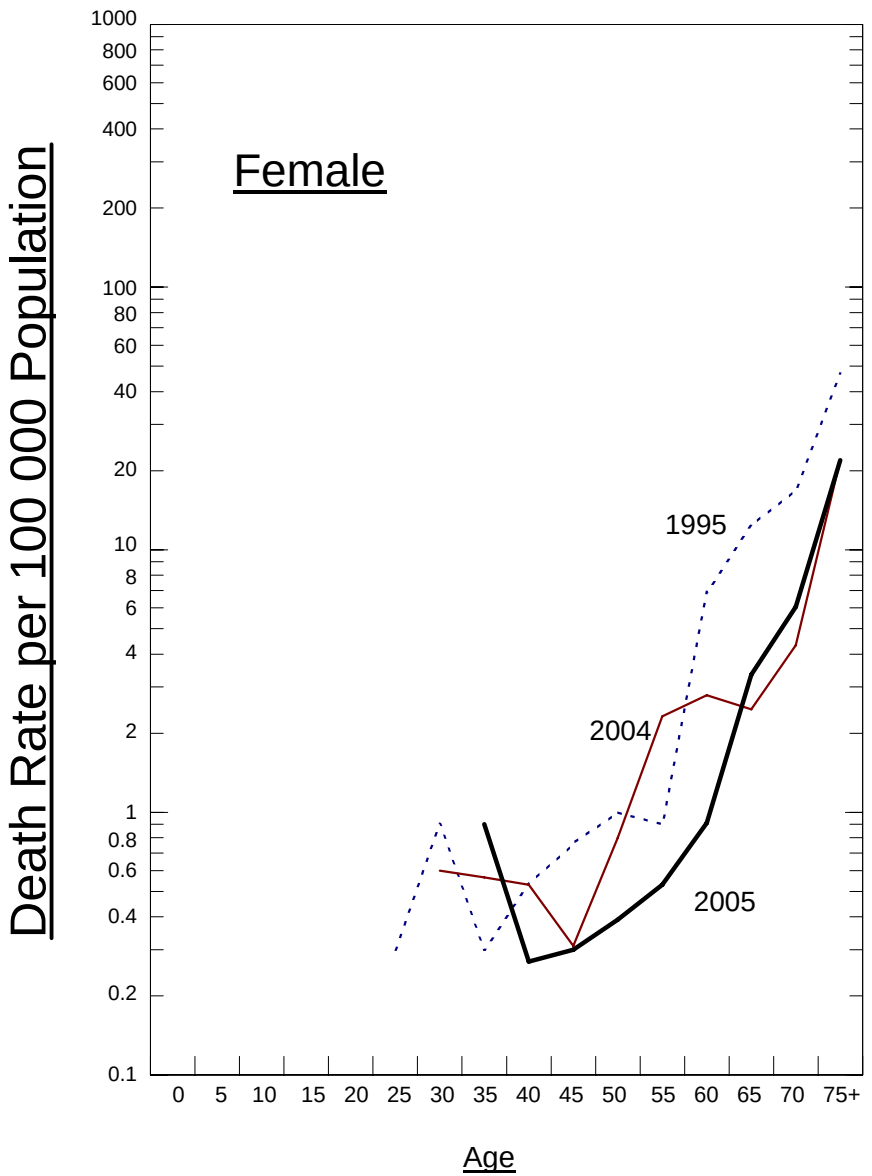
TB Death (All Forms) & Death Rate by Age & Sex 2005

Age Group	Tuberculosis Death (All Forms)			Death Rate (per 100,000 population)		
	Male	Female	Total	Male	Female	Total
Under 1	0	0	0	0.00	0.00	0.00
1	0	0	0			
2	0	0	0			
3	0	0	0			
4	0	0	0			
5-9	0	0	0	0.00	0.00	0.00
10-14	0	0	0	0.00	0.00	0.00
15-19	0	0	0	0.00	0.00	0.00
20-24	0	0	0	0.00	0.00	0.00
25-29	0	0	0	0.00	0.00	0.00
30-34	1	0	1	0.41	0.00	0.18
35-39	2	3	5	0.78	0.90	0.85
40-44	3	1	4	0.94	0.27	0.58
45-49	7	1	8	2.19	0.30	1.23
50-54	3	1	4	1.18	0.39	0.78
55-59	10	1	11	5.05	0.53	2.83
60-64	9	1	10	7.19	0.91	4.25
65-69	24	4	28	19.00	3.34	11.37
70-74	23	7	30	20.41	6.06	13.14
75-79	43	7	50	55.56	7.58	29.45
80-84	41	22	63	96.24	33.79	58.50
85 & over	38	18	56	147.86	31.58	67.71
Unknown	1	0	1			
Total	**205**	**66**	**271**	**6.28**	**1.86**	**3.98**

APPENDIX 8

TB Mortality Rate by Age & Sex 1995, 2004 & 2005





Appendix 9

TB Deaths by Type by Age & Sex 2005

Age Group	Pulmonary only #			Miliary			Meninges			Bones & Joints			Others		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Under 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	2	2	1	-	1	-	1	1	1	-	1	-	-	-
40-44	2	-	2	1	1	2	-	-	-	-	-	-	-	-	-
45-49	5	1	6	1	-	1	-	-	-	-	-	-	1	-	1
50-54	3	-	3	-	1	1	-	-	-	-	-	-	-	-	-
55-59	7	-	7	2	1	3	-	-	-	-	-	-	1	-	1
60-64	5	-	5	-	-	-	1	-	1	-	-	-	3	1	4
65-69	19	1	20	2	1	3	-	-	-	-	-	-	3	2	5
70-74	20	4	24	1	1	2	-	1	1	-	-	-	2	1	3
75-79	38	5	43	1	-	1	-	-	-	-	-	-	4	2	6
80-84	35	19	54	-	2	2	-	-	-	-	-	-	6	1	7
85 & over	35	9	44	-	2	2	-	-	-	-	-	-	3	7	10
Unknown	1		1	-	-	-	-	-	-	-	-	-	-	-	-
Total	171	41	212	9	9	18	1	2	3	1	0	1	23	14	37 *

* Breakdown of Deaths from other forms of TB:-

	Number
Intestines, peritoneum & mesenteric glands	6
Tuberculous of skin and subcutaneous tissue	1
Late effects of Tuberculosis	30
Total	37

Pulmonary TB only, without extrapulmonary site involvement.

APPENDIX 10

Tuberculosis Mortality
1950 - 2005

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

APPENDIX 11

Top Ten Causes of Death 2005

Rank	Causes of Death	Detailed List No.	2005		
		ICD 10th Revision	Male	Female	Total
	All Causes		21 568	17 110	38 683 (5)
1	Malignant neoplasms	C00-C97	7 497	4 813	12 310
2	Diseases of heart	I00-I09, I11 I13, I20-I51	2 971	2 897	5 868
3	Cerebrovascular diseases	I60-I69	1 663	1 771	3 434
4	Pneumonia	J12-J18	2 276	2 015	4 291
5	Chronic lower respiratory diseases *	J40-J47	1 598	663	2 261
6	External causes of morbidity and mortality #	V01-Y89	1 402	748	2 150
7	Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	601	660	1 261
8	Diabetes mellitus	E10-E14	247	355	602
9	Septicaemia	A40-A41	321	380	701
10	Chronic liver disease and cirrhosis	K70,K73-K74	230	143	373
	Tuberculosis (including late effects of tuberculosis)		205	66	271
	All other causes	Residues of all causes	2557	2599	5156 (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
1995 - 2005

Origin	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
East Kowloon Chest Clinic	158	190	175	225	118	192	173	144	123	121	132
Kowloon Chest Clinic	788	742	667	529	608	477	413	420	432	330	287
Sai Ying Pun Chest Clinic (a)	261	254	180	216	198	196	194	142	133	148	112
Shaukiwan Chest Clinic	189	195	181	199	158	169	158	148	122	138	111
Shaukiwan Pneumoconiosis		31	31	50	29	25	23	27	12	29	10
Shek Kip Mei Chest Clinic	256	243	302	282	266	232	208	180	162	157	140
South Kwai Chung Chest Clinic	554	581	547	531	439	342	339	279	300	261	282
Tai Po Chest Clinic				98	92	88	84	96	111	112	101
Wanchai Chest Clinic	593	590	502	461	365	375	384	279	264	223	214
Yan Oi Chest Clinic	363	170	428	419	440	425	396	355	320	290	263
Yaumatei Chest Clinic	181	325	280	389	344	339	373	271	233	203	249
Yuen Chau Kok Chest Clinic				420	395	308	288	223	226	181	148
Yung Fung Shee Chest Clinic	301	300	240	285	331	222	213	218	197	178	174
NT Chest Clinic (b)	650	630	561								
Castle Peak Hospital (Chest Clinic)										5	3
Cheung Chau Chest Clinic									2	2	3
Sai Kung Chest Clinic				13	8	4	4	11	7	7	4
Sheung Shui Chest Clinic				102	97	103	81	96	59	54	64
Tung Chung Chest Clinic				6	13	26	24	35	22	16	11
Yuen Long Chest Clinic				94	94	111	96	103	75	80	93
Sub-total	4294	4251	4094	4319	3995	3634	3451	3027	2800	2535	2401
Grantham Hospital	338	285	360	316	296	358	259	249	252	257	165
Haven of Hope Hospital	88	97	72	117	105	141	116	147	119	137	127
Kowloon Hospital	322	335	384	339	426	443	322	237	220	205	113
Ruttonjee Hospital	229	235	333	275	324	326	305	236	223	263	256
Wong Tai Sin Hospital	372	330	442	458	431	352	330	263	166	189	184
Other Govt. Institutions (c)	16	3	5	7	42	43	113	107	84	87	84
Other H.A. Hospitals	277	287	740	1244	1682	2081	2176	2133	1937	2301	2543
Private Practitioners	253	589	413	343	157	121	125	130	159	136	156
Private Hospitals	23	89	229	255	54	79	65	73	64	116	131
Total	6212	6501	7072	7673	7512	7578	7262	6602	6024	6226	6160
% of cases from Chest Clinics among the total	69.1	65.4	57.9	56.3	53.2	48.0	47.5	45.8	46.5	40.7	39.0
% from Chest Hospitals (d)	21.7	19.7	22.5	19.6	21.1	21.4	18.3	17.1	16.3	16.9	13.7
% from Other Public Hospitals	4.7	4.5	10.5	16.3	22.9	28.0	31.5	33.9	33.5	38.4	42.6
% from Private Sector	4.4	10.4	9.1	7.8	2.8	2.6	2.6	3.1	3.7	4.0	4.7

Notes : (a) Including Notifications from Cheung Chau Chest Clinic
(b) Including Yuen Chau Kok Chest Clinic.
(c) Sources are from Public Mortuaries, Prison Hospitals, & Army Hospitals.
(d) 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" 2005

Name of Hospital	No. of TB Notification
Alice Ho Miu Ling Nethersole Hospital	104
Caritas Medical Centre	106
Castle Peak Hospital	1
Cheshire Home, Chung Hom Kok	2
Duchess of Kent Children's Hospital	2
Fung Yiu King Hospital	1
Hong Kong Buddhist Hospital	4
Kwai Chung Hospital	1
Kwong Wah Hospital	207
North District Hospital	171
Our Lady of Maryknoll Hospital	16
Pamela Youde Nethersole Eastern Hospital	150
Pok Oi Hospital	11
Prince of Wales Hospital	241
Princess Margaret Hospital	208
Queen Elizabeth Hospital	333
Queen Mary Hospital	138
Shatin Hospital	12
St. John's Hospital	1
Tai Po Hospital	14
Tseung Kwan O Hospital	89
Tuen Mun Hospital	289
Tung Wah Eastern Hospital	10
Tung Wah Hospital	4
United Christian Hospital	293
Wong chuk Hang Hospital	1
Yan Chai Hospital	134
Total	**2543**

Appendix 13

Tuberculosis Notifications & Notification Rates

by District Council District 2005

District Council District	Notification	Notification Rate (per 100,000 pop.)
Hong Kong Island	1030	82.1
Central & Western	227	91.7
Wanchai	420	279.1
Eastern	214	36.5
Southern	169	62.4
Kowloon	2303	111.7
Kowloon City	364	98.1
Kwun Tong	630	107.6
Sham Shui Po	444	119.3
Wong Tai Sin	472	109.4
Yau Tsim Mong	393	130.1
NT (East)	1288	74.1
Islands	94	72.2
Northern	260	89.7
Sai Kung/Tseung Kwan O	261	64.6
Shatin	453	73.4
Tai Po	220	73.8
NT (West)	1505	82.0
Kwai Tsing	467	91.3
Tsuen Wan	218	78.6
Tuen Mun	409	82.6
Yuen Long	411	74.7
Marine	0	
Unknown	9	
Others	25	
Total	**6160**	**90.4**

APPENDIX 14

Establishment & Strength of TB & Chest Service

As at 31.12.2005

Post	Establishment	Strength
Consultant Chest Physician i/c	1	1
Consultant Chest Physician	1	1
Senior Medical & Health Officer	7	6
Medical & Health Officer	23	23
Contract Doctor	1	1
Senior Nursing Officer	1	1
Nursing Officer	14	13
Registered Nurse	59	66
Contract Nurse	4	4
Enrolled Nurse	92	85
Senior Dispenser	9	9
Dispenser	1	0
Executive Officer I	1	1
Administrative Assistant	1	1
Statistical Officer II	2	2
Research Assistant	1	1
Personal Secretary I	1	1
Clerical Officer	16	13
Assistant Clerical Officer	20	19
Clerical Assistant	55	55
Project Assistant	4	4
Office Assistant	11	11
Health Programme Assistant	1	1
Workman II	46	49
General Worker	6	6
Property Attendant	2	0
Senior Radiographer	3	3
Radiographer I	7	4
Radiographer II	14	11
Contract Radiographer	12	12
Senior Radiographic Technician	1	1
Radiographic Technician	5	5
Darkroom Technician	11	12
Darkroom Assistant	1	1

APPENDIX 15

Total Attendances at Chest Clinics

1995 - 2005

Clinic/Hospital	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
East Kowloon Chest Clinic	54430	54921	58862	65220	56317	64102	64820	60729	56132	58535	61835
Kowloon Chest Clinic	95667	104572	120663	117678	112291	119624	106321	98403	97223	86502	77337
Sai Ying Pun Chest Clinic	48537	55967	50875	56233	58380	57916	53854	51808	45437	46974	45159
Shaukiwan Chest Clinic	48215	55737	54639	54732	52446	53011	57215	57968	47541	50828	50699
Shaukiwan Pneumoconiosis	9944	9664	9185	10821	12182	11023	10889	9120	8008	8098	9144
Shek Kip Mei Chest Clinic	56871	63462	72274	75610	68971	70941	71134	65572	60461	60382	60789
South Kwai Chung Chest Clinic	94000	101041	111683	113185	108654	99012	90448	85221	78998	75487	80015
Tai Po Chest Clinic (Full Time)	-	-	-	-	-	-	-	7866	33518	30879	35347
Tung Chung (Full Time)	-	-	101	3730	4687	4601	6241	6129	6807	1928	-
Wanchai Chest Clinic	79964	89391	92697	91331	85109	84960	79212	70500	62322	60406	57906
Yan Oi Chest Clinic	64091	70741	69581	70979	78840	79188	72982	66905	66084	70168	72078
Yaumatei Chest Clinic	79224	80341	89759	103198	108226	111959	114499	95700	71378	70294	80708
Yuen Chau Kok Chest Clinic	54642	55615	61160	76626	71273	66192	65190	64748	60339	56322	59328
Yung Fung Shee Chest Clinic	56908	58139	58841	66567	74735	73255	73663	77078	77516	71269	78279
Castle Peak Hospital	1932	1773	1169	1283	1151	868	1010	416	372	373	317
Cheung Chau Chest Clinic	2414	2490	2808	2943	2706	2611	1640	2404	1944	2032	2066
Sai Kung Chest Clinic	1412	1451	1444	1682	1905	2141	1945	2119	2372	2495	2382
Sheung Shui Chest Clinic	7710	10151	15330	18756	21256	22383	24271	24273	22933	23211	22601
Tai Po Chest Clinic (Part Time)	8083	8773	15760	20350	20758	24688	25636	17761	-	-	-
Tung Chung (Part Time)	-	-	-	-	-	-	-	-	-	2802	5173
Yuen Long Chest Clinic	9822	11687	18742	21677	24075	27603	27208	29393	28702	31054	33056
Hei Ling Chau ATC	1550	3187	2600	2664	1855	3726	2474	2302	2352	1670	585
Lai Chi Kok Reception Centre	-	-	-	-	-	-	-	-	-	723	479
Pik Uk Prison	87	-	-	-	-	-	-	-	-	-	-
Shek Pik Prison Hospital	1239	943	725	173	266	241	291	277	203	211	141
Stanley Prison Hospital	5925	7751	6053	7380	9062	10468	10532	11977	8829	7459	527
Total	**782667**	**847797**	**914951**	**982818**	**975145**	**990513**	**961475**	**908669**	**839471**	**820102**	**835951**

Appendix 16

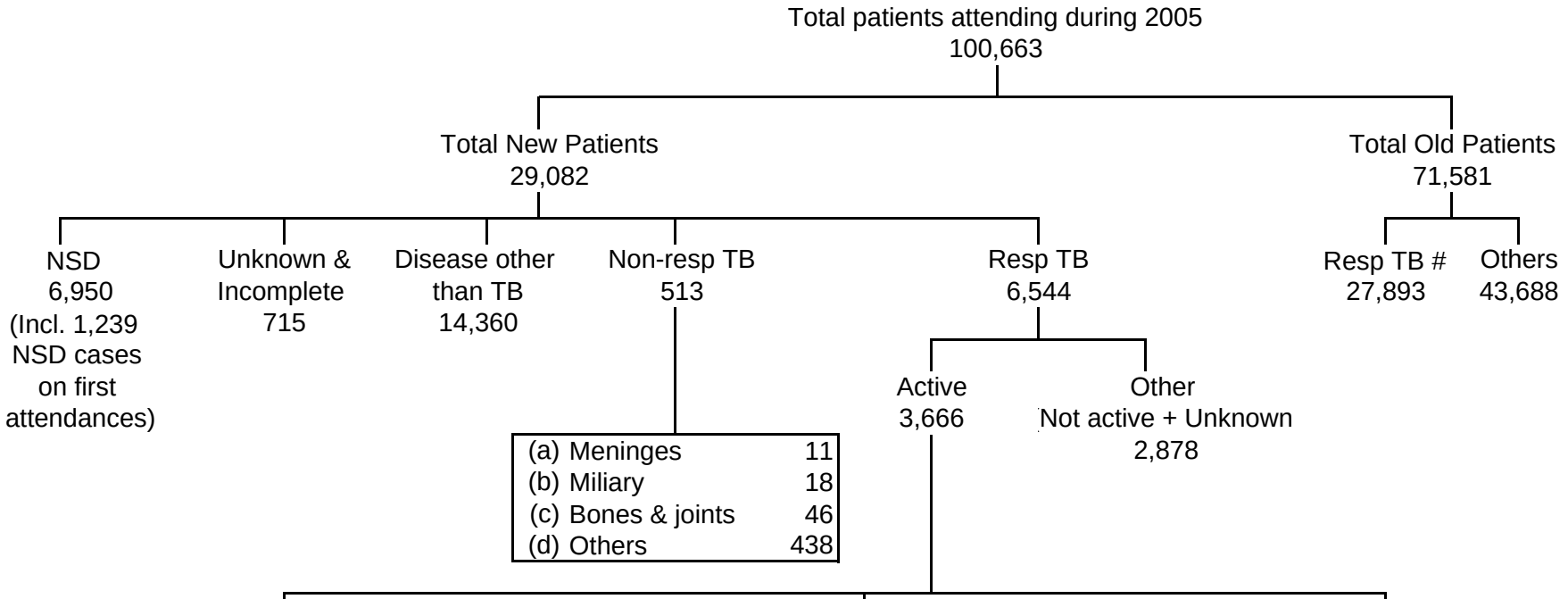
No. of Doctor Sessions, Cases Seen by Doctor and Patient/ Doctor Session 2005

Clinic/Hospital	Doctor Sessions	Cases Seen by Doctor	Patient/Doctor Session
Full Time Clinics			
East Kowloon	668	18242	27
Kowloon	1144	33842	30
Pneumoconiosis	556	8840	16
Sai Ying Pun	584	16515	28
Shaukeiwan	601	15827	26
Shek Kip Mei	714	17176	24
South Kwai Chung	1015	31643	31
Tai Po	1088	11499	11
Wanchai	651	22986	35
Yan Oi	889	24657	28
Yaumatei	1077	24831	23
Yuen Chau Kok	882	18958	21
Yung Fung Shee	653	18579	28
Sub-total	**10522**	**263595**	**25**
Part Time Clinics			
Castle Peak	26	269	10
Cheung Chau	26	627	24
Sai Kung	49	863	18
Sheung Shui	294	7138	24
Tung Chung	149	2213	15
Yuen Long	396	9035	23
Sub-total	**940**	**20145**	**21**
Institutions Correctional Ser Dept			
Hei Ling Chau	13	593	46
Lai Chi Kok Reception Center	52	476	9
Shek Pik	18	143	8
Stanley Prison	22	527	24
Sub-total	**105**	**1739**	**17**
Total	**11567**	**285479**	**25**

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

APPENDIX 17

Flow Chart of Patients Attending Chest Clinics 2005



Bacteriology	Extent	Number
Negative	1	894
	2	176
	3	49
Positive	1	1247
	2	790
	3	413
Incomplete	1	81
	2	13
	3	3

Bacteriology	Cavity	Number
Negative	Yes	97
	No	1022
Positive	Yes	639
	No	1811
Incomplete	Yes	8
	No	89

Previous History of TB	Previous Treatment of TB	Number
No	No	3257
Yes	No	231
Yes	Yes	171
Unknown	Unknown	7

Refer to cases with pulmonary TB only, without coexisting TB of extrapulmonary sites.

APPENDIX 18

Classification of Patients of First Attendance with New Case Card Completed By Clinics According to International Classification of Diseases Code 2005

Code	Classification	Total
010	Primary Tuberculosis Infection	8
011	Pulmonary Tuberculosis	3473
012	Other Respiratory Tuberculosis	185
013	Tuberculosis of Meninges	11
014	Tuberculosis of Intestines	40
015	Tuberculosis of Bones & Joints	46
016	Tuberculosis of Genito-urinary System	30
017	Tuberculosis of Other Organs	368
018	Miliary Tuberculosis	18
137	Late effects of Tuberculosis	2878
160-165	Malignant Neoplasm of Respiratory System	453
212	Benign Neoplasm of Respiratory System	3
460-466	Acute Respiratory Infection	2544
470-478	Other Diseases of Upper Resp Tract	134
480-486	Pneumonia	1848
487	Influenza	1
490-491	Bronchitis, (not specified as acute or chronic) & chronic brochitis	2635
492	Emphysema	105
493	Asthma	190
494	Bronchiectasis	378
495-496	Others	365
501	Asbestosis	2
502	Silicosis	9
505	Pneumoconiosis, unspecified	5
506-508	Others	1
510	Empyema	11
511	Pleurisy	127
512	Pneumothorax	49
513-519	Other Diseases of Respiratory System	575
786	Unknown	2593
V71	N.S.D.	3138
	Diseases Other than TB & Resp System	4925
Total		27148

Appendix 19 (a)

Extent of Active Resporary TB in First Attenders at Chest Clinics 2003-2005

Extent *	2003		2004		2005	
	No.	%	No.	%	No.	%
1. Minimal	2318	63.6	2196	60.5	2222	60.6
2. Moderate	945	25.9	971	26.7	979	26.7
3. Extensive	383	10.5	464	12.8	465	12.7
Total	3646	100.0	3631	100.0	3666	100.0
No. of first attenders	29085		26909		29082	
% of active TB	12.5		13.5		12.6	

* 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 2005

	Number	%
Smear +	1260	34.4
Smear - Culture +	1195	32.6
Smear - Culture -	1100	30.0
Incomplete	111	3.0
Total	3666	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 2005 (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	1.45	1.45	1.45	7.25	7.25	0.00	1.45	1.45	8.70	69
	Previously treated cases	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3
	Overall	1.39	1.39	1.39	6.94	6.94	0.00	1.39	1.39	8.33	72
20 - 39	New cases	0.55	0.82	5.74	8.20	8.47	2.46	0.55	0.55	11.48	366
	Previously treated cases	15.00	20.00	15.00	15.00	0.00	5.00	15.00	15.00	20.00	20
	Overall	1.30	1.81	6.22	8.55	8.03	2.59	1.30	1.30	11.92	386
40 - 59	New cases	0.71	0.48	4.28	8.08	9.03	1.90	0.24	0.24	11.16	421
	Previously treated cases	3.28	1.64	6.56	6.56	1.64	8.20	0.00	0.00	9.84	61
	Overall	1.04	0.62	4.56	7.88	8.09	2.70	0.21	0.21	11.00	482
60 up	New cases	0.16	0.82	3.29	7.25	7.25	1.81	0.16	0.33	9.23	607
	Previously treated cases	0.99	0.99	9.90	9.90	9.90	3.96	0.99	0.99	14.85	101
	Overall	0.28	0.85	4.24	7.63	7.63	2.12	0.28	0.42	10.03	708
All	New cases	0.48	0.75	4.10	7.72	8.07	1.91	0.34	0.41	10.32	1463
	Previously treated cases	3.24	3.24	9.19	9.19	5.95	5.41	2.16	2.16	13.51	185
	Overall	0.79	1.03	4.67	7.89	7.83	2.31	0.55	0.61	10.68	1648

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) registered during the period January to June 2005 (Data from Programme Forms)

	New case		Previously treated cases		Combined	
	N	%	N	%	N	%
Total number of strains tested	1463	100	185	100	1648	100
Susceptible to all 4 drugs	1312	89.68	160	86.49	1472	89.32
Any resistance	151	10.32	25	13.51	176	10.68
H	60	4.10	17	9.19	77	4.67
R	11	0.75	6	3.24	17	1.03
E	7	0.48	6	3.24	13	0.79
S	113	7.72	17	9.19	130	7.89
Monoresistance	118	8.07	11	5.95	129	7.83
H	28	1.91	5	2.70	33	2.00
R	4	0.27	0	0.00	4	0.24
E	2	0.14	0	0.00	2	0.12
S	84	5.74	6	3.24	90	5.46
Multidrug resistance	6	0.41	4	2.16	10	0.61
H+R	2	0.14	0	0.00	2	0.12
H+R+E	1	0.07	0	0.00	1	0.06
H+R+S	1	0.07	1	0.54	2	0.12
H+R+E+S	2	0.14	3	1.62	5	0.30
Other patterns	27	1.85	10	5.41	37	2.25
H+E	1	0.07	1	0.54	2	0.12
H+S	24	1.64	7	3.78	31	1.88
H+E+S	1	0.07	0	0.00	1	0.06
R+E	0	0.00	2	1.08	2	0.12
R+S	1	0.07	0	0.00	1	0.06
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	1312	89.68	160	86.49	1472	89.32
1 drug	118	8.07	11	5.95	129	7.83
2 drugs	28	1.91	10	5.41	38	2.31
3 drugs	3	0.21	1	0.54	4	0.24
4 drugs	2	0.14	3	1.62	5	0.30

APPENDIX 19 (c1)

Rate of Drug-resistant Tuberculosis

Among cases (mainly cases seen at chest clinics) registered during the period January to December 2004 (Data from Programme Forms)

Age Group	Category	% resistance to				* % resistance to			MDR-TB	# Total % resistance	Total no. of cases analysed
		E	R	H	S	1 drug	2 drugs	≥ 3 drugs			
0 - 19	New cases	0.00	0.00	0.83	4.17	3.33	0.83	0.00	0.00	4.17	120
	Previously treated cases	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2
	Overall	0.00	0.00	0.82	4.10	3.28	0.82	0.00	0.00	4.10	122
20 - 39	New cases	0.70	0.70	5.07	7.89	7.46	2.54	0.56	0.42	10.56	710
	Previously treated cases	5.26	13.16	18.42	18.42	7.89	18.42	2.63	10.53	28.95	38
	Overall	0.94	1.34	5.75	8.42	7.49	3.34	0.67	0.94	11.50	748
40 - 59	New cases	0.51	1.27	4.44	0.62	8.49	1.52	1.01	0.89	11.03	789
	Previously treated cases	3.54	5.31	9.73	8.85	3.54	4.42	4.42	5.31	12.39	113
	Overall	0.89	1.77	5.10	8.65	7.87	1.88	1.44	1.44	11.20	902
60 up	New cases	0.00	0.47	2.45	5.27	5.17	1.22	0.19	0.28	6.59	1063
	Previously treated cases	0.91	2.27	9.55	11.36	11.36	3.18	1.82	1.82	16.36	220
	Overall	0.16	0.78	3.66	6.31	6.24	1.56	0.47	0.55	8.26	1283
All	New cases	0.34	0.75	3.65	6.90	6.67	1.64	0.52	0.48	8.84	2682
	Previously treated cases	2.14	4.29	10.46	11.26	8.58	5.09	2.68	3.75	16.35	373
	Overall	0.56	1.18	4.48	7.43	6.91	2.06	0.79	0.88	9.75	3055

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) registered during the period January to December 2004 (Data from Programme Forms)

	New case		Previously treated cases		Combined	
	N	%	N	%	N	%
Total number of strains tested	2682	100	373	100	3055	100
Susceptible to all 4 drugs	2445	91.16	312	83.65	2757	90.25
Any resistance	237	8.84	61	16.35	298	9.75
H	98	3.65	39	10.46	137	4.48
R	20	0.75	16	4.29	36	1.18
E	9	0.34	8	2.14	17	0.56
S	185	6.90	42	11.26	227	7.43
Monoresistance	179	6.67	32	8.58	211	6.91
H	42	1.57	12	3.22	54	1.77
R	5	0.19	0	0.00	5	0.16
E	1	0.04	0	0.00	1	0.03
S	131	4.88	20	5.36	151	4.94
Multidrug resistance	13	0.48	14	3.75	27	0.88
H+R	2	0.07	4	1.07	6	0.20
H+R+E	1	0.04	2	0.54	3	0.10
H+R+S	7	0.26	3	0.80	10	0.33
H+R+E+S	3	0.11	5	1.34	8	0.26
Other patterns	45	1.68	15	4.02	60	1.96
H+E	1	0.04	0	0.00	1	0.03
H+S	40	1.49	13	3.49	53	1.73
H+E+S	2	0.07	0	0.00	2	0.07
R+E	0	0.00	1	0.27	1	0.03
R+S	1	0.04	1	0.27	2	0.07
R+E+S	1	0.04	0	0.00	1	0.03
E+S	0	0.00	0	0.00	0	0.00
Number of drugs resistant to:						
0 drug	2445	91.16	312	83.65	2757	90.25
1 drug	179	6.67	32	8.58	211	6.91
2 drugs	44	1.64	19	5.09	63	2.06
3 drugs	11	0.41	5	1.34	16	0.52
4 drugs	3	0.11	5	1.34	8	0.26

APPENDIX 19 (d)

Rate of Resistance to Ofloxacin

Drug susceptibility testing to ofloxacin has been performed for Mycobacterium tuberculosis strains isolated in TB Reference Laboratory of Department of Health. The rates of resistance to ofloxacin are tabulated as follows for the years 1999 to 2004. However, the data should be interpreted with caution as susceptibility testing to ofloxacin for Cat [B], [C] and [D] are done only if requested by the attending doctor, and not all such strains are included. Thus, the resistance rates among Cat [B], [C] and [D] are probably somewhat over-estimated. For Cat [E], the test is done for all MDR-TB strains and thus the rates are more representative of the true picture.

Year			All strains [A] (=B+C)	Strains with full susceptibility to SHRE [B]	Strains with resistance to any one drug of SHRE [C] (=D+E)	Non-MDR resistant strains [D]	MDR-TB strains [E]
1999	Total number tested		349	146	203	153	50
	Resistant to Ofloxacin	Number	17	2	15	4	11
		%	(4.9%)	(1.4%)	(7.4%)	(2.61%)	(22%)
2000	Total number tested		343	153	190	135	55
	Resistant to Ofloxacin	Number	14	0	14	3	11
		%	(4.1%)	(0%)	(7.4%)	(2.2%)	(20%)
2001	Total number tested		288	123	165	121	44
	Resistant to Ofloxacin	Number	15	1	14	5	9
		%	(5.2%)	(0.8%)	(8.5%)	(4.1%)	(20.5%)
2002	Total number tested		270	141	129	101	28
	Resistant to Ofloxacin	Number	14	0	14	6	8
		%	(5.2%)	(0%)	(10.7%)	(5.9%)	(28.6%)
2003	Total number tested		307	173	134	100	34
	Resistant to Ofloxacin	Number	5	0	5	1	4
		%	(1.6%)	(0%)	(3.7%)	(1.0%)	(11.8%)
2004	Total number tested		614 *	442	172	143	29
	Resistant to Ofloxacin	Number	9	2	7	3	4
		%	(1.4%)	(0.5%)	(4.3%)	(2.1%)	(13.7%)

* Note: Increase in number of strains tested due to inclusion of testing for QMH isolates

Appendix 19 (e)

Trend of anti-TB drug resistance (1998-2005) (Data from Programme Forms)

New cases

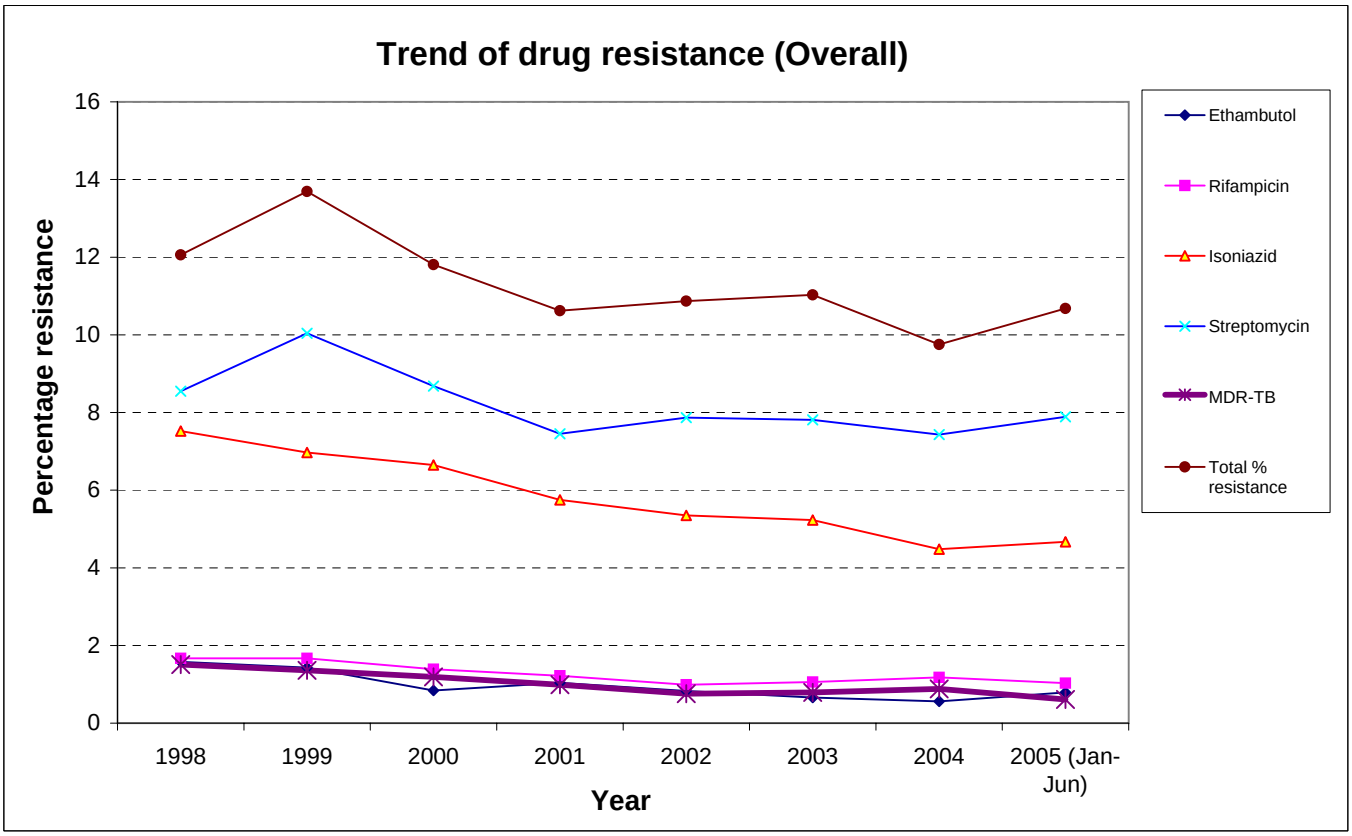
(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005 (Jan-Jun)
Ethambutol	1.24	1.11	0.54	0.96	0.65	0.42	0.34	0.48
Rifampicin	1.17	0.97	0.61	0.83	0.46	0.69	0.75	0.75
Isoniazid	6.78	6.22	5.21	5.02	4.71	4.64	3.65	4.10
Streptomycin	7.65	9.34	7.78	7.39	7.40	7.59	6.90	7.72
MDR-TB	1.06	0.75	0.47	0.55	0.34	0.46	0.48	0.41
Total % resistance	10.89	12.61	10.35	10.39	10.22	10.54	8.84	10.32

Previously treated cases

(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005 (Jan-Jun)
Ethambutol	3.51	3.16	2.68	1.85	2.04	2.19	2.14	3.24
Rifampicin	4.61	6.09	5.98	3.71	4.59	3.41	4.29	3.24
Isoniazid	11.84	11.51	15.26	11.80	9.69	9.00	10.46	9.19
Streptomycin	13.82	14.45	13.81	10.96	10.97	9.25	11.26	9.19
MDR-TB	4.17	5.19	5.36	3.54	3.57	2.92	3.75	2.16
Total % resistance	18.86	20.32	20.41	16.36	16.58	14.11	16.35	13.51

Overall

(Percentages)	1998	1999	2000	2001	2002	2003	2004	2005 (Jan-Jun)
Ethambutol	1.58	1.43	0.84	1.04	0.83	0.66	0.56	0.79
Rifampicin	1.67	1.67	1.39	1.22	0.99	1.06	1.18	1.03
Isoniazid	7.52	6.97	6.65	5.75	5.35	5.23	4.48	4.67
Streptomycin	8.55	10.04	8.68	7.45	7.87	7.81	7.43	7.89
MDR-TB	1.51	1.36	1.19	0.99	0.76	0.79	0.88	0.61
Total % resistance	12.06	13.69	11.81	10.62	10.87	11.03	9.75	10.68



Appendix 20 (a)
Treatment Return 2005

Name of Clinic/Hospital	Service Regimen																									
	No. put on Rx b/f	Bought in					Treatment completed				Transfer out to		Interrup Rx temp	Died	Drop out				Complete defaulter				No. still onRx c/f	Unsup Rx	Incomp super. Rx	No. def. >2M <3M
		1	2	3	4	5	<6M	at 6M	>6M	%	hosp.	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
Full Time Clinics																										
East Kowloon	209	106	8	8	158	123	6	81	203	89.6	52	41	0	15	0	4	0	5	1	3	5	2.8	196	8	67	3
Kowloon	65	245	37	22	165	145	10	86	250	88.0	76	118	0	16	0	6	0	11	1	3	9	3.4	93	0	120	15
South Kwai Chung	325	308	31	28	202	113	20	163	305	87.2	107	21	0	33	2	11	1	6	0	2	15	3.2	321	0	143	0
Sai Ying Pun	155	104	6	4	98	75	1	65	167	90.3	72	11	0	12	0	6	1	3	1	0	3	1.6	100	6	44	0
Shaukeiwan	195	97	12	6	128	70	3	67	187	93.4	46	16	0	8	1	4	0	4	0	0	1	0.4	171	0	39	5
Shek Kip Mei	143	128	4	5	128	89	5	85	158	84.4	60	19	0	15	1	2	0	4	8	6	9	8.0	125	1	51	0
Tai Po	160	119	6	6	92	46	5	88	111	87.7	16	13	1	17	0	2	0	7	0	0	2	0.9	167	0	33	0
Wanchai	195	186	13	7	152	150	7	103	157	80.0	134	29	2	11	0	31	3	14	0	9	0	2.8	203	0	94	1
Yan Oi	316	259	5	10	190	135	19	168	289	89.1	104	35	1	23	2	17	2	6	0	2	6	1.6	241	8	92	0
Yaumatei	256	264	13	16	158	138	30	160	227	88.2	71	28	0	19	5	3	1	6	3	12	4	4.3	276	0	42	7
Yuen Chau Kok	213	170	4	15	123	40	9	110	181	91.2	30	16	4	14	2	8	4	3	0	0	1	0.3	183	28	40	0
Yung Fung Shee	289	203	11	7	209	73	4	146	224	92.0	34	60	0	11	3	8	9	3	1	0	6	1.7	283	4	85	0
Sub-total	2521	2189	150	134	1803	1197	119	1322	2459	88.4	802	407	8	194	16	102	21	72	15	37	61	2.6	2359	55	850	31
Hosp Discharge Clinic																										
East Kowloon	2	0	0	0	0	2	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	4	0	0	0
Part Time Clinics																										
Castle Peak	8	4	0	0	1	1	1	2	6	100.0	0	4	0	0	0	0	0	0	0	0	0	0.0	1	0	0	0
Cheung Chau	4	2	0	1	2	5	0	2	5	100.0	2	1	0	0	0	0	0	0	0	0	0	0.0	4	0	0	0
Sai Kung	16	5	0	0	8	6	0	2	11	86.7	1	0	0	1	0	0	0	1	0	0	0	0.0	19	0	0	0
Sheung Shui	105	67	4	2	79	52	5	26	83	85.8	39	15	0	3	0	1	0	3	1	6	4	8.7	123	0	100	5
Tung Chung	26	9	1	1	18	16	1	14	24	92.7	6	3	0	2	0	1	0	0	0	0	0	0.0	20	0	13	0
Yuen Long	132	96	6	4	87	49	7	34	118	82.2	35	11	0	15	0	5	0	2	1	1	9	5.9	136	0	103	6
Sub-total	291	183	11	8	195	129	14	80	247	85.4	83	34	0	21	0	7	0	6	2	7	13	5.7	303	0	216	11
Institutions Correctional Services Dept																										
Hei Ling Chau	7	32	2	0	1	2	4	2	1	27.3	0	20	0	0	2	6	0	0	0	0	0	0.0	9	0	0	0
Stanley Prison	20	12	0	0	0	0	0	12	0	100.0	2	2	0	0	0	0	0	0	0	0	0	0.0	16	0	0	0
Shek Pik Prison	10	2	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	12	0	0	0
Sub-total	37	46	2	0	1	2	4	14	1	65.2	2	22	0	0	2	6	0	0	0	0	0	0.0	37	0	0	0
Total	2851	2418	163	142	1999	1330	137	1416	2707	88.0	887	463	8	215	18	115	21	78	17	44	74	2.9	2703	55	1066	42

Appendix 20 (b)
Treatment Return 2005

Other Regimen																									
	No. put	Bought in					Treatment completed				Transfer out to		Interrup		Drop out				Complete defaulter				No. still	Unsup	Incomp	No. def.
Name of Clinic/Hospital	on Rx b/f	1	2	3	4	5	<6M	at6M	>6M	%	hosp.	other cc	Rx temp	Died	Rx by GP	Leave HK	Def. >1x	AMA	<2M	>2M <3M	>3M	%	onRx c/f	Rx	super. Rx	>2M <3M
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Full Time Clinics																										
East Kowloon	45	9	3	5	58	21	3	10	35	90.0	18	17	0	5	0	0	0	0	0	0	0	0.0	53	7	24	0
Kowloon	178	19	3	6	22	42	2	5	43	81.4	47	22	2	7	1	1	0	2	0	0	0	0.0	138	0	27	0
South Kwai Chung	56	7	7	7	31	12	0	6	24	81.1	14	2	0	5	0	0	0	1	0	0	1	2.7	67	0	17	0
Sai Ying Pun	59	9	2	1	35	8	0	4	12	84.2	9	1	0	2	0	1	0	0	0	0	0	0.0	85	2	18	0
Shaukeiwan	37	5	2	0	12	14	0	3	29	97.0	13	6	0	1	0	0	0	0	0	0	0	0.0	18	0	6	1
Shek Kip Mei	81	26	4	6	33	17	3	10	28	69.1	22	3	0	5	0	1	1	4	2	3	2	12.7	83	0	35	0
Tai Po	24	4	0	1	7	6	0	3	12	68.2	7	3	1	6	0	0	0	1	0	0	0	0.0	9	0	1	0
Wanchai	18	5	2	3	17	18	0	2	19	100.0	14	1	1	0	0	0	0	0	0	0	0	0.0	26	0	3	0
Yan Oi	63	5	0	3	22	10	2	3	14	89.5	9	2	0	2	0	0	1	0	0	0	0	0.0	70	0	2	0
Yaumatei	17	6	1	0	23	15	0	5	14	73.1	8	2	0	4	0	1	0	0	0	1	1	7.7	26	0	8	0
Yuen Chau Kok	41	45	3	1	30	11	4	13	46	86.8	7	2	3	8	0	0	0	1	0	0	0	0.0	47	20	16	0
Yung Fung Shee	24	1	0	4	21	13	1	5	21	89.7	7	1	0	3	0	0	0	0	0	0	0	0.0	25	0	7	0
Sub-total	643	141	27	37	311	187	15	69	297	83.6	175	62	7	48	1	4	2	9	2	4	4	2.3	647	29	164	1
Hosp Discharge Clinic																										
East Kowloon	0	0	0	1	0	1	0	0	0	0.0	0	1	0	0	0	0	0	0	0	0	0	0.0	1	0	0	0
Part Time Clinics																										
Castle Peak	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Cheung Chau	1	1	0	0	5	2	0	1	1	66.7	2	1	0	1	0	0	0	0	0	0	0	0.0	3	0	4	0
Sai Kung	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
Sheung Shui	10	2	0	2	5	4	0	2	6	100.0	5	1	0	0	0	0	0	0	0	0	0	0.0	9	0	9	0
Tung Chung	0	0	0	1	2	1	0	0	2	100.0	0	0	0	0	0	0	0	0	0	0	0	0.0	2	0	1	0
Yuen Long	6	0	0	1	4	1	1	1	4	100.0	3	0	0	0	0	0	0	0	0	0	0	0.0	3	0	3	0
Sub-total	17	3	0	4	16	8	1	4	13	94.4	10	2	0	1	0	0	0	0	0	0	0	0.0	17	0	17	0
Institutions Correctional Services Dept																										
Hei Ling Chau	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
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	660	144	27	42	327	196	16	73	310	84.0	185	65	7	49	1	4	2	9	2	4	4	2.2	665	29	181	1

APPENDIX 20 (c)

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

Name of clinic/hospital	Service regimen / Other regimens *																								
	b/f	Brought in					Treatment completed				Transfer out to		Interrup. Rx temp.	Died	Drop out				Complete defaulter				Number still on Rx c/f	Unsup. Rx	Incomp. Super. Rx	No. Def. >2m, <3m
											hospi-tal	other cc			Rx by GP	Leave HK	Def. >1x	AMA	<2M	>2M, <3M	>3M	%				
							<6M	at 6M	>6M	%																
	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

J = (H + I) / (A + B + C + D + E + F - G - K - L - M - Q - W) ⇨

V = (S + T + U) / (A + B + C + D + E + F - G - K - L - M - Q - W) ⇨

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

* Explanatory Notes :

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

APPENDIX 20 (d)

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

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

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

Number put on treatment b/f:

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

Brought in:

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

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

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

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

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

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

Treatment completed:

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

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

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

(J) % = (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.

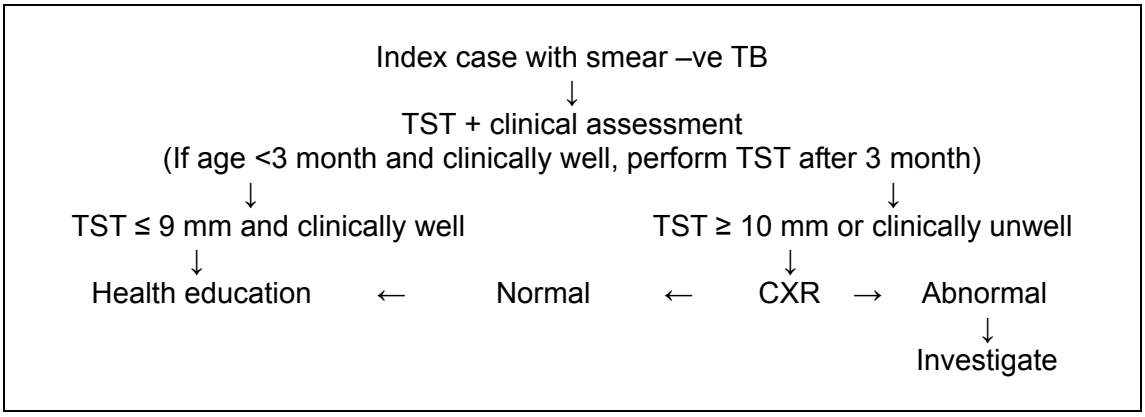
Appendix 21 (a)

Scheme for Investigation of Close Contacts (Household) in the Tuberculosis & Chest Service, Department of Health, 2005

Target groups	Circumstances	Strategy
Close contacts (household) < 5 years old	Index case smear –ve	TST ± CXR (see flow chart below)
	Index case smear +ve	CXR and TST/ treatment of LTBI (see Appendix 21(b))
Close contacts (household) 5-34 years old	Index case smear –ve	CXR
	Index case smear +ve	CXR and TST/ treatment of LTBI (see Appendix 21(b))
Close contacts (household) ≥ 34 years old	Index case smear –ve/ +ve	CXR (or follow Appendix 21(b) under special circumstances)

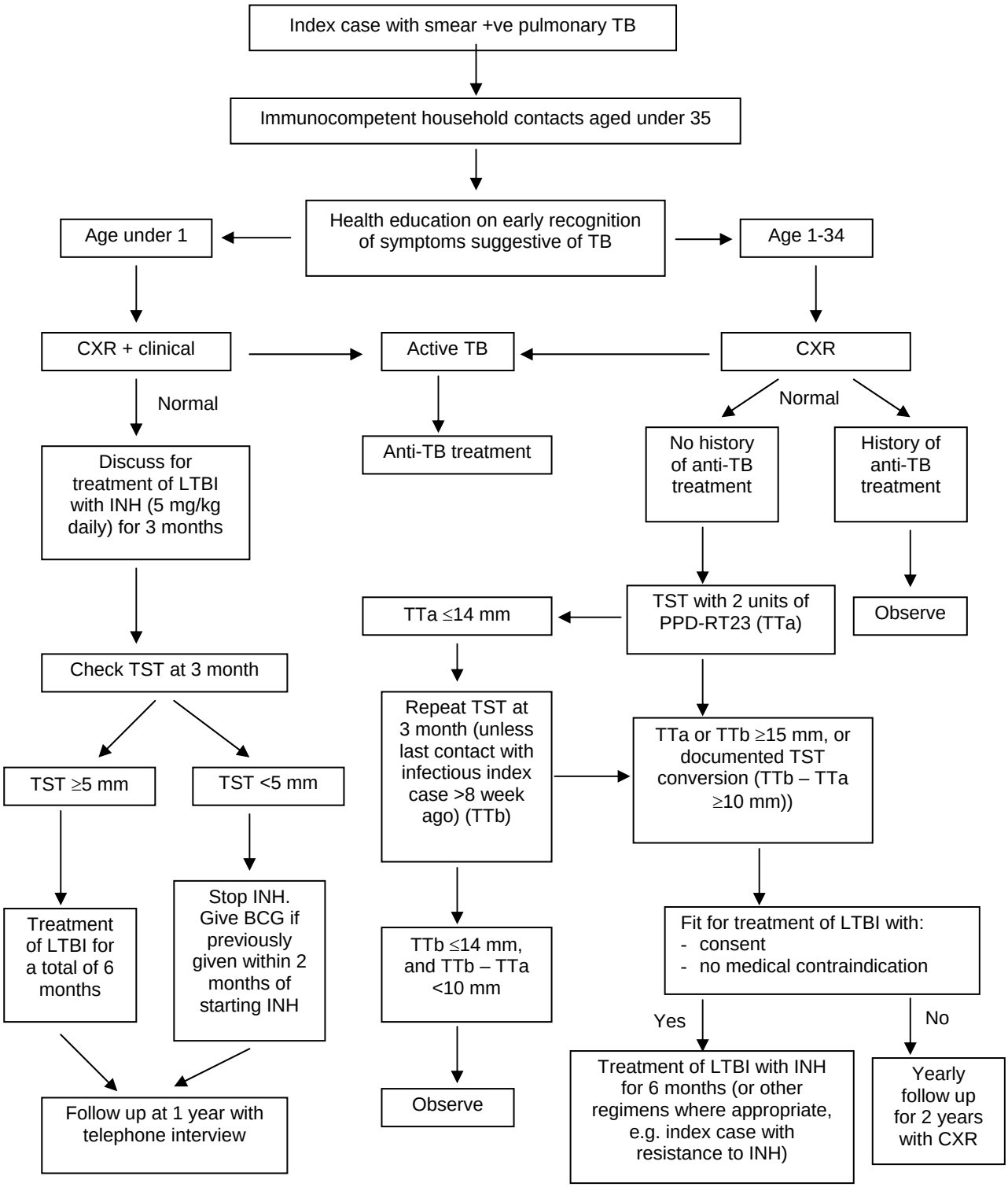
Note: CXR = chest X-ray examination; TST = tuberculin skin test; LTBI = latent TB infection

Flow chart for contact investigation of close contacts aged below 5 with smear –ve index case



Appendix 21 (b)

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



Note: INH = isoniazid
TST = tuberculin skin test

APPENDIX 21 (c)

Examination of Contacts in the Chest Clinics 2005

Particulars	Smear Positive Index Cases		Smear Negative Index Cases		Total	
No. of patients (new & old) listed	1593		4120		5713	
No. of contacts listed	4625		11423		16048	
Number of contacts x-rayed	4312	(100.00%)	10194	(100.00%)	14506	(100.00%)
Results						
(a) NSD & Unknown	3678	(85.30%)	8967	(87.96%)	12645	(87.17%)
(b) Disease other than TB	343	(7.95%)	704	(6.91%)	1047	(7.22%)
(c) Inactive respiratory TB	164	(3.80%)	393	(3.86%)	557	(3.84%)
(d) Active respiratory TB						
A (radiologically)	57	(1.32%)	39	(0.38%)	96	(0.66%)
B (bacteriogically)	35	(0.81%) > 99 (2.30%)	11	(0.11%) > 56 (0.55%)	46	(0.32%) > 155 (1.07%)
C (incomplete)	7	(0.16%)	6	(0.06%)	13	(0.09%)
(e) Non-respiratory TB	3	(0.07%)	15	(0.15%)	18	(0.12%)
(f) Result not yet known	25	(0.58%)	59	(0.58%)	84	(0.58%)

APPENDIX 22 (a)

Scheme for BCG Administration in Hong Kong, 2005

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

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

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

APPENDIX 22 (b)

BCG Vaccinations at Birth 2005

Institution		No. of Live-births	BCG Vaccination	% Vaccinated
Hospital under HA management	P.Y. Nethersole East	3883	3843	99.0
	Queen Mary	3797	3792	99.9
Private Hospital	Canossa	840	841	100.1 *
	H.K. Adventist	739	715	96.8
	H.K. Sanatorium	941	939	99.8
	Matilda International	790	722	91.4
	St. Paul's	2024	2012	99.4
Total (HK Island)		13014	12864	98.8
Hospital under HA management	Kwong Wah	6005	5960	99.3
	Queen Elizabeth	5355	5359	100.1 *
	United Christian	5101	5096	99.9
Private Hospital	H.K. Baptist	3332	3296	98.9
	St. Teresa's	4474	4423	98.9
Total (Kowloon)		24267	24134	99.5
Hospital under HA management	Alice H.M.L. Nethersole	-	-	-
	Prince of Wales	6354	6335	99.7
	Princess Margaret	4720	4658	98.7
	Tuen Mun	6043	6012	99.5
Private Hospital	T.W. Adventist	955	951	99.6
	Shatin Int'l Medical Ctr Union	1747	1728	98.9
Total (NT Areas)		19819	19684	99.3
Mother & Child Health Centre		-	87	-
Grand Total		57100	56769	99.42

Note: * Including vaccinations of live births transferred from other maternity institutions and vaccinations of live births at end of 2004

Vaccination Method 2005	Percentage
Intradermal	100.0
Percutaneous	0.0

(Revised Mar 2008)

APPENDIX 23

TB Beds in Public Services, 2005

Hospital		No. of TB Beds
Hospital Authority	Grantham Hospital	154
	Kowloon Hospital	112
	Ruttonjee Hospital	173
	Haven of Hope Hospital	123
	Wong Tai Sin Hospital	104
	Total (Hospital Authority)	666
Custody	Stanley Prison Hospital	20
	Grand Total (2005)	686
	Grand Total (2004)	704
	Grand Total (2003)	747

APPENDIX 24

Annual Admissions to Hospitals from Government Chest Clinics

1994 - 2005

Year	Total Admissions
1994	5176
1995	5392
1996	4607
1997	4597
1998	4709
1999	5012
2000	5408
2001	5317
2002	5183
2003	4603
2004	4986
2005	4435

Admissions by Clinic	Year 2005
East Kowloon	448
Kowloon	338
Sai Ying Pun	322
Shaukeiwan	293
Shaukeiwan Pneumoconiosis	89
Shek Kip Mei	301
South Kwai Chung	444
Tai Po	85
Tung Chung	31
Wanchai	525
Yan Oi	453
Yaumatei	451
Yuen Chau Kok	202
Yung Fung Shee	257
Cheung Chau	12
NT Unit	184
Total	4435

APPENDIX 25

Unlinked Anonymous Screening (UAS) for HIV in TB & Chest Service (2005)

Age	Male	Female	Total
< 20	18	16	34
20-29	50 (1)	63	113 (1)
30-39	52 (1)	64	116 (1)
40-49	84 (1)	58 (1)	142 (2)
50-59	81	40 (1)	121 (1)
≥ 60	236 (2)	74	310 (2)
Unknown	5	0	5
Total	526 (5)	315 (2)	841 (7)

UAS for HIV in TB & Chest Service (1990 to 2005)

Period	Category	Sample	Number Tested (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%)

APPENDIX 26

Number of 'Confirmed' cases of TB in health care staff
Notified to Labour Department (1993 – 2005)

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

'Confirmed' Cases of TB in Health Care Staff Notified
to Labour Department (2005) by Age and Job Title

Age Group	Doctor	Nurse	Other Allied Health Professional	Other Supporting Staff	Total
20 – 24		1			1
25 – 29	1	1	3		5
30 – 34		7	2		9
35 – 39	2	2	1	1	6
40 – 44	1			1	2
45 – 49		3		1	4
50 – 54			2	1	3
55 – 59					
60 – 64					
65 – 69					
Total	4	14	8	4	30

Appendix 27 (a)

Cohort of TB Patients in 2004

A	**Number of TB cases in 2004**	**6,226**

*Number of these cases, by **strategy**, that are*		**DOTS**	**Non-DOTS**	
B	**New pulmonary smear-positive**	**1,356**	**337**	**1,693**
C	**New pulmonary smear-negative**	**2,321**	**532**	**2,853**
D	**New pulmonary smear-unknown**	**95**	**113**	**208**
E	**New extrapulmonary**	**527**	**147**	**674**
F	**Other NEW cases not in lines B–E**	**0**	**0**	
G	**Smear-positive relapse pulmonary**	**195**	**61**	**256**
H	**Treatment after failure (smear-positive pulmonary)**	**1**	**1**	*2*
I	**Treatment after default (smear-positive pulmonary)**	**13**	**1**	*14*
J	**Other RE-TREATMENT cases not in lines G–I.**	**429**	**97**	***526***
K	**Other, not in lines B–J (i.e., history unknown)** Please specify what these cases are, in "Remarks."	**0**	**0**	
		4,937	***1,289***	***6,226***
L	**New pulmonary lab-confirmed cases**	**2,777**	**760**	**3,537**

Age and sex of new pulmonary smear-positive TB cases, 2004

DOTS	**0–14**	**15–24**	**25–34**	**35–44**	**45–54**	**55–64**	**65+**	**Total**
Male	**2**	**54**	**83**	**109**	**206**	**148**	**321**	923
Female	**3**	**82**	**99**	**75**	**50**	**29**	**95**	433
								1,356

Non-DOTS								
Male	**1**	**5**	**11**	**19**	**20**	**27**	**156**	239
Female	**3**	**15**	**13**	**12**	**6**	**5**	**44**	98
								337

Note (1): "Pulmonary TB" includes cases with both pulmonary and extrapulmonary involvement.
"Extrapulmonary TB" refers to those with extrapulmonary but without pulmonary involvement.

Note (2): New pulmonary lab-confirmed cases are bacteriologically confirmed cases by smear or culture.

Appendix 27 (b)

Cohort of TB patients in 2004 (smear-positive cases) - treatment outcomes

	DOTS	Total number of cases registered	Cured	Completed	Died	Failed	Defaulted	Transferred out*	Total evaluated
A	New pulmonary smear-positive	1,356	977	110	77	113	42	33	1,352
B	New pulmonary smear-negative and unknown	2,416		1,887	112	158	101	64	2,322
C	New extrapulmonary	527		404	8	60	14	19	505
D	Relapse (smear-positive pulmonary)	195	114	14	12	25	10	2	177
E	Treatment after failure (smear-positive pulmonary)	1	0	1	0	0	0	0	1
F	Treatment after default (smear-positive pulmonary)	13	3	1	1	5	2	0	12
G	Other re-treatment	429	141	159	21	41	26	10	398
	non-DOTS								**Total evaluated**
H	New pulmonary smear-positive	337	19	1	4	3	0	3	30
I	New pulmonary smear-negative and not done	645		34	13	3	0	7	57
J	New extrapulmonary	147		3	0	2	0	0	5
K	Relapse (smear-positive pulmonary)	61	1	1	1	1	0	1	5
L	Treatment after failure (smear-positive pulmonary)	1	0	0	0	0	0	0	0
M	Treatment after default (smear-positive pulmonary)	1	0	0	0	0	0	0	0
N	Other re-treatment	97	5	2	2	0	1	0	10

Note: For those under DOTS, the treatment success rate (as at 12 month) for new pulmonary smear-positive cases is 80.4% [(977+110)/1352]. Among the 113 cases "failed", all of them were still on treatment at 12 month, with 104 sputum smear converted negative at 7 month, 3 sputum smear still positive at 7 month, and 6 unknown.

Appendix 27 (c)

Cohort of TB patients in 2004 (bacteriologically-positive cases) - treatment outcomes

	DOTS	Total number of cases registered	Cured	Completed	Died	Failed	Defaulted	Transferred out*	Total evaluated
A	New pulmonary lab-confirmed	2,777	1,921	290	153	236	97	68	2,765
B	New pulmonary not lab-confirmed	995		802	37	40	47	31	957
C	New extrapulmonary	527		404	8	60	14	19	505
D	Relapse (lab-confirmed pulmonary)	392	234	28	26	47	18	6	359
E	Treatment after failure (lab-confirmed pulmonary)	2	0	1	0	0	1	0	2
F	Treatment after default (lab-confirmed pulmonary)	28	8	1	1	5	9	1	25
G	Other re-treatment	216	16	145	7	19	10	5	202

	non-DOTS								Total evaluated
H	New pulmonary lab-confirmed	760	32	5	13	5	0	4	59
I	New pulmonary not lab-confirmed	222		17	4	1	0	6	28
J	New extrapulmonary	147		3	0	2	0	0	5
K	Relapse (lab-confirmed pulmonary)	120	6	1	2	1	1	1	12
L	Treatment after failure (lab-confirmed pulmonary)	1	0	0	0	0	0	0	0
M	Treatment after default (lab-confirmed pulmonary)	2	0	0	0	0	0	0	0
N	Other re-treatment	37	0	2	1	0	0	0	3

Note: For those under DOTS, the treatment success rate (as at 12 month) for new pulmonary bacteriologically-positive cases is 80.0% [(1921+290)/2765]. Among the 236 cases "failed", all of them were still on treatment at 12 month, with 210 sputum bacteriologically converted negative at 7 month, 5 sputum bacteriologically still positive at 7 month, and 21 unknown.

Appendix 27 (d)

Treatment outcomes of special groups

Treatment outcomes for HIV-positive TB cases (smear-positive) (2004 cohort)

		Total number of cases registered	Cured	Completed	Died	Failed	Defaulted	Transferred out*	Total evaluated
A	**New pulmonary smear-positive**	**17**	**13**	**0**	**2**	**0**	**0**	**2**	**17**
B	**New pulmonary smear-negative and unknown**	**10**		**7**	**1**	**0**	**2**	**0**	**10**
C	**New extrapulmonary**	**7**		**7**	**0**	**0**	**0**	**0**	**7**
D	**Relapses (smear-positive pulmonary)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
E	**Treatment after failure (smear-positive pulmonary)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
F	**Treatment after default (smear-positive pulmonary)**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
G	**Other re-treatment**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Appendix 27 (e)

Treatment outcomes of special groups

Treatment outcomes for HIV-positive TB cases (bacteriologically-positive) (2004 cohort)

		Total number of cases registered	Cured	Completed	Died	Failed	Defaulted	Transferred out*	Total evaluated
8.A	New pulmonary lab-confirmed	22	15	0	3	0	2	2	22
8.B	New pulmonary not lab-confirmed and unknown	5		5	0	0	0	0	5
8.C	New extrapulmonary	7		7	0	0	0	0	7
8.D	Relapses (lab-confirmed pulmonary)	0	0	0	0	0	0	0	0
8.E	Treatment after failure (lab-confirmed pulmonary)	0	0	0	0	0	0	0	0
8.F	Treatment after default (lab-confirmed pulmonary)	1	0	0	0	0	1	0	1
8.G	Other re-treatment	0	0	0	0	0	0	0	0

Final treatment outcomes for MDR cases registered in 2002

GLC-approved

		Total number of cases registered	Cured	Completed	Died	Failed	Defaulted	Transferred out*	Total evaluated
8.H	New cases	0							
8.I	Re-treatment cases	0							
8.J	Other cases	0							

Other

8.K	New	8	6	0	0	0	1	1	8
8.L	Re-treatment	13	12	0	0	0	0	1	13
8.M	Other	0	0	0	0	0	0	0	0

Part 2

PNEUMOCONIOSIS

Part 2 - Pneumoconiosis: Contents

APPENDIX 1

New Cases of Suspected Pneumoconiosis attending
the Pneumoconiosis Clinic in Hong Kong 1956 - 2005

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 (c) (2)	7789	1494 (d)	4091

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 70 of the 134 cases in 2005 had been assesed 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 70 cases.

(d) Under Revised Ordinance 1993 : 583 out of 1494 pneumoconiotics had joined the pneumoconiosis ex-gratia scheme up to the year 2005. 222 living pneumoconiotics were each receiving a monthly ex-gratia payment of $4710.00 in 2005.

APPENDIX 2

Age Distribution of Pneumoconiosis Cases 2005

Age	Number of Cases	%
25 - 29	-	-
30 - 34	-	-
35 - 39	1	1
40 - 44	1	1
45 - 49	6	9
50 - 54	13	19
55 - 59	7	10
60 - 64	12	17
65 - 69	8	11
70 - 74	11	16
75+	11	16
Total	70	100

APPENDIX 3

Occupation Distribution of Confirmed Pneumoconiosis 2005

Type of Occupation	Number of Cases	%
Construction Construction/Quarry Others	49 7 14	70 10 20
Total	70	100

APPENDIX 4

Pneumoconiosis Patients by Duration of Exposure to Dust 2005

Duration	Number of Cases	%
<5 years	-	-
5 - 9	3	4
10 - 14	5	7
15 - 19	11	16
20 - 24	19	27
25 - 29	7	10
30+	25	36
Unknown	-	-
Total	70	100

APPENDIX 5

Pneumoconiosis Patients by Degree of Incapacity 2005

Degree of Incapacity (%)	No. of New Cases Compensated under Compensation Ordinance
5	24
10	22
15	7
20	6
25	2
30	1
35	-
40	3
45	-
50	-
60	-
70	-
80	1
100	-
N. A.	4
Total	70

APPENDIX 6

Confirmed Pneumoconiosis Patients
Classified by Radiological Appearance 2005

Type of Opacity	Profusion 1	2	3	Sub-Total
Small opacities				
Rounded				
p (up to 1.5 mm diameter)	5	-	-	5
q (1.5 to 3.0 mm diameter)	38	3	-	41
r (3.0 to 10.0 mm diameter)	2	4	2	8
Irregular				
s (fine irregular or linear)	1	-	-	1
t (medium irregular)	5	3	-	8
u (coarse irregular)	-	-	-	-
Sub-total	51	10	2	63
Combined opacities	3	-	-	3
N. A.	-	-	-	4
Total				70

12 out of the 70 patients have large opacities as follows :

Large opacities	
A (Single opacity 1 - 5 cm or multiple opacities > 1 cm each but sum of diameter < 5 cm)	8
B (Single or multiple opacities with combined area < the equivalent of right upper zone)	4
C (Single or multiple opacities with combined area > the equivalent of right upper zone)	-
Total	12

Appendix 7

Pneumoconiosis Patients with Tuberculosis 2005

Type of T.B.	Number of Cases	%
Bacteriological Positive	11	16
Bacteriological Negative	16	23
No T.B.	39	56
N.A.	4	5
Total	70	100

Appendix 8

Confirmed Pneumoconiosis Patients by Other Particulars 2005

Characteristics		Number of Cases	%
Smoking	Smoker/Ex-smoker	63	90
	Non-smoker	7	10
	Unknown	-	-
	Total	70	100
Still exposed to dust when seen by the Pneumoconiosis Clinic	Yes	19	27
	No	51	73
	Unknown	-	-
	Total	70	100
General Condition	Good	59	85
	Fair	7	10
	Poor	-	-
	Died	4	5
	Total	70	100

Part 3

ANNEX

Part 3 – Annex: Contents

Annex 1 (a)

Treatment Outcomes up to 2 year of the 2002 Cohort of TB Patients

"Programme Forms" have been completed for a total of 5787 TB patients notified in the year 2002. Among them, 5299 were ever seen at chest clinics (ES) while 488 were never seen at chest clinics (NS). They are categorised as follows:

Categories		ES	%	NS	%	ES/NS	%
(A)	New pulmonary, smear positive	1557	29.4	143	29.3	1700	29.4
(B)	New pulmonary, smear negative	2447	46.2	225	46.1	2672	46.2
(C)	New pulmonary, smear not done/ unknown	158	3.0	44	9.0	202	3.5
(D)	New extra-pulmonary	606	11.4	28	5.7	634	11.0
(E)	Relapse pulmonary, smear positive	169	3.2	18	3.7	187	3.2
(F)	Pulmonary smear-positive retreatment after failure or default	29	0.5	1	0.2	30	0.5
(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)]	333	6.3	29	5.9	362	6.3
Total		5299	100.0	488	100.0	5787	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
	(iii) NS (cases never seen at chest clinics) - sheet 01 to 03
Annex 1 (c)	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 2002

Discussion

Annex 1 (b) – Various age groups

Among the total of 5787 patients, 228 (3.9%) were aged between 0 and 19, 1525 (26.4%) between 20 and 39, 1579 (27.3%) between 40 and 59, and 2455 (42.4%) above 60. 65.5% were male. 43.3%, 27.4%, and 22.8% were never smokers, ex-smokers, and current smokers respectively. 90.2% were permanent local residents while 92.5% were of Chinese ethnicity. Most of them (83.9%) presented because of symptoms. 11.7% presented as incidental finding to pre-employment, pre-immigration, other body check or incidental to other illness, while 2.1% were diagnosed through contact tracing.

75.1% of patients had pulmonary TB, 11.6% had extra-pulmonary TB and 13.3% had both. TB pleura and TB lymph node accounted for 10.2% and 8.1% of the site of involvement respectively. Among pulmonary TB patients, 40.4% had pretreatment sputum smear +ve, 68.6% had pretreatment culture +ve and 13.9% had cavitary lesion on their chest radiographs.

With regard to co-morbidity factors for TB, 12.4% of TB patients had diabetes mellitus, 3.9% of patients had coexisting malignancy, 0.6% of patients were immuno-suppressed because of either steroid or cytotoxic therapy. HIV infection was reported for 0.4% of cases. 4.1% of all TB patients were reported to be hepatitis B carrier while 0.6% had chronic active hepatitis.

64.5% of patients were on 6 months short course chemotherapy for TB or other standard regimen based on HREZS. Treatment side effect was reported in 43.9% of patients. 16.8% were GI side effects, 15.1% were skin rash, 5.5% had transient rise in liver enzyme and 6.5% had frank hepatitis.

Among the 5299 patients ever seen in chest clinic, 69.3% received >90% DOT in initial 2 months, while 56.6% received >90% DOT in subsequent 4 months. Treatment completion/cure rates at 6 months, 12 months and 24 months were: 33.1%, 79.7% and 87.0% respectively. Death rates at corresponding periods were 3.1%, 4.7% and 5.0% respectively.

Among the 488 patients never seen in chest clinic, 10% received >90% DOT in initial 2 months, while 9.6% received >90% DOT in subsequent 4 months. Treatment completion/cure rates at 6 months, 12 months and 24 months were: 7.6%, 10.5% and 11.3% respectively. Death rates at corresponding periods were 1.8%, 2.5% and 2.5% 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, 1917 were pretreatment smear +ve, 3059 were pretreatment culture +ve, and 16 were MDR-TB patients.

In the initial 2 months, over 65% of pretreatment smear +ve or culture +ve patients and 81.3% of MDR-TB received >90% DOT. These decreased to around 54-62% for all three groups of patients in subsequent 4 months.

Overall sputum smear conversion rate at 2 months were 85.4% for smear +ve patients and 92.3% for MDRTB patients. Culture conversion rate at 2 months were 88.2% for culture +ve patients and 69.2% for MDR-TB patients.

Treatment success rates for smear +ve patients at 6 months, 12 months and 24 months were 25.0%, 71.9% and 79.9% respectively. Those for culture +ve patients were 29.7%, 72.4% and 79.7% respectively. Those for MDR-TB patients were 6.3%, 25.0% and 68.8% respectively. 0 out of 16 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 27.3%, 72.8% and 80.6% respectively. The corresponding treatment success rates for retreatment pulmonary smear +ve patients were 6.9%, 64.5% and 74.2% respectively.

Annex 1 (e) – Treatment defaulters

There were 227 treatment defaulters at 24 months in the 2002 cohort. Majority (69.2%) were aged between 20 to 59, 31.3% worked full time, 6.6% part time, 22.0% retired, and 27.3% unemployed. 83.7% were new case, 9.3% were relapse and 7.0% were retreatment after default cases. 34.8% had pretreatment smear +ve and 16.9% had cavitary lesions on the chest radiograph. 55.9% of patients lost contact after default and 12.3% 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	115	50.4	792	51.9	478	30.3	611	24.9	1996	34.5
Male	113	49.6	733	48.1	1101	69.7	1844	75.1	3791	65.5
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Marital status										
Single	220	96.5	860	56.4	212	13.4	178	7.3	1470	25.4
Married	2	0.9	597	39.1	1243	78.7	1968	80.2	3810	65.8
Separated	0	0.0	6	0.4	18	1.1	16	0.7	40	0.7
Divorce	0	0.0	24	1.6	57	3.6	30	1.2	111	1.9
Widowed	0	0.0	1	0.1	11	0.7	151	6.2	163	2.8
Not recorded	6	2.6	37	2.4	38	2.4	112	4.6	193	3.3
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Smoking status										
Never	173	75.9	922	60.5	644	40.8	766	31.2	2505	43.3
Ex-smoker	13	5.7	170	11.1	339	21.5	1066	43.4	1588	27.4
Current smoker	27	11.8	350	23.0	520	32.9	422	17.2	1319	22.8
Not recorded	15	6.6	83	5.4	76	4.8	201	8.2	375	6.5
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Institution-related										
Yes	126	55.3	203	13.3	98	6.2	366	14.9	793	13.7
No	100	43.9	1286	84.3	1452	92.0	2015	82.1	4853	83.9
Not recorded	2	0.9	36	2.4	29	1.8	74	3.0	141	2.4
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Institution										
Client	118	-	135	-	55	-	349	-	657	-
Staff	6	-	55	-	28	-	5	-	94	-
Institution type										
Old age home	1	-	3	-	15	-	313	-	332	-
School	123	-	83	-	10	-	3	-	219	-
Hospital	0	-	26	-	15	-	18	-	59	-
Handicapped	0	-	11	-	4	-	1	-	16	-
Prison	0	-	59	-	32	-	1	-	92	-
Others	1	-	15	-	14	-	4	-	34	-
Living situation										
Street-sleeper	1	0.4	1	0.1	8	0.5	7	0.3	17	0.3
Cubicle bed space	1	0.4	4	0.3	6	0.4	23	0.9	34	0.6
Institution	1	0.4	72	4.7	50	3.2	313	12.7	436	7.5
Work quarter	2	0.9	46	3.0	8	0.5	1	0.0	57	1.0
Alone (not above)	0	0.0	68	4.5	148	9.4	276	11.2	492	8.5
With friends	3	1.3	56	3.7	25	1.6	34	1.4	118	2.0
With family	218	95.6	1234	80.9	1306	82.7	1726	70.3	4484	77.5
Not recorded	2	0.9	44	2.9	28	1.8	75	3.1	149	2.6
Residential status										
Permanent resident	196	86.0	1214	79.6	1458	92.3	2349	95.7	5217	90.2
Chinese immigrant	22	9.6	71	4.7	44	2.8	27	1.1	164	2.8
Imported worker	3	1.3	133	8.7	29	1.8	1	0.0	166	2.9
Tourist - 2 way permit Chinese	1	0.4	24	1.6	4	0.3	3	0.1	32	0.6
Other tourist	0	0.0	7	0.5	5	0.3	1	0.0	13	0.2
Vietnamese	0	0.0	3	0.2	4	0.3	2	0.1	9	0.2
Illegal immigrants	0	0.0	25	1.6	5	0.3	2	0.1	32	0.6
Not recorded	6	2.6	48	3.1	30	1.9	70	2.9	154	2.7
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	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	162	71.1	950	62.3	681	43.1	390	15.9	2183	37.7
Mainland China	57	25.0	347	22.8	746	47.2	1870	76.2	3020	52.2
Others	8	3.5	198	13.0	115	7.3	104	4.2	425	7.3
Not recorded	1	0.4	30	2.0	37	2.3	91	3.7	159	2.7
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Ethnicity										
Chinese	217	95.2	1285	84.3	1482	93.9	2371	96.6	5355	92.5
Other Asian	6	2.6	185	12.1	58	3.7	15	0.6	264	4.6
Caucasian	2	0.9	3	0.2	5	0.3	5	0.2	15	0.3
Others	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0
Not recorded	3	1.3	52	3.4	34	2.2	63	2.6	152	2.6
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Previous BCG history										
Yes	184	80.7	943	61.8	412	26.1	93	3.8	1632	28.2
No	7	3.1	122	8.0	431	27.3	1183	48.2	1743	30.1
Unknown	37	16.2	460	30.2	736	46.6	1179	48.0	2412	41.7
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
BCG scar										
Yes	171	-	886	-	371	-	89	-	1517	-
No	42	-	449	-	1037	-	2007	-	3535	-
Evidence of previous BCG										
BCG history +ve or scar +ve	197	86.4	1007	66.0	459	29.1	118	4.8	1781	30.8
Employment status										
Full-time	29	12.7	945	62.0	744	47.1	155	6.3	1873	32.4
Part-time	4	1.8	62	4.1	96	6.1	25	1.0	187	3.2
Retired	1	0.4	4	0.3	105	6.6	1716	69.9	1826	31.6
Unemployed	24	10.5	244	16.0	374	23.7	118	4.8	760	13.1
Housewife	2	0.9	150	9.8	222	14.1	372	15.2	746	12.9
Student	164	71.9	73	4.8	1	0.1	1	0.0	239	4.1
Not recorded	4	1.8	47	3.1	37	2.3	68	2.8	156	2.7
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Occupation										
Blue collar	19	8.3	402	26.4	542	34.3	134	5.5	1097	19.0
White collar	8	3.5	374	24.5	134	8.5	30	1.2	546	9.4
Medical	0	0.0	5	0.3	1	0.1	0	0.0	6	0.1
Nursing	0	0.0	17	1.1	3	0.2	0	0.0	20	0.3
Paramedical	0	0.0	5	0.3	1	0.1	1	0.0	7	0.1
Supporting health staff	0	0.0	2	0.1	9	0.6	0	0.0	11	0.2
Not applicable	151	66.2	558	36.6	757	47.9	2155	87.8	3621	62.6
Not recorded	50	21.9	162	10.6	132	8.4	135	5.5	479	8.3
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
First presentation										
Private doctor	38	16.7	356	23.3	223	14.1	128	5.2	745	12.9
Private hospital	2	0.9	27	1.8	21	1.3	18	0.7	68	1.2
GOPC	7	3.1	41	2.7	78	4.9	108	4.4	234	4.0
Chest Clinic	45	19.7	244	16.0	303	19.2	375	15.3	967	16.7
Other DH Clinic	1	0.4	74	4.9	57	3.6	44	1.8	176	3.0
HA Clinic	5	2.2	51	3.3	47	3.0	61	2.5	164	2.8
HA Hospital	121	53.1	676	44.3	803	50.9	1660	67.6	3260	56.3
Mainland	3	1.3	29	1.9	25	1.6	22	0.9	79	1.4
Overseas	5	2.2	7	0.5	5	0.3	3	0.1	20	0.3
Not recorded	1	0.4	20	1.3	17	1.1	36	1.5	74	1.3
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	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	196	86.0	1309	85.8	1403	88.9	2179	88.8	5087	87.9
N	31	13.6	197	12.9	162	10.3	238	9.7	628	10.9
Not recorded	1	0.4	19	1.2	14	0.9	38	1.5	72	1.2
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Chest symptoms	148	-	929	-	1011	-	1661	-	3749	-
Systemic symptoms	24	-	156	-	174	-	311	-	665	-
Other site-specific symptoms	26	-	269	-	264	-	259	-	818	-
Reason for presentation										
Symptom	192	84.2	1266	83.0	1334	84.5	2065	84.1	4857	83.9
Contact screening	17	7.5	46	3.0	27	1.7	33	1.3	123	2.1
Pre-employment	4	1.8	44	2.9	18	1.1	3	0.1	69	1.2
Pre-emigration	1	0.4	4	0.3	3	0.2	4	0.2	12	0.2
Other body check	12	5.3	111	7.3	92	5.8	90	3.7	305	5.3
Incidental to other illness	0	0.0	21	1.4	72	4.6	200	8.1	293	5.1
Others	0	0.0	11	0.7	5	0.3	7	0.3	23	0.4
Not recorded	2	0.9	22	1.4	28	1.8	53	2.2	105	1.8
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Contact with TB patients										
Yes	45	19.7	150	9.8	87	5.5	83	3.4	365	6.3
No	181	79.4	1348	88.4	1468	93.0	2295	93.5	5292	91.4
Not recorded	2	0.9	27	1.8	24	1.5	77	3.1	130	2.2
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Contact type										
Household	31	-	98	-	61	-	58	-	248	-
Work	4	-	28	-	10	-	1	-	43	-
Casual	4	-	8	-	5	-	6	-	23	-
Time of contact										
Within 2 year	20	-	59	-	31	-	28	-	138	-
Over 2 year	13	-	34	-	25	-	18	-	90	-
Previous chemoprophylaxis										
Yes	0	-	5	-	5	-	21	-	31	-
Reason for chemoprophylaxis										
Contact	0	-	0	-	0	-	1	-	1	-
Silicosis	0	-	0	-	0	-	7	-	7	-
HIV	0	-	0	-	0	-	0	-	0	-
Old scar on CXR	0	-	0	-	0	-	3	-	3	-
Others	0	-	0	-	0	-	6	-	6	-
Disease Classification										
Pulmonary TB only	170	74.6	1051	68.9	1157	73.3	1968	80.2	4346	75.1
Extrapulmonary TB only	24	10.5	233	15.3	227	14.4	188	7.7	672	11.6
Both	34	14.9	241	15.8	195	12.3	299	12.2	769	13.3
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	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	23	10.1	169	11.1	149	9.4	250	10.2	591	10.2
Lymph node	26	11.4	217	14.2	147	9.3	78	3.2	468	8.1
Meninges	2	0.9	9	0.6	13	0.8	10	0.4	34	0.6
Miliary	0	0.0	16	1.0	10	0.6	12	0.5	38	0.7
Abdomen	1	0.4	25	1.6	23	1.5	26	1.1	75	1.3
Bone and joint (not spine)	1	0.4	6	0.4	10	0.6	27	1.1	44	0.8
Spine	0	0.0	6	0.4	10	0.6	14	0.6	30	0.5
Genito-urinary tract	1	0.4	13	0.9	30	1.9	40	1.6	84	1.5
Naso/oro-pharynx	0	0.0	7	0.5	9	0.6	5	0.2	21	0.4
Larynx	0	0.0	1	0.1	5	0.3	6	0.2	12	0.2
Pericardium	0	0.0	3	0.2	7	0.4	7	0.3	17	0.3
Skin	0	0.0	9	0.6	10	0.6	10	0.4	29	0.5
Other sites	4	1.8	11	0.7	24	1.5	17	0.7	56	1.0
Case category										
New case	223	97.8	1460	95.7	1413	89.5	2112	86.0	5208	90.0
Relapse	3	1.3	47	3.1	147	9.3	330	13.4	527	9.1
Treatment after default	2	0.9	17	1.1	14	0.9	11	0.4	44	0.8
Failure of previous treatment	0	0.0	1	0.1	5	0.3	2	0.1	8	0.1
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Disease characteristics (pulmonary cases)										
Pretreatment smear +ve	69	33.8	479	37.1	578	42.8	938	41.4	2064	40.4
Pretreatment culture +ve	124	60.8	807	62.5	913	67.5	1665	73.4	3509	68.6
Extent = 1	117	57.4	718	55.6	723	53.5	1040	45.9	2598	50.8
Extent=1 & cavity=N	*107*	*52.5*	*647*	*50.1*	*661*	*48.9*	*973*	*42.9*	*2388*	*46.7*
Extent=1 & cavity=Y	*10*	*4.9*	*71*	*5.5*	*62*	*4.6*	*67*	*3.0*	*210*	*4.1*
Extent = 2	40	19.6	307	23.8	351	26.0	650	28.7	1348	26.4
Extent=2 & cavity=N	*25*	*12.3*	*227*	*17.6*	*262*	*19.4*	*561*	*24.7*	*1075*	*21.0*
Extent=2 & cavity=Y	*15*	*7.4*	*80*	*6.2*	*89*	*6.6*	*89*	*3.9*	*273*	*5.3*
Extent=3	21	10.3	114	8.8	149	11.0	295	13.0	579	11.3
Extent=3 & cavity=N	*9*	*4.4*	*62*	*4.8*	*81*	*6.0*	*208*	*9.2*	*360*	*7.0*
Extent=3 & cavity=Y	*12*	*5.9*	*52*	*4.0*	*68*	*5.0*	*87*	*3.8*	*219*	*4.3*
Extent=not specified	26	12.7	153	11.8	129	9.5	282	12.4	590	11.5
Extent=ns & cavity=N	*26*	*12.7*	*149*	*11.5*	*129*	*9.5*	*277*	*12.2*	*581*	*11.4*
Extent=ns & cavity=Y	*0*	*0.0*	*4*	*0.3*	*0*	*0.0*	*5*	*0.2*	*9*	*0.2*
Cavity=N	167	81.9	1085	84.0	1133	83.8	2019	89.1	4404	86.1
Cavity=Y	37	18.1	207	16.0	219	16.2	248	10.9	711	13.9
Mode of diagnosis										
Bacteriological	141	61.8	955	62.6	1064	67.4	1900	77.4	4060	70.2
Histological	18	7.9	140	9.2	164	10.4	144	5.9	466	8.1
Clinical-radiological	56	24.6	321	21.0	255	16.1	272	11.1	904	15.6
Clinical only	1	0.4	8	0.5	8	0.5	10	0.4	27	0.5
Not recorded	12	5.3	101	6.6	88	5.6	129	5.3	330	5.7
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Histology										
Typical (with caseation)	6	-	79	-	72	-	33	-	190	-
Granulomatous inflammation	19	-	124	-	154	-	180	-	477	-
Other	5	-	49	-	37	-	20	-	111	-
Ziehl-Neelzen staining										
Positive	15	-	122	-	127	-	122	-	386	-

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	4	1.8	84	5.5	403	25.5	812	33.1	1303	22.5
Diabetes mellitus	2	0.9	23	1.5	240	15.2	453	18.5	718	12.4
Lung cancer	0	0.0	1	0.1	19	1.2	64	2.6	84	1.5
Other malignancies	0	0.0	4	0.3	39	2.5	97	4.0	140	2.4
On cytotoxic drugs	0	0.0	2	0.1	3	0.2	3	0.1	8	0.1
On steroid	2	0.9	8	0.5	7	0.4	9	0.4	26	0.4
Chronic renal failure	0	0.0	3	0.2	12	0.8	25	1.0	40	0.7
HIV	0	0.0	10	0.7	12	0.8	2	0.1	24	0.4
Silicosis	0	0.0	0	0.0	15	0.9	42	1.7	57	1.0
Alcoholism	0	0.0	9	0.6	42	2.7	44	1.8	95	1.6
Drug abuser	0	0.0	19	1.2	39	2.5	7	0.3	65	1.1
Gastrectomy	0	0.0	1	0.1	5	0.3	19	0.8	25	0.4
General debilitation	0	0.0	0	0.0	1	0.1	148	6.0	149	2.6
Others	1	0.4	8	0.5	6	0.4	23	0.9	38	0.7
Factors affecting treatment choices										
Yes	11	4.8	112	7.3	218	13.8	528	21.5	869	15.0
Hepatitis-B carrier	8	3.5	54	3.5	95	6.0	82	3.3	239	4.1
Chronic active hepatitis	0	0.0	7	0.5	8	0.5	17	0.7	32	0.6
Impaired renal function	0	0.0	3	0.2	13	0.8	75	3.1	91	1.6
Chronic renal failure	0	0.0	1	0.1	7	0.4	13	0.5	21	0.4
Impaired vision	2	0.9	17	1.1	47	3.0	242	9.9	308	5.3
Impaired heaering	0	0.0	2	0.1	6	0.4	40	1.6	48	0.8
Known drug reaction	0	0.0	2	0.1	2	0.1	7	0.3	11	0.2
Known drug resistance	1	0.4	10	0.7	10	0.6	17	0.7	38	0.7
Gout	0	0.0	4	0.3	7	0.4	38	1.5	49	0.8
Idiopathic thromb. purpura	0	0.0	0	0.0	1	0.1	3	0.1	4	0.1
Others	1	0.4	23	1.5	36	2.3	88	3.6	142	2.5
6-month short course treatment										
Yes	98	43.0	557	36.5	377	23.9	311	12.7	1343	23.2
2HRZE+4HR	91	39.9	464	30.4	302	19.1	246	10.0	1103	19.1
2HRZS+4HR	3	1.3	15	1.0	27	1.7	23	0.9	68	1.2
Other standard regimen based on HRZES										
Yes	88	38.6	571	37.4	784	49.7	1121	45.7	2564	44.3
Treatment side effects										
Yes	68	29.8	554	36.3	724	45.9	1195	48.7	2541	43.9
GI upset	35	15.4	259	17.0	282	17.9	394	16.0	970	16.8
Skin rash	24	10.5	169	11.1	259	16.4	421	17.1	873	15.1
Visual	2	0.9	27	1.8	53	3.4	111	4.5	193	3.3
Transient rise liver enzyme	6	2.6	69	4.5	93	5.9	153	6.2	321	5.5
Hepatitis	6	2.6	60	3.9	108	6.8	201	8.2	375	6.5
Vestibular	1	0.4	5	0.3	16	1.0	20	0.8	42	0.7
Arthropathy	3	1.3	30	2.0	43	2.7	78	3.2	154	2.7
Fever-chill	2	0.9	16	1.0	27	1.7	23	0.9	68	1.2
Dizziness	4	1.8	46	3.0	57	3.6	92	3.7	199	3.4
Thrombocytopenia	0	0.0	4	0.3	9	0.6	16	0.7	29	0.5
Leucopenia	0	0.0	3	0.2	5	0.3	12	0.5	20	0.3
Flush face	1	0.4	11	0.7	12	0.8	5	0.2	29	0.5
Others	5	2.2	39	2.6	41	2.6	106	4.3	191	3.3
Consequence of side effects										
Rx temporarily withheld	25	11.0	238	15.6	383	24.3	692	28.2	1338	23.1
Desensitiation or drug trial	9	3.9	134	8.8	217	13.7	432	17.6	792	13.7
Change in dosage/frequency	13	5.7	131	8.6	179	11.3	309	12.6	632	10.9
Change of drugs	13	5.7	163	10.7	259	16.4	577	23.5	1012	17.5

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%	149	65.4	964	63.2	1018	64.5	1590	64.8	3721	64.3
>75%	32	14.0	173	11.3	141	8.9	143	5.8	489	8.4
>50%	10	4.4	101	6.6	117	7.4	100	4.1	328	5.7
>25%	7	3.1	45	3.0	58	3.7	83	3.4	193	3.3
≤25%	5	2.2	45	3.0	59	3.7	68	2.8	177	3.1
Not recorded	25	11.0	197	12.9	186	11.8	471	19.2	879	15.2
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	124	54.4	749	49.1	770	48.8	1402	57.1	3045	52.6
>75%	33	14.5	202	13.2	204	12.9	148	6.0	587	10.1
>50%	17	7.5	132	8.7	156	9.9	99	4.0	404	7.0
>25%	16	7.0	93	6.1	113	7.2	85	3.5	307	5.3
≤25%	13	5.7	107	7.0	100	6.3	124	5.1	344	5.9
Not recorded	25	11.0	242	15.9	236	14.9	597	24.3	1100	19.0
Under supervision by relatives (initial 2 months)										
>90%	2	0.9	8	0.5	7	0.4	14	0.6	31	0.5
>75%	1	0.4	5	0.3	5	0.3	11	0.4	22	0.4
>50%	0	0.0	6	0.4	8	0.5	8	0.3	22	0.4
>25%	1	0.4	9	0.6	13	0.8	16	0.7	39	0.7
≤25%	160	70.2	1015	66.6	1005	63.6	1460	59.5	3640	62.9
Not recorded	64	28.1	482	31.6	541	34.3	946	38.5	2033	35.1
Under supervision by relatives (subsequent 4 months)										
>90%	2	0.9	6	0.4	9	0.6	18	0.7	35	0.6
>75%	2	0.9	21	1.4	17	1.1	16	0.7	56	1.0
>50%	0	0.0	8	0.5	19	1.2	12	0.5	39	0.7
>25%	3	1.3	15	1.0	12	0.8	17	0.7	47	0.8
≤25%	156	68.4	955	62.6	939	59.5	1353	55.1	3403	58.8
Not recorded	65	28.5	520	34.1	583	36.9	1039	42.3	2207	38.1
Supplied for unsupervised treatment (initial 2 months)										
<5%	151	66.2	950	62.3	996	63.1	1504	61.3	3601	62.2
<10%	12	5.3	72	4.7	80	5.1	77	3.1	241	4.2
<15%	10	4.4	62	4.1	52	3.3	41	1.7	165	2.9
<25%	13	5.7	67	4.4	69	4.4	57	2.3	206	3.6
<50%	8	3.5	71	4.7	80	5.1	78	3.2	237	4.1
≥50%	6	2.6	45	3.0	64	4.1	86	3.5	201	3.5
Not recorded	28	12.3	258	16.9	238	15.1	612	24.9	1136	19.6
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	129	56.6	782	51.3	826	52.3	1353	55.1	3090	53.4
<10%	19	8.3	98	6.4	80	5.1	77	3.1	274	4.7
<15%	9	3.9	59	3.9	64	4.1	45	1.8	177	3.1
<25%	15	6.6	81	5.3	85	5.4	53	2.2	234	4.0
<50%	8	3.5	95	6.2	98	6.2	73	3.0	274	4.7
≥50%	22	9.6	125	8.2	157	9.9	138	5.6	442	7.6
Not recorded	26	11.4	285	18.7	269	17.0	716	29.2	1296	22.4
Defaulted (initial 2 months)										
<5%	168	73.7	1083	71.0	1113	70.5	1678	68.4	4042	69.8
<10%	12	5.3	33	2.2	20	1.3	23	0.9	88	1.5
<15%	2	0.9	24	1.6	19	1.2	14	0.6	59	1.0
<25%	3	1.3	26	1.7	22	1.4	14	0.6	65	1.1
<50%	2	0.9	20	1.3	16	1.0	12	0.5	50	0.9
≥50%	3	1.3	10	0.7	20	1.3	20	0.8	53	0.9
Not recorded	38	16.7	329	21.6	369	23.4	694	28.3	1430	24.7
Defaulted (subsequent 4 months)										
<5%	161	70.6	1005	65.9	1055	66.8	1568	63.9	3789	65.5
<10%	10	4.4	38	2.5	45	2.8	21	0.9	114	2.0
<15%	7	3.1	39	2.6	24	1.5	16	0.7	86	1.5
<25%	5	2.2	35	2.3	24	1.5	28	1.1	92	1.6
<50%	3	1.3	29	1.9	18	1.1	11	0.4	61	1.1
≥50%	3	1.3	35	2.3	22	1.4	23	0.9	83	1.4
Not recorded	39	17.1	344	22.6	391	24.8	788	32.1	1562	27.0

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	112	49.1	631	41.4	475	30.1	573	23.3	1791	30.9
Still on treatment	86	37.7	628	41.2	840	53.2	1229	50.1	2783	48.1
Died	0	0.0	3	0.2	22	1.4	146	5.9	171	3.0
Transferred	8	3.5	84	5.5	36	2.3	38	1.5	166	2.9
Defaulted	5	2.2	51	3.3	65	4.1	54	2.2	175	3.0
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	17	7.5	128	8.4	141	8.9	415	16.9	701	12.1
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Among those cured/ treatment completed										
Bacteriological conversion	46	41.1	314	49.8	231	48.6	352	61.4	943	52.7
Radiological improvement	92	82.1	538	85.3	378	79.6	430	75.0	1438	80.3
Other clinical improvement	20	17.9	156	24.7	117	24.6	166	29.0	459	25.6
No evidence of response	6	5.4	22	3.5	23	4.8	25	4.4	76	4.2
Among those still on treatment										
Reasons for still on treatment:										
Retreatment case	2	2.3	29	4.6	87	10.4	134	10.9	252	9.1
Extrapulmonary disease	37	43.0	247	39.3	227	27.0	194	15.8	705	25.3
Extensive disease	19	22.1	102	16.2	112	13.3	166	13.5	399	14.3
Interrupted treatment	14	16.3	170	27.1	213	25.4	402	32.7	799	28.7
Drug resistance	5	5.8	45	7.2	26	3.1	50	4.1	126	4.5
Poor response	5	5.8	54	8.6	49	5.8	69	5.6	177	6.4
Others	11	12.8	93	14.8	267	31.8	440	35.8	811	29.1
Among those died - causes of death:										
TB-related cause	0	-	0	0.0	1	4.5	9	6.2	10	5.8
Not TB-related	0	-	2	66.7	17	77.3	97	66.4	116	67.8
Unknown	0	-	1	33.3	4	18.2	40	27.4	45	26.3
Among those transferred, new sources of care:										
GP	2	25.0	9	10.7	5	13.9	5	13.2	21	12.7
Chest Clinic	0	0.0	0	0.0	0	0.0	1	2.6	1	0.6
Hospital	0	0.0	8	9.5	9	25.0	16	42.1	33	19.9
Outside HK	6	75.0	63	75.0	22	61.1	15	39.5	106	63.9
Not recorded	0	0.0	4	4.8	0	0.0	1	2.6	5	3.0
Among those defaulted										
Never found	3	60.0	45	88.2	31	47.7	30	55.6	109	62.3
Retreated after default	2	40.0	1	2.0	3	4.6	0	0.0	6	3.4
Treatment stopped by doctor	0	0.0	4	7.8	21	32.3	15	27.8	40	22.9
Not recorded	0	0.0	1	2.0	10	15.4	9	16.7	20	11.4

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	201	88.2	1224	80.3	1233	78.1	1617	65.9	4275	73.9
Still on treatment	9	3.9	70	4.6	111	7.0	214	8.7	404	7.0
Died	0	0.0	4	0.3	30	1.9	225	9.2	259	4.5
Transferred	10	4.4	90	5.9	42	2.7	34	1.4	176	3.0
Defaulted	6	2.6	74	4.9	90	5.7	69	2.8	239	4.1
Failure	0	0.0	1	0.1	0	0.0	0	0.0	1	0.0
Not recorded	2	0.9	62	4.1	73	4.6	296	12.1	433	7.5
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Among those cured/ treatment completed										
Bacteriological conversion	95	47.3	617	50.4	675	54.7	1051	65.0	2438	57.0
Radiological improvement	166	82.6	1008	82.4	937	76.0	1263	78.1	3374	78.9
Other clinical improvement	70	34.8	502	41.0	453	36.7	526	32.5	1551	36.3
No evidence of response	7	3.5	22	1.8	39	3.2	59	3.6	127	3.0
After treatment completed:										
No relapse	176	87.6	1012	82.7	1071	86.9	1400	86.6	3659	85.6
Loss to follow up	18	9.0	135	11.0	76	6.2	80	4.9	309	7.2
Died	0	0.0	1	0.1	4	0.3	29	1.8	34	0.8
TB-related	*0*		*0*		*1*		*1*		*2*	
Not TB-related	*0*		*0*		*3*		*16*		*19*	
Unknown	*0*		*1*		*0*		*10*		*11*	
Relapse	0	0.0	3	0.2	5	0.4	2	0.1	10	0.2
Bacteriological	*0*		*3*		*4*		*2*		*9*	
Histological	*0*		*0*		*1*		*0*		*1*	
Clinico-radiological	*0*		*0*		*0*		*0*		*0*	
Not recorded	7	3.5	73	6.0	77	6.2	106	6.6	263	6.2
Among those still on treatment										
Reasons for still on treatment:										
Retreatment case	0	0.0	4	5.7	5	4.5	5	2.3	14	3.5
Extrapulmonary disease	2	22.2	13	18.6	16	14.4	24	11.2	55	13.6
Extensive disease	1	11.1	4	5.7	9	8.1	12	5.6	26	6.4
Interrupted treatment	2	22.2	28	40.0	50	45.0	127	59.3	207	51.2
Drug resistance	2	22.2	17	24.3	8	7.2	16	7.5	43	10.6
Poor response	2	22.2	10	14.3	11	9.9	11	5.1	34	8.4
Others	0	0.0	25	35.7	52	46.8	99	46.3	176	43.6
Among those died - causes of death:										
TB-related cause	0	-	1	25.0	1	3.3	11	4.9	13	5.0
Not TB-related	0	-	2	50.0	25	83.3	151	67.1	178	68.7
Unknown	0	-	1	25.0	4	13.3	63	28.0	68	26.3
Among those transferred, new sources of care:										
GP	2	20.0	10	11.1	5	11.9	4	11.8	21	11.9
Chest Clinic	0	0.0	1	1.1	1	2.4	0	0.0	2	1.1
Hospital	0	0.0	6	6.7	12	28.6	15	44.1	33	18.8
Outside HK	8	80.0	70	77.8	24	57.1	13	38.2	115	65.3
Not recorded	0	0.0	3	3.3	0	0.0	2	5.9	5	2.8
Among those defaulted										
Never found	5	83.3	58	78.4	53	58.9	35	50.7	151	63.2
Retreated after default	0	0.0	4	5.4	6	6.7	5	7.2	15	6.3
Treatment stopped by doctor	1	16.7	9	12.2	18	20.0	15	21.7	43	18.0
Not recorded	0	0.0	3	4.1	13	14.4	14	20.3	30	12.6

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	210	92.1	1293	84.8	1347	85.3	1817	74.0	4667	80.6
Still on treatment	0	0.0	5	0.3	3	0.2	7	0.3	15	0.3
Died	0	0.0	5	0.3	34	2.2	236	9.6	275	4.8
Transferred	9	3.9	84	5.5	31	2.0	30	1.2	154	2.7
Defaulted	6	2.6	72	4.7	85	5.4	64	2.6	227	3.9
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	3	1.3	66	4.3	79	5.0	301	12.3	449	7.8
Total	228	100.0	1525	100.0	1579	100.0	2455	100.0	5787	100.0
Among those cured/ treatment completed										
Bacteriological conversion	110	52.4	704	54.4	793	58.9	1264	69.6	2871	61.5
Radiological improvement	177	84.3	1099	85.0	1080	80.2	1500	82.6	3856	82.6
Other clinical improvement	87	41.4	610	47.2	572	42.5	698	38.4	1967	42.1
No evidence of response	6	2.9	22	1.7	45	3.3	49	2.7	122	2.6
After treatment completed:										
No relapse	162	77.1	936	72.4	1072	79.6	1419	78.1	3589	76.9
Loss to follow up	35	16.7	258	20.0	175	13.0	177	9.7	645	13.8
Died	0	0.0	0	0.0	12	0.9	90	5.0	102	2.2
TB-related	*0*		*0*		*0*		*2*		*2*	
Not TB-related	*0*		*0*		*10*		*56*		*66*	
Unknown	*0*		*0*		*2*		*28*		*30*	
Relapse	5	2.4	12	0.9	12	0.9	15	0.8	44	0.9
Bacteriological	*1*		*6*		*4*		*9*		*20*	
Histological	*2*		*3*		*6*		*3*		*14*	
Clinico-radiological	*2*		*3*		*2*		*3*		*10*	
Not recorded	8	3.8	87	6.7	76	5.6	116	6.4	287	6.1
Among those still on treatment										
Reasons for still on treatment:										
Retreatment case	0	-	1	-	0	-	0	-	1	6.7
Extrapulmonary disease	0	-	0	-	0	-	0	-	0	0.0
Extensive disease	0	-	0	-	0	-	0	-	0	0.0
Interrupted treatment	0	-	1	-	1	-	2	-	4	26.7
Drug resistance	0	-	3	-	1	-	1	-	5	33.3
Poor response	0	-	1	-	0	-	0	-	1	6.7
Others	0	-	1	-	1	-	5	-	7	46.7
Among those died - causes of death:										
TB-related cause	0	-	2	40.0	1	2.9	13	5.5	16	5.8
Not TB-related	0	-	2	40.0	26	76.5	159	67.4	187	68.0
Unknown	0	-	1	20.0	7	20.6	64	27.1	72	26.2
Among those transferred, new sources of care:										
GP	2	22.2	9	10.7	5	16.1	4	13.3	20	13.0
Chest Clinic	0	0.0	1	1.2	0	0.0	0	0.0	1	0.6
Hospital	0	0.0	3	3.6	6	19.4	11	36.7	20	13.0
Outside HK	6	66.7	67	79.8	17	54.8	13	43.3	103	66.9
Not recorded	1	11.1	4	4.8	3	9.7	2	6.7	10	6.5
Among those defaulted										
Never found	4	66.7	47	65.3	43	50.6	33	51.6	127	55.9
Retreated after default	1	16.7	9	12.5	10	11.8	8	12.5	28	12.3
Treatment stopped by doctor	1	16.7	7	9.7	12	14.1	12	18.8	32	14.1
Not recorded	0	0.0	9	12.5	20	23.5	11	17.2	40	17.6

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	115	51.1	751	52.5	456	30.5	535	24.9	1857	35.0
Male	110	48.9	679	47.5	1037	69.5	1616	75.1	3442	65.0
Total	225	100.0	1430	100.0	1493	100.0	2151	100.0	5299	100.0
First presentation										
Private doctor	37	16.4	345	24.1	219	14.7	121	5.6	722	13.6
Private hospital	2	0.9	27	1.9	19	1.3	16	0.7	64	1.2
GOPC	7	3.1	40	2.8	78	5.2	105	4.9	230	4.3
Chest Clinic	45	20.0	232	16.2	296	19.8	358	16.6	931	17.6
Other DH Clinic	1	0.4	41	2.9	36	2.4	43	2.0	121	2.3
HA Clinic	4	1.8	49	3.4	45	3.0	55	2.6	153	2.9
HA Hospital	120	53.3	646	45.2	756	50.6	1407	65.4	2929	55.3
Mainland	3	1.3	29	2.0	25	1.7	20	0.9	77	1.5
Overseas	5	2.2	7	0.5	4	0.3	3	0.1	19	0.4
Not recorded	1	0.4	14	1.0	15	1.0	23	1.1	53	1.0
Total	225	100.0	1430	100.0	1493	100.0	2151	100.0	5299	100.0
Symptomatic on presentation										
Y	194	86.2	1246	87.1	1341	89.8	1916	89.1	4697	88.6
N	30	13.3	171	12.0	140	9.4	210	9.8	551	10.4
Not recorded	1	0.4	13	0.9	12	0.8	25	1.2	51	1.0
Total	225	100.0	1430	100.0	1493	100.0	2151	100.0	5299	100.0
Chest symptoms	147	-	882	-	975	-	1470	-	3474	-
Systemic symptoms	24	-	151	-	165	-	275	-	615	-
Other site-specific symptoms	25	-	261	-	250	-	243	-	779	-
Reason for presentation										
Symptom	190	84.4	1211	84.7	1279	85.7	1822	84.7	4502	85.0
Contact screening	16	7.1	44	3.1	27	1.8	31	1.4	118	2.2
Pre-employment	4	1.8	43	3.0	18	1.2	2	0.1	67	1.3
Pre-emigration	1	0.4	4	0.3	3	0.2	4	0.2	12	0.2
Other body check	12	5.3	81	5.7	71	4.8	81	3.8	245	4.6
Incidental to other illness	0	0.0	20	1.4	66	4.4	174	8.1	260	4.9
Others	0	0.0	11	0.8	5	0.3	4	0.2	20	0.4
Not recorded	2	0.9	16	1.1	24	1.6	33	1.5	75	1.4
Total	225	100.0	1430	100.0	1493	100.0	2151	100.0	5299	100.0
Disease Classification										
Pulmonary TB only	168	74.7	975	68.2	1095	73.3	1712	79.6	3950	74.5
Extrapulmonary TB only	24	10.7	226	15.8	215	14.4	178	8.3	643	12.1
Both	33	14.7	229	16.0	183	12.3	261	12.1	706	13.3
Total	225	100.0	1430	100.0	1493	100.0	2151	100.0	5299	100.0
6-month short course treatment										
Yes	97	43.1	539	37.7	367	24.6	307	14.3	1310	24.7
2HRZE+4HR	90	40.0	449	31.4	293	19.6	244	11.3	1076	20.3
2HRZS+4HR	3	1.3	14	1.0	26	1.7	23	1.1	66	1.2
Other standard regimen based on HRZES										
Yes	88	39.1	559	39.1	775	51.9	1115	51.8	2537	47.9

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%	149	66.2	941	65.8	1002	67.1	1580	73.5	3672	69.3
>75%	32	14.2	170	11.9	141	9.4	142	6.6	485	9.2
>50%	10	4.4	100	7.0	117	7.8	100	4.6	327	6.2
>25%	7	3.1	45	3.1	56	3.8	82	3.8	190	3.6
≤25%	5	2.2	45	3.1	59	4.0	66	3.1	175	3.3
Not recorded	22	9.8	129	9.0	118	7.9	181	8.4	450	8.5
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	124	55.1	725	50.7	756	50.6	1393	64.8	2998	56.6
>75%	33	14.7	201	14.1	204	13.7	147	6.8	585	11.0
>50%	17	7.6	132	9.2	156	10.4	99	4.6	404	7.6
>25%	16	7.1	92	6.4	112	7.5	85	4.0	305	5.8
≤25%	13	5.8	106	7.4	99	6.6	122	5.7	340	6.4
Not recorded	22	9.8	174	12.2	166	11.1	305	14.2	667	12.6
Under supervision by relatives (initial 2 months)										
>90%	1	0.4	8	0.6	7	0.5	14	0.7	30	0.6
>75%	1	0.4	5	0.3	5	0.3	11	0.5	22	0.4
>50%	0	0.0	6	0.4	8	0.5	8	0.4	22	0.4
>25%	1	0.4	9	0.6	13	0.9	16	0.7	39	0.7
≤25%	160	71.1	1004	70.2	995	66.6	1460	67.9	3619	68.3
Not recorded	62	27.6	398	27.8	465	31.1	642	29.8	1567	29.6
Under supervision by relatives (subsequent 4 months)										
>90%	1	0.4	6	0.4	9	0.6	17	0.8	33	0.6
>75%	2	0.9	21	1.5	17	1.1	16	0.7	56	1.1
>50%	0	0.0	8	0.6	19	1.3	12	0.6	39	0.7
>25%	3	1.3	15	1.0	12	0.8	17	0.8	47	0.9
≤25%	156	69.3	944	66.0	931	62.4	1352	62.9	3383	63.8
Not recorded	63	28.0	436	30.5	505	33.8	737	34.3	1741	32.9
Supplied for unsupervised treatment (initial 2 months)										
<5%	151	67.1	939	65.7	987	66.1	1499	69.7	3576	67.5
<10%	12	5.3	70	4.9	80	5.4	76	3.5	238	4.5
<15%	10	4.4	62	4.3	52	3.5	41	1.9	165	3.1
<25%	13	5.8	67	4.7	68	4.6	57	2.6	205	3.9
<50%	8	3.6	70	4.9	80	5.4	78	3.6	236	4.5
≥50%	6	2.7	43	3.0	63	4.2	84	3.9	196	3.7
Not recorded	25	11.1	179	12.5	163	10.9	316	14.7	683	12.9
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	129	57.3	770	53.8	818	54.8	1348	62.7	3065	57.8
<10%	19	8.4	98	6.9	80	5.4	76	3.5	273	5.2
<15%	9	4.0	58	4.1	64	4.3	45	2.1	176	3.3
<25%	15	6.7	81	5.7	85	5.7	53	2.5	234	4.4
<50%	8	3.6	94	6.6	97	6.5	73	3.4	272	5.1
≥50%	22	9.8	123	8.6	157	10.5	137	6.4	439	8.3
Not recorded	23	10.2	206	14.4	192	12.9	419	19.5	840	15.9
Defaulted (initial 2 months)										
<5%	168	74.7	1070	74.8	1104	73.9	1673	77.8	4015	75.8
<10%	12	5.3	33	2.3	20	1.3	23	1.1	88	1.7
<15%	2	0.9	24	1.7	19	1.3	14	0.7	59	1.1
<25%	3	1.3	26	1.8	22	1.5	14	0.7	65	1.2
<50%	2	0.9	20	1.4	16	1.1	12	0.6	50	0.9
≥50%	3	1.3	10	0.7	19	1.3	19	0.9	51	1.0
Not recorded	35	15.6	247	17.3	293	19.6	396	18.4	971	18.3
Defaulted (subsequent 4 months)										
<5%	161	71.6	991	69.3	1048	70.2	1563	72.7	3763	71.0
<10%	10	4.4	38	2.7	45	3.0	21	1.0	114	2.2
<15%	7	3.1	39	2.7	24	1.6	16	0.7	86	1.6
<25%	5	2.2	35	2.4	24	1.6	28	1.3	92	1.7
<50%	3	1.3	29	2.0	18	1.2	11	0.5	61	1.2
≥50%	3	1.3	35	2.4	21	1.4	22	1.0	81	1.5
Not recorded	36	16.0	263	18.4	313	21.0	490	22.8	1102	20.8

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	111	49.3	608	42.5	466	31.2	569	26.5	1754	33.1
Still on treatment	86	38.2	616	43.1	828	55.5	1221	56.8	2751	51.9
Died	0	0.0	3	0.2	20	1.3	139	6.5	162	3.1
Transferred	8	3.6	82	5.7	36	2.4	37	1.7	163	3.1
Defaulted	5	2.2	50	3.5	62	4.2	53	2.5	170	3.2
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	15	6.7	71	5.0	81	5.4	132	6.1	299	5.6
Total	225	100.0	1430	100.0	1493	100.0	2151	100.0	5299	100.0
Outcome at 12 months										
Cured/ treatment completed	200	88.9	1193	83.4	1220	81.7	1611	74.9	4224	79.7
Still on treatment	9	4.0	68	4.8	107	7.2	212	9.9	396	7.5
Died	0	0.0	4	0.3	28	1.9	215	10.0	247	4.7
Transferred	10	4.4	88	6.2	42	2.8	33	1.5	173	3.3
Defaulted	6	2.7	72	5.0	86	5.8	68	3.2	232	4.4
Failure	0	0.0	1	0.1	0	0.0	0	0.0	1	0.0
Not recorded	0	0.0	4	0.3	10	0.7	12	0.6	26	0.5
Total	225	100.0	1430	100.0	1493	100.0	2151	100.0	5299	100.0
Outcome at 24 months										
Cured/ treatment completed	209	92.9	1262	88.3	1332	89.2	1809	84.1	4612	87.0
Still on treatment	0	0.0	5	0.3	3	0.2	7	0.3	15	0.3
Died	0	0.0	5	0.3	32	2.1	226	10.5	263	5.0
Transferred	9	4.0	83	5.8	31	2.1	29	1.3	152	2.9
Defaulted	6	2.7	69	4.8	81	5.4	63	2.9	219	4.1
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	1	0.4	6	0.4	14	0.9	17	0.8	38	0.7
Total	225	100.0	1430	100.0	1493	100.0	2151	100.0	5299	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	0	0.0	41	43.2	22	25.6	76	25.0	139	28.5
Male	3	100.0	54	56.8	64	74.4	228	75.0	349	71.5
Total	3	100.0	95	100.0	86	100.0	304	100.0	488	100.0
First presentation										
Private doctor	1	33.3	11	11.6	4	4.7	7	2.3	23	4.7
Private hospital	0	0.0	0	0.0	2	2.3	2	0.7	4	0.8
GOPC	0	0.0	1	1.1	0	0.0	3	1.0	4	0.8
Chest Clinic	0	0.0	12	12.6	7	8.1	17	5.6	36	7.4
Other DH Clinic	0	0.0	33	34.7	21	24.4	1	0.3	55	11.3
HA Clinic	1	33.3	2	2.1	2	2.3	6	2.0	11	2.3
HA Hospital	1	33.3	30	31.6	47	54.7	253	83.2	331	67.8
Mainland	0	0.0	0	0.0	0	0.0	2	0.7	2	0.4
Overseas	0	0.0	0	0.0	1	1.2	0	0.0	1	0.2
Not recorded	0	0.0	6	6.3	2	2.3	13	4.3	21	4.3
Total	3	100.0	95	100.0	86	100.0	304	100.0	488	100.0
Symptomatic on presentation										
Y	2	66.7	63	66.3	62	72.1	263	86.5	390	79.9
N	1	33.3	26	27.4	22	25.6	28	9.2	77	15.8
Not recorded	0	0.0	6	6.3	2	2.3	13	4.3	21	4.3
Total	3	100.0	95	100.0	86	100.0	304	100.0	488	100.0
Chest symptoms	1	-	47	-	36	-	191	-	275	-
Systemic symptoms	0	-	5	-	9	-	36	-	50	-
Other site-specific symptoms	1	-	8	-	14	-	16	-	39	-
Reason for presentation										
Symptom	2	66.7	55	57.9	55	64.0	243	79.9	355	72.7
Contact screening	1	33.3	2	2.1	0	0.0	2	0.7	5	1.0
Pre-employment	0	0.0	1	1.1	0	0.0	1	0.3	2	0.4
Pre-emigration	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other body check	0	0.0	30	31.6	21	24.4	9	3.0	60	12.3
Incidental to other illness	0	0.0	1	1.1	6	7.0	26	8.6	33	6.8
Others	0	0.0	0	0.0	0	0.0	3	1.0	3	0.6
Not recorded	0	0.0	6	6.3	4	4.7	20	6.6	30	6.1
Total	3	100.0	95	100.0	86	100.0	304	100.0	488	100.0
Disease Classification										
Pulmonary TB only	2	66.7	76	80.0	62	72.1	256	84.2	396	81.1
Extrapulmonary TB only	0	0.0	7	7.4	12	14.0	10	3.3	29	5.9
Both	1	33.3	12	12.6	12	14.0	38	12.5	63	12.9
Total	3	100.0	95	100.0	86	100.0	304	100.0	488	100.0
6-month short course treatment										
Yes	1	33.3	18	18.9	10	11.6	4	1.3	33	6.8
2HRZE+4HR	1	33.3	15	15.8	9	10.5	2	0.7	27	5.5
2HRZS+4HR	0	0.0	1	1.1	1	1.2	0	0.0	2	0.4
Other standard regimen based on HRZES										
Yes	0	0.0	12	12.6	9	10.5	6	2.0	27	5.5

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	23	24.2	16	18.6	10	3.3	49	10.0
>75%	0	0.0	3	3.2	0	0.0	1	0.3	4	0.8
>50%	0	0.0	1	1.1	0	0.0	0	0.0	1	0.2
>25%	0	0.0	0	0.0	2	2.3	1	0.3	3	0.6
≤25%	0	0.0	0	0.0	0	0.0	2	0.7	2	0.4
Not recorded	3	100.0	68	71.6	68	79.1	290	95.4	429	87.9
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	0	0.0	24	25.3	14	16.3	9	3.0	47	9.6
>75%	0	0.0	1	1.1	0	0.0	1	0.3	2	0.4
>50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
>25%	0	0.0	1	1.1	1	1.2	0	0.0	2	0.4
≤25%	0	0.0	1	1.1	1	1.2	2	0.7	4	0.8
Not recorded	3	100.0	68	71.6	70	81.4	292	96.1	433	88.7
Under supervision by relatives (initial 2 months)										
>90%	1	33.3	0	0.0	0	0.0	0	0.0	1	0.2
>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	11	11.6	10	11.6	0	0.0	21	4.3
Not recorded	2	66.7	84	88.4	76	88.4	304	100.0	466	95.5
Under supervision by relatives (subsequent 4 months)										
>90%	1	33.3	0	0.0	0	0.0	1	0.3	2	0.4
>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	11	11.6	8	9.3	1	0.3	20	4.1
Not recorded	2	66.7	84	88.4	78	90.7	302	99.3	466	95.5
Supplied for unsupervised treatment (initial 2 months)										
<5%	0	0.0	11	11.6	9	10.5	5	1.6	25	5.1
<10%	0	0.0	2	2.1	0	0.0	1	0.3	3	0.6
<15%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<25%	0	0.0	0	0.0	1	1.2	0	0.0	1	0.2
<50%	0	0.0	1	1.1	0	0.0	0	0.0	1	0.2
≥50%	0	0.0	2	2.1	1	1.2	2	0.7	5	1.0
Not recorded	3	100.0	79	83.2	75	87.2	296	97.4	453	92.8
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	0	0.0	12	12.6	8	9.3	5	1.6	25	5.1
<10%	0	0.0	0	0.0	0	0.0	1	0.3	1	0.2
<15%	0	0.0	1	1.1	0	0.0	0	0.0	1	0.2
<25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<50%	0	0.0	1	1.1	1	1.2	0	0.0	2	0.4
≥50%	0	0.0	2	2.1	0	0.0	1	0.3	3	0.6
Not recorded	3	100.0	79	83.2	77	89.5	297	97.7	456	93.4
Defaulted (initial 2 months)										
<5%	0	0.0	13	13.7	9	10.5	5	1.6	27	5.5
<10%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<15%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≥50%	0	0.0	0	0.0	1	1.2	1	0.3	2	0.4
Not recorded	3	100.0	82	86.3	76	88.4	298	98.0	459	94.1
Defaulted (subsequent 4 months)										
<5%	0	0.0	14	14.7	7	8.1	5	1.6	26	5.3
<10%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<15%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≥50%	0	0.0	0	0.0	1	1.2	1	0.3	2	0.4
Not recorded	3	100.0	81	85.3	78	90.7	298	98.0	460	94.3

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	1	33.3	23	24.2	9	10.5	4	1.3	37	7.6
Still on treatment	0	0.0	12	12.6	12	14.0	8	2.6	32	6.6
Died	0	0.0	0	0.0	2	2.3	7	2.3	9	1.8
Transferred	0	0.0	2	2.1	0	0.0	1	0.3	3	0.6
Defaulted	0	0.0	1	1.1	3	3.5	1	0.3	5	1.0
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	2	66.7	57	60.0	60	69.8	283	93.1	402	82.4
Total	3	100.0	95	100.0	86	100.0	304	100.0	488	100.0
Outcome at 12 months										
Cured/ treatment completed	1	33.3	31	32.6	13	15.1	6	2.0	51	10.5
Still on treatment	0	0.0	2	2.1	4	4.7	2	0.7	8	1.6
Died	0	0.0	0	0.0	2	2.3	10	3.3	12	2.5
Transferred	0	0.0	2	2.1	0	0.0	1	0.3	3	0.6
Defaulted	0	0.0	2	2.1	4	4.7	1	0.3	7	1.4
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	2	66.7	58	61.1	63	73.3	284	93.4	407	83.4
Total	3	100.0	95	100.0	86	100.0	304	100.0	488	100.0
Outcome at 24 months										
Cured/ treatment completed	1	33.3	31	32.6	15	17.4	8	2.6	55	11.3
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	2	2.3	10	3.3	12	2.5
Transferred	0	0.0	1	1.1	0	0.0	1	0.3	2	0.4
Defaulted	0	0.0	3	3.2	4	4.7	1	0.3	8	1.6
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	2	66.7	60	63.2	65	75.6	284	93.4	411	84.2
Total	3	100.0	95	100.0	86	100.0	304	100.0	488	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	1755	91.5	3193	91.0	15	93.8
No	162	8.5	316	9.0	1	6.3
Total	1917	100	3509	100.0	16	100.0
Age group						
0 to 19	68	3.5	124	3.5	1	6.3
Female	37		65		1	
Male	31		59		0	
20 to 39	461	24.0	807	23.0	7	43.8
Female	222		387		2	
Male	239		420		5	
40 to 59	547	28.5	913	26.0	2	12.5
Female	109		198		0	
Male	438		715		2	
60+	841	43.9	1665	47.4	6	37.5
Female	137		346		3	
Male	704		1319		3	
Total	1917	100.0	3509	100.0	16	100.0
Female	505	26.3	996	28.4	6	37.5
Male	1412	73.7	2513	71.6	10	62.5
Marital status						
Single	509	26.6	847	24.1	4	25.0
Married	1246	65.0	2349	66.9	10	62.5
Separated	18	0.9	26	0.7	0	0.0
Divorce	47	2.5	70	2.0	1	6.3
Widowed	39	2.0	95	2.7	0	0.0
Not recorded	58	3.0	122	3.5	1	6.3
Total	1917	100.0	3509	100.0	16	100.0
Smoking status						
Never	673	35.1	1300	37.0	9	56.3
Ex-smoker	622	32.4	1122	32.0	4	25.0
Current smoker	490	25.6	865	24.7	2	12.5
Not recorded	132	6.9	222	6.3	1	6.3
Total	1917	100.0	3509	100.0	16	100.0
Institution-related						
Yes	224	11.7	453	12.9	3	18.8
No	1650	86.1	2977	84.8	12	75.0
Not recorded	43	2.2	79	2.3	1	6.3
Total	1917	100.0	3509	100.0	16	100.0
Institution						
Client	182	-	382	-	3	-
Staff	26	-	45	-	0	-
Institution type						
Old age home	85	-	206	-	0	-
School	77	-	120	-	1	-
Hospital	22	-	39	-	0	-
Handicapped	5	-	10	-	0	-
Prison	11	-	37	-	1	-
Others	8	-	16	-	1	-

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	6	0.3	12	0.3	0	0.0
Cubicle bed space	5	0.3	15	0.4	0	0.0
Institution	113	5.9	256	7.3	2	12.5
Work quarter	11	0.6	25	0.7	0	0.0
Alone (not above)	228	11.9	346	9.9	1	6.3
With friends	44	2.3	72	2.1	1	6.3
With family	1460	76.2	2691	76.7	11	68.8
Not recorded	50	2.6	92	2.6	1	6.3
Residential status						
Permanent resident	1767	92.2	3220	91.8	12	75.0
Chinese immigrant	40	2.1	84	2.4	1	6.3
Imported worker	49	2.6	75	2.1	0	0.0
Tourist - 2 way permit Chinese	6	0.3	14	0.4	2	12.5
Other tourist	7	0.4	10	0.3	0	0.0
Vietnamese	1	0.1	4	0.1	0	0.0
Illegal immigrants	3	0.2	14	0.4	0	0.0
Not recorded	44	2.3	88	2.5	1	6.3
Total	1917	100.0	3509	100.0	16	100.0
Place of birth						
Hong Kong	755	39.4	1304	37.2	5	31.3
Mainland China	971	50.7	1866	53.2	8	50.0
Others	149	7.8	243	6.9	2	12.5
Not recorded	42	2.2	96	2.7	1	6.3
Total	1917	100.0	3509	100.0	16	100.0
Ethnicity						
Chinese	1789	93.3	3287	93.7	12	75.0
Other Asian	81	4.2	124	3.5	3	18.8
Caucasian	4	0.2	11	0.3	0	0.0
Others	1	0.1	1	0.0	0	0.0
Not recorded	42	2.2	86	2.5	1	6.3
Total	1917	100.0	3509	100.0	16	100.0
Previous BCG history						
Yes	511	26.7	913	26.0	4	25.0
No	576	30.0	1113	31.7	4	25.0
Unknown	830	43.3	1483	42.3	8	50.0
Total	1917	100.0	3509	100.0	16	100.0
BCG scar						
Yes	471	-	830	-	5	-
No	1190	-	2205	-	11	-
Employment status						
Full-time	603	31.5	1024	29.2	3	18.8
Part-time	54	2.8	105	3.0	1	6.3
Retired	670	35.0	1292	36.8	3	18.8
Unemployed	300	15.6	487	13.9	4	25.0
Housewife	172	9.0	383	10.9	3	18.8
Student	74	3.9	126	3.6	1	6.3
Not recorded	44	2.3	92	2.6	1	6.3
Total	1917	100.0	3509	100.0	16	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	356	18.6	626	17.8	2	12.5
White collar	152	7.9	271	7.7	1	6.3
Medical	0	0.0	5	0.1	0	0.0
Nursing	8	0.4	10	0.3	0	0.0
Paramedical	2	0.1	4	0.1	0	0.0
Supporting health staff	3	0.2	6	0.2	0	0.0
Not applicable	1253	65.4	2328	66.3	11	68.8
Not recorded	143	7.5	259	7.4	2	12.5
Total	1917	100.0	3509	100.0	16	100.0
First presentation						
Private doctor	254	13.2	417	11.9	2	12.5
Private hospital	20	1.0	33	0.9	1	6.3
GOPC	100	5.2	144	4.1	0	0.0
Chest Clinic	288	15.0	589	16.8	7	43.8
Other DH Clinic	28	1.5	82	2.3	1	6.3
HA Clinic	36	1.9	74	2.1	0	0.0
HA Hospital	1153	60.1	2102	59.9	4	25.0
Mainland	19	1.0	25	0.7	0	0.0
Overseas	0	0.0	2	0.1	0	0.0
Not recorded	19	1.0	41	1.2	1	6.3
Total	1917	100.0	3509	100.0	16	100.0
Symptomatic on presentation						
Y	1811	94.5	3174	90.5	14	87.5
N	89	4.6	296	8.4	1	6.3
Not recorded	17	0.9	39	1.1	1	6.3
Total	1917	100.0	3509	100.0	16	100.0
Chest symptoms	1540	-	2674	-	13	-
Systemic symptoms	289	-	442	-	0	-
Other site-specific symptoms	84	-	185	-	1	-
Reason for presentation						
Symptom	1752	91.4	3037	86.5	13	81.3
Contact screening	14	0.7	50	1.4	0	0.0
Pre-employment	4	0.2	19	0.5	0	0.0
Pre-emigration	0	0.0	5	0.1	0	0.0
Other body check	37	1.9	141	4.0	2	12.5
Incidental to other illness	83	4.3	194	5.5	0	0.0
Others	3	0.2	7	0.2	0	0.0
Not recorded	24	1.3	56	1.6	1	6.3
Total	1917	100.0	3509	100.0	16	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	96	5.0	187	5.3	0	0.0
No	1784	93.1	3246	92.5	15	93.8
Not recorded	37	1.9	76	2.2	1	6.3
Total	1917	100.0	3509	100.0	16	100.0
Contact type						
Household	67	-	125	-	0	-
Work	11	-	21	-	0	-
Casual	8	-	15	-	0	-
Time of contact						
Within 2 year	33	-	67	-	0	-
Over 2 year	28	-	46	-	0	-
Previous chemoprophylaxis						
Yes	13	-	23	-	0	-
Reason for chemoprophylaxis						
Contact	0	-	1	-	0	-
Silicosis	2	-	6	-	0	-
HIV	0	-	0	-	0	-
Old scar on CXR	0	-	1	-	0	-
Others	3	-	5	-	0	-
Disease Classification						
Pulmonary TB only	1778	92.7	3126	89.1	16	100.0
Both pulm & extrapulm	139	7.3	383	10.9	0	0.0
Total	1917	100.0	3509	100.0	16	100.0
Case category						
New case	1700	88.7	3116	88.8	7	43.8
Relapse	187	9.8	353	10.1	7	43.8
Treatment after default	25	1.3	34	1.0	0	0.0
Failure of previous treatment	5	0.3	6	0.2	2	12.5
Total	1917	100.0	3509	100.0	16	100.0
Disease characteristics (pulmonary cases)						
Extent = 1	682	35.6	1614	46.0	7	43.8
Extent=1 & cavity=N	*561*	*29.3*	*1454*	*41.4*	*5*	*31.3*
Extent=1 & cavity=Y	*121*	*6.3*	*160*	*4.6*	*2*	*12.5*
Extent = 2	709	37.0	1080	30.8	6	37.5
Extent=2 & cavity=N	*498*	*26.0*	*830*	*23.7*	*3*	*18.8*
Extent=2 & cavity=Y	*211*	*11.0*	*250*	*7.1*	*3*	*18.8*
Extent=3	406	21.2	507	14.4	1	6.3
Extent=3 & cavity=N	*222*	*11.6*	*309*	*8.8*	*0*	*0.0*
Extent=3 & cavity=Y	*184*	*9.6*	*198*	*5.6*	*1*	*6.3*
Extent=not specified	120	6.3	308	8.8	2	12.5
Extent=ns & cavity=N	*117*	*6.1*	*304*	*8.7*	*1*	*6.3*
Extent=ns & cavity=Y	*3*	*0.2*	*4*	*0.1*	*1*	*6.3*
Cavity=N	1398	72.9	2897	82.6	9	56.3
Cavity=Y	519	27.1	612	17.4	7	43.8
6-month short course treatment						
Yes	342	17.8	752	21.4	1	6.3
2HRZE+4HR	264	13.8	615	17.5	1	6.3
2HRZS+4HR	20	1.0	37	1.1	0	0.0
Other standard regimen based on HRZES						
Yes	928	48.4	1536	43.8	2	12.5

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%	1287	67.1	2301	65.6	13	81.3
>75%	143	7.5	274	7.8	2	12.5
>50%	111	5.8	193	5.5	0	0.0
>25%	56	2.9	111	3.2	0	0.0
≤25%	47	2.5	95	2.7	0	0.0
Not recorded	273	14.2	535	15.2	1	6.3
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)						
>90%	1055	55.0	1907	54.3	10	62.5
>75%	188	9.8	327	9.3	3	18.8
>50%	132	6.9	231	6.6	0	0.0
>25%	101	5.3	185	5.3	0	0.0
≤25%	94	4.9	193	5.5	1	6.3
Not recorded	347	18.1	666	19.0	2	12.5
Under supervision by relatives (initial 2 months)						
>90%	6	0.3	18	0.5	0	0.0
>75%	5	0.3	12	0.3	0	0.0
>50%	7	0.4	11	0.3	0	0.0
>25%	17	0.9	24	0.7	1	6.3
≤25%	1208	63.0	2192	62.5	11	68.8
Not recorded	674	35.2	1252	35.7	4	25.0
Under supervision by relatives (subsequent 4 months)						
>90%	9	0.5	19	0.5	0	0.0
>75%	14	0.7	33	0.9	0	0.0
>50%	14	0.7	22	0.6	0	0.0
>25%	13	0.7	26	0.7	1	6.3
≤25%	1134	59.2	2057	58.6	11	68.8
Not recorded	733	38.2	1352	38.5	4	25.0
Supplied for unsupervised treatment (initial 2 months)						
<5%	1247	65.0	2228	63.5	14	87.5
<10%	79	4.1	135	3.8	0	0.0
<15%	54	2.8	91	2.6	1	6.3
<25%	60	3.1	122	3.5	0	0.0
<50%	64	3.3	133	3.8	0	0.0
≥50%	54	2.8	105	3.0	0	0.0
Not recorded	359	18.7	695	19.8	1	6.3
Supplied for unsupervised treatment (subsequent 4 months)						
<5%	1079	56.3	1920	54.7	11	68.8
<10%	97	5.1	166	4.7	0	0.0
<15%	57	3.0	97	2.8	1	6.3
<25%	68	3.5	130	3.7	1	6.3
<50%	69	3.6	148	4.2	0	0.0
≥50%	136	7.1	255	7.3	1	6.3
Not recorded	411	21.4	793	22.6	2	12.5
Defaulted (initial 2 months)						
<5%	1338	69.8	2435	69.4	15	93.8
<10%	39	2.0	58	1.7	0	0.0
<15%	20	1.0	36	1.0	0	0.0
<25%	22	1.1	40	1.1	0	0.0
<50%	18	0.9	34	1.0	0	0.0
≥50%	18	0.9	34	1.0	0	0.0
Not recorded	462	24.1	872	24.9	1	6.3
Defaulted (subsequent 4 months)						
<5%	1260	65.7	2287	65.2	12	75.0
<10%	36	1.9	70	2.0	2	12.5
<15%	32	1.7	56	1.6	0	0.0
<25%	35	1.8	56	1.6	0	0.0
<50%	29	1.5	43	1.2	0	0.0
≥50%	24	1.3	44	1.3	0	0.0
Not recorded	501	26.1	953	27.2	2	12.5

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	479	25.0	1042	29.7	1	6.3
Still on treatment	1045	54.5	1727	49.2	14	87.5
Died	61	3.2	120	3.4	1	6.3
Transferred	48	2.5	82	2.3	0	0.0
Defaulted	47	2.5	89	2.5	0	0.0
Failure	0	0.0	0	0.0	0	0.0
Not recorded	237	12.4	449	12.8	0	0.0
Total	1917	100.0	3509	100.0	16	100.0
Outcome at 12 months						
Cured/ treatment completed	1378	71.9	2542	72.4	4	25.0
Still on treatment	167	8.7	271	7.7	9	56.3
Died	95	5.0	182	5.2	1	6.3
Transferred	51	2.7	90	2.6	1	6.3
Defaulted	72	3.8	130	3.7	0	0.0
Failure	1	0.1	1	0.0	1	6.3
Not recorded	153	8.0	293	8.3	0	0.0
Total	1917	100.0	3509	100.0	16	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	1532	79.9	2795	79.7	11	68.8
Still on treatment	8	0.4	8	0.2	0	0.0
Died	104	5.4	196	5.6	2	12.5
Transferred	45	2.3	78	2.2	1	6.3
Defaulted	69	3.6	126	3.6	0	0.0
Failure	0	0.0	0	0.0	0	0.0
Not recorded	159	8.3	306	8.7	2	12.5
Total	1917	100.0	3509	100.0	16	100.0
Among those cured/ treatment completed						
Bacteriological conversion	1483	96.8	2607	93.3	9	81.8
Radiological improvement	1448	94.5	2573	92.1	11	100.0
Other clinical improvement	514	33.6	939	33.6	1	9.1
No evidence of response	6	0.4	13	0.5	0	0.0
After treatment completed:						
No relapse	1180	77.0	2174	77.8	10	90.9
Loss to follow up	203	13.3	357	12.8	0	0.0
Died	36	2.3	71	2.5	0	0.0
TB-related	*1*		*2*		*0*	
Not TB-related	*23*		*46*		*0*	
Unknown	*12*		*23*		*0*	
Relapse	17	1.1	33	1.2	1	9.1
Bacteriological	*12*		*19*		*0*	
Histological	*4*		*9*		*0*	
Clinico-radiological	*1*		*5*		*1*	
Not recorded	96	6.3	160	5.7	0	0.0
Among those still on treatment						
Reasons for still on treatment:						
Retreatment case	1	-	1	-	0	-
Extrapulmonary disease	0	-	0	-	0	-
Extensive disease	0	-	0	-	0	-
Interrupted treatment	2	-	2	-	0	-
Drug resistance	4	-	4	-	0	-
Poor response	1	-	1	-	0	-
Others	2	-	2	-	0	-
Among those died - causes of death:						
TB-related cause	8	7.7	13	6.6	2	-
Not TB-related	66	63.5	129	65.8	0	-
Unknown	30	28.8	54	27.6	0	-
Among those transferred, new sources of care:						
GP	5	11.1	11	14.1	0	0.0
Chest Clinic	1	2.2	1	1.3	0	0.0
Hospital	7	15.6	12	15.4	0	0.0
Outside HK	27	60.0	48	61.5	1	100.0
Not recorded	5	11.1	6	7.7	0	0.0
Among those defaulted						
Never found	37	53.6	73	57.9	0	0.0
Retreated after default	17	24.6	24	19.0	0	0.0
Treatment stopped by doctor	7	10.1	12	9.5	0	0.0
Not recorded	8	11.6	17	13.5	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	127	8.3	208	7.6	15	93.8
Streptomycin - S	1402	91.7	2517	92.4	1	6.3
Isoniazid - R	76	5.0	142	5.2	16	100.0
Isoniazid - S	1453	95.0	2584	94.8	0	0.0
Rifampicin - R	16	1.0	23	0.8	16	100.0
Rifampicin - S	1511	99.0	2699	99.2	0	0.0
Ethambutol - R	13	0.9	20	0.7	9	56.3
Ethambutol - S	1514	99.1	2702	99.3	7	43.8
Pyrazinamide - R	8	21.1	13	21.0	9	64.3
Pyrazinamide - S	30	78.9	49	79.0	5	35.7
Ofloxacin - R	5	9.4	8	9.4	6	37.5
Ofloxacin - S	48	90.6	77	90.6	10	62.5
Smear conversion rates						
1. Smear at 2 month = N (a)	989				12	
2. Smear at 2 month = P (b)	169				1	
2. Sm 2m (P); Sm 3m (N) (c)	99				0	
2. Sm 2m (P); Sm 3m (P) (d)	46				1	
2. Sm 2m (P); Sm 3m (U) (e)	24				0	
3. Smear at 2 month = U (f)	759				3	
3. Sm 2m (U); Sm 3m (N) (g)	226				1	
3. Sm 2m (U); Sm 3m (P) (h)	21				0	
3. Sm 2m (U); Sm 3m (U) (i)	512				2	
Overall percentage of smear conversion at 2m = (a)/ [(a)+(b)]	85.4		-		92.3	
Overall percentage of smear conversion at 3m = [(a)+(c)+(g)]/ [(a)+(c)+(d)+(g)+(h)]	95.1		-		92.9	
Culture conversion rates						
1. Culture at 2 month = N (a)			1644		9	
2. Culture at 2 month = P (b)			220		4	
2. Cu 2m (P); Cu 3m (N) (c)			115		2	
2. Cu 2m (P); Cu 3m (P) (d)			35		2	
2. Cu 2m (P); Cu 3m (U) (e)			70		0	
3. Culture at 2 month = U (f)			1629		3	
3. Cu 2m (U); Cu 3m (N) (g)			417		1	
3. Cu 2m (U); Cu 3m (P) (h)			19		0	
3. Cu 2m (U); Cu 3m (U) (i)			1193		2	
Overall percentage of culture conversion at 2m = (a)/ [(a)+(b)]	-		88.2		69.2	
Overall percentage of culture conversion at 3m = [(a)+(c)+(g)]/ [(a)+(c)+(d)+(g)+(h)]	-		97.6		85.7	

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	1557	91.6	198	91.2
No	143	8.4	19	8.8
Total	1700	100.0	217	100.0
Age group				
0 to 19	66	3.9	2	0.9
Female	36		1	
Male	30		1	
20 to 39	436	25.6	25	11.5
Female	213		9	
Male	223		16	
40 to 59	484	28.5	63	29.0
Female	102		7	
Male	382		56	
60+	714	42.0	127	58.5
Female	128		9	
Male	586		118	
Total	1700	100.0	217	100.0
Female	479	28.2	26	12.0
Male	1221	71.8	191	88.0
Disease Classification				
Pulmonary TB only	1572	92.5	206	94.9
Both pulmon and extrapulm	128	7.5	11	5.1
Total	1700	100.0	217	100.0
6-month short course treatment				
Yes	329	19.4	13	6.0
2HRZE+4HR	256	15.1	8	3.7
2HRZS+4HR	19	1.1	1	0.5
Other standard regimen based on HRZES				
Yes	807	47.5	121	55.8
Outcome at 6 months				
Cured/ treatment completed	464	27.3	15	6.9
Still on treatment	892	52.5	153	70.5
Died	50	2.9	11	5.1
Transferred	45	2.6	3	1.4
Defaulted	37	2.2	10	4.6
Failure	0	0.0	0	0.0
Not recorded	212	12.5	25	11.5
Total	1700	100.0	217	100.0
Outcome at 12 months				
Cured/ treatment completed	1238	72.8	140	64.5
Still on treatment	139	8.2	28	12.9
Died	80	4.7	15	6.9
Transferred	48	2.8	3	1.4
Defaulted	59	3.5	13	6.0
Failure	0	0.0	1	0.5
Not recorded	136	8.0	17	7.8
Total	1700	100.0	217	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	1371	80.6	161	74.2
Still on treatment	4	0.2	4	1.8
Died	87	5.1	17	7.8
Transferred	42	2.5	3	1.4
Defaulted	56	3.3	13	6.0
Failure	0	0.0	0	0.0
Not recorded	140	8.2	19	8.8
Total	1700	100.0	217	100.0
Among those cured/ treatment completed				
Bacteriological conversion	1324	96.6	159	98.8
Radiological improvement	1293	94.3	155	96.3
Other clinical improvement	475	34.6	39	24.2
No evidence of response	6	0.4	0	0.0
After treatment completed:				
No relapse	1052	76.7	128	79.5
Loss to follow up	189	13.8	14	8.7
Died	32	2.3	4	2.5
TB-related	*0*		*1*	
Not TB-related	*21*		*2*	
Unknown	*11*		*1*	
Relapse	15	1.1	2	1.2
Bacteriological	*11*		*1*	
Histological	*3*		*1*	
Clinico-radiological	*1*		*0*	
Not recorded	83	6.1	13	8.1
Among those still on treatment				
Reasons for still on treatment:				
Retreatment case	1	-	0	-
Extrapulmonary disease	0	-	0	-
Extensive disease	0	-	0	-
Interrupted treatment	0	-	2	-
Drug resistance	3	-	1	-
Poor response	1	-	0	-
Others	1	-	1	-
Among those died - causes of death:				
TB-related cause	4	4.6	4	23.5
Not TB-related	57	65.5	9	52.9
Unknown	26	29.9	4	23.5
Among those transferred, new sources of care:				
GP	5	11.9	0	0.0
Chest Clinic	1	2.4	0	0.0
Hospital	7	16.7	0	0.0
Outside HK	24	57.1	3	100.0
Not recorded	5	11.9	0	0.0
Among those defaulted				
Never found	36	64.3	1	7.7
Retreated after default	12	21.4	5	38.5
Treatment stopped by doctor	3	5.4	4	30.8
Not recorded	5	8.9	3	23.1

Annex 1 (e) - Treatment defaulters - 01

Ever seen at chest clinics

Yes	219	96.5
No	8	3.5
Total	227	100.0

Age group

0 to 19	6	2.6
Female	3	
Male	3	
20 to 39	72	31.7
Female	22	
Male	50	
40 to 59	85	37.4
Female	18	
Male	67	
60+	64	28.2
Female	13	
Male	51	
Total	227	100.0
Female	56	24.7
Male	171	75.3

Marital status

Single	70	30.8
Married	139	61.2
Separated	2	0.9
Divorce	8	3.5
Widowed	4	1.8
Not recorded	4	1.8
Total	227	100.0

Smoking status

Never	63	27.8
Ex-smoker	51	22.5
Current smoker	102	44.9
Not recorded	11	4.8
Total	227	100.0

Institution-related

Yes	17	7.5
No	204	89.9
Not recorded	6	2.6
Total	227	100.0

Institution

Client	11	-
Staff	2	-

Institution type

Old age home	1	-
School	2	-
Hospital	1	-
Handicapped	1	-
Prison	9	-
Others	0	-

Annex 1 (e) - Treatment defaulters - 02

Living situation

Street-sleeper	4	1.8
Cubicle bed space	0	0.0
Institution	7	3.1
Work quarter	4	1.8
Alone (not above)	35	15.4
With friends	13	5.7
With family	156	68.7
Not recorded	8	3.5

Residential status

Permanent resident	197	86.8
Chinese immigrant	8	3.5
Imported worker	11	4.8
Tourist - 2 way permit Chinese	2	0.9
Other tourist	1	0.4
Vietnamese	2	0.9
Illegal immigrants	0	0.0
Not recorded	6	2.6
Total	227	100.0

Place of birth

Hong Kong	76	33.5
Mainland China	124	54.6
Others	21	9.3
Not recorded	6	2.6
Total	227	100.0

Ethnicity

Chinese	202	89.0
Other Asian	19	8.4
Caucasian	0	0.0
Others	0	0.0
Not recorded	6	2.6
Total	227	100.0

Employment status

Full-time	71	31.3
Part-time	15	6.6
Retired	50	22.0
Unemployed	62	27.3
Housewife	23	10.1
Student	1	0.4
Not recorded	5	2.2
Total	227	100.0

Occupation

Blue collar	58	25.6
White collar	8	3.5
Medical	0	0.0
Nursing	1	0.4
Paramedical	0	0.0
Supporting health staff	1	0.4
Not applicable	142	62.6
Not recorded	17	7.5
Total	227	100.0

Annex 1 (e) - Treatment defaulters - 03

First presentation

Private doctor	14	6.2
Private hospital	2	0.9
GOPC	12	5.3
Chest Clinic	48	21.1
Other DH Clinic	11	4.8
HA Clinic	9	4.0
HA Hospital	116	51.1
Mainland	10	4.4
Overseas	2	0.9
Not recorded	3	1.3
Total	227	100.0

Symptomatic on presentation

Y	190	83.7
N	34	15.0
Not recorded	3	1.3
Total	227	100.0

Chest symptoms	132	-
Systemic symptoms	21	-
Other site-specific symptoms	37	-

Reason for presentation

Symptom	185	81.5
Contact screening	2	0.9
Pre-employment	2	0.9
Pre-emigration	0	0.0
Other body check	16	7.0
Incidental to other illness	15	6.6
Others	0	0.0
Not recorded	7	3.1
Total	227	100.0

Contact with TB patients

Yes	6	2.6
No	217	95.6
Not recorded	4	1.8
Total	227	100.0

Contact type

Household	5	-
Work	1	-
Casual	0	-

Time of contact

Within 2 year	2	-
Over 2 year	3	-

Annex 1 (e) - Treatment defaulters - 04

Previous chemoprophylaxis

Yes	1	-

Reason for chemoprophylaxis

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

Disease Classification

Pulmonary TB only	172	75.8
Extrapulmonary TB only	26	11.5
Both	29	12.8
Total	227	100.0

Case category

New case	190	83.7
Relapse	21	9.3
Treatment after default	16	7.0
Failure of previous treatment	0	0.0
Total	227	100.0

Disease characteristics (pulmonary cases)

Pretreatment smear +ve	70	34.8
Pretreatment culture +ve	126	62.7
Extent = 1	110	54.7
Extent=1 & cavity=N	*98*	*48.8*
Extent=1 & cavity=Y	*12*	*6.0*
Extent = 2	46	22.9
Extent=2 & cavity=N	*38*	*18.9*
Extent=2 & cavity=Y	*8*	*4.0*
Extent=3	26	12.9
Extent=3 & cavity=N	*12*	*6.0*
Extent=3 & cavity=Y	*14*	*7.0*
Extent=not specified	19	9.5
Extent=ns & cavity=N	*19*	*9.5*
Extent=ns & cavity=Y	*0*	*0.0*
Cavity=N	167	83.1
Cavity=Y	34	16.9

6-month short course treatment

Yes	13	5.7
2HRZE+4HR	7	3.1
2HRZS+4HR	0	0.0

Other standard regimen based on HRZES

Yes	98	43.2

Among those defaulted

Never found	127	55.9
Retreated after default	28	12.3
Treatment stopped by doctor	32	14.1
Not recorded	40	17.6

Annex 1 (e) - Treatment defaulters - 05

Treatment supervision

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

>90%	75	33.0
>75%	25	11.0
>50%	21	9.3
>25%	20	8.8
≤25%	35	15.4
Not recorded	51	22.5

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

>90%	15	6.6
>75%	18	7.9
>50%	15	6.6
>25%	16	7.0
≤25%	54	23.8
Not recorded	109	48.0

Under supervision by relatives (initial 2 months)

>90%	1	0.4
>75%	1	0.4
>50%	1	0.4
>25%	0	0.0
≤25%	125	55.1
Not recorded	99	43.6

Under supervision by relatives (subsequent 4 months)

>90%	0	0.0
>75%	1	0.4
>50%	2	0.9
>25%	0	0.0
≤25%	87	38.3
Not recorded	137	60.4

Supplied for unsupervised treatment (initial 2 months)

<5%	121	53.3
<10%	13	5.7
<15%	4	1.8
<25%	9	4.0
<50%	10	4.4
≥50%	5	2.2
Not recorded	65	28.6

Supplied for unsupervised treatment (subsequent 4 months)

<5%	80	35.2
<10%	6	2.6
<15%	5	2.2
<25%	8	3.5
<50%	8	3.5
≥50%	5	2.2
Not recorded	115	50.7

Defaulted (initial 2 months)

<5%	87	38.3
<10%	7	3.1
<15%	8	3.5
<25%	16	7.0
<50%	14	6.2
≥50%	27	11.9
Not recorded	68	30.0

Defaulted (subsequent 4 months)

<5%	23	10.1
<10%	3	1.3
<15%	5	2.2
<25%	9	4.0
<50%	19	8.4
≥50%	54	23.8
Not recorded	114	50.2

Annex 1 (f) Sources completing Programme Forms

Sources completing Programme Forms	PFA	PFB1	PFB2	PFC	PFD
Chest Clinics	4016	5059	5061	5288	5113
Hospital Authority	1587	25	20	11	5
Private Practitioners/ Private Hospitals	3	1	1	0	0
Correctional Services and Others	116	49	48	27	12
Not Recorded	65	653	657	461	657
Total	5787	5787	5787	5787	5787

Breakdown for Hospital Authority:

Alice Ho Miu Ling Nethersole Hospital	25	0	0	0	0
Caritas Medical Centre	0	0	0	0	0
Castle Peak Hospital	6	3	2	2	1
Duchess of Kent Children Hospital	1	0	0	0	0
Fung Yiu King Hospital	0	0	0	0	0
Grantham Hospital	229	3	1	1	0
Haven of Hope Hospital	135	4	4	2	0
Kowloon Hospital	184	1	1	0	0
Kwong Wah Hospital	48	0	0	0	0
North District Hospital	23	0	0	0	0
Nam Long Hospital	0	1	1	1	0
Our Lady of Maryknoll Hospital	14	0	0	0	0
Pamela Youde Nethersole Eastern Hospital	0	0	0	0	0
Pok Oi Hospital	1	1	1	0	0
Prince of Wales Hospital	121	1	1	1	1
Princess Margaret Hospital	68	1	1	1	1
Queen Elizabeth Hospital	127	0	0	1	0
Queen Mary Hospital	22	1	1	0	0
Ruttonjee Hospital	120	5	5	2	2
Shatin Hospital	1	0	0	0	0
Tai Po Hospital	6	0	0	0	0
Tseung Kwan O Hosital	42	1	0	0	0
Tuen Mun Hospital	102	0	0	0	0
Tung Wah Eastern Hospital	2	0	0	0	0
Tung Wah Hospital	5	1	1	0	0
United Christian Hospital	88	2	1	0	0
Wong Tai Sin Hospital	216	0	0	0	0
Wong Chuk Hang Hospital	1	0	0	0	0
Yan Chai Hospital	0	0	0	0	0
Total	1587	25	20	11	5

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: 1.single/ 2.married/ 3.separated/ 4.divorce/ 5.widowed Smoking status: 1.never/ 2.ex-smoker/ 3.current smokers

Institution-related: N / Y : 1.Client / 2.Staff Type: 1.Old age home/ 2.School/ 3. Hospital/ 4.Handicapped/ 5.Prison/ 6.Others

Name of institution: _____

Living situation: 1.street-sleeper/ 2.cubicle bed space/ 3.institution/ 4.work quarter/ 5.alone (but not 1. to 4.)/ 6.with friends/ 7.with family

Resident status: 1.PermanentResident/ 2.ChineseNewImmigrant(inHK<7yr)/ 3.ImportedWorker/ 4.Tourist-2wayPermitChinese/ 5.OtherTourist/ 6.Vietnamese/ 7.IllegalImmigrants

Place of birth: 1.Hong Kong / 2.Mainland/ 3.Others _____

Ethnicity: 1.Chinese/ 2.Other Asian/ 3.Caucasian/ 4.Other _____

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

Employment status (including self-employment) at DOS: 1.Full-time/ 2.Part-time/ 3.Retired/ 4.Unemployed/ 5.Housewife/ 6.Student

Occupation (current or last): 1.Blue collar/ 2.White collar/ 3.Medical/ 4.Nursing/ 5.Paramedical/ 6.Supporting health staff/ 7.Not applicable

Job title: _____

Part (B) Information on this episode of TB:

First presentation to: 1. Private doctor / 2.Private Hospital / 3.GOPC / 4.Chest Clinic / 5.Other DH Clinic / 6 .HA Clinic / 7. HA Hospital / 8. Mainland / 9.Overseas

Symptomatic on presentation: N / Y: 1.Chest symptoms / 2.Systemic Symptoms / 3.Other site-specific symptoms

Reason for presentation: 1. Symptom / 2.Contact Screening / 3. Pre-employment / 4.Pre-emigration/ 5.Other body check / 6. Incidental to other illness / 7. Others: _____

Contact with TB patients: N / Y: 1.Household / 2.Work / 3.Casual
1. within 2 year / 2. over 2 year

Previous chemoprophylaxis: N / Y : reason: 1. Contact / 2. Silicosis / 3. HIV / 4. Old scar on CXR / 5. Others _____

Drugs & duration: _____

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

1. New case (<1m previous Rx)
2. Relapse case.
3. Treatment after default.
4. Failure of previous treatment.

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

PFB1 – To be completed at 6 month from DOS (for TB patients)

Part (E) Mode of TB diagnosis: 1. Bacteriological/ 2.Histological/ 3.Clinical-radiological/ 4.Clinical only (choose 1 item, priority from left to right)

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

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

- Histological result from (site) _____: 1 Typical (with caseation) / 2.Granulomatous inflammation / 3.other
  Ziehl-Neelzen staining: P / N / U
- **If pre-treatment culture is positive for MTB, is the ST favourable? (i.e., sensitive to HRES)**: N / Y / U (ST not done)

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

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

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

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

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

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

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 supervison 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 □ 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: 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 □ Last visit date (mm/yyyy): ____/_____

Died □ Cause: 1.TB-related/ 2.Not TB-related/ 3.Unknown Date of death (mm/yyyy): ____/_____

Relapse □ Date relapse (mm/yyyy): ____/_____

- 1.Bacteriological / 2.Histological / 3.Clinical-radiological (choose 1 item, priority from left to right)

(2) Treatment incomplete (including death while on treatment) □

- 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 □ 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: 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: _ _/_ _/_ _ _ _

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: 1.TB-related/ 2.Not TB-related/ 3.Unknown Date of death (mm/yyyy): ____/_____

Relapse □ Date relapse (mm/yyyy): ____/_____

- 1.Bacteriological / 2.Histological / 3.Clinical-radiological / 4.Clinical only (choose 1 item, priority from left to right)

(2) Treatment incomplete (including death while on treatment) □

- 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 □ 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: 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.)

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	2001	2002	2003	2004	2005
Notified TB cases who are Chinese New Immigrants (with years of arrival in Hong Kong)	≤1 year	42	43	66	27	14
	≤2 year	36	30	15	19	11
	≤3 year	26	13	15	13	11
	≤4 year	25	20	16	11	7
	≤5 year	28	26	24	9	9
	≤6 year	12	30	22	11	13
	≤7 year	23	24	19	20	12
	Total	192	186	177	110	77
Overall notified TB cases		7262	6602	6024	6226	6160

The above table shows the number of all notified TB cases in Hong Kong from 2001 to 2005 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 2001 to 2005 are 108.0, 97.3, 88.5, 90.5 and 88.8 respectively.

From Annex 2 (b), the overall estimated rates (per 100,000) among the new immigrants from 2001 to 2005 are 50.6, 49.1, 47.7, 30.7 and 21.5 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 (2001-2005)

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

	2001	2001	2001	2002	2002	2002	2003	2003	2003	2004	2004	2004	2005	2005	2005
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	10	20	30	15	13	28	12	12	24	4	12	16	3	6	9
20-39	26	77	103	16	77	93	23	77	100	8	56	64	4	38	42
40-59	14	32	46	12	34	46	8	21	29	8	12	20	5	14	19
60+	7	6	13	9	10	19	12	12	24	5	5	10	3	4	7
Total	57	135	192	52	134	186	55	122	177	25	85	110	15	62	77

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

	2001	2001	2001	2002	2002	2002	2003	2003	2003	2004	2004	2004	2005	2005	2005
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	11.6	24.4	17.9	17.8	16.0	16.9	15.4	15.8	15.6	5.3	16.3	10.8	4.4	9.0	6.7
20-39	102.5	67.0	73.4	65.3	64.5	64.7	96.8	59.5	65.3	34.9	42.5	41.4	16.0	26.0	24.5
40-59	172.6	65.6	80.9	148.8	73.0	84.2	96.3	51.7	59.3	94.2	36.8	48.7	50.4	47.6	48.3
60+	256.9	52.0	91.2	326.8	83.8	129.3	447.4	97.4	159.9	198.3	42.8	70.3	121.4	40.9	57.1
Total	46.7	52.5	50.6	43.6	51.7	49.1	48.8	47.2	47.7	22.9	34.1	30.7	14.2	24.6	21.5

Annex 2 (c)

TB Notification and Rates (All Cases) By Age & Sex (2001-2005)

All TB cases by age and sex

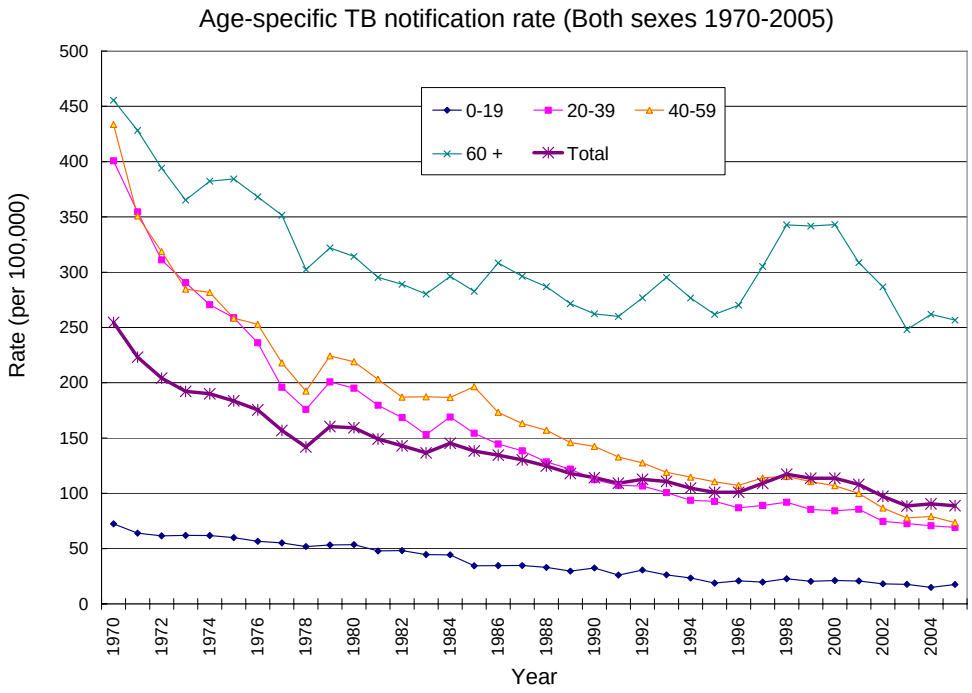
	2001	2001	2001	2002	2002	2002	2003	2003	2003	2004	2004	2004	2005	2005	2005
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	150	171	321	139	140	279	139	126	265	96	124	220	137	118	255
20-39	951	983	1934	778	883	1661	744	832	1576	696	823	1519	690	782	1472
40-59	1303	604	1907	1215	528	1743	1150	484	1634	1209	527	1736	1105	575	1680
60+	2268	832	3100	2157	762	2919	1895	654	2549	1987	764	2751	2041	712	2753
Total	4672	2590	7262	4289	2313	6602	3928	2096	6024	3988	2238	6226	3973	2187	6160

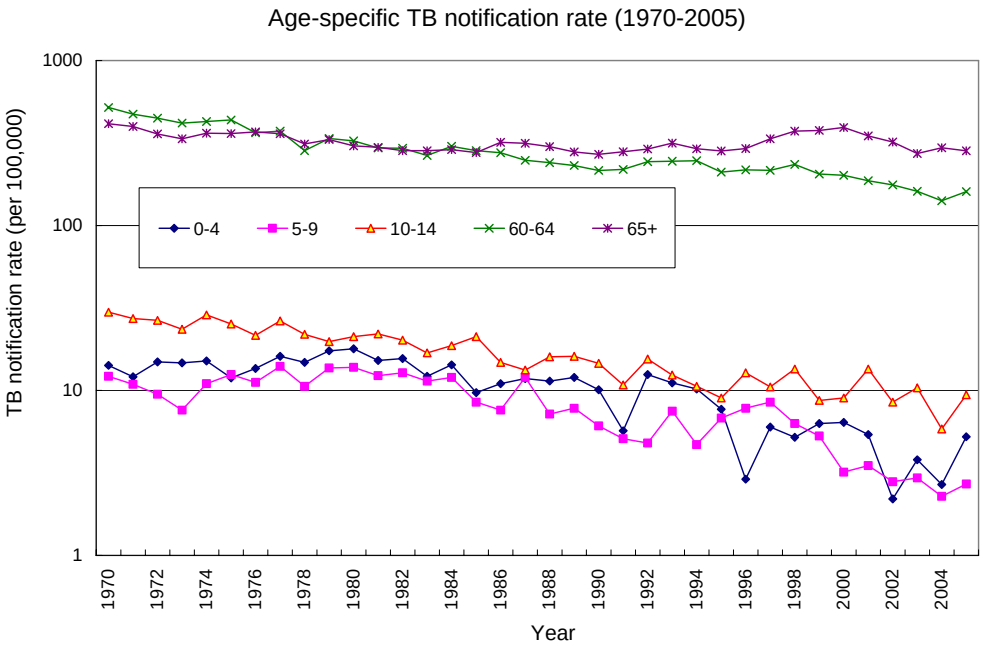
Rate of TB (all notified cases) (per 100,000)

	2001	2001	2001	2002	2002	2002	2003	2003	2003	2004	2004	2004	2005	2005	2005
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	18.7	22.8	20.7	17.6	18.8	18.2	17.9	17.3	17.6	12.6	17.2	14.8	18.3	16.8	17.6
20-39	91.9	80.2	85.6	76.6	73.0	74.7	75.3	70.5	72.7	71.3	70.0	70.6	71.9	66.9	69.2
40-59	134.5	64.2	99.8	120.9	52.6	86.7	110.7	45.5	77.7	112.8	46.8	79.0	100.1	48.7	73.5
60+	470.4	159.3	308.6	442.3	143.6	286.7	384.6	122.3	248.1	394.0	139.8	261.8	396.7	127.5	256.6
Total	142.1	75.3	108.0	130.0	66.3	97.3	119.2	59.7	88.5	120.3	62.7	90.5	119.5	60.6	88.8

Annex 3

Trend of age-specific TB notification rates (1970-2005)





- 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

The TB-HIV Registry is a registry kept jointly by the TB & Chest Service (TB&CS) and Special Preventive Programme (SPP), Public Health Services Branch, Department of Health (DH), for surveillance purposes. The registry include any cases of TB-HIV co-infection voluntarily reported from chest clinics and other DH clinics, SPP, Hospital Authority (HA) hospitals, and the private sector. About 60% of the cases were under the care of both TB&CS and SPP. Surveillance data are generally more complete for these cases. Most of the remaining cases were seen at chest clinics and one of the HA hospitals.

Table 1 shows the total number of TB-HIV cases reported to the Registry for the years 1985-2005.

Table 2 shows the data on TB as primary AIDS-defining illness in the Hong Kong HIV/AIDS reporting system for the years 1985-2005. TB has increasingly become a more frequent AIDS-defining illness among AIDS patients in Hong Kong. It accounted cumulatively for 24.0% of the AIDS-defining illnesses of all reported AIDS cases. In 2005, 39.1% of the newly diagnosed AIDS patients had TB as the primary AIDS-defining illness, and TB surpassed Pneumocystis carinii pneumonia (PCP) as the most common AIDS-defining illness. The exact reason for the change is not certain, even though such trend is also observed in other places with a burden of latent TB infection. Further monitoring of the trend and pattern is therefore necessary.

Table 3 shows the distribution of cases with TB as the primary AIDS-defining illness for 150 cases reported from chest clinics and SPP for the years 1996-2005.

Table 4 shows the pre-treatment drug sensitivity pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996-2005. At present, the rate of MDR-TB among the reported TB-HIV cases (3/182 or 1.6%) is low, and is only slightly higher than the MDR-TB rate of around 0.61% to 1.23% among all reported TB cases from 2000 to 2005. The actual number of MDRTB cases among TB-HIV co-infected patients, however, was small, and the result has to be interpreted with caution. There is no XDR-TB cases detected among the TB patients reported to the TB-HIV Registry during the period.

Table 5 shows the characteristics of 30 TB cases reported from chest clinics and SPP in 2005. There are greater proportions of young males and non-Chinese Asians among TB-HIV co-infected patients as compared to the non-HIV infected counterparts. Most are new cases of TB. Relapse cases and cases with re-treatment after default accounted for about 10% of the cases. Only about 20% of the patients were receiving anti-retroviral therapy at time of diagnosis of active TB. CD4 count is generally low. TB-HIV co-infected patients with pulmonary involvement tend to have more extensive disease and a positive bacteriology. Extra-pulmonary involvement, with or without pulmonary involvement, is common, and is present in 53% of the patients in this cohort.

Annex 4 (b)

TB-HIV Registry

Table 1: Total number of TB-HIV cases reported to TB-HIV Registry, 1985-2005*

	Pre-1994	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Number of TB-HIV cases	24	11	14	24	22	22	30	31	34	20	23	29	42	326

* Including cases reported from chest clinics and other DH clinics, SPP, HA hospitals, and private sectors

Table 2: TB as primary AIDS-defining illness in the Hong Kong HIV/AIDS reporting system, 1985-2005*

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Mycobacterium tuberculosis infection	0	--	0	0	1	2	3	1	2	4	8	21	17	18	13	19	17	9	15	13	25	188
Total number of reported AIDS cases	3	--	6	7	17	13	14	14	19	37	45	70	64	63	61	67	60	53	56	49	64	782
TB as AIDS defining illness	0.00%		0.00%	0.00%	5.90%	15.40%	21.40%	7.10%	10.50%	10.80%	17.80%	30.00%	26.60%	28.60%	21.30%	28.40%	28.30%	17.00%	26.80%	26.50%	39.1%#	24.00%

* An expanded case definition was adopted in 1995 to include pulmonary TB cases with a CD4 count below 200/μl.
# TB surpassed Pneumocystis carinni pneumonia (PCP) as the most common AIDS defining illness

Table 3: TB as primary AIDS-defining illness criteria for 150 cases reported from chest clinics and SPP, 1996-2005*

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
TB as AIDS defining illness											
Yes	8	5	9	13	5	9	13	6	12	23	103
Extra-pulmonary TB	1	2	6	7	2	3	4	1	5	9	40
Pulmonary TB with CD4 count below 200/μl	7	3	3	6	3	6	9	5	7	14	63
No	1	2	3	4	5	7	2	5	11	7	47
Total	9	7	12	17	10	16	15	11	23	30	150

* Among 277 cases reported to the TB-HIV Registry from 1996 to 2005, 150 cases were seen at both chest clinics and SPP. The table is compiled basing on data of these 150 cases.

Table 4: Pre-treatment drug sensitivity pattern among culture-positive (sputum or other specimens) TB-HIV cases from TB-HIV Registry, 1996-2005*

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Susceptible to SHRE	6	5	13	15	13	23	11	17	18	29	150
Resistant to at least any one drug of SHRE											
Any resistance (non- MDR)	1	1	1	4	2	4	3	2	6	5	29
MDR	0	0	0	1	0	0	1	1	0	0	3
XDR	0	0	0	0	0	0	0	0	0	0	0
Total number of culture-positive cases	7	6	14	20	15	27	15	20	24	34	182

* Among 277 cases reported to HIV Registry from 1996 to 2005, 182 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 182 cases.

Annex 4 (c)

TB-HIV Registry

Table 5: Characteristics of 30 TB cases reported from chest clinics and SPP in 2005*

	Number	(%)
Age distribution		
0 to 19	0	0.00%
20 to 39	14	46.70%
40 to 59	11	36.70%
60+	5	16.60%
Sex distribution		
Male	23	76.70%
Female	7	23.30%
Ethnicity		
Chinese	25	83.40%
Asians, non-Chinese	4	13.30%
Caucasians	1	3.30%
Others	0	0%
Case category		
New case	27	90.00%
Relapse	2	6.70%
Treatment after default	1	3.30%
Failure of previous treatment	0	0%
TB as primary-AIDS defining illness		
Yes	23	76.70%
No	7	23.30%
HIV stage		
A1	1	3.30%
A2	3	10%
A3	0	0%
B1	0	0%
B2	2	6.70%
B3	1	3.30%
C1	0	0%
C2	0	0%
C3	23	76.70%
CD4 count at time of co-infection		
[median (range)]	65 (3-554) /μl	
Viral load at time of co-infection		
[median (range)]	210000 (400-3900000) copies/ml	
Anti-retroviral therapy at time of co-infection		
Yes	6	20%
No	24	80%
Presence of extra-pulmonary TB	16	53%
Extent of Respiratory TB**		
Minimal	9	40.90%
Moderate	7	31.80%
Extensive	6	27.30%
Bacteriological status (pre-treatment)		
Smear + culture +	12	40%
Smear - culture +	11	36.70%
Smear - culture -	7	23.30%
Incomplete	0	0%
Drug resistance pattern (pre-treatment)***		
Susceptible to SHRE	19	82.60%
Resistant to at least any one drug of SHRE		
Any resistance (non-MDR)	4	17.40%
MDR	0	0%
XDR	0	0%

* Among 42 cases reported to HIV Registry in 2005, 30 were managed at chest clinics and/or SPP. The table is compiled basing on data of these 30 cases.

** 22 out of the 30 cases had lung parenchymal lesion on CXR.

*** 23 out of the 30 cases had a positive sputum or other specimen culture.

Annex 5

HBsAg Seroprevalence Survey
Among TB Patients Seen At Chest Clinics

In a sample survey conducted by the TB & Chest Service of the Department of Health in 2005 (2-month period from 1.3.2005 to 31.5.2005), the HBsAg seropositive rate among TB patients seen at chest clinics was 10.09%.

Sex/Age group	HBsAg status			HBsAg seropositive rate (%)*	Total
	Positive	Negative	Unknown		
Male					
0-19	1	11	3	8.33	15
20-39	6	73	4	7.59	83
40-59	28	114	5	19.72	147
≥60	17	192	15	8.13	224
Female					
0-19	0	19	0	0.00	19
20-39	5	84	6	5.62	95
40-59	6	56	3	9.68	65
≥60	6	66	2	8.33	74
Total	69	615	38	10.09	722

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

Annex 6

Crude and Standardised Death Rate and Notification Rate 1981 - 2005

(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	108.0	88.6
2002	3.9	2.4	97.3	78.9
2003	4.0	2.5	88.5	72.3
2004	4.2	2.4	90.5	71.1
2005	4.0	2.2	90.4	70.5

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

Part 4

SUPPLEMENT

Part 4 – Supplement: Contents

Supplement

Guidelines on tuberculin testing and treatment of latent TB infection among immunocompetent household contacts (aged 1 – 34) of smear-positive pulmonary tuberculosis patients in Hong Kong

(2005)

Internal guidelines of
the Tuberculosis & Chest Service of
the Department of Health of
the Government of the Hong Kong SAR

Background

1. The Centers for Diseases Control of the United States published a detailed set of guidelines on tuberculin testing and treatment of latent tuberculosis infection in 2000[1].
2. Anti-TB chemoprophylaxis has not been widely practiced in Hong Kong, partly because of the difficulty in interpreting a positive tuberculin response within a community where BCG revaccination was widely practiced, and partly because of potential problems with drug compliance and drug reaction with prolonged course of treatment.
3. A study on a cohort of local children given BCG vaccination at birth from 1978 to 1982 suggested that those who were tuberculin-positive (induration ≥10mm) at an age of 6 to 9 were at a greater risk of developing TB than those who were tuberculin-negative[2].
4. A higher cut-off point of 15 mm or over is more likely to indicate latent tuberculosis infection (LTBI)[3,4]. Because of the higher prevalence of LTBI among close TB contacts, a tuberculin test response of 15 mm or over among close TB contacts is more likely to indicate LTBI, irrespective of past BCG vaccination.
5. The average risk of progression from TB infection to disease is approximately 10% for an immunocompetent adult. The short-term risk of developing disease is especially high among those recently infected. Treatment of LTBI has been accorded priority only second to treatment of active TB disease[5].
6. A daily 12-month regimen of isoniazid was shown to be more effective than a 6-month regimen of isoniazid for preventing TB in persons with fibrotic lung disease[6]. The problems with the former regimen are client acceptance and compliance. Recent data from Centres for Disease Control indicate that only 60% of patients complete at least 6 mo of treatment[1].
7. In United States, isoniazid daily regimen for 9 months is recommended[1] because, in subgroup analyses of several trials, the maximal beneficial effect of isoniazid is likely achieved by 9 months[7-9]. A 6-mo regimen also provides substantial protection and has been shown to be superior to placebo in both HIV-negative and HIV-positive persons[1]. In some situations, treatment for 6 months rather than 9 months may provide a more favorable outcome from a cost-effectiveness standpoint[10].
8. Despite an earlier favourable report in the use of the 2-month rifampicin plus pyrazinamide regimen in the treatment of latent tuberculosis among the

HIV-infected subjects[11], such regimen was associated with a high incidence of hepatotoxicity in a recent local study on the treatment of latent tuberculosis infection among the silicotic subjects[12] . There have also been similar reports from other places[13-17].

9. In a previous study of anti-tuberculosis drug-related liver dysfunction in Hong Kong, age and HBsAg status were found to be the predictors of drug-related liver dysfunction[18]. In a retrospective study on TB in older people in Hong Kong, the incidence of liver dysfunction among those patients aged 65 or above was found to be 17.7%, in contrast with only 9.2% among younger patients[19]. The recent study by Jasmer et al on the treatment of LTBI also found that patients older than 35 years had a higher risk of grade 3 or 4 hepatotoxicity[17].
10. Isoniazid-associated hepatitis occurs in 0.3% of treated persons from the age of 20 to 34, 1.2% from 35 to 49, and 2.3% of those form 50 to 64[20].
11. This set of guidelines is intended to provide general guidance for tuberculin testing and treatment of latent tuberculosis infection among immunocompetent, household contacts aged 1 to 34 inclusive of smear-positive pulmonary tuberculosis patients. Infants <1 are managed differently as detailed in the guidelines for tuberculin testing and treatment of LTBI among infant household contacts of smear-positive tuberculosis patients. For contacts aged 35 or above, such treatment may still be offered after careful assessment on an individual basis if there is documented tuberculin conversion after significant exposure or other exceptional circumstances.

Tuberculin testing of household contacts (aged 1 to 34 inclusive) of smear-positive pulmonary tuberculosis patients

All **household contacts** aged 1 to 34 (i.e. ≥ 1 or < 35) of **smear-positive index tuberculosis patients** will be offered tuberculin test (2 unit RT-23) as part of the contact screening work-up except those with past history of confirmed tuberculosis (i.e. TB requiring treatment and not just lung scars).

A computerized register should be kept of all **household contacts** (of any age) of **smear-positive index tuberculosis patients** (including cases notified from outside sources). For contacts aged 1 to 34, besides chest x-ray, tuberculin testing will also be offered for targeted screening. If the client agrees to tuberculin testing, BCG history should be obtained. The number of previous BCG scars should be recorded while the test is being administered. The tuberculin reaction (in mm) should also be recorded in the register when they are read 48 to 72 hours later. In mobile clinics, where there may be difficulty in arranging the tuberculin testing, the relevant contacts should be offered the options of having CXR examination in the mobile clinic or both CXR and tuberculin test in the closest full-time chest clinic. Irrespective of tuberculin status, all contacts should be given health education on early recognition of symptoms suggestive of TB.

All household contacts with tuberculin reaction ≥ 15 mm should be interviewed by the public health unit. They will be told that they are likely to have been infected by TB and the life-time risk of developing TB disease later is approximately 10%. They should be referred to see a doctor, preferably, within the same session. The attending doctor should examine the CXR taken for contact screening and discuss treatment for LTBI with the contact if it is appropriate. Irrespective of whether these strongly tuberculin-positive close contacts are put on treatment, they should be offered annual follow-up for two years. During the follow-up visits, CXR will be offered, unless the patient is pregnant.

For those contacts with tuberculin reaction ≤14 mm, they should be offered an

appointment for tuberculin retesting after 3 months, unless their last contact with the infectious source was over eight weeks ago. Smear-positive patients will be regarded as non-infectious for the usual community settings if they have been on effective treatment with the standard four-drug regimen for two or more weeks, unless drug resistance is suspected. For those agreeing for retesting but failing to return on scheduled date, a reminder will be sent by either telephone or mail.

Treatment of latent tuberculosis infection among tuberculin strongly positive household contacts of smear-positive pulmonary tuberculosis patients

In view of a considerable risk of developing tuberculosis after infection, treatment of latent tuberculosis infection with isoniazid should be considered, irrespective of previous BCG vaccination, if all of the following conditions are met:

1. Subjects aged 1 to 34 (below 35)
2. Household contacts of patients with smear-positive pulmonary tuberculosis
3. Strongly positive tuberculin skin test response defined as an induration ≥ 15 mm in response to 2 units of PPD RT23 or documented tuberculin conversion (an increase of the tuberculin reaction size by 10mm or above on repeat testing).

However, such treatment is not appropriate for confirmed cases of active tuberculosis and may not be appropriate in the following situations:

1. Clinical suspicion of active pulmonary tuberculosis
2. Clinical suspicion of extrapulmonary tuberculosis
3. History of receiving more than two months of continuous anti-tuberculosis treatment in the past
4. Past intolerance of, or contraindication to use of , isoniazid
5. Poor general condition
6. Symptomatic hepatitis or alanine transaminase (ALT) above the upper limit of normal on at least 2 occasions separated by 2 weeks or known case of liver cirrhosis at enrollment
7. Alcoholism (habitual alcohol drinkers with alcohol **dependence**), even if alcohol use will be discontinued during treatment
8. Concurrently taking other medications commonly associated with clinically significant liver injury
9. Reluctance and / or inability to take medications or attend for follow-up
10. *Mycobacterium tuberculosis* cultured from index patient already known to be resistant to isoniazid

Decision on targeted testing and preventive treatment should be made after discussion with patients. While contacts should be fully informed of the risk of contracting and developing TB, asymptomatic individuals with LTBI do not pose an immediate public health hazard. Their informed choice should therefore be respected.

Special situations

This set of guidelines is not intended for the management of HIV-infected or other immunocompromised contacts. For such situations or for other contacts in whom the risk of the disease is particularly high or the consequence of disease particularly grave, a lower cut-off value for the tuberculin response may have to be used. Reference should be made to other relevant guidelines for up-to-date information, e.g. the latest ATS recommendations and the local guidelines prepared by the Scientific Committee on AIDS for HIV-infected contacts.

No definitive data exist concerning treatment of contacts who have been exposed to patients with probable or confirmed isoniazid-resistant TB. Rifampicin alone for 4 months[1,21] is an acceptable alternative and may be offered after careful assessment and discussion with the patient. In situations in which rifampin cannot be used, rifabutin can be substituted.

For contacts of patients with multidrug-resistant tuberculosis (resistant to both isoniazid and rifampicin), the problem has not been evaluated in prospective studies, and consensus is lacking. These patients are unlikely to benefit from treatment with isoniazid and rifampicin. There is, as yet, insufficient evidence to allow recommendation of preventive treatment on a regular basis. Use of a regimen containing other agents active against M. tuberculosis should be considered if treatment of latent tuberculosis infection is to be given. Decision has to be made on a case-to-case basis in full consultation with the patient, and after careful balance of the potential risks and benefits.

Pretreatment Investigations

1. Baseline blood tests for patients aged 16 or above or on any clinical indications, e.g. patients whose initial evaluation suggests a liver disorder, patients infected with HIV, pregnant women and those in the immediate postpartum period (i.e., within 3 mo of delivery), persons with a history of liver disease (e.g., hepatitis B or C, alcoholic hepatitis), persons who use alcohol regularly, and others who are at risk for chronic liver disease:
    a. Complete blood picture (CBP),
    b. Liver function test (LFT) including albumin and total protein,
    c. Renal function test (RFT)
    d. Hepatitis B surface antigen (HBsAg)
2. Sputum examination: two sputum sample collected on two different days are collected for acid-fast bacilli (AFB) smear and culture for mycobacteria.
3. Urinalysis for glucose and protein

Chemoprophylaxis Regimen

Six-month course of daily isoniazid (6H) with 180 doses in total.

- Children aged ≤ 16
  Isoniazid 5mg/kg daily (max. 300mg)
- Adults
  Isoniazid 300mg daily (a lower dose of 200mg daily may be considered for patients with chronic renal failure)

(Pyridoxine supplementation at 10 mg daily should be considered for those with malnutrition or at risk of neuropathy, e.g. diabetes mellitus, habitual alcohol use, chronic renal failure, and HIV infection.)

Patient Education and Dispensing of Medication

The drug should be dispensed on a monthly basis with a drug calendar. Health education and counselling will be provided before treatment and at each monthly visit. Patients should be clearly informed of the potential side effects and advised to report them

promptly. They should be encouraged to comply with the prescription and record every consumed dose in the calendar honestly. The monthly drug calendar is to be returned in the next follow-up visit. Help of relatives should be enlisted if available.

Monitoring

1. All patients will be followed up at least monthly during treatment.
2. At all treatment visits, patients will be assessed clinically for adverse side effects. For those HBsAg-positive, with abnormal baseline LFT or otherwise at risk of hepatic disease, LFT should be checked biweekly at 2, 4 and 6 weeks, and 2 months. Any other investigation will be done according to clinical suspicion. Treatment should be withheld according to the management of drug-induced hepatitis protocol.
3. The drug calendar will be reviewed at each visit to assess compliance with treatment.
4. Treatment will be terminated for any adverse drug reactions that entail treatment interruption for more than 1 month.
5. If the patient fails to complete the 180 doses of treatment within 6 months, treatment may be extended to allow completion of the regimen, up to a maximum of 3 more months.
6. CXR, sputum and / or other investigations will be checked upon clinical suspicion. If active TB develops during treatment of LTBI, chemoprophylaxis must be replaced by appropriate anti-TB treatment.
7. After treatment, all patients should be offered follow-up at 1 year (from date of tuberculin test) and 2 year. During the follow-up visits, CXR will be offered, unless the patient is pregnant.

Management of drug-induced liver dysfunction

If patient has asymptomatic biochemical liver dysfunction with ALT < 3 X the upper limit of normal and bilirubin < 2 X the upper limit of normal, treatment may be continued under close clinical and biochemical monitoring. LFT has to be monitored every 2 weeks or more frequently as appropriate until ALT returns to normal.

<u>Definition of symptomatic hepatitis:</u>

It is defined as the presence of symptoms of hepatitis, such as malaise, reduced appetite,

nausea, vomiting, yellowing of sclera, lethargy and/or right upper quadrant discomfort, together with the presence of liver dysfunction irrespective of the severity of the biochemical abnormalities.

Management of drug-induced hepatitis:

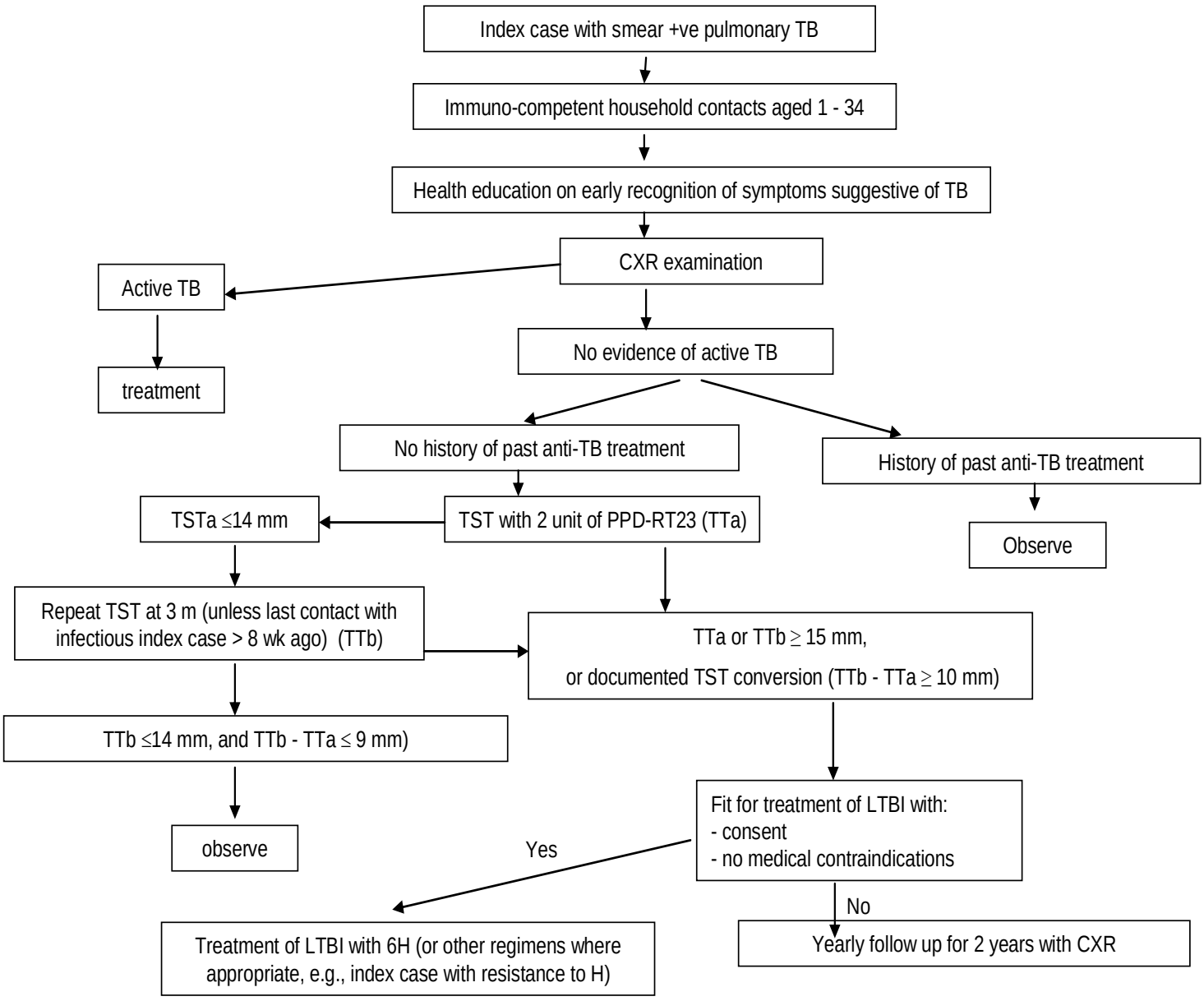
Treatment should be stopped and not resumed for any of these findings:

1. ALT > normal range when accompanied by symptoms of hepatitis, or
2. ALT > 3 X the upper limit of normal range in an asymptomatic person,
3. Serum bilirubin > normal range when accompanied by symptoms of hepatitis
4. Serum bilirubin > 2 X the upper limit of normal in an asymptomatic person.

After withholding treatment, LFT will be repeated weekly until ALT returns to normal.

Figure 1

Tuberculin testing and treatment of LTBI among immunocompetent household contacts (aged 1 to 34) of smear positive pulmonary TB patients



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GUIDELINES ON THE MANAGEMENT OF PATIENTS WITH MULTIDRUG-RESISTANT TUBERCULOSIS IN HONG KONG

A consensus statement of
the Tuberculosis Control Coordinating Committee of
the Hong Kong Department of Health and
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the Coordinating Committee in Internal Medicine of
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Introduction

Multi-drug resistant tuberculosis (MDR-TB), defined as tuberculosis caused by tubercle bacilli showing in vitro resistance to at least both isoniazid and rifampicin, is of increasing concern in tuberculosis control programmes all over the world [1]. Use of DOTS has been shown to reduce the transmission of tuberculosis and the incidence of drug resistant diseases. As regards drug-resistant TB in particular MDR-TB, they are more difficult to treat with significantly lower treatment success rates, treatment costs are much higher, and they may remain infectious for longer period of time. For the control of MDR-TB, "DOTS-PLUS" strategy is recommended. This strategy incorporates continuous drug resistance surveillance, culture and drug susceptibility testing for TB patients, and tailoring of individual drug regimen with the use of first and second line drugs.

At present, the rate of TB notification in Hong Kong is still high as compared with other western developed countries, at a level slightly below 100 per 100,000. The rate of MDR-TB, as noted in the Government Chest Service's annual report, has shown a decreasing trend with a rate of around 1% in recent years [2]. It is necessary to remain vigilant and continue to update our knowledge and measures for the control of drug-resistant TB.

The Tuberculosis Control Coordinating Committee has published guidelines on the management of both clinical and public health aspects of patients with TB [3-6]. As patients with MDR-TB may first approach and seek for care from general medical doctors working in public non-chest hospitals or in private health care facilities, a specific set of guidelines for MDR-TB is considered desirable. Recommendation is provided on diagnosis, reporting, general principles in treatment, contact screening, infection control and preventive measures in relation to MDR-TB for reference by general medical doctors. Most of the basic principles in the management of a case of uncomplicated TB are also applicable for drug resistant cases. On top of these basic principles, the guidelines in this paper should be referred to when managing a multi-drug resistant case, although each case should be managed according to each individual circumstance.

Recommendations

The treatment of MDR-TB involves second-line (reserve) drugs which are much more expensive, generally less efficacious, and have more potential adverse effects than the first line drugs. Clinical expertise and good laboratory support are essential for the successful management of patients with MDR-TB. It is therefore recommended that treatment of MDR-TB be managed by or in close consultation with TB specialists.

1) Diagnosis

It has been recommended that drug susceptibility testing of pretreatment positive culture isolates should be done for all TB patients [1]. In this regard, diagnosis of drug-resistant TB can be made and the treatment regimen can be modified with the availability of the susceptibility test results.

However, early diagnosis of drug resistant TB, particularly MDR-TB, is highly desirable. A high index of suspicion is required. A history of incomplete treatment for tuberculosis, close contact with MDR-TB patients and migration from an area endemic for drug resistance are some of the useful clues. Other risk factors for MDR-TB such as HIV infection, drug addiction and alcoholism should also be sought in the history.

For re-treatment cases, the number of episodes of previous treatment, treatment non-adherence, and the treatment details for each episode of treatment should be enquired.

The Public Health Laboratory Centre (PHLC) of Department of Health may be contacted for consideration of drug susceptibility tests for first line as well as second-line anti-tuberculosis drugs. Under appropriate circumstances, PHLC may also be contacted for consideration of either rapid drug sensitivity tests with BACTEC or performing drug susceptibility tests concomitantly with identification tests.

It has been described that about 96% of rifampicin resistant isolates have a mutated *rpo*B gene, and the mutations are concentrated on a short, less than 100-bp stretch of the gene [7]. Thus, genetic testing for rifampicin resistance

would be useful and its positive predictive value for MDR-TB can be high. Hence, when available and in case of high index of suspicion, rapid genetic testing for rifampicin resistance may be recommended [1].

2) Reporting of MDR-TB cases

Timely notification of TB cases, drug susceptible and drug resistance cases alike, is crucial to the effective control and prevention of the disease. It is also important for public health surveillance and for initiation of contact screening. In addition to the usual TB notification registry, a MDR-TB registry has been set up within the TB & Chest Service since May 1995 and the procedures have been updated in 2004 (MDR_Flow_protocol0503) to include reporting of MDR-TB cases from sources outside TB & Chest Service. Whenever a currently active and previously unreported case of MDR-TB is diagnosed, health care workers are requested to *notify* the case to Wanchai Chest Clinic using the MDR-TB notification form (MDR_Noti_Form0503). In order to track progress of patients with MDR-TB, a set of special programme record forms have been designed (TB-PFMDR-X(1)/10-2004 and TB-PFMDR-X(2)/10-2004). These forms are to be filled in every 6 months after the completion of the usual set of programme record forms (PFA, B1, B2, C and D) from 2.5 year to 5 year from date of starting treatment (DOS). The forms can be downloaded from the DH TB website (http://www.info.gov.hk/tb_chest). [NB: PFA at pretreatment, PFB1 & PFB2 at 6m, PFBC at 12m, PFBD at 24m, and PFMDR-X at 30m, 36m, 42m, 48m, 54m, and 60m]

3) Treatment

There are several general principles:

Regimen

For MDR-TB patients with known susceptibility pattern, the regimen should comprise 5 to 6 drugs to which the organism is or is likely to be susceptible for the initial 6 months, and then 3 to 4 drugs subsequently. Some would recommend the inclusion of an injectable agent and a quinolone in the core regimen. Daily regime should be used, except for the injectables especially when they are used

during the continuation phase. Drugs showing in vitro resistance are avoided with possible exception of the use of isoniazid in cases with low-level isoniazid-resistance. The possibility of cross-resistance between drugs should be noted [8-9].

Apart from first-line anti-tuberculosis drugs, available drugs for treatment of MDR-TB include the fluoroquinolones (e.g. ofloxacin, levofloxacin, ciprofloxacin), aminoglycosides (e.g. kanamycin, amikacin), prothionamide/ ethionamide, cycloserine, para-aminosalicylic acid, and clofazimine. [Tables 1-3] Drugs that have not been used to treat the patient before are preferred.

There is controversy on the best approach in managing MDR-TB patients before drug susceptibility results for the second line drugs become available. Some experts advocate empirical use of second line drugs while others may wait till definitive drug susceptibility results are available to avoid misuse of ineffective drugs which may lead to emergence of further resistance. The relative merits and de-merits of either practice has never been systematically studied. Each case should be judged depending on the individual circumstances. For example, patients with poor general condition or extensive diseases should be commenced on treatment as early as possible. The opinion of TB experts should be sought under these circumstances. If it is considered necessary to treat a suspected MDR-TB patient before second-line drug susceptibility test results are available, it is advisable to give both the essential first-line drugs plus at least three second-line drugs that have not been used previously.

The total duration of therapy for MDR-TB has not been clearly established; most will recommend a total duration of 18 months at least, or 18 months after culture being converted negative. However, local experience suggests that, with combination drug treatment and the inclusion of quinolones to which the bacilli are still susceptible, the total duration may be shortened to 12 to 15 months, or one year after sputum culture conversion [10]. The longer duration may be required for patients with diabetes mellitus, silicosis, slow sputum culture conversion, extensive drug resistance or extensive disease. Again the opinion of TB experts should be sought.

A single drug should never be added to a failing regimen, because doing so may select for organisms that are resistant to the newly added drug (*Addition Phenomenon*). Combination of two or three drugs to which the organism is or is

likely to be susceptible should be added.

Caution is to be exercised in the use of second-line drugs as they are often associated with significant adverse effects. Bactericidal drugs are preferred to bacteriostatic drugs. Cycloserine should be used only with caution and when its benefit is perceived to outweigh its adverse effects.

Drug supervision

Therapy of all patients with MDR-TB should be delivered by DOT (directly observed treatment) as far as practicable. Failure to comply with treatment is the main cause of emergence of drug resistant organisms. Therefore every effort should be made to ensure that patients complete the full course of treatment.

For patients who have problems with drug adherence, the reasons for defaulting treatment should be carefully explored. All efforts should be made to seek cooperation from treatment defaulters for treatment. The management of treatment defaulters can be problematic. Team approach is the strategy. Counseling by specially trained TB workers and medical social workers form an integral part of management of these patients. Early referral to government chest clinics or HA MDR-TB Centres would be desirable.

Surgery

For selected cases of MDR-TB with sufficiently localized disease that are not responding well to treatment with an adequate chemotherapeutic regimen, surgical resection of a major pulmonary focus may be a useful adjunct to anti-tuberculosis treatment. The remaining lung tissue should be relatively devoid of TB and there should be sufficient drug activity to diminish the Mycobacterial burden to facilitate healing of the bronchial stump [9]. The opinion of thoracic surgeons should be sought under these circumstances.

Monitoring

Close monitoring of progress during anti-TB treatment is required, in particular the general condition, body weight, chest radiograph and bacteriological status. Sputum specimens should be sent monthly for AFB smear and culture examination, as well as drug susceptibility tests, until they are converted negative

for three consecutive months. Sputum tests may be monitored at longer intervals thereafter, say, every three months, depending on the clinical situation. Renal function should be checked periodically particularly if an aminoglycoside is given. Liver function should be monitored regularly in patients with risk factors for hepatitis. The patient should also be regularly assessed for other potential adverse reactions from the drugs given.

Caution should be exercised in the interpretation of chest radiograph when initial radiographic improvement is observed. Sometimes this may only indicate temporary improvement due to response of the drug-susceptible part of the bacilli population in the lesion, leaving behind the selected resistant part to grow subsequently and deteriorate again. The opinion of TB experts should be sought if response to anti-TB treatment is unsatisfactory.

Admission

Admission of patients with MDR-TB to special care centres (to HA MDR-TB Centres including Grantham Hospital or Kowloon Hospital for newly diagnosed cases; or to the respective chest hospitals if they are their old cases) is recommended particularly during the initial period. This will facilitate detail assessment, stabilization and optimisation of drug regime, re-enforcement of health education, and enhancement of treatment adherence during subsequent outpatient follow up after discharge. Arrangement for hospital admission can be made by direct referral to the specialist outpatient clinics of the relevant chest hospitals or through government chest clinics.

General measures

The patient should be provided health education on measures to prevent the spread of the disease, e.g., good personal hygiene (avoid spitting and sneezing in public area), and avoid going to overcrowded areas. The patient should be advised to put on surgical masks if there is a need to go to crowded public areas including public transport vehicles.

4) Contact screening

Good public health measures are indispensable for the prevention of emergence

and transmission of drug resistant organisms. Contact screening, together with notification, surveillance, health education and infection control are the most important public health measures undertaken by DH. The general principles for screening of close contacts also apply to those of MDR-TB cases [2,11]. In addition, for MDR-TB contacts with normal CXR findings on initial screening, periodic screening say every 6 to 12 months may be indicated, depending on the infectiousness of the index case as assessed from the updated findings on chest radiograph and sputum status. The contacts should also be educated on symptoms suspicious of tuberculosis and advised to return for consultation if such symptoms develop. The health staff of chest clinics may be contacted for arranging contact screening if the latter has not been undertaken by general medical doctors.

If a contact is found to have developed active pulmonary tuberculosis, it is important to correlate with the drug susceptibility pattern of the index case. Special public health measures may have to be taken if transmission of MDR-TB among contacts is suspected. To achieve effective public health control of the infection, close communication should be maintained with the relevant parties including Department of Health. Restriction fragment length polymorphism (RFLP, or DNA fingerprinting) may be considered.

5) Infection control measures

Measures should be taken to prevent nosocomial spread of MDR-TB in clinics, hospitals and other health care settings. These include an effective triage system, minimization of the MDR-TB patients' duration of stay in the health care settings, advice on personal hygiene and the use of face masks, etc [12,13].

6) Other issues

Special management may be necessary for chronic MDR-TB cases not responding well to treatment, and the failure-failure cases. Compassionate re-housing may have to be considered. It would be useful to discuss with the patient and his/her household members on observation of personal hygiene, maintenance of good indoor ventilation, as well as other measures including special arrangement of the home setting and layout of rooms. The use of

incentives and enablers may be desirable through liaison with medical social workers. Incentives like those in the form of special diet allowance should be used with close monitoring and follow-up remedial actions to ensure that they are used effectively. The DH staff may be contacted if the above arrangement is considered necessary.

Conclusions

Treatment success rate for MDR-TB is relatively low. It should be much more cost effective to prevent its emergence in the first place. The routine use of DOTS in the treatment of all cases of TB cannot be overemphasized. Currently, a number of new drugs as well as new vaccines for TB are under different phases of research and development. Fluoroquinolones are currently among the most valuable drugs in the medical treatment of MDR-TB. As Hong Kong has a relatively high TB prevalence, careful use of fluoroquinolones is highly desirable, not only in the context of TB, but also in other medical conditions including community acquired pneumonia. Otherwise, the loss of this important group of compounds will have adverse consequences on our battle against TB.

To control MDR-TB, specific surveillance programmes like the MDR-TB registry, drug resistance surveillance and treatment outcome monitoring are indispensable. They should provide useful information for close monitoring, evaluation, and planning of targeted control measures. Today TB is still an infectious disease of public health importance globally and locally. The control of TB is a long term work. Continuous multisectoral cooperation is necessary.

Table 1 Adverse reactions to antituberculosis drugs

Drug	Reactions		
	Common	Uncommon	Rare
Isoniazid		Hepatitis Cutaneous hypersensitivity Peripheral neuropathy	Giddiness Convulsion Optic neuritis Mental symptoms Haemolytic anaemia Aplastic anaemia Lupoid reactions Arthralgia Gynaecomastia
Rifampicin		Hepatitis Cutaneous hypersensitivity Gastrointestinal reactions Thrombocytopenic purpura Febrile reactions “Flu syndrome”	Shortness of breath Shock Haemolytic anaemia Acute renal failure
Pyrazinamide	Anorexia Nausea Flushing	Hepatitis Vomiting Arthralgia Cutaneous reaction	Sideroblastic anaemia
Ethambutol		Retrobulbar neuritis Arthralgia	Cutaneous reaction Peripheral neuropathy
Streptomycin	Cutaneous hypersensitivity Giddiness Numbness Tinnitus	Vertigo Ataxia Deafness	Renal damage Aplastic anaemia
Thiacetazone	Gastrointestinal reactions Cutaneous hypersensitivity Vertigo Conjunctivitis	Hepatitis Erythema multiforme Exfoliative dermatitis Haemolytic anaemia	Agranulocytosis

Amikacin Kanamycin Capreomycin	Ototoxicity: hearing damage, vestibular disturbance Nephrotoxicity: deranged renal function test	Clinical renal failure	
Ofloxacin Levofloxacin Ciprofloxacin	Gastrointestinal reactions Insomnia	Anxiety Dizziness Headache Tremor	Convulsion
Ethionamide Prothionamide	Gastrointestinal reactions	Hepatitis Cutaneous reactions Peripheral neuropathy	Convulsion Mental symptoms Impotence Gynaecomastia
Cycloserine	Dizziness Headache Depression Memory loss	Psychosis Convulsion	Sideroblastic anaemia
Clofazimine	Nausea Giddiness Discoloration of skin (dose-related) and urine Dryness of skin	Eye irritation Diarrhoea with high doses	Taste disorder
Para-aminosalicylic acid	Gastrointestinal reactions	Hepatitis Drug fever	Hypothyroidism Haematological reactions

Table 2 Usual dosages of conventional antituberculosis drugs

Drug	Daily dosage			Intermittent dosage		
	Adults and children (mg/kg)	Adults		Adults and children (mg/kg)	Adults	
		Weight (kg)	Dose		Weight (kg)	Dose
Isoniazid * @	5	–	300 mg #	10-15 three times/week	–	–
Rifampicin *	10	<50	450 mg	10-12 three times/week	–	600 mg
		≥50	600 mg			
Streptomycin *	12-15	<50	500-750 mg	12-15	<50	500-750 mg
		≥50	750 mg		≥50	750-1000mg
Pyrazinamide	25-30	<50	1.0-1.5 g	30-40 three times/week	<50	2.0 g
		≥50	1.5-2.0 g		≥50	2.5 g
Ethambutol	15	–		30 three times/week	–	–
Thiacetazone *	2.5	–	150 mg	–	–	–
Rifater		per 10 kg	1 tablet			
		>50 kg	5 tablets			

* *Some authorities recommend higher dosages of isoniazid, rifampicin, streptomycin, and thiacetazone for children.*

\# *Some elderly and/or malnourished patients can only tolerate isoniazid 200 mg daily.*

@ *Pyridoxine supplement should be considered for those with malnutrition or at risk of neuropathy, e.g. pregnancy, diabetes mellitus, alcoholism, chronic renal failure, and HIV infection.*

Table 3 Usual dosages of second-line antituberculosis drugs in the treatment of MDR-TB

Drug	Daily dosage			
	Adults and children (mg/kg)	Adults		
		Weight (kg)	Dosage	
Amikacin	15		750 mg	three to five times/week
Kanamycin	15		750 mg	
Capreomycin	15		750 mg	
Ofloxacin			600-800 mg	
Levofloxacin			500-600 mg	
Ciprofloxacin			750-1500 mg	
Ethionamide	15 (adults)	<50	500-750 mg	
Prothionamide		≥50	750-1000 mg	
Cycloserine	15 (adults)	<50	500-750 mg	
		≥50	750-1000 mg	
Clofazimine			50-100 mg	
Para-aminosalicylic acid	2 g/10 kg		10-12 g	

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13. Infection Control Committee of Department of Health. Guidelines on infection control practice in the clinic setting. August 2004 (revised).

[Other references: http://www.info.gov.hk/tb_chest]

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

Name: _ DOS: _ _/_ _/_ _ _ _

Date of start of 2nd line anti-TB treatment: _ _/_ _/_ _ _ _

PF-MDR(X), supplementary record forms for MDRTB patients (Page 1 of 2)

(X = multiples of 6, ranging from 30 to 60) (That is, this form is to be completed for MDR-TB patients every 6 months from 2½ year to 5 year of DOS)

PF-MDR (_____) [That is, this form has been completed at (_____) months from DOS]

A. Treatment outcome (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: 1.TB-related/ 2.Not TB-related/ 3.Unknown Date of death (mm/yyyy): ____/_____

Relapse □ Date relapse (mm/yyyy): ____/_____

- 1.Bacteriological / 2.Histological / 3.Clinical-radiological (choose 1 item, priority from left to right)

(2) Treatment incomplete (including death while on treatment) □

- Still on treatment (including those whose treatment only temporarily withheld, e.g., due to side effects), 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): ____/_____

(2) 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): ____/_____
- Reason(s) for defaulting treatment in the last 6 months (if applicable):
  1 No reason/ 2 Denial of disease/ 3 Seeking treatment from others/ 4 Treatment side effect/
  5 Frequent travel outside Hong Kong/ 6 Other reason (1): _____ /
  7 Other reason (2): _____

(3) Failure- failure (persistent positive bacteriology despite treatment with 2nd line drugs and treatment stopped; cases with treatment stopped and planned not to be given again despite disease not yet cured are included in this category) □

B. Bacteriological examination in the past 6 months: 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/ 6.others: _____	
	First 3 months	Subsequent 3 months	First 3 months	Subsequent 3 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

C. Was treatment given in the past 6 months: Yes / No / Unknown If yes:

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

2. Was treatment temporarily withheld for side effects: N / Y

D. Treatment side effects in the past 6 months: N / Y (If Y, please circle one or more of the followings:)

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.suicidal ideation/ 14.sleep disturbance/ 15.depression/ 16.psychotic reaction/ 17.renal function impairment/ 18.other (1) _____ /19.other (2) _____

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

Name: _ DOS: _ _/_ _/_ _ _ _

Date of start of 2nd line anti-TB treatment: _ _/_ _/_ _ _ _

PF-MDR (X), supplementary record forms for MDRTB patients (Page 2 of 2)

(X = multiples of 6, ranging from 30 to 60) (That is, this form is to be completed for MDR-TB patients every 6 months from 2½ year to 5 year of DOS)

PF-MDR (_____) [That is, this form has been completed at (_____) months from DOS]

E. Treatment supervision in the past 6 months *(no need to be completed if no treatment given)***:**

Category	Proportion of doses:
Under DOT at chest clinic, hospital, CNS or other health staff	>90% >75% >50% >25% ≤25%
Under supervision by relatives	>90% >75% >50% >25% ≤25%
Supplied for unsupervised treatment	<5% <10% <15% < 25% <50% ≥50%
Defaulted	<5% <10% <15% < 25% <50% ≥50%

F. Home and working environment in the past 6 months *(no need to be completed if treatment success)***:**

		Home	**Workplace**
Is the patient living alone?		Yes/ No	Not applicable
Total number of close contacts	examined:		
	not examined:		
Total number of close contacts aged <5	examined:		
	not examined:		
Among the above, number of close contacts with immunocompromised condition and state the condition (s)		Number: Condition:	Number: Condition:
Result of active case finding in the last six months		NA/ ND/ positive/ negative	NA/ ND/ positive/ negative
Does the patient have a single room?		Yes/ No	Yes/ No

(*NA= not applicable; ND= Not done; positive=active TB case detected during contact examination; negative=no active case detected)*

G. Hospitalization for management of MDRTB in the past 6 months

Episode	Period (dd/mm/yy – dd/mm/yy)	Duration (weeks)	Hospital	Indication(s)* (Please refer to key)
1				
2				
3				
4				

**Key: (more than one option can be chosen)*

1. Establishment of 2nd line drug regimen

2. Treatment complication: a. hepatitis; b. skin reaction; c. psychiatric symptom; d. others (please state)

3. Disease complication: a. Haemoptysis; b. pneumothorax; c. chronic respiratory failure; d. others (please state)

4. Other comorbidities: a. poor DM control; b. concomitant pneumonia; c. acute exacerbation of COPD; d. others (please state)

5. Modification of 2nd line drug regimen

6. Poor compliance

7. Other public health or social reasons

H. Public financial assistance and special housing needs in the past 6 months *(no need to be completed if treatment success)*

1. Is the patient receiving public financial assistance? Yes / No / Unknown

2. Which of the following forms of financial assistance is the patient receiving? (If applicable)

CSSA □ Diet allowance □ Normal disability allowance □ High disability allowance □

Special grant for renting □ Special grant for rehousing to a public housing unit for one person □

Special grant for rehousing to a bigger housing unit with provision of a single room for the patient □

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.

Protocol for the management flow and reporting of multidrug-resistant TB (MDR-TB) cases to an MDR-TB Registry

The purpose of setting up an MDR-TB registry is to keep close surveillance of this high risk group of patients for assessment, management and evaluation of control measures.

1. Chest Clinics
   - If a case is newly diagnosed as having MDR-TB in the chest clinics, the case should be notified to Consultant Chest Physician i/c at Wanchai Chest Clinic (WCC) using the MDR-TB notification form (MDR_Noti_Form0503).
   - Under most circumstances, the case of MDR-TB will be admitted to hospital for management. For newly diagnosed cases from Kowloon Chest Clinic, Shek Kip Mei Chest Clinic, and Yaumatei Chest Clinic, they should be admitted to Kowloon Hospital. For cases from other chest clinics, they should be admitted to Grantham Hospital. MDR-TB cases which are old cases of certain chest hospitals will in general be admitted to the same hospital for management if admission is required.

2. General Hospitals and Chest Hospitals other than Grantham Hospital (GH) and Kowloon Hospital (KH)
   - If a case is diagnosed as having MDR-TB in these hospitals, the case should be transferred to GH or KH for further management and GH and KH will be responsible for reporting the case to the MDR-TB registry at WCC.
   - However, if somehow the case is not to be transferred to GH or KH, but is to be managed in the respective hospital or is to be discharged, the case should be notified to the MDR-TB registry at WCC. Even if the case is to be discharged and referred to chest clinics, it should still be notified to WCC as the patient may default for follow up at chest clinic.

3. GH and KH
   - If a case of MDR-TB is diagnosed in GH or KH, or recently diagnosed and transferred to GH or KH but has not yet been notified to the MDR-TB registry at WCC, the case should be notified to WCC using MDR_Noti_Form0503.

4. TB Reference Laboratory of DH
   - When a new case has been found to have specimen with drug susceptibility tests showing MDR-TB by the TB Reference Laboratory, the case should be notified to WCC together with the information on the source of care requesting the bacteriological examination. Upon receiving the information, WCC will see whether the case has been notified or not to the MDR-TB Registry, and if not, will trace the source of care for any necessary reporting.

Note:
After notifying the MDR-TB case to WCC (using the form MDR_Noti_Form00503), a copy of the form should be filed in the hospital record (as well as filing with discharge summary upon transferring case to chest clinic) or chest clinic record for future reference and to avoid duplicate notification. There is no need for re-notification of the case even if a new episode of treatment is to be initiated for the same patient again.

MEMO

From	*To* Consultant Chest Physician i/c
Ref. *in*	*(Attn.:* Statistics Unit, Wanchai Chest Clinic *)*
Tel. No.	*Your Ref.* *in*
Fax. No.	*dated* *Fax. No.* 28346627
Date	*Total Pages*

Notification of case to MDR-TB Registry at Wanchai Chest Clinic

I would like to notify a case of Multi-drug Resistant TB as follows:

Name: _____

Sex: M / F Age: _____

ID Number: _____

Clinic number: _____

Date when MDR-TB was first documented: / /

Pretreatment ST pattern:

	(S)	(R)		(S)	(R)
H	☐	☐	E	☐	☐
R	☐	☐	S	☐	☐

Date of start of second line treatment for this episode: / /

Case referred to (if applicable): Chest Clinic (name): _____

Grantham / Kowloon / Other Chest Hospital: _____

Other HA Hospital: _____

Others: _____

Remarks:

Signature: _____

Name of doctor: _____

A copy of this form should preferably be filed in the patient's medical record for future reference. *MDR_Noti_Form0503*

FORM 1

QUARANTINE AND PREVENTION OF DISEASE ORDINANCE

(Cap. 141)

TUBERCULOSIS NOTIFICATION

Particulars of Infected Person

<table>
<tr><td colspan="3">Name in English</td><td colspan="2">Name in Chinese</td><td colspan="2">Age/Sex:</td><td>I.D. Card/Passport No.</td></tr>
<tr><td colspan="7">Address:</td><td>Telephone Number:</td></tr>
<tr><td colspan="7">Place of Work/
School Attended:</td><td>Telephone Number:</td></tr>
<tr><td colspan="2">Site of TB</td><td colspan="3">Sputum</td><td colspan="2">Disposal</td><td rowspan="5">Hospital/Clinic sent to (if any):</td></tr>
<tr><td>Resp. System</td><td></td><td></td><td>Smear</td><td>Culture</td><td>On Treatment</td><td></td></tr>
<tr><td>Meninges</td><td></td><td>Positive</td><td></td><td></td><td>On Observation</td><td></td></tr>
<tr><td>Bone & Joint</td><td></td><td>Negative</td><td></td><td></td><td>Referred</td><td></td><td rowspan="3">Hospital No.:</td></tr>
<tr><td>Other(s)</td><td></td><td>Unknown</td><td></td><td></td><td>Died</td><td></td></tr>
<tr><td colspan="8">Duration of stay in Hong Kong: _____ Years
Does patient have a history of past treatment for tuberculosis? __Yes __No
If yes, please state the YEAR in which he first received treatment: _____</td></tr>
</table>

Notified under the Prevention of the Spread of Infectious Diseases Regulations by

Dr. _____ on _____ / _____ / _____
(Full Name in BLOCK Letters) (Date)

Telephone Number: _____ _____
(Signature)

(Please DELETE whichever is not applicable)

"I will arrange for examination of contacts myself."

"Please arrange for examination of contacts to be done by the Government Chest Service."

Further Remarks:

DH 1A(s)(Rev.99)

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. of employer: _____

For Internal use:
Code: _____
Code: _____
Code: _____
Code: _____

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

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

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: _____

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.

Please
affix
stamp

Occupational Health Service
Labour Department
15/F, Habour Building
38, Pier Road
Central
Hong Kong