ANNUAL REPORT 2004

TUBERCULOSIS & CHEST SERVICE

OF THE

DEPARTMENT OF HEALTH

ANNUAL REPORT 2004

TUBERCULOSIS & CHEST SERVICE

OF THE

DEPARTMENT OF HEALTH

Part 1	TUBERCULOSIS
Part 2	PNEUMOCONIOSIS
Part 3	ANNEX
Part 4	SUPPLEMENT

PREFACE

In 2003, the world was hit badly and unexpectedly by the SARS (severe acute respiratory syndrome) epidemic. Upon the recommendation of SARS Expert Committee, the Centre of Health Protection (CHP) was formed in June 2004 with a mission to achieve effective prevention and control of diseases in Hong Kong in collaboration with major local and international stakeholders. The three existing services of Tuberculosis and Chest Service (TB&CS), Social Hygiene Service and Special Preventive Programme were incorporated into the Public Health Services Branch of the newly formed CHP to provide direct clinical services for common infectious diseases of major public health importance, including TB (tuberculosis), STIs (sexually transmitted infections), and HIV (human immunodeficiency virus infection), as well as playing the key role in their surveillance and public health control activities.

Despite the availability of effective treatment, TB has become resurgent alongside rampant drug resistance and HIV co-infection in various parts of the world. In April 1993, the World Health Organization (WHO) declared TB as a global emergency. 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. 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. Locally, the notification trends showed considerable fluctuation in the recent years. The TB notification rate per 100,000 population dropped rapidly from 108.0 in 2001 to 97.3 in 2002, and 88.5 in 2003. Despite such a sharp decline of around 10% per annum for two consecutive years, the notification rate rose slightly again to 90.5 per 100,000 population in 2004. Changes in healthcare seeking behaviour at the time of the SARS crisis and intensified surveillance afterwards could have accounted for such increase. A longer period of observation is therefore required to clarify the trend.

Smoking and TB are both important causes of morbidity and mortality in many parts of the world. In recent years, there have been mounting evidences pointing to a close association between these two important causes of human sufferings. In Hong Kong, a strong relationship has been demonstrated between smoking and TB among a prospective

cohort of 42 655 elderly, who were followed up from 2000 to 2003.[1] In that cohort, the annual TB notification rates were 735, 427, and 174 per 100 000 among current smokers, ex-smokers and never-smokers respectively. The excess risk persisted after control of relevant background characteristics. A clear dose response relationship was observed between the number of cigarettes being smoked and the subsequent development of TB, and smoking cessation almost halved the risk. Smoking accounted for 32.8%, 8.6% and 18.7% of the TB risk among males, females and the whole cohort respectively. About 45% of the gender difference in TB risk was attributable to smoking. 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 2004, a number of other important studies were also published by the TB&CS in collaboration with other investigators from different sectors.[2-7] 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 the same year, colleagues from the TB&CS participated and presented on different topics, such as latent tuberculosis infection and TB screening in prisons, in the following international TB meetings:

(a) Hong Kong International Conference on Infectious Diseases in Hong Kong, China (31 Jan to 1 Feb 2004)
(b) Conference on Public Health and Inauguration of the World Association of Chinese Public Health Professionals in Hong Kong, China (5 Mar to 6 Mar 2004)
(c) Workshop on Surveillance and Epidemiology of Tuberculosis in the Western Pacific Region in Manila, Philippines (4 May to 7 May 2004)
(d) Hong Kong SARS Forum and Hospital Authority Convention in Hong Kong, China (8 May to 11 May 2004)
(e) 35th International Union Against Tuberculosis and Lung Disease (IUATLD) World Conference on Lung Health in Paris, France (28 Oct to 1 Nov 2004)
(f) 9th Congress of the Asian Pacific Society of Respirology in Hong Kong, China (10 Dec to 13 Dec 2004)

During the year, 102,209 patients attended the TB&CS as compared to 106,354 in 2003, and the total attendance was 820,102 in comparison with 839,471 in 2003. Among the

102,209 patients, 26,909 patients were new attendants, of whom 26.1% were found free of any chest diseases. The diagnoses among other new patients included active pulmonary tuberculosis (12.7%), active tuberculosis of other forms (2.9%), inactive tuberculosis (10.1%), bronchitis not specified as acute or chronic (9.6%), acute respiratory infection (6.5%), pneumonia (4.4%), malignant neoplasm of trachea and bronchus (1.8%), bronchiectasis (1.2%), asthma (0.6%) and emphysema (0.4%). Among all the attendance, 4,986 hospital admissions were arranged.

Part 1: Tuberculosis

The number of tuberculosis notification in 2004 was 6,226, making a notification rate of 90.5 per 100,000 population. The corresponding figures in 2003 were 6,024 and 88.5 respectively.

The number of tuberculosis deaths was 286 in 2004 as compared with 275 in 2003. The corresponding tuberculosis mortality rates were 4.2 and 4.0 per 100,000 respectively.

Tuberculosis stayed outside the top ten causes of death in 2004. Tuberculosis deaths accounted for 0.8% of the total registered deaths in Hong Kong. The average age of tuberculosis deaths was 73.4.

In 2004, 98.8% 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 8,098 in 2004 compared with 8,008 in 2003. In 2004, 141 new cases of pneumoconiosis were registered in the TB&CS, and 73 new cases (including 4 cases of asbestos-related lung diseases) were confirmed by the Pneumoconiosis Medical Board. Up to the end of 2004, a total of 5,515 patients had been compensated.

References

1. *Leung CC, Li T, Lam TH, Yew WW, Law WS, Tam CM, Chan WM, Chan CK, Ho KS, Chang KC. Smoking and tuberculosis among the elderly in Hong Kong. Am J Respir Crit Care Med 2004;170:1027-33.*
2. *Chang KC, Leung CC, Yew WW, Ho SC, Tam CM. A nested case-control study on treatment-related risk factors for early*
3. *Chan CY, Au-Yeang C, Yew WW, Leung CC, Cheng AF. In vitro postantibiotic effects of rifapentine, isoniazid, and moxifloxacin against Mycobacterium tuberculosis. Antimicrob Agents Chemother 2004;48:340-3.*
4. *Leung CC, Yew WW, Tam CM, Chan CK, Chang KC, Law WS, Wong MY, Au KF. Socio-economic factors and tuberculosis: a district-based ecological analysis in Hong Kong. Int J Tuberc Lung Dis 2004;8:958-64.*
5. *Chang KC, Leung CC, Tam CM. Risk factors for defaulting from anti-tuberculosis treatment under directly observed treatment in Hong Kong. Int J Tuberc Lung Dis 2004;8:1492-8.*
6. *Yam WC, Tam CM, Leung CC, Tong HL, Chan KH, Leung ET, Wong KC, Yew WW, Seto WH, Yuen KY, Ho PL. Direct detection of rifampin-resistant mycobacterium tuberculosis in respiratory specimens by PCR-DNA sequencing. J Clin Microbiol 2004;42:4438-43.*
7. *Tso HW, Lau YL, Tam CM, Wong HS, Chiang AK. Associations between IL12B polymorphisms and tuberculosis in the Hong Kong Chinese population. J Infect Dis 2004;190:913-9.*

Part 1

TUBERCULOSIS

Appendix No.	Part 1 - Tuberculosis: Contents

1	Notification & Death Rate of Tuberculosis (All Forms), 1947-2004
2	TB Notification Rate (All Forms), 1960-2004 (Graph)
3	Crude Death Rate due to Tuberculosis (All Forms), 1910-2004 (Graph)
4 (a)	Tuberculosis Notifications (All Forms) & Rate by Age & Sex 2004
4 (b)	Pulmonary TB Notifications by Age & Sex 2004
4 (c)	Rate of Pulmonary TB Notification by Age & Sex 2004
5	TB Notification Rate by Age & Sex 1994, 2003 & 2004 (Graph)
6	Notifications of Tuberculosis by Type by Age & Sex 2004
7	TB Death (All Forms) & Death Rate by Age & Sex 2004
8	TB Mortality Rate by Age & Sex 1994, 2003 & 2004 (Graph)
9	TB Deaths by Type by Age & Sex 2004
10	Tuberculosis Mortality, 1950-2004
11	Top Ten Causes of Death 2004
12 (a)	Origin of Tuberculosis Notifications, 1994-2004
12 (b)	Breakdown of Origin of TB Notifications for "Other H.A. Hospitals" 2004
13	Tuberculosis Notifications & Notification Rates by District Council Districts 2004
14	Establishment & Strength of TB & Chest Service as at 31.12.2004
15	Total Attendances at Chest Clinics, 1994-2004
16	No. of Doctor Sessions, Cases seen by Doctor and Patient/Doctor Session 2004
17	Flow Chart of Patients Attending Chest Clinics 2004
18	Classification of Patients of First Attendance with New Case Card Completed by Clinics According to International Classification of Diseases Code 2004
19 (a)	Extent of Active Respiratory TB in First Attenders at Chest Clinics, 2002-2004
19 (b1),(b2)	Rate of Drug-resistant Tuberculosis January to June 2004
19 (c1),(c2)	Rate of Drug-resistant Tuberculosis 2003
19 (d)	Rate of Resistance to Ofloxacin
19 (e)	Trend of anti-TB drug resistance (1998-2004)
20 (a),(b)	Treatment Return 2004
20 (c),(d)	Explanatory Notes for Appendices 20 (a) & 20 (b)
21	Examation of Contacts in the Chest Clinics 2004
22 (a)	Scheme for Tuberculin Testing and BCG Administration in Hong Kong 2004
22 (b)	Household Contacts below 5 (with history of previous BCG vaccination)
23	BCG Vaccinations at Birth 2004
24	Tuberculin Tests and BCG Vaccination of School Children, 1962-2000
25	Beds for Treatment of Tuberculosis 2004
26	Annual Admissions to Hospitals from Government Chest Clinics, 1993-2004
27	Unlinked Anonymous Screening (UAS) for HIV in TB & Chest Service 2004
28	Number of "Confirmed" Cases of TB in Health Care Staff Notified to Labour Department 1993-2004
29 (a),(b),(c)	Cohort of TB Patients Seen at Chest Clinics in 2003

APPENDIX 1

TB Notifications & Death Rate of Tuberculosis (All Forms)
1947 - 2004

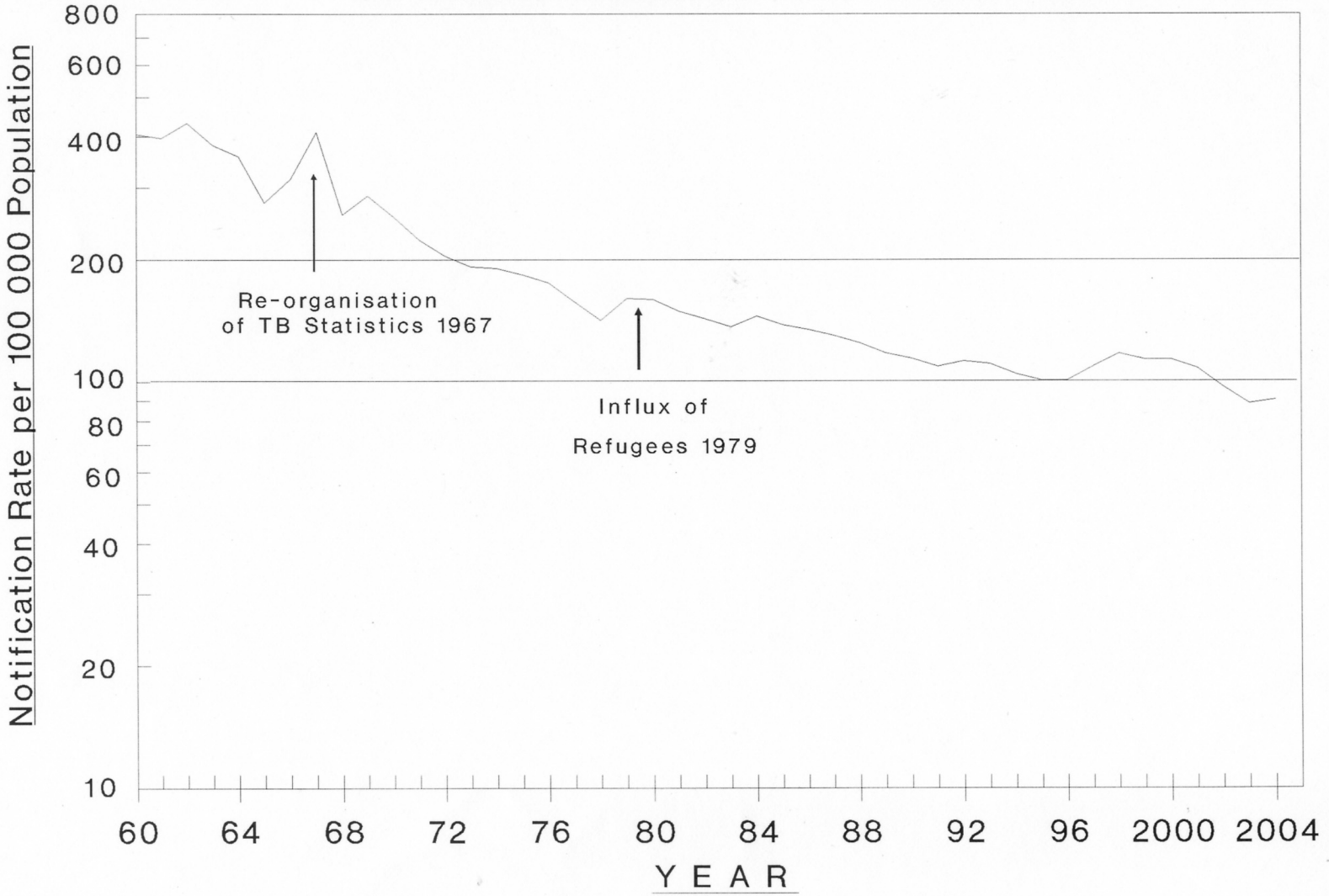
Year	TB Notifications			Notification Rate per 100,000 Pop	TB Deaths	Death Rate per 100,000 Pop	Ratio (Notifications/ Deaths)	Deaths ---------- x 100% Notifications
1947	4855			277.4	1861	106.3	2.61	38.33
1948	6279			348.8	1961	108.9	3.20	31.23
1949	7510			404.4	2611	140.6	2.88	34.77
1950	9067			405.3	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

* 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.

NB The rates from the year 1996 onwards have been updated to reflect the adoption of the "Resident Population" approach by the Census & Statistics Department in August 2000 and the revision based on the latest results of the 2001 Population Census.

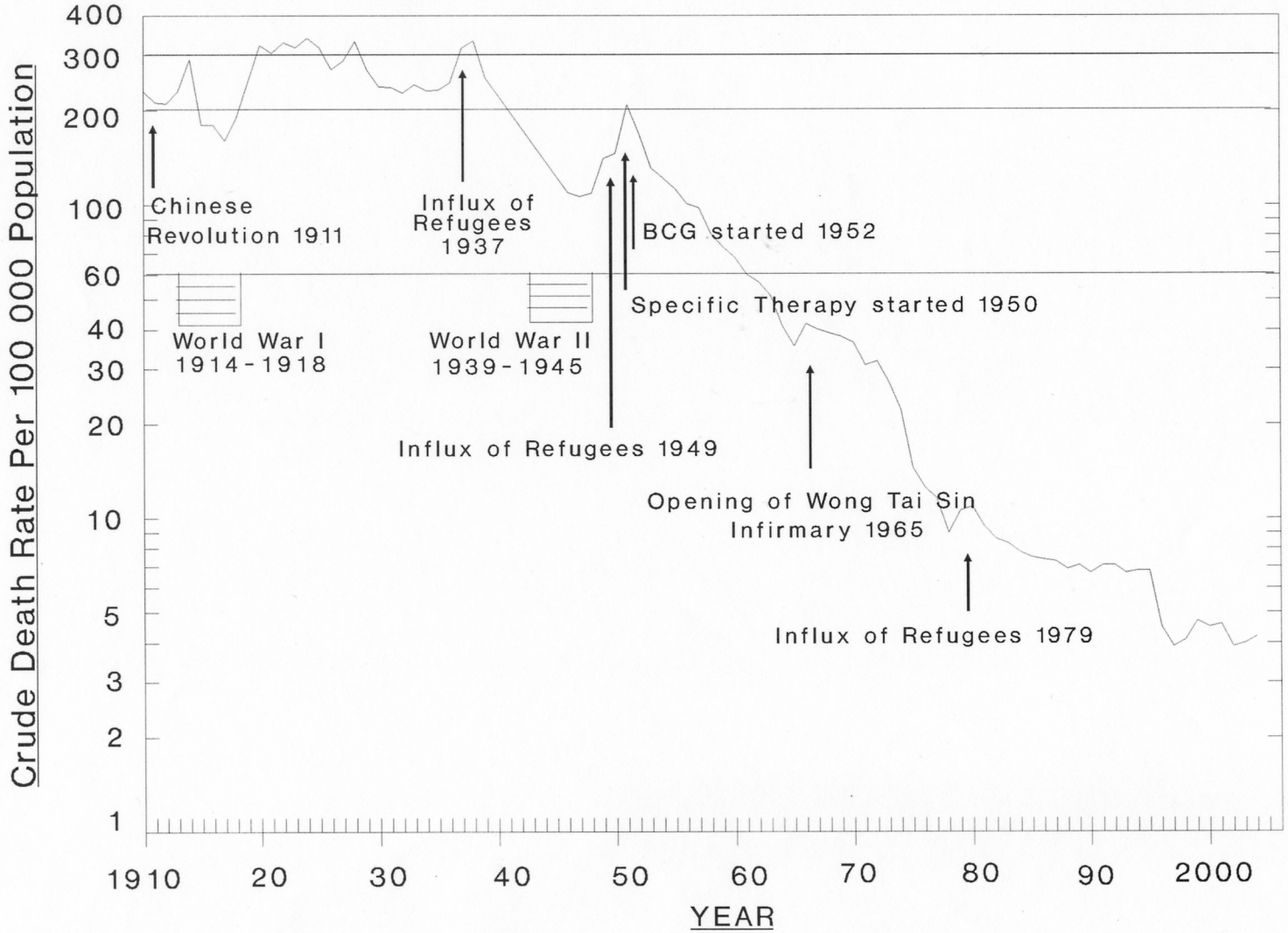
APPENDIX 2

TB Notification Rate (All Forms) 1960-2004



APPENDIX 3

Crude Death Rate due to Tuberculosis (All Forms) 1910-2004



APPENDIX 4 (a)

Tuberculosis Notifications (All Forms) & Rate by Age & Sex 2004

Age Group	Tuberculosis Notifications (All Forms)			Tuberculosis Notifications Rate (per 100,000 population)		
	Male	Female	Total	Male	Female	Total
Under 1	0	1	1	2.23	3.19	2.69
1	1	1	2			
2	1	0	1			
3	1	2	3			
4	0	0	0			
5-9	4	4	8	2.21	2.35	2.28
10-14	10	15	25	4.54	7.23	5.84
15-19	79	101	180	34.82	46.57	40.56
20-24	161	192	353	70.99	83.51	77.29
25-29	181	222	403	80.12	86.75	83.64
30-34	173	215	388	69.70	64.80	66.90
35-39	181	194	375	65.79	54.22	59.25
40-44	248	156	404	74.59	41.07	56.72
45-49	336	144	480	107.83	44.61	75.66
50-54	351	129	480	141.59	51.54	96.35
55-59	273	98	371	151.84	56.91	105.40
60-64	259	69	328	208.20	64.13	141.38
65-69	344	112	456	271.94	92.11	183.80
70-74	469	148	617	413.58	128.14	269.55
75-79	384	136	520	514.06	150.94	315.53
80-84	300	113	413	729.93	185.86	405.30
85 & over	232	186	418	958.68	365.42	556.59
Total	**3988**	**2238**	**6226**	**120.28**	**62.74**	**90.46**

Appendix 4 (b)

Pulmonary TB Notifications by Age & Sex 2004**

Age Group	Pulmonary TB			Bacteriologically * Positive Pulmonary TB			Smear Positive Pulmonary TB		
	M	F	T	M	F	T	M	F	T
Under 1	0	0	0	0	0	0	0	0	0
1	1	0	1	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	1	1	2	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5-9	3	2	5	2	1	3	0	0	0
10-14	7	10	17	6	9	15	3	6	9
15-19	76	87	163	55	69	124	22	38	60
20-24	149	157	306	99	116	215	41	59	100
25-29	164	184	348	111	121	232	57	60	117
30-34	157	167	324	100	112	212	48	56	104
35-39	162	141	303	95	96	191	54	45	99
40-44	223	114	337	148	75	223	83	46	129
45-49	306	115	421	224	80	304	122	36	158
50-54	322	92	414	234	61	295	137	30	167
55-59	252	60	312	200	42	242	108	20	128
60-64	246	53	299	199	37	236	112	15	127
65-69	329	86	415	255	64	319	113	31	144
70-74	451	125	576	360	91	451	171	40	211
75-79	368	108	476	306	78	384	147	32	179
80-84	285	97	382	244	75	319	102	29	131
85 & over	220	168	388	191	126	317	66	36	102
Total	**3722**	**1767**	**5489**	**2829**	**1253**	**4082**	**1386**	**579**	**1965**

** Pulmonary TB with or without extrapulmonary TB

* Either smear or culture positive

Appendix 4 (c)

Rate of Pulmonary TB Notifications by Age & Sex 2004**

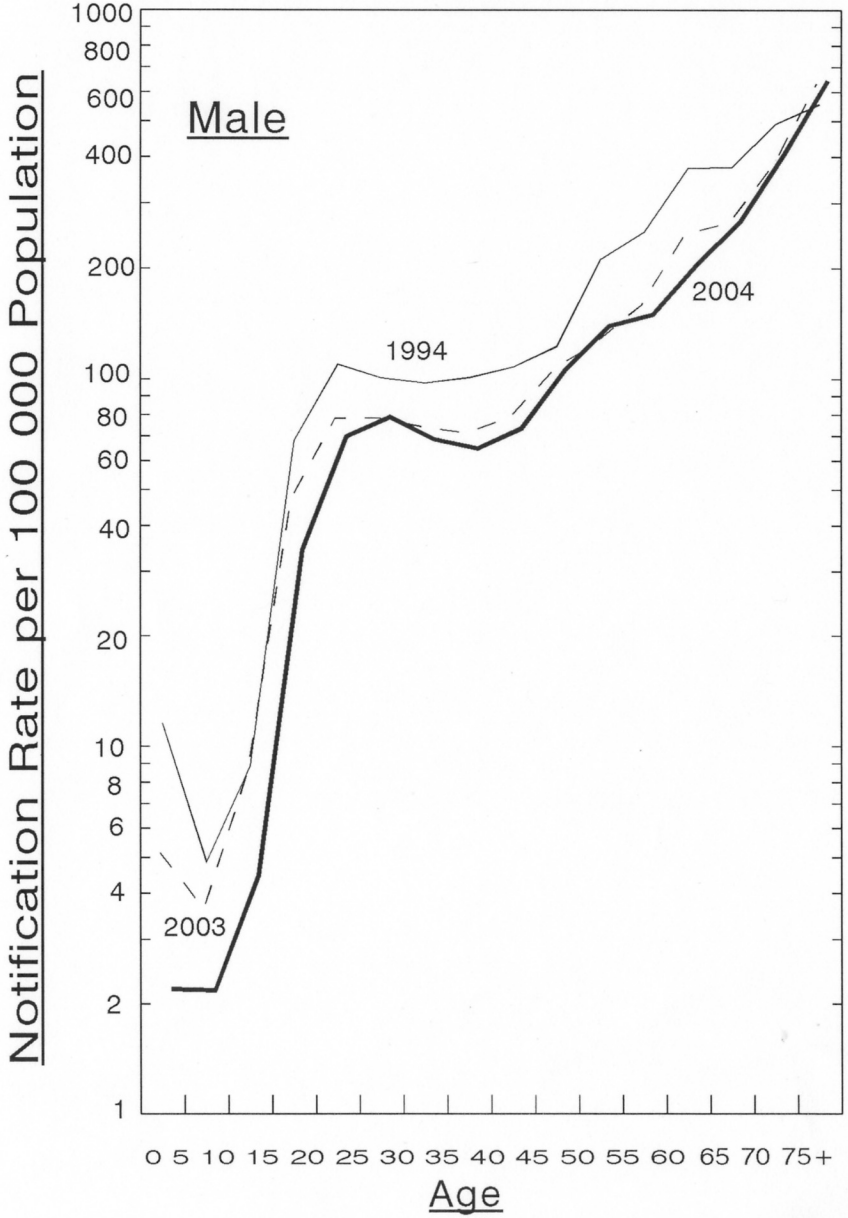
(Rate per 100,000 Population)

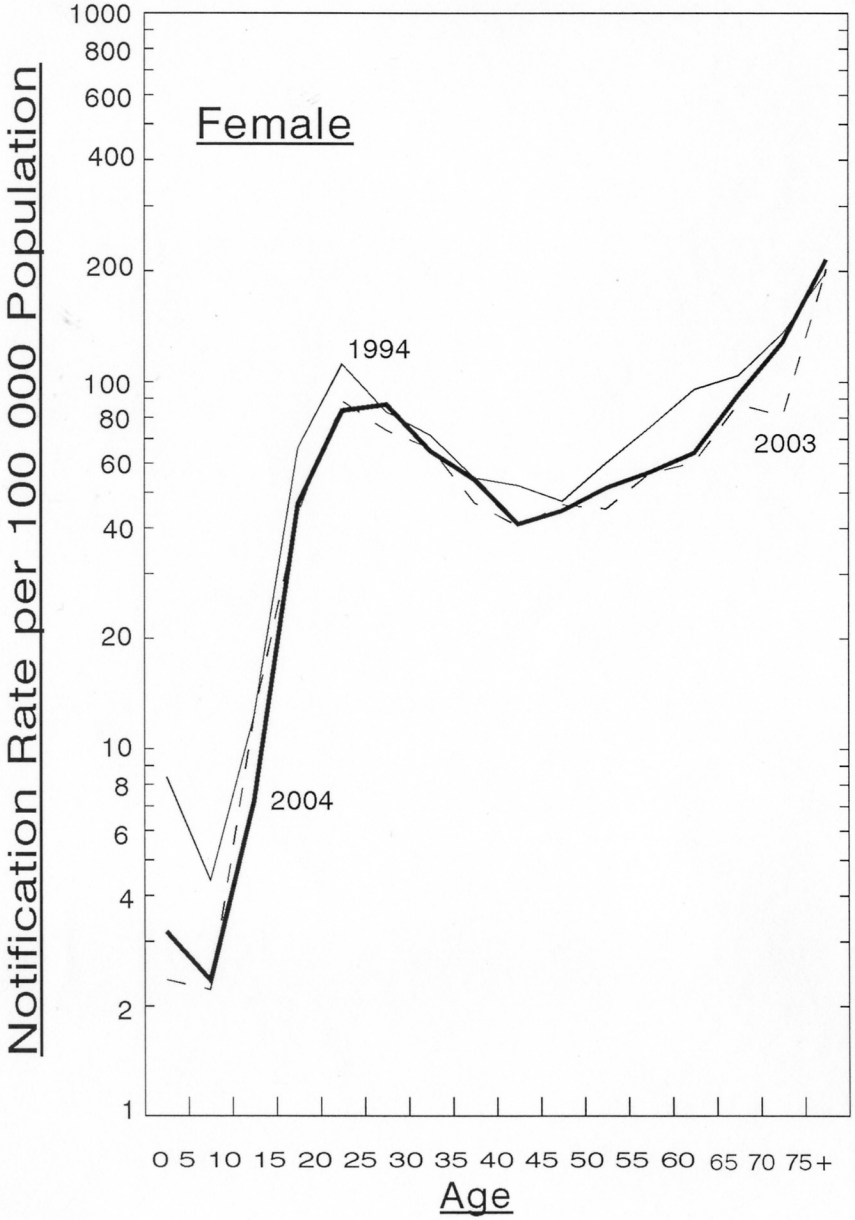
Age Group	Pulmonary TB			Bacteriologically * Positive Pulmonary TB			Smear Positive Pulmonary TB		
	M	F	T	M	F	T	M	F	T
0-4	1.5	0.8	1.2	0.0	0.0	0.0	0.0	0.0	0.0
5-9	1.7	1.2	1.4	1.1	0.6	0.9	0.0	0.0	0.0
10-14	3.2	4.8	4.0	2.7	4.3	3.5	1.4	2.9	2.1
15-19	33.5	40.1	36.7	24.2	31.8	27.9	9.7	17.5	13.5
20-24	65.7	68.3	67.0	43.7	50.5	47.1	18.1	25.7	21.9
25-29	72.6	71.9	72.2	49.1	47.3	48.2	25.2	23.4	24.3
30-34	63.3	50.3	55.9	40.3	33.8	36.6	19.3	16.9	17.9
35-39	58.9	39.4	47.9	34.5	26.8	30.2	19.6	12.6	15.6
40-44	67.1	30.0	47.3	44.5	19.7	31.3	25.0	12.1	18.1
45-49	98.2	35.6	66.4	71.9	24.8	47.9	39.2	11.2	24.9
50-54	129.9	36.8	83.1	94.4	24.4	59.2	55.3	12.0	33.5
55-59	140.2	34.8	88.6	111.2	24.4	68.8	60.1	11.6	36.4
60-64	197.7	49.3	128.9	160.0	34.4	101.7	90.0	13.9	54.7
65-69	260.1	70.7	167.3	201.6	52.6	128.6	89.3	25.5	58.0
70-74	397.7	108.2	251.6	317.5	78.8	197.0	150.8	34.6	92.2
75-79	492.6	119.9	288.8	409.6	86.6	233.0	196.8	35.5	108.6
80-84	693.4	159.5	374.9	593.7	123.4	313.1	248.2	47.7	128.6
85 & over	909.1	330.1	516.6	789.3	247.5	422.1	272.7	70.7	135.8
Total	**112.3**	**49.5**	**79.8**	**85.3**	**35.1**	**59.3**	**41.8**	**16.2**	**28.6**

** Pulmonary TB with or without extrapulmonary TB
* Either smear or culture positive

APPENDIX 5

TB Notification Rate by Age & Sex 1994, 2003 & 2004





Appendix 6

Notifications of Tuberculosis by Type by Age & Sex 2004

Age Group	Pulmonary only #			Miliary			Meninges & CNS			Bones & Joints			Others		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Under 1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
1	1	-	1	-	-	-	-	-	-	-	-	-	-	1	1
2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
3	1	1	2	-	-	-	-	-	-	-	1	1	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5-9	3	2	5	-	-	-	-	-	-	-	-	-	1	2	3
10-14	6	9	15	-	1	1	-	-	-	1	-	1	3	5	8
15-19	75	84	159	-	-	-	-	1	1	-	-	-	4	16	20
20-24	141	136	277	1	5	6	1	1	2	-	1	1	18	49	67
25-29	152	162	314	4	4	8	-	1	1	1	1	2	24	54	78
30-34	139	149	288	4	-	4	3	3	6	1	2	3	26	61	87
35-39	153	127	280	1	-	1	3	1	4	-	4	4	24	62	86
40-44	215	103	318	2	4	6	2	5	7	3	2	5	26	42	68
45-49	292	108	400	2	-	2	3	2	5	1	4	5	38	30	68
50-54	303	88	391	3	2	5	1	-	1	2	4	6	42	35	77
55-59	240	54	294	-	3	3	1	1	2	7	1	8	25	39	64
60-64	238	48	286	5	3	8	1	-	1	1	1	2	14	17	31
65-69	313	85	398	3	-	3	1	-	1	-	3	3	27	24	51
70-74	433	120	553	6	2	8	2	1	3	3	2	5	25	23	48
75-79	359	102	461	2	2	4	1	-	1	2	9	11	20	23	43
80-84	277	93	370	2	2	4	2	1	3	3	4	7	16	13	29
85 & over	216	156	372	1	5	6	-	1	1	2	4	6	13	20	33
Total	3557	1627	5184	36	33	69 (a)	21	18	39 (b)	27	43	70 (c)	347	517	864 (d)*

* Including

TB lymph node	413
TB urogenital system	53
TB peritonitis	22
TB pleural effusion	136
TB laryngitis	4
TB skin	47
Others	138
Unspecified	51

(a) All miliary TB cases has coexisting pulmonary TB; also include 14 cases with coexisting TB of other extrapulmonary sites (among which 1 is meninges and 3 are bones & joints).

(b) Including 13 cases wih coexisting pulmonary TB; also include 5 cases with coexisting TB of other extrapulmonary sites (among which 1 is bones & joints).

(c) Including 12 cases with coexisting Pulmonary TB and 4 cases with coexisting TB of other extrapulmonary sites.

(d) Including 211 cases with coexisting Pulmonary TB.

\# Pulmonary TB only, without extrapulmonary site involvement

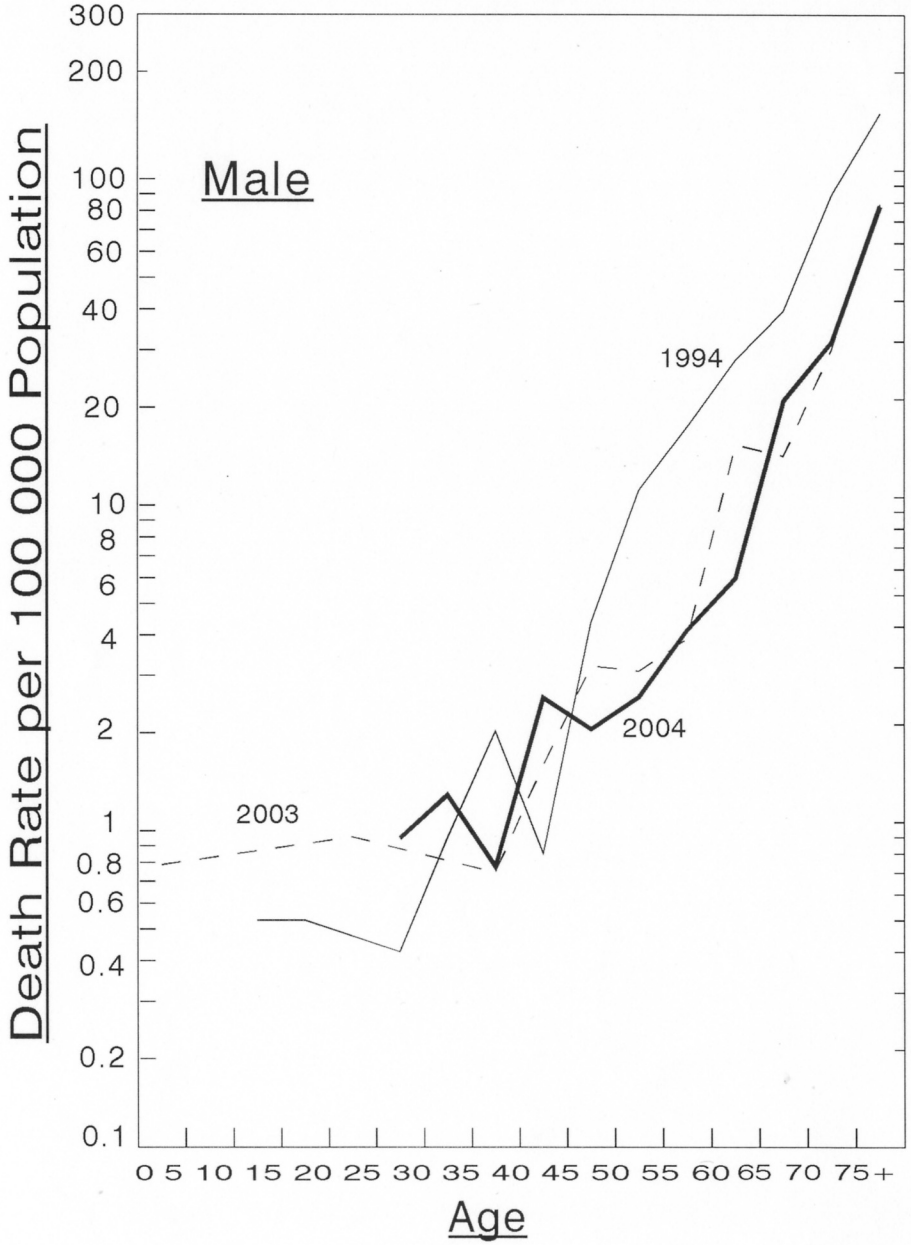
APPENDIX 7

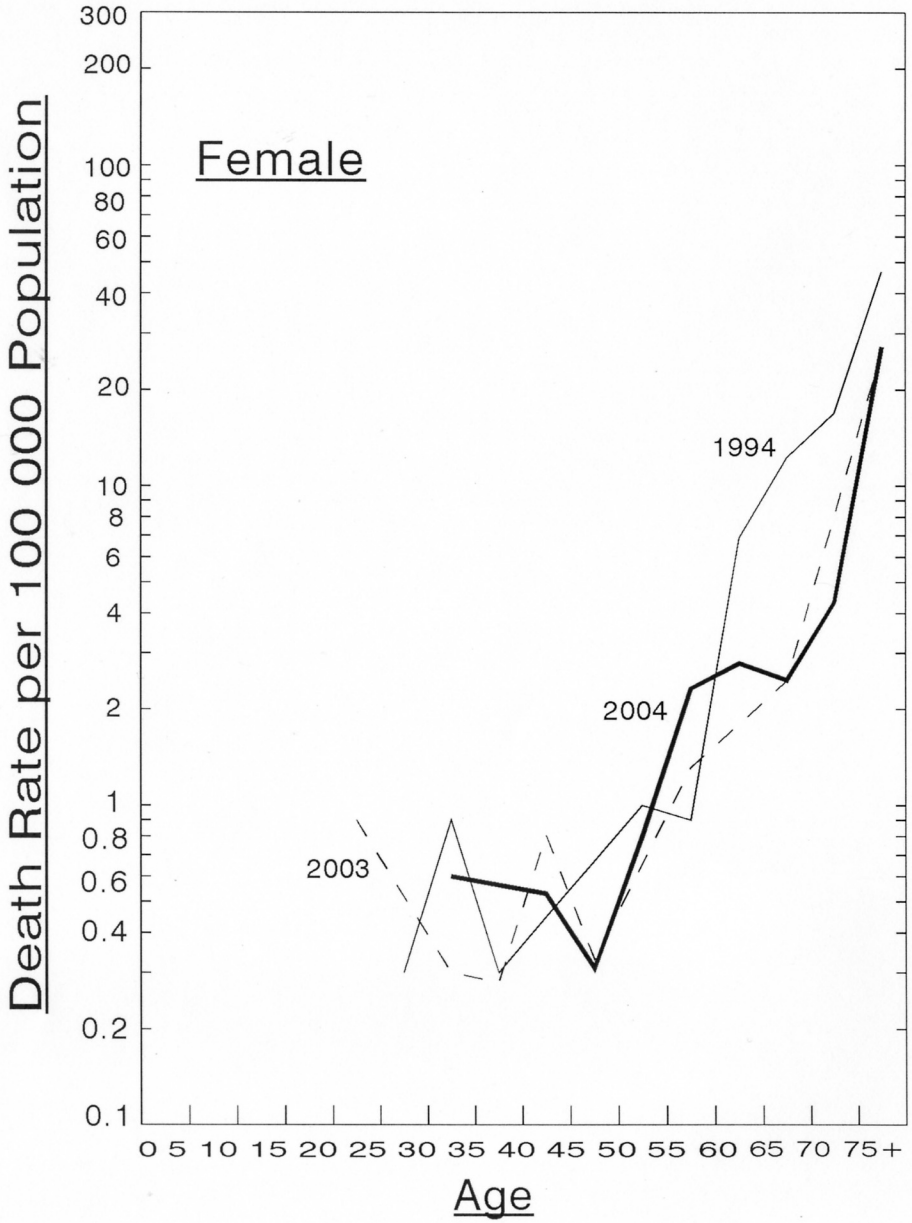
TB Death (All Forms) & Death Rate by Age & Sex 2004

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	2	0	2	0.89	0.00	0.42
30-34	3	2	5	1.21	0.60	0.86
35-39	2	0	2	0.73	0.00	0.32
40-44	8	2	10	2.41	0.53	1.40
45-49	6	1	7	1.93	0.31	1.10
50-54	6	2	8	2.42	0.80	1.61
55-59	7	4	11	3.89	2.32	3.13
60-64	7	3	10	5.63	2.79	4.31
65-69	25	3	28	19.76	2.47	11.29
70-74	34	5	39	29.98	4.33	17.04
75-79	28	9	37	37.48	9.99	22.45
80-84	42	17	59	102.19	27.96	57.90
85 & over	39	29	68	161.16	56.97	90.55
Total	**209**	**77**	**286**	**6.30**	**2.16**	**4.16**

APPENDIX 8

TB Mortality Rate by Age & Sex 1994, 2003 & 2004





Appendix 9

TB Deaths by Type by Age & Sex 2004

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	1	-	1	1	-	1	-	-	-	-	-	-	-	-	-
30-34	1	2	3	1	-	1	1	-	1	-	-	-	-	-	-
35-39	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
40-44	5	1	6	1	-	1	-	1	1	-	-	-	2	-	2
45-49	5	-	5	1	-	1	-	-	-	-	-	-	-	1	1
50-54	5	1	6	-	1	1	1	-	1	-	-	-	-	-	-
55-59	6	3	9	1	-	1	-	-	-	-	1	1	-	-	-
60-64	7	-	7	-	-	-	-	-	-	-	-	-	-	3	3
65-69	18	3	21	3	-	3	2	-	2	-	-	-	2	-	2
70-74	28	2	30	-	-	-	2	2	4	-	-	-	4	1	5
75-79	22	4	26	-	-	-	-	-	-	-	1	1	6	4	10
80-84	29	15	44	2	-	2	1	-	1	-	-	-	10	2	12
85 & over	32	24	56	-	2	2	-	1	1	1	-	1	6	2	8
Total	161	55	216	10	3	13	7	4	11	1	2	3	30	13	43 *

* Breakdown of Deaths from other forms of TB:-	Number
Intestines, peritoneum & mesenteric glands	6
Tuberculous peripheral lymphadenopathy	1
Tuberculosis of other organ	1
Late effects of Tuberculosis	35
Total	43

Pulmonary TB only, without extrapulmonary site involvement.

APPENDIX 10

Tuberculosis Mortality
1950 - 2004

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

APPENDIX 11

Top Ten Causes of Death 2004

Rank	Causes of Death	Detailed List No.	2004		
		ICD 10th Revision	Male	Female	Total
	All Causes		21 023	16 293	37 321 (5)
1	Malignant neoplasms	C00-C97	7 183	4 608	11 791
2	Diseases of heart	I00-I09, I11 I13, I20-I51	3 015	2 851	5 866
3	Cerebrovascular diseases	I60-I69	1 730	1 686	3 416
4	Pneumonia	J12-J18	1 905	1 771	3 676
5	Chronic lower respiratory diseases *	J40-J47	1 516	607	2 123
6	External causes of morbidity and mortality #	V01-Y89	1 505	735	2 240
7	Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27	542	640	1182
8	Diabetes mellitus	E10-E14	311	417	728
9	Septicaemia	A40-A41	294	321	615
10	Aortic aneurysm and dissection	I71	241	144	385
	Tuberculosis (including late effects of tuberculosis)		209	77	286
	All other causes	Residues of all causes	2 572	2 436	5 013 (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
1994 - 2004

Origin	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
East Kowloon Chest Clinic	280	158	190	175	225	118	192	173	144	123	121
Kowloon Chest Clinic	823	788	742	667	529	608	477	413	420	432	330
Sai Ying Pun Chest Clinic (a)	271	261	254	180	216	198	196	194	142	133	148
Shaukiwan Chest Clinic	176	189	195	181	199	158	169	158	148	122	138
Shaukiwan Pneumoconiosis			31	31	50	29	25	23	27	12	29
Shek Kip Mei Chest Clinic	272	256	243	302	282	266	232	208	180	162	157
South Kwai Chung Chest Clinic	552	554	581	547	531	439	342	339	279	300	261
Wanchai Chest Clinic	603	593	590	502	461	365	375	384	279	264	223
Yaumatei Chest Clinic	349	181	325	280	389	344	339	373	271	233	203
Yan Oi Chest Clinic	303	363	170	428	419	440	425	396	355	320	290
Yung Fung Shee Chest Clinic	296	301	300	240	285	331	222	213	218	197	178
NT Chest Clinic (b)	706	650	630	561							
Tung Chung Chest Clinic					6	13	26	24	35	22	16
Yuen Chau Kok Chest Clinic					420	395	308	288	223	226	181
Sheung Shui Chest Clinic					102	97	103	81	96	59	54
Tai Po Chest Clinic					98	92	88	84	96	111	112
Yuen Long Chest Clinic					94	94	111	96	103	75	80
Castle Peak Hospital (Chest Clinic)											5
Cheung Chau Chest Clinic										2	2
Sai Kung Chest Clinic					13	8	4	4	11	7	7
Sub-total	4631	4294	4251	4094	4319	3995	3634	3451	3027	2800	2535
Kowloon Hospital	274	322	335	384	339	426	443	322	237	220	205
Wong Tai Sin Hospital	418	372	330	442	458	431	352	330	263	166	189
Ruttonjee Hospital	290	229	235	333	275	324	326	305	236	223	263
Grantham Hospital	208	338	285	360	316	296	358	259	249	252	257
Haven of Hope Hospital	80	88	97	72	117	105	141	116	147	119	137
Other Govt. Institutions (c)	18	16	3	5	7	42	43	113	107	84	87
Other H.A. Hospitals	327	277	287	740	1244	1682	2081	2176	2133	1937	2301
Private Practitioners	53	253	589	413	343	157	121	125	130	159	136
Private Hospitals	20	23	89	229	255	54	79	65	73	64	116
Total	6319	6212	6501	7072	7673	7512	7578	7262	6602	6024	6226
% of cases from Chest Clinics among the total	73.3	69.1	65.4	57.9	56.3	53.2	48.0	47.5	45.8	46.5	40.7
% from Chest Hospitals (d)	20.1	21.7	19.7	22.5	19.6	21.1	21.4	18.3	17.1	16.3	16.9
% from Other Public Hospitals	5.5	4.7	4.5	10.5	16.3	22.9	28.0	31.5	33.9	33.5	38.4
% from Private Sector	1.2	4.4	10.4	9.1	7.8	2.8	2.6	2.6	3.1	3.7	4.0

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" 2004

Name of Hospital	No. of TB Notification
Alice Ho Miu Ling Nethersole Hospital	88
Caritas Medical Centre	134
Duchess of Kent Children's Hospital	1
Fung Yiu King Hospital	5
Hong Kong Buddhist Hospital	5
Kwong Wah Hospital	162
North District Hospital	163
Our Lady of Maryknoll Hospital	16
Pamela Youde Nethersole Eastern Hospital	152
Pok Oi Hospital	5
Prince of Wales Hospital	198
Princess Margaret Hospital	199
Queen Elizabeth Hospital	259
Queen Mary Hospital	106
Shatin Hospital	12
Tai Po Hospital	19
Tsan Yuk Hospital	1
Tseung Kwan O Hospital	98
Tuen Mun Hospital	270
Tung Wah Eastern Hospital	10
Tung Wah Hospital	6
Wong chuk Hang Hospital	1
United Christian Hospital	278
Yan Chai Hospital	112
Other	1
Total	**2301**

Appendix 13

Tuberculosis Notifications & Notification Rates

by District Council District 2004

District Council District	Notification	Notification Rate (per 100,000 pop.)
Hong Kong Island	1145	90.8
Central & Western	228	95.0
Wanchai	198	132.1
Eastern	460	77.7
Southern	259	92.7
Kowloon	2349	115.1
Kowloon City	342	93.5
Kwun Tong	750	130.8
Sham Shui Po	458	125.7
Wong Tai Sin	417	94.5
Yau Tsim Mong	382	128.9
NT (East)	1238	70.4
Islands	84	68.1
Northern	279	94.1
Sai Kung/Tseung Kwan O	232	56.8
Shatin	427	68.1
Tai Po	216	71.3
NT (West)	1479	81.4
Kwai Tsing	476	94.4
Tsuen Wan	187	68.2
Tuen Mun	405	81.0
Yuen Long	411	76.3
Marine	0	
Unknown	5	
Others	10	
Total	**6226**	**90.5**

APPENDIX 14

Establishment & Strength of TB & Chest Service

As at 31.12.2004

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
Senior Nursing Officer	1	0
Nursing Officer	14	15
Registered Nurse	59	74
Enrolled Nurse	92	82
Senior Dispenser	9	9
Dispenser	1	0
Executive Officer I	1	1
Statistical Officer II	2	3
Personal Secretary I	1	1
Clerical Officer	16	14
Assistant Clerical Officer	20	16
Clerical Assistant	55	61
Office Assistant	11	12
Workman II	48	62
Property Attendant	2	0
Senior Radiographer	3	2
Radiographer I	7	5
Radiographer II	14	22
Senior Radiographic Technician	1	1
Radiographic Technician	5	5
Darkroom Technician	11	13

APPENDIX 15

Total Attendances at Chest Clinics

1994 - 2004

Clinic/Hospital	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
East Kowloon Chest Clinic	64845	54430	54921	58862	65220	56317	64102	64820	60729	56132	58535
Kowloon Chest Clinic	83223	95667	104572	120663	117678	112291	119624	106321	98403	97223	86502
Sai Ying Pun Chest Clinic	47995	48537	55967	50875	56233	58380	57916	53854	51808	45437	46974
Shaukiwan Chest Clinic	43128	48215	55737	54639	54732	52446	53011	57215	57968	47541	50828
Shaukiwan Pneumoconiosis	-	9944	9664	9185	10821	12182	11023	10889	9120	8008	8098
Shek Kip Mei Chest Clinic	65676	56871	63462	72274	75610	68971	70941	71134	65572	60461	60382
South Kwai Chung Chest Clinic	91095	94000	101041	111683	113185	108654	99012	90448	85221	78998	75487
Tai Po Chest Clinic (Full Time)	-	-	-	-	-	-	-	-	7866	33518	30879
Tung Chung (Full Time)	-	-	-	101	3730	4687	4601	6241	6129	6807	1928
Wanchai Chest Clinic	85106	79964	89391	92697	91331	85109	84960	79212	70500	62322	60406
Yan Oi Chest Clinic	59698	64091	70741	69581	70979	78840	79188	72982	66905	66084	70168
Yaumatei Chest Clinic	83555	79224	80341	89759	103198	108226	111959	114499	95700	71378	70294
Yuen Chau Kok Chest Clinic	51089	54642	55615	61160	76626	71273	66192	65190	64748	60339	56322
Yung Fung Shee Chest Clinic	55740	56908	58139	58841	66567	74735	73255	73663	77078	77516	71269
Castle Peak Hospital	2442	1932	1773	1169	1283	1151	868	1010	416	372	373
Cheung Chau Chest Clinic	1781	2414	2490	2808	2943	2706	2611	1640	2404	1944	2032
Sai Kung Chest Clinic	1446	1412	1451	1444	1682	1905	2141	1945	2119	2372	2495
Sheung Shui Chest Clinic	7644	7710	10151	15330	18756	21256	22383	24271	24273	22933	23211
Tai Po Chest Clinic (Part Time)	9620	8083	8773	15760	20350	20758	24688	25636	17761	-	-
Tung Chung (Part Time)	-	-	-	-	-	-	-	-	-	-	2802
Yuen Long Chest Clinic	8963	9822	11687	18742	21677	24075	27603	27208	29393	28702	31054
Hei Ling Chau ATC	1232	1550	3187	2600	2664	1855	3726	2474	2302	2352	1670
Lai Chi Kok Reception Centre	-	-	-	-	-	-	-	-	-	-	723
Pik Uk Prison	1	87	-	-	-	-	-	-	-	-	-
Shek Pik Prison Hospital	594	1239	943	725	173	266	241	291	277	203	211
Stanley Prison Hospital	9991	5925	7751	6053	7380	9062	10468	10532	11977	8829	7459
Total	**774864**	**782667**	**847797**	**914951**	**982818**	**975145**	**990513**	**961475**	**908669**	**839471**	**820102**

Appendix 16

No. of Doctor Sessions, Cases Seen by Doctor and Patient/ Doctor Session 2004

Clinic/Hospital	Doctor Sessions	Cases Seen by Doctor	Patient/Doctor Session
Full Time Clinics			
East Kowloon	670	17145	26
Kowloon	1172	34812	30
Sai Ying Pun	628	15835	25
Shaukeiwan	545	14300	26
Pneumoconiosis	558	9395	17
Shek Kip Mei	720	18785	26
South Kwai Chung	1044	27119	26
Wanchai	1242	22204	18
Tai Po	554	11702	21
Tung Chung (Jan-May)	221	867	4
Yan Oi	891	24166	27
Yaumatei	1073	20972	20
Yuen Chau Kok	881	17680	20
Yung Fung Shee	545	17673	32
Sub-total	**10744**	**252655**	**24**
Part Time Clinics			
Castle Peak	25	373	15
Cheung Chau	25	502	20
Sai Kung	51	925	18
Sheung Shui	296	7287	25
Tung Chung (Jun-Dec)	89	1200	13
Yuen Long	391	8919	23
Sub-total	**877**	**19206**	**22**
Institutions Correctional Ser Dept			
Hei Ling Chau	12	423	35
Lai Chi Kok Reception Center	30	340	11
Shek Pik	18	34	2
Stanley Prison	20	581	29
Sub-total	**80**	**1378**	**17**
Total	**11701**	**273239**	**23**

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

APPENDIX 17

Flow Chart of Patients Attending Chest Clinics 2004

Total patients attending during 2004
102,209

- Total New Patients
  26,909
  - NSD
    7,019
    (Incl. 1,190 NSD cases on first attendances)
  - Unknown & Incomplete
    873
  - Disease other than TB
    12,122
  - Non-resp TB
    555

(a) Meninges	23
(b) Miliary	30
(c) Bones & joints	43
(d) Others	459

  - Resp TB
    6,340
    - Active
      3,631
    - Other
      (Not active + Unknown)
      2,709

Bacteriology	Extent	Number
Negative	1	850
	2	152
	3	31
Positive	1	1215
	2	791
	3	427
Incomplete	1	131
	2	28
	3	6

Bacteriology	Cavity	Number
Negative	Yes	91
	No	942
Positive	Yes	626
	No	1807
Incomplete	Yes	13
	No	152

Previous History of TB	Previous Treatment of TB	Number
No	No	3292
Yes	No	150
Yes	Yes	186
Unknow	Unknow	3

- Total Old Patients
  75,300
  - Resp TB #
    32,030
  - Others
    43,270

APPENDIX 18

Classification of Patients of First Attendance with New Case Card Completed By Clinics According to International Classification of Diseases Code 2004

Code	Classification	Total
010	Primary Tuberculosis Infection	7
011	Pulmonary Tuberculosis	3406
012	Other Respiratory Tuberculosis	218
013	Tuberculosis of Meninges	23
014	Tuberculosis of Intestines	31
015	Tuberculosis of Bones & Joints	43
016	Tuberculosis of Genito-urinary System	40
017	Tuberculosis of Other Organs	388
018	Miliary Tuberculosis	30
137	Late effects of Tuberculosis	2709
160-165	Malignant Neoplasm of Respiratory System	492
212	Benign Neoplasm of Respiratory System	2
460-466	Acute Respiratory Infection	1755
470-478	Other Diseases of Upper Resp Tract	123
480-486	Pneumonia	1177
487	Influenza	2
490-491	Bronchitis, (not specified as acute or chronic) & chronic brochitis	2574
492	Emphysema	95
493	Asthma	164
494	Bronchiectasis	313
495-496	Others	302
501	Asbestosis	0
502	Silicosis	7
505	Pneumoconiosis, unspecified	2
506-508	Others	2
510	Empyema	6
511	Pleurisy	106
512	Pneumothorax	36
513-519	Other Diseases of Respiratory System	444
786	Unknown	2566
V71	N.S.D.	3236
	Diseases Other than TB & Resp System	4520
Total		24819

Appendix 19 (a)

Extent of Active Resporary TB in First Attenders at Chest Clinics 2002-2004

Extent *	2002		2003		2004	
	No.	%	No.	%	No.	%
1. Minimal	2611	63.2	2318	63.6	2196	60.5
2. Moderate	1088	26.3	945	25.9	971	26.7
3. Extensive	435	10.5	383	10.5	464	12.8
Total	4134	100.0	3646	100.0	3631	100.0
No. of first attenders	34788		29085		26909	
% of active TB	11.9		12.5		13.5	

* 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 2004

	Number	%
Smear +	1354	37.3
Smear - Culture +	1101	30.3
Smear - Culture -	1008	27.8
Incomplete	168	4.6
Total	3631	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 2004

Age Group	Category	% resistance to				* % resistance to			MDR-TB	# Total % resistance	Total no. of cases analysed
		E	R	H	S	1 drug	2 drugs	≥ 3 drugs			
0 - 19	New cases	0.00	0.00	0.00	4.92	4.92	0.00	0.00	0.00	4.92	61
	Previously treated cases	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Overall	0.00	0.00	0.00	4.92	4.92	0.00	0.00	0.00	4.92	61
20 - 39	New cases	0.84	0.84	4.75	7.82	6.70	2.51	0.84	0.56	10.06	358
	Previously treated cases	5.56	16.67	22.22	16.67	16.67	22.22	0.00	11.11	38.89	18
	Overall	1.06	1.60	5.59	8.24	7.18	3.46	0.80	1.06	11.44	376
40 - 59	New cases	0.80	1.60	4.79	9.84	9.31	1.33	1.60	1.33	12.23	376
	Previously treated cases	5.26	5.26	12.28	10.53	7.02	3.51	5.26	5.26	15.79	57
	Overall	1.39	2.08	5.77	9.93	9.01	1.62	2.08	1.85	12.70	433
60 up	New cases	0.00	0.80	2.79	5.18	5.58	1.00	0.40	0.60	6.97	502
	Previously treated cases	2.11	3.16	10.53	13.68	9.47	4.21	3.16	3.16	16.84	95
	Overall	0.34	1.17	4.02	6.53	6.20	1.51	0.84	1.01	8.54	597
All	New cases	0.46	1.00	3.78	7.25	6.94	1.46	0.85	0.77	9.25	1297
	Previously treated cases	3.53	5.29	12.35	12.94	9.41	5.88	3.53	4.71	18.82	170
	Overall	0.82	1.50	4.77	7.91	7.23	1.98	1.16	1.23	10.36	1467

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 2004:

	New case		Previously treated cases		Combined	
	N	%	N	%	N	%
Total number of strains tested	1297	100	170	100	1467	100
Susceptible to all 4 drugs	1177	90.75	138	81.18	1315	89.64
Any resistance	120	9.25	32	18.82	152	10.36
H	49	3.78	21	12.35	70	4.77
R	13	1.00	9	5.29	22	1.50
E	6	0.46	6	3.53	12	0.82
S	94	7.25	22	12.94	116	7.91
Monoresistance	90	6.94	16	9.41	106	7.23
H	20	1.54	6	3.53	26	1.77
R	2	0.15	0	0.00	2	0.14
E	0	0.00	0	0.00	0	0.00
S	68	5.24	10	5.88	78	5.32
Multidrug resistance	10	0.77	8	4.71	18	1.23
H+R	2	0.15	2	1.18	4	0.27
H+R+E	1	0.08	1	0.59	2	0.14
H+R+S	6	0.46	1	0.59	7	0.48
H+R+E+S	1	0.08	4	2.35	5	0.34
Other patterns	20	1.54	8	4.71	28	1.91
H+E	1	0.08	0	0.00	1	0.07
H+S	16	1.23	7	4.12	23	1.57
H+E+S	2	0.15	0	0.00	2	0.14
R+E	0	0.00	1	0.59	1	0.07
R+S	0	0.00	0	0.00	0	0.00
R+E+S	1	0.08	0	0.00	1	0.07
E+S	0	0.00	0	0.00	0	0.00
Number of drugs resistant to:						
0 drug	1177	90.75	138	81.18	1315	89.64
1 drug	90	6.94	16	9.41	106	7.23
2 drugs	19	1.46	10	5.88	29	1.98
3 drugs	10	0.77	2	1.18	12	0.82
4 drugs	1	0.08	4	2.35	5	0.34

APPENDIX 19 (c1)

Rate of Drug-resistant Tuberculosis

Among cases (mainly cases seen at chest clinics) registered during the period January to December 2003

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	0.84	6.72	10.92	10.92	2.52	0.84	0.84	14.29	119
	Previously treated cases	4.35	6.52	13.04	8.70	13.04	2.17	4.35	6.52	19.57	46
	Overall	1.21	2.42	8.48	10.30	11.52	2.42	1.82	2.42	15.76	165
20 - 39	New cases	0.67	0.94	6.61	8.10	10.39	1.75	0.67	0.67	12.82	741
	Previously treated cases	8.57	14.29	14.29	14.29	8.57	0.00	11.43	11.43	20.00	35
	Overall	1.03	1.55	6.96	8.38	10.31	1.68	1.16	1.16	13.14	776
40 - 59	New cases	0.41	0.68	4.65	8.07	9.03	1.92	0.27	0.41	11.22	731
	Previously treated cases	1.18	2.35	5.88	5.88	7.06	2.35	1.18	1.18	10.59	85
	Overall	0.49	0.86	4.78	7.84	8.82	1.96	0.37	0.49	11.15	816
60 up	New cases	0.29	0.49	2.95	6.49	5.90	1.87	0.20	0.29	7.96	1017
	Previously treated cases	1.22	1.63	8.57	9.80	8.16	3.27	2.04	1.63	13.47	245
	Overall	0.48	0.71	4.04	7.13	6.34	2.14	0.55	0.55	9.03	1262
All	New cases	0.42	0.69	4.64	7.59	8.28	1.88	0.38	0.46	10.54	2609
	Previously treated cases	2.19	3.41	9.00	9.25	8.52	2.68	2.92	2.92	14.11	411
	Overall	0.66	1.06	5.23	7.81	8.31	1.99	0.73	0.79	11.03	3020

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 2003:

	New case		Previously treated cases		Combined	
	N	%	N	%	N	%
Total number of strains tested	2609	100	411	100	3020	100
Susceptible to all 4 drugs	2334	89.46	353	85.89	2687	88.97
Any resistance	275	10.54	58	14.11	333	11.03
H	121	4.64	37	9.00	158	5.23
R	18	0.69	14	3.41	32	1.06
E	11	0.42	9	2.19	20	0.66
S	198	7.59	38	9.25	236	7.81
Monoresistance	216	8.28	35	8.52	251	8.31
H	63	2.41	14	3.41	77	2.55
R	5	0.19	2	0.49	7	0.23
E	3	0.11	0	0.00	3	0.10
S	145	5.56	19	4.62	164	5.43
Multidrug resistance	12	0.46	12	2.92	24	0.79
H+R	3	0.11	1	0.24	4	0.13
H+R+E	1	0.04	2	0.49	3	0.10
H+R+S	4	0.15	4	0.97	8	0.26
H+R+E+S	4	0.15	5	1.22	9	0.30
Other patterns	47	1.80	11	2.68	58	1.92
H+E	2	0.08	1	0.24	3	0.10
H+S	43	1.65	9	2.19	52	1.72
H+E+S	1	0.04	1	0.24	2	0.07
R+E	0	0.00	0	0.00	0	0.00
R+S	1	0.04	0	0.00	1	0.03
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	2334	89.46	353	85.89	2687	88.97
1 drug	216	8.28	35	8.52	251	8.31
2 drugs	49	1.88	11	2.68	60	1.99
3 drugs	6	0.23	7	1.70	13	0.43
4 drugs	4	0.15	5	1.22	9	0.30

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 2003. 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%)

Appendix 19 (e)

Trend of anti-TB drug resistance (1998-2004) (Data from Programme Forms)

New cases

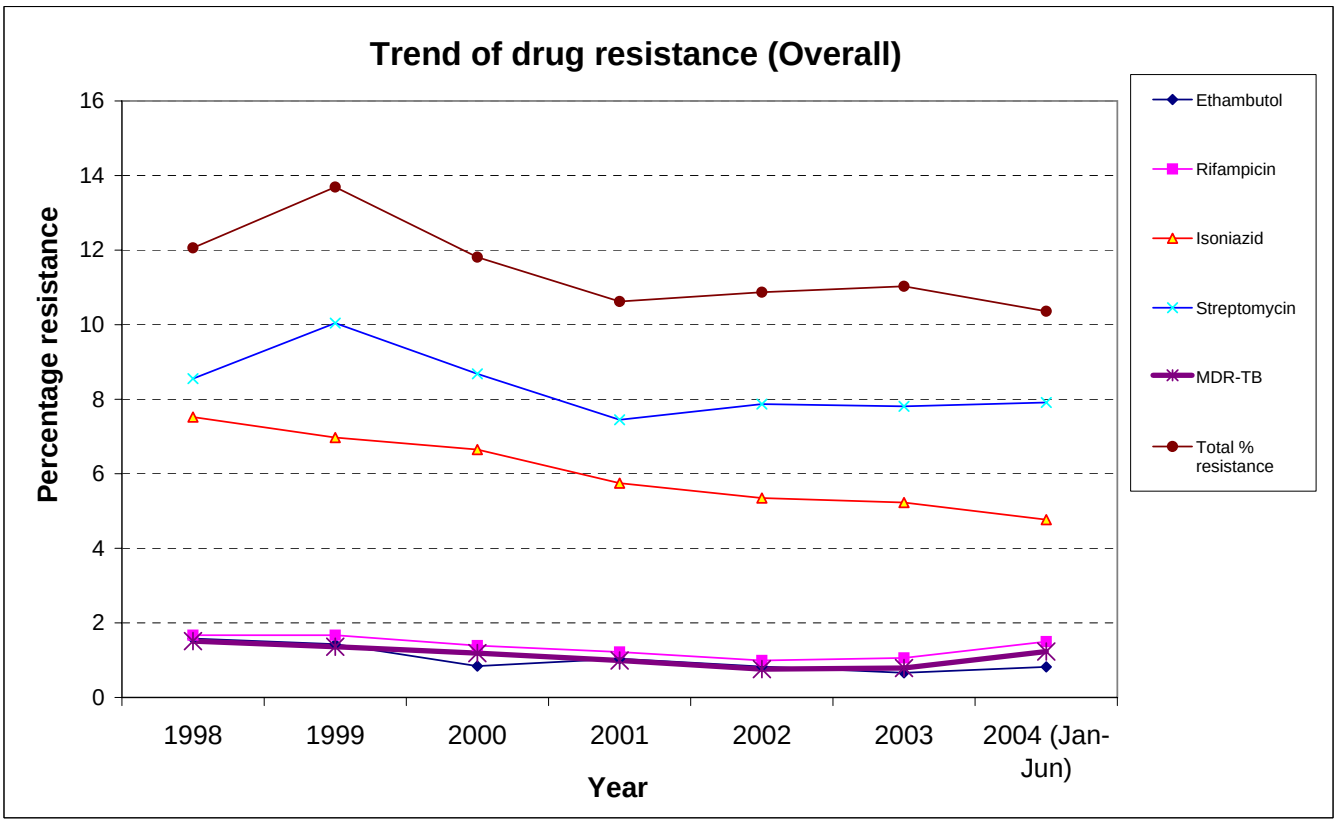
(Percentages)	1998	1999	2000	2001	2002	2003	2004 (Jan-Jun)
Ethambutol	1.24	1.11	0.54	0.96	0.65	0.42	0.46
Rifampicin	1.17	0.97	0.61	0.83	0.46	0.69	1.00
Isoniazid	6.78	6.22	5.21	5.02	4.71	4.64	3.78
Streptomycin	7.65	9.34	7.78	7.39	7.40	7.59	7.25
MDR-TB	1.06	0.75	0.47	0.55	0.34	0.46	0.77
Total % resistanc	10.89	12.61	10.35	10.39	10.22	10.54	9.25

Previously treated cases

(Percentages)	1998	1999	2000	2001	2002	2003	2004 (Jan-Jun)
Ethambutol	3.51	3.16	2.68	1.85	2.04	2.19	3.53
Rifampicin	4.61	6.09	5.98	3.71	4.59	3.41	5.29
Isoniazid	11.84	11.51	15.26	11.80	9.69	9.00	12.35
Streptomycin	13.82	14.45	13.81	10.96	10.97	9.25	12.94
MDR-TB	4.17	5.19	5.36	3.54	3.57	2.92	4.71
Total % resistanc	18.86	20.32	20.41	16.36	16.58	14.11	18.82

Overall

(Percentages)	1998	1999	2000	2001	2002	2003	2004 (Jan-Jun)
Ethambutol	1.58	1.43	0.84	1.04	0.83	0.66	0.82
Rifampicin	1.67	1.67	1.39	1.22	0.99	1.06	1.50
Isoniazid	7.52	6.97	6.65	5.75	5.35	5.23	4.77
Streptomycin	8.55	10.04	8.68	7.45	7.87	7.81	7.91
MDR-TB	1.51	1.36	1.19	0.99	0.76	0.79	1.23
Total % resistanc	12.06	13.69	11.81	10.62	10.87	11.03	10.36



Appendix 20 (a)
Treatment Return 2004

Service Regimen																										
Name of Clinic/Hospital	No. put on Rx b/f	Bought in					Treatment completed				Transfer out to hosp.	other cc	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	%					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	181	99	6	11	183	161	7	81	174	87.3	76	56	0	10	1	6	0	6	0	3	11	4.8	210	14	70	22
Kowloon	140	323	39	14	148	99	29	109	284	91.4	68	171	0	14	1	11	0	3	3	2	3	1.9	65	0	115	15
South Kwai Chung	291	261	29	20	227	131	10	143	262	86.2	114	22	0	26	2	10	0	10	0	1	16	3.6	343	0	110	0
Sai Ying Pun	175	128	7	13	129	122	2	59	204	93.9	120	17	0	8	0	5	0	1	0	0	3	1.1	155	0	75	1
Shaukeiwan	175	131	3	10	134	105	3	72	176	92.5	56	34	2	6	0	4	1	5	1	0	4	1.9	194	0	60	4
Shek Kip Mei	138	138	5	12	132	73	13	68	159	86.0	50	24	0	15	0	2	4	9	6	2	3	4.2	143	0	42	10
Tai Po	128	124	3	5	80	39	1	74	105	93.7	18	8	0	4	0	3	1	3	1	0	1	1.0	160	0	26	0
Wanchai	201	178	6	12	150	133	9	108	177	85.1	111	29	0	2	1	20	1	5	1	2	19	6.6	195	1	78	7
Yan Oi	255	276	8	12	206	140	26	129	230	88.2	116	31	0	27	0	3	0	6	0	4	8	2.9	317	10	87	48
Yaumatei	212	199	15	21	151	162	28	133	181	86.5	88	22	0	11	2	6	3	11	2	16	1	5.2	256	0	47	7
Yuen Chau Kok	223	196	8	8	134	50	13	104	178	91.3	55	26	0	10	1	9	3	4	0	1	2	1.0	213	27	42	0
Yung Fung Shee	253	198	16	15	230	101	12	143	203	93.0	63	78	0	11	1	5	0	3	0	0	6	1.6	288	0	116	0
Sub-total	2372	2251	145	153	1904	1316	153	1223	2333	89.3	935	518	2	144	9	84	13	66	14	31	77	3.1	2539	52	868	114
Hosp Discharge Clinic																										
East Kowloon	2	0	0	0	1	2	0	1	1	66.7	1	0	0	0	0	0	0	0	1	0	0	33.3	1	0	0	0
Part Time Clinics																										
Castle Peak	7	8	0	0	2	0	1	4	3	100.0	1	0	0	0	0	0	0	0	0	0	0	0.0	8	0	0	0
Cheung Chau	3	2	0	0	1	7	0	3	3	100.0	2	1	0	0	0	0	0	0	0	0	0	0.0	4	0	0	0
Sai Kung	12	4	0	1	7	9	1	7	7	93.3	0	3	0	0	0	1	0	0	0	0	0	0.0	14	0	1	0
Sheung Shui	125	60	1	6	57	36	5	23	84	75.4	26	13	2	13	0	1	1	0	0	4	17	14.8	96	1	54	1
Tung Chung	22	15	1	2	9	15	2	7	18	89.3	7	1	0	0	0	1	0	1	0	0	1	3.6	26	0	1	0
Yuen Long	105	73	2	4	65	45	4	27	81	85.0	24	10	1	4	0	1	0	3	0	2	9	8.7	128	0	101	3
Sub-total	274	162	4	13	141	112	13	71	196	82.2	60	28	3	17	0	4	1	4	0	6	27	10.2	276	1	157	4
Institutions Correctional Services Dept																										
Hei Ling Chau	14	18	5	0	2	1	1	0	1	9.1	9	11	1	0	2	7	0	1	0	0	0	0.0	7	0	0	0
Stanley Prison	28	18	0	0	0	0	4	22	0	100.0	0	0	1	0	0	0	0	0	0	0	0	0.0	19	0	0	0
Shek Pik Prison	9	1	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	1	0	0	0	0.0	9	0	0	0
Sub-total	51	37	5	0	2	1	5	22	1	67.6	9	11	2	0	2	7	0	2	0	0	0	0.0	35	0	0	0
Total	2699	2450	154	166	2048	1431	171	1317	2531	88.6	1005	557	7	161	11	95	14	72	15	37	104	3.6	2851	53	1025	118

Appendix 20 (b)
Treatment Return 2004

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	40	1	2	5	49	20	1	6	34	90.9	13	14	0	3	0	0	0	0	0	0	1	2.3	45	9	27	1
Kowloon	184	21	10	2	34	24	4	5	44	83.1	18	16	0	3	0	2	0	3	0	0	2	3.4	178	0	28	1
South Kwai Chung	48	3	8	4	24	9	3	2	19	80.8	11	0	0	4	0	0	0	0	0	0	1	3.8	56	1	15	0
Sai Ying Pun	34	9	0	0	29	4	0	1	7	88.9	8	0	0	1	0	0	0	0	0	0	0	0.0	59	0	23	0
Shaukeiwan	25	8	1	3	28	25	0	2	23	78.1	17	4	0	4	0	0	0	2	0	0	1	3.1	37	0	16	2
Shek Kip Mei	70	7	4	5	38	15	1	3	27	81.1	14	4	0	6	0	0	2	1	0	0	0	0.0	81	2	27	0
Tai Po	12	6	1	0	17	7	3	1	7	66.7	6	1	0	3	0	0	0	1	0	0	0	0.0	21	0	7	0
Wanchai	16	5	4	6	12	9	3	2	14	94.1	12	2	0	1	0	0	0	0	0	0	0	0.0	18	0	12	0
Yan Oi	45	8	0	3	19	9	3	1	6	63.6	5	2	0	4	0	0	0	0	0	0	0	0.0	63	0	0	0
Yaumatei	15	6	0	4	14	8	7	3	13	84.2	6	0	0	0	0	1	0	1	0	1	0	5.3	15	0	6	0
Yuen Chau Kok	32	16	7	11	28	6	4	6	25	81.6	10	6	1	5	0	0	0	1	1	0	0	2.6	41	5	17	0
Yung Fung Shee	23	5	1	2	16	12	0	2	13	88.2	13	5	0	2	0	0	0	0	0	0	0	0.0	24	0	3	0
Sub-total	544	95	38	45	308	148	29	34	232	82.9	133	54	1	36	0	3	2	9	1	1	5	2.2	638	17	181	4
Hosp Discharge Clinic																										
East Kowloon	0	0	0	0	1	0	0	0	0	0.0	0	0	0	0	0	0	0	0	1	0	0	0.0	0	0	0	0
Part Time Clinics																										
Castle Peak	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Cheung Chau	0	1	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	1	0	0	0
Sai Kung	0	0	0	0	0	1	0	0	1	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Sheung Shui	7	0	2	1	3	2	0	0	4	100.0	0	1	0	0	0	0	0	0	0	0	0	0.0	10	0	5	0
Tung Chung	1	0	0	1	0	0	0	0	1	100.0	1	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
Yuen Long	2	3	1	0	5	4	0	0	1	25.0	4	1	0	0	0	1	0	0	0	0	0	0.0	6	0	6	0
Sub-total	10	4	3	2	8	7	0	0	7	87.5	5	2	0	0	0	1	0	0	0	0	0	0.0	19	0	11	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	554	99	41	47	317	155	29	34	239	84.6	138	56	1	36	0	4	2	9	2	1	5	2.4	657	17	192	4

APPENDIX 20 (c)

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

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

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

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

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

* Explanatory Notes :

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

APPENDIX 20 (d)

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

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

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

Number put on treatment b/f:

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

Brought in:

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

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

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

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

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

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

Treatment completed:

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

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

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

(J) % = (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:

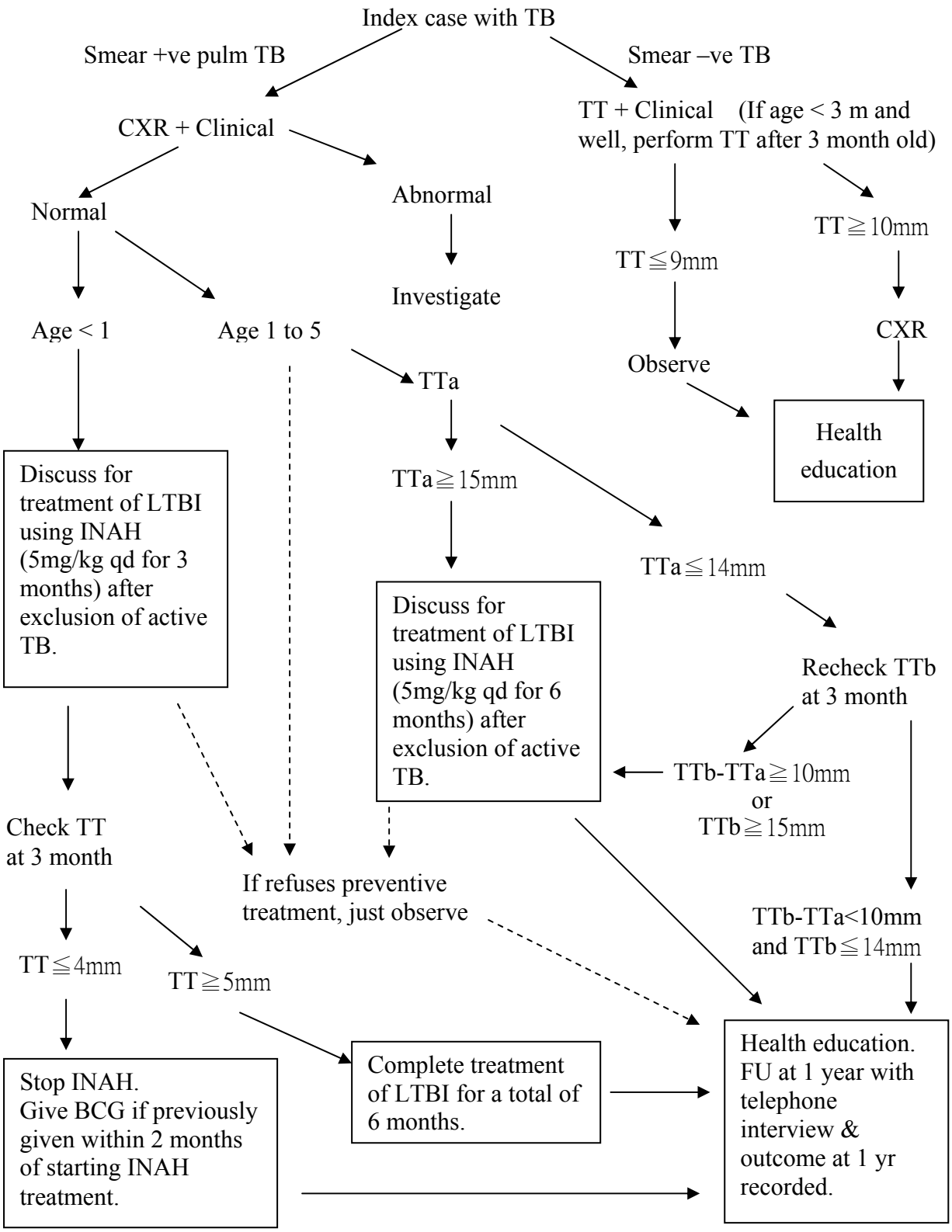
(Z) - Number of defaulters who have defaulted treatment for more than 2 months but less than 3 months, but not yet NFA in conference with MO. (NB: No cases who have been counted under this item in the last month will be counted again under this item for the subsequent months.)

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

No. of patients (new & old) listed	1666	4116	5782

APPENDIX 22 (b)

Household Contacts below 5 (with history of previous BCG vaccination)



Note: Tuberculin test (TT) is done by intradermal method using 2 TU (in 0.1 ml) of PPD-RT23. In general, the criteria for a positive TT is a reaction at 48-72 hour with diameter of induration at 10 mm or above. However, special criteria for TT is being used in the above flow chart for the special groups under consideration. [5 TU of PPD-S, which is widely used in the United States, is equivalent to 2 TU of PPD-RT23.]

APPENDIX 23

BCG Vaccinations at Birth 2004

Institution		No. of Live-births	BCG Vaccination	% Vaccinated
Hospital under HA management	P.Y. Nethersole East	3731	3702	99.2
	Queen Mary	3476	3447	99.2
Private Hospital	Canossa	642	623	97.0
	H.K. Adventist	701	682	97.3
	H.K. Sanatorium	732	728	99.5
	Matilda International	856	782	91.4
	St. Paul's	1368	1346	98.4
Total (HK Island)		11506	11310	98.3
Hospital under HA management	Kwong Wah	5230	5183	99.1
	Queen Elizabeth	5169	5142	99.5
	United Christian	4588	4568	99.6 *
Private Hospital	H.K. Baptist	2397	2371	98.9
	St. Teresa's	3308	3260	98.5
Total (Kowloon)		20692	20524	99.2
Hospital under HA management	Alice H.M.L. Nethersole			-
	Prince of Wales	5550	5523	99.5 *
	Princess Margaret	4220	4199	99.5 *
	Tuen Mun	5701	5564	97.6
Private Hospital	T.W. Adventist	756	750	99.2
	Shatin Int'l Medical Ctr Union	1390	1367	98.3
Total (NT Areas)		17617	17403	98.8 *
Mother & Child Health Centre		-	111	-
Grand Total		49815	49348	99.1

Note: * Including vaccinations of live births transferred from other maternity institutions and vaccinations of live births at end of 2005

Vaccination Method 2006	Percentage
Intradermal	100.0
Percutaneous	0.0

(Revised Mar 2008)

APPENDIX 24

Tuberculin Tests and BCG Vaccination of School Children
1962 - 2000

Year	Number (a) Eligible	% Agree for TT	Number TT Tested	Number TT Negative (TT<=9mm)	Number Given BCG	% of TT Tested Given BCG
1962			49567		22903	46.2
1963			34793		10706	30.8
1964			38871		9764	25.1
1965			76407		10845	14.2
1966			77447		10911	14.1
1967	224666	56.1	125975	25794	25766	20.5
1968	208029	68.2	141922	30328	30314	21.4
1969	126906	70.4	89306	16831	16821	18.8
1970	194298	65.7	127680	49655	49547	38.8
1971	213457	68.0	145205	50115	50020	34.4
1972	201537	61.7	124385	54340	54100	43.5
1973	120797	69.4	83882	29713	29554	35.2
1974	295287	60.7	179169	47591	47378	26.4
1975	136175	65.3	88987	38334	(b) 39120	44.0
1976	230861	63.7	147057	77085	76790	52.2
1977	137465	55.4	76143	43752	43502	57.1
1978	134218	66.9	89732	52504	54137	60.3
1979	133697	66.1	88375	49555	49355	55.8
1980	101215	66.8	67633	42419	43830	64.8
1981	111121	68.7	76342	47093	47089	61.7
1982	115042	71.9	82675	52654	52455	63.4
1983	121392	77.9	94578	65487	65627	69.4
1984	71950	85.3	61359	47086	47705	77.7
1985	90771	82.4	74802	56646	56625	75.7
1986	100116	82.0	82057	65251	64985	79.2
1987	84610	79.2	67038	53695	53419	79.7
1988	78806	89.2	70318	58796	59237	84.2
1989	68367	91.3	62390	50747	50794	81.4
1990	121280	86.0	104263	78244	78540	75.3
1991	120705	91.3	110193	75343	75107	68.2
1992	102580	91.2	93533	63550	(c) 63234	67.6
1993	100895	96.3	97189	69723	68598	70.6
1994	91593	94.8	86817	65075	66372	76.5
1995	94614	93.4	88378	65044	64005	72.4
1996	73265	92.3	67625	49619	49113	72.6
1997	61445	97.2	59746	49824	49336	82.6
1998	91523	95.4	87271	74199	74008	84.8
1999	106483	92.1	98069	80322	80103	81.7
2000 (d)	16542	99.0	16377	13603	13209	80.7
2001 onwards	Programme Stopped					

Note : (a) By "number eligible" is meant the total population in the specified age group which it was intended to test and/or vaccinate, i.e. the number of persons in each area who could have been tested and/or vaccinated during the period of reporting according to the prevailing policy, by the staff assigned to that area.
(b) Direct BCG was introduced in remote areas w.e.f. 27.10.1975 and number of BCG given includes direct BCG without TT.
(c) No direct BCG was given in 1992 and number of direct BCG given in previous years were not recorded separately.
(d) The BCG revaccination programme was stopped since September 2000.

Appendix 29 (b)

Cohort of TB patients in 2003 (smear positive cases) - treatment outcomes

		DOTS								non-DOTS	
		New pulmonary smear-positive		Relapse		Treat-after-Failure		Treat-after-Default		New pulmonary smear-positive	
Z	**Cases included in cohort**	**1,470**		**233**		**1**		**21**		**324**	
			%		%		%		%		%
A	**Cured**	**1,070**	72.8	**161**	69.1	**0**	0.0	**11**	52.4	**8**	2.5
B	**Completed**	**78**	5.3	**26**	11.2	**1**	100.0	**0**	0.0	**5**	1.5
C	**Died** (Note 1)	**69**	4.7	**9**	3.9	**0**	0.0	**3**	14.3	**19**	5.9
D	**Failed** (Note 2)	**139**	9.5	**25**	10.7	**0**	0.0	**3**	14.3	**0**	0.0
E	**Defaulted**	**53**	3.6	**3**	1.3	**0**	0.0	**4**	19.0	**0**	0.0
F	**Transferred out**	**61**	4.1	**9**	3.9	**0**	0.0	**0**	0.0	**292**	90.1
		1,470	100.0	233	100.0	1	100.0	21	100.0	324	100.0

For those under DOTS, the treatment success rate (as at 12 month) for (a) new pulmonary smear-positive cases is 78.1% (72.8+5.3%), (b) relapse cases is 80.3% (69.1+11.2%).

(Note 1) Among 69 “died”, 5 were related to TB, 45 not related to TB, and 19 unknown.
(Note 2) Among 139 “failed”, all of them were still on treatment at 12 month, with 133 sputum smear converted negative at 7 month, 1 sputum smear still positive at 7 m, and 5 unknown.

Appendix 29 (c)

Cohort of TB patients in 2003 (bacteriologically positive cases) - treatment outcomes

		DOTS								non-DOTS	
		New pulmonary bacteriologically-positive		Relapse		Treat-after-Failure		Treat-after-Default		New pulmonary bacteriologically-positive	
Z	**Cases included in cohort**	**2,729**		**407**		**4**		**27**		**695**	
			%		%		%		%		%
A	**Cured**	**1,966**	72.0	**272**	66.8	**2**	50.0	**14**	51.9	**23**	3.3
B	**Completed**	**201**	7.4	**47**	11.5	**1**	25.0	**0**	0.0	**15**	2.2
C	**Died** (Note 1)	**132**	4.8	**16**	3.9	**0**	0.0	**3**	11.1	**34**	4.9
D	**Failed** (Note 2)	**235**	8.6	**42**	10.3	**1**	25.0	**3**	11.1	**1**	0.1
E	**Defaulted**	**89**	3.3	**11**	2.7	**0**	0.0	**6**	22.2	**2**	0.3
F	**Transferred out**	**106**	3.9	**19**	4.7	**0**	0.0	**1**	3.7	**620**	89.2
		2,729	100.0	407	100.0	4	100.0	27	100.0	695	100.0

For those under DOTS, the treatment success rate (as at 12 month) for (a) new pulmonary bacteriologically-positive cases is 79.4% (72.0+7.4%), (b) relapse cases is 78.3% (66.8+11.5%).

(Note 1) Among 132 “died”, 8 were related to TB, 89 not related to TB, and 35 unknown.
(Note 2) Among 235 “failed”, all of them were still on treatment at 12 month, with 209 sputum bacteriology converted negative at 7 month, 2 sputum bacteriology still positive at 7 m, and 24 unknown.

Part 2 - Pneumoconiosis: Contents

Appendix No.	
1	New Cases of Suspected Pneumoconiosis attending the Pneumoconiosis Clinic in Hong Kong 1956-2004
2	Age Distribution of Pneumoconiosis Cases 2004
3	Occupation Distribution of Confirmed Pneumoconiosis 2004
4	Pneumoconiosis Patients by Duration of Exposure to Dust 2004
5	Pneumoconiosis Patients by Degree of Incapacity 2004
6	Confirmed Pneumoconiosis Patients Classified by Radiological Appearance 2004
7	Pneumoconiosis Patients with Tuberculosis 2004
8	Confirmed Pneumoconiosis Patients by Other Particulars 2004

APPENDIX 3

Occupation Distribution of Confirmed Pneumoconiosis 2004

Type of Occupation	Number of Cases	%
Construction Construction/Quarry Others	36 6 31	49 8 43
Total	73	100

APPENDIX 4

Pneumoconiosis Patients by Duration of Exposure to Dust 2004

Duration	Number of Cases	%
<5 years	-	-
5 - 9	3	4
10 - 14	5	7
15 - 19	13	18
20 - 24	18	25
25 - 29	14	19
30+	20	27
Unknown	-	-
Total	73	100

APPENDIX 5

Pneumoconiosis Patients by Degree of Incapacity 2004

Degree of Incapacity (%)	No. of New Cases Compensated under Compensation Ordinance
5	29
10	24
15	9
20	-
25	2
30	-
35	2
40	1
45	-
50	2
60	1
70	-
80	-
100	-
N. A.	3
Total	73

APPENDIX 6

Confirmed Pneumoconiosis Patients
Classified by Radiological Appearance 2004

Type of Opacity	Profusion 1	Profusion 2	Profusion 3	Sub-Total
Small opacities				
Rounded				
p (up to 1.5 mm diameter)	4	-	-	4
q (1.5 to 3.0 mm diameter)	41	8	-	49
r (3.0 to 10.0 mm diameter)	4	4	-	8
Irregular				
s (fine irregular or linear)	1	-	-	1
t (medium irregular)	1	3	-	4
u (coarse irregular)	-	2	1	3
Sub-total	51	17	1	69
Combined opacities	-	-	-	-
N. A.	-	-	-	4
Total				73

15 out of the 73 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)	11
B (Single or multiple opacities with combined area < the equivalent of right upper zone)	3
C (Single or multiple opacities with combined area > the equivalent of right upper zone)	1
Total	15

Appendix 7

Pneumoconiosis Patients with Tuberculosis 2004

Type of T.B.	Number of Cases	%
Bacteriological Positive	14	19
Bacteriological Negative	14	19
No T.B.	41	57
N.A.	4	5
Total	73	100

Appendix 8

Confirmed Pneumoconiosis Patients by Other Particulars 2004

Characteristics		Number of Cases	%
Smoking	Smoker/Ex-smoker	67	92
	Non-smoker	5	7
	Unknown	1	1
	Total	73	100
Still exposed to dust when seen by the Pneumoconiosis Clinic	Yes	16	22
	No	57	78
	Unknown	-	-
	Total	73	100
General Condition	Good	66	90
	Fair	4	6
	Poor	-	-
	Died	3	4
	Total	73	100

Part 3

ANNEX

Part 3 – Annex: Contents

Annex
No.

1(a) Treatment Outcomes up to 2 year of the 2001 Cohort of TB Patients
1(b) Analysis for Various Age Groups
1(c) Analysis for Pulmonary Pretreatment Smear Positive, Pretreatment Culture Positive, and MDR-TB Cases
1(d) Analysis for New Pulmonary Smear Positive and Retreatment Pulmonary Smear Positive Cases
1(e) Analysis for Treatment Defaulters
1(f) Sources completing Programme Forms PFA, PFB1, PFB2, PFC, and PFD
1(g) Sample of the set of "Programme Forms" used in 2001
2(a) TB among Chinese New Immigrants
2(b) TB Notification and Estimated Rates among Chinese New Immigrants by Age & Sex (2000-2004)
2(c) TB Notification and Rates (All Cases) by Age & Sex (2000-2004)
3 Trend of Age-specific TB Notification Rates (1970-2004)

Annex 1 (a)

Treatment Outcomes up to 2 year of the 2001 Cohort of TB Patients

"Programme Forms" have been completed for a total of 6704 TB patients notified in the year 2001. Among them, 5885 were ever seen at chest clinics (ES) while 819 were never seen at chest clinics (NS). They are categorised as follows:

Categories		ES	%	NS	%	ES/NS	%
(A)	New pulmonary, smear positive	1526	25.9	104	12.7	1630	24.3
(B)	New pulmonary, smear negative	2700	45.9	328	40.0	3028	45.2
(C)	New pulmonary, smear not done/ unknown	403	6.8	224	27.4	627	9.4
(D)	New extra-pulmonary	605	10.3	61	7.4	666	9.9
(E)	Relapse pulmonary, smear positive	136	2.3	13	1.6	149	2.2
(F)	Pulmonary smear-positive retreatment after failure or default	21	0.4	0	0.0	21	0.3
(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)]	494	8.4	89	10.9	583	8.7
Total		5885	100.0	819	100.0	6704	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 2001

Discussion

Annex 1 (b) – Various age groups

Among the total of 6704 patients, 292 (4.4%) were aged between 0 and 19, 1849 (27.6%) between 20 and 39, 1772 (26.4%) between 40 and 59, and 2791 (41.6%) above 60. 64.3% were male. 44.6%, 26.3%, and 23.0% were never smokers, ex-smokers, and current smokers respectively. 89.8% were permanent local residents while 92.3% were of Chinese ethnicity. Most of them (82.7%) presented because of symptoms. 12.9% presented as incidental finding to pre-employment, pre-immigration, or other body check, while 2.7% were diagnosed through contact tracing.

76.0% of patients had pulmonary TB, 10.7% had extra-pulmonary TB and 13.3% had both. TB pleura and TB lymph node accounted for 9.8% and 7.9% of the site of involvement respectively. Among pulmonary TB patients, 30.1% had pretreatment sputum smear +ve, 56.7% had pretreatment culture +ve and 13.5% had cavitary lesion on their chest radiographs.

With regard to co-morbidity factors for TB, 11.6% of TB patients had diabetes mellitus, 4.5% of patients had coexisting malignancy, 1% of patients were immuno-suppressed because of either steroid or cytotoxic therapy. HIV infection was reported for 0.4% of cases. 2.4% of all TB patients were reported to be hepatitis B carrier while 0.6% had chronic active hepatitis.

70% of patients were on 6 months short course chemotherapy for TB or other standard regimen based on HREZS. Treatment side effect was reported in 47.6% of patients. 19.1% were GI side effects, 16.6% were skin rash, 5% had transient rise in liver enzyme and 6.6% had frank hepatitis.

Among the 5885 patients ever seen in chest clinic, 71.8% received >90% DOT in initial 2 months, while 57.1% received >90% DOT in subsequent 4 months. Treatment completion/cure rates at 6 months, 12 months and 24 months were: 36.0%, 79.1% and 87.3% respectively. Death rates at corresponding periods were 3.3%, 4.3% and 4.7% respectively.

Among the 819 patients never seen in chest clinic, 20.6% received >90% DOT in initial 2 months, while 11.6% received >90% DOT in subsequent 4 months. Treatment completion/cure rates at 6 months, 12 months and 24 months were: 15.8%, 21.1% and

21.5% respectively. Death rates at corresponding periods were 33.5%, 33.9% and 33.9% respectively.

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

Regarding patients with pulmonary TB, 1800 were pretreatment smear +ve, 3391 were pretreatment culture +ve, and 26 were MDR-TB patients.

In the initial 2 months, over 70% of pretreatment smear +ve or culture +ve patients and 84.6% of MDR-TB received >90% DOT. These decreased to around 60% for all three groups of patients in subsequent 4 months.

Overall sputum smear conversion rate at 2 months were 84.2 % for smear +ve patients and 68.8% for MDRTB patients. Culture conversion rate at 2 months were 87.9% for culture +ve patients and 56.3% for MDR-TB patients.

Treatment success rates for smear +ve patients at 6 months, 12 months and 24 months were 28.5%, 74.1% and 83.8% respectively. Those for culture +ve patients were 33.8%, 74.7% and 83.9% respectively. Those for MDR-TB patients were 3.8%, 15.4% and 73.1% respectively. 6 out of 26 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 30.2%, 75.0% and 84.6% respectively. The corresponding treatment success rates for retreatment pulmonary smear +ve patients were 11.8%, 65.3% and 75.9% respectively.

Annex 1 (e) – Treatment defaulters

There were 230 treatment defaulters at 24 months in the 2001 cohort. Majority (43.9%) were aged between 20 to 39, 38.3% worked full time, 21.3 % retired, and 28.7% unemployed. 85.2% were new case, 6.5% were relapse and 8.3% were retreatment after default cases. 33.8% had pretreatment smear +ve and 15.7% had cavitary lesions on the chest radiograph. 68.3% of patients lost contact after default and 11.7% 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	156	53.4	943	51.0	558	31.5	739	26.5	2396	35.7
Male	136	46.6	906	49.0	1214	68.5	2052	73.5	4308	64.3
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Marital status										
Single	283	96.9	1001	54.1	250	14.1	222	8.0	1756	26.2
Married	3	1.0	756	40.9	1388	78.3	2218	79.5	4365	65.1
Separated	1	0.3	11	0.6	11	0.6	9	0.3	32	0.5
Divorce	0	0.0	26	1.4	65	3.7	21	0.8	112	1.7
Widowed	0	0.0	3	0.2	11	0.6	182	6.5	196	2.9
Not recorded	5	1.7	52	2.8	47	2.7	139	5.0	243	3.6
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Smoking status										
Never	227	77.7	1136	61.4	742	41.9	882	31.6	2987	44.6
Ex-smoker	19	6.5	193	10.4	352	19.9	1198	42.9	1762	26.3
Current smoker	29	9.9	438	23.7	586	33.1	486	17.4	1539	23.0
Not recorded	17	5.8	82	4.4	92	5.2	225	8.1	416	6.2
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Institution-related										
Yes	163	55.8	236	12.8	112	6.3	474	17.0	985	14.7
No	124	42.5	1578	85.3	1628	91.9	2242	80.3	5572	83.1
Not recorded	5	1.7	35	1.9	32	1.8	75	2.7	147	2.2
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Institution										
Client	135	-	129	-	59	-	395	-	718	-
Staff	3	-	75	-	30	-	4	-	112	-
Institution type										
Old age home	1	-	6	-	11	-	401	-	419	-
School	151	-	92	-	13	-	5	-	261	-
Hospital	1	-	45	-	31	-	24	-	101	-
Handicapped	1	-	8	-	7	-	0	-	16	-
Prison	2	-	61	-	32	-	3	-	98	-
Others	2	-	16	-	7	-	4	-	29	-
Living situation										
Street-sleeper	0	0.0	4	0.2	10	0.6	4	0.1	18	0.3
Cubicle bed space	1	0.3	6	0.3	9	0.5	42	1.5	58	0.9
Institution	4	1.4	77	4.2	55	3.1	386	13.8	522	7.8
Work quarter	0	0.0	45	2.4	4	0.2	2	0.1	51	0.8
Alone (not above)	0	0.0	90	4.9	169	9.5	316	11.3	575	8.6
With friends	4	1.4	68	3.7	38	2.1	42	1.5	152	2.3
With family	278	95.2	1495	80.9	1450	81.8	1904	68.2	5127	76.5
Not recorded	5	1.7	64	3.5	37	2.1	95	3.4	201	3.0
Residential status										
Permanent resident	263	90.1	1455	78.7	1640	92.6	2665	95.5	6023	89.8
Chinese immigrant	23	7.9	107	5.8	47	2.7	18	0.6	195	2.9
Imported worker	1	0.3	173	9.4	29	1.6	3	0.1	206	3.1
Tourist - 2 way permit Chinese	0	0.0	28	1.5	3	0.2	4	0.1	35	0.5
Other tourist	0	0.0	10	0.5	7	0.4	0	0.0	17	0.3
Vietnamese	0	0.0	20	1.1	5	0.3	0	0.0	25	0.4
Illegal immigrants	2	0.7	16	0.9	5	0.3	3	0.1	26	0.4
Not recorded	3	1.0	40	2.2	36	2.0	98	3.5	177	2.6
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	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	221	75.7	1127	61.0	747	42.2	461	16.5	2556	38.1
Mainland China	59	20.2	404	21.8	849	47.9	1960	70.2	3272	48.8
Others	8	2.7	281	15.2	125	7.1	158	5.7	572	8.5
Not recorded	4	1.4	37	2.0	51	2.9	212	7.6	304	4.5
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Ethnicity										
Chinese	278	95.2	1546	83.6	1668	94.1	2693	96.5	6185	92.3
Other Asian	7	2.4	262	14.2	67	3.8	24	0.9	360	5.4
Caucasian	0	0.0	4	0.2	3	0.2	0	0.0	7	0.1
Others	1	0.3	2	0.1	3	0.2	1	0.0	7	0.1
Not recorded	6	2.1	35	1.9	31	1.7	73	2.6	145	2.2
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Previous BCG history										
Yes	234	80.1	1104	59.7	448	25.3	111	4.0	1897	28.3
No	10	3.4	164	8.9	521	29.4	1354	48.5	2049	30.6
Unknown	48	16.4	581	31.4	803	45.3	1326	47.5	2758	41.1
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
BCG scar										
Yes	213	-	1052	-	437	-	119	-	1821	-
No	56	-	538	-	1078	-	2091	-	3763	-
Employment status										
Full-time	34	11.6	1180	63.8	826	46.6	165	5.9	2205	32.9
Part-time	4	1.4	65	3.5	118	6.7	24	0.9	211	3.1
Retired	1	0.3	9	0.5	124	7.0	1869	67.0	2003	29.9
Unemployed	29	9.9	291	15.7	392	22.1	196	7.0	908	13.5
Housewife	1	0.3	153	8.3	258	14.6	421	15.1	833	12.4
Student	214	73.3	71	3.8	0	0.0	2	0.1	287	4.3
Not recorded	9	3.1	80	4.3	54	3.0	114	4.1	257	3.8
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Occupation										
Blue collar	22	7.5	599	32.4	847	47.8	966	34.6	2434	36.3
White collar	16	5.5	470	25.4	197	11.1	134	4.8	817	12.2
Medical	0	0.0	6	0.3	2	0.1	0	0.0	8	0.1
Nursing	0	0.0	25	1.4	5	0.3	2	0.1	32	0.5
Paramedical	0	0.0	4	0.2	3	0.2	0	0.0	7	0.1
Supporting health staff	0	0.0	2	0.1	4	0.2	3	0.1	9	0.1
Not applicable	177	60.6	358	19.4	352	19.9	952	34.1	1839	27.4
Not recorded	77	26.4	385	20.8	362	20.4	734	26.3	1558	23.2
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
First presentation										
Private doctor	45	15.4	425	23.0	277	15.6	164	5.9	911	13.6
Private hospital	6	2.1	37	2.0	28	1.6	24	0.9	95	1.4
GOPC	13	4.5	58	3.1	91	5.1	132	4.7	294	4.4
Chest Clinic	60	20.5	302	16.3	388	21.9	462	16.6	1212	18.1
Other DH Clinic	5	1.7	90	4.9	67	3.8	52	1.9	214	3.2
HA Clinic	11	3.8	77	4.2	92	5.2	94	3.4	274	4.1
HA Hospital	146	50.0	804	43.5	787	44.4	1794	64.3	3531	52.7
Mainland	1	0.3	19	1.0	24	1.4	19	0.7	63	0.9
Overseas	3	1.0	14	0.8	5	0.3	6	0.2	28	0.4
Not recorded	2	0.7	23	1.2	13	0.7	44	1.6	82	1.2
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	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	261	89.4	1603	86.7	1550	87.5	2451	87.8	5865	87.5
N	30	10.3	227	12.3	211	11.9	293	10.5	761	11.4
Not recorded	1	0.3	19	1.0	11	0.6	47	1.7	78	1.2
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Chest symptoms	181	-	1108	-	1073	-	1801	-	4163	-
Systemic symptoms	31	-	198	-	201	-	353	-	783	-
Other site-specific symptoms	49	-	314	-	269	-	294	-	926	-
Reason for presentation										
Symptom	249	85.3	1535	83.0	1478	83.4	2281	81.7	5543	82.7
Contact screening	20	6.8	66	3.6	48	2.7	44	1.6	178	2.7
Pre-employment	5	1.7	72	3.9	13	0.7	1	0.0	91	1.4
Pre-emigration	3	1.0	6	0.3	10	0.6	3	0.1	22	0.3
Other body check	6	2.1	100	5.4	110	6.2	115	4.1	331	4.9
Incidental to other illness	7	2.4	40	2.2	95	5.4	280	10.0	422	6.3
Others	1	0.3	11	0.6	7	0.4	18	0.6	37	0.6
Not recorded	1	0.3	19	1.0	11	0.6	49	1.8	80	1.2
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Contact with TB patients										
Yes	46	15.8	172	9.3	121	6.8	114	4.1	453	6.8
No	245	83.9	1648	89.1	1629	91.9	2567	92.0	6089	90.8
Not recorded	1	0.3	29	1.6	22	1.2	110	3.9	162	2.4
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Contact type										
Household	32	-	96	-	81	-	79	-	288	-
Work	2	-	22	-	7	-	2	-	33	-
Casual	5	-	25	-	11	-	5	-	46	-
Time of contact										
Within 2 year	23	-	61	-	35	-	40	-	159	-
Over 2 year	9	-	32	-	33	-	28	-	102	-
Previous chemoprophylaxis										
Yes	0	-	9	-	10	-	29	-	48	-
Reason for chemoprophylaxis										
Contact	0	-	2	-	1	-	0	-	3	-
Silicosis	0	-	0	-	0	-	4	-	4	-
HIV	0	-	0	-	0	-	0	-	0	-
Old scar on CXR	0	-	0	-	0	-	3	-	3	-
Others	0	-	3	-	4	-	8	-	15	-
Disease Classification										
Pulmonary TB only	213	72.9	1299	70.3	1344	75.8	2240	80.3	5096	76.0
Extrapulmonary TB only	31	10.6	278	15.0	231	13.0	179	6.4	719	10.7
Both	48	16.4	272	14.7	197	11.1	372	13.3	889	13.3
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	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	27	9.2	186	10.1	143	8.1	302	10.8	658	9.8
Lymph node	40	13.7	269	14.5	147	8.3	76	2.7	532	7.9
Meninges	1	0.3	11	0.6	11	0.6	15	0.5	38	0.6
Miliary	5	1.7	10	0.5	14	0.8	21	0.8	50	0.7
Abdomen	3	1.0	18	1.0	25	1.4	24	0.9	70	1.0
Bone and joint (not spine)	6	2.1	9	0.5	12	0.7	32	1.1	59	0.9
Spine	1	0.3	9	0.5	12	0.7	16	0.6	38	0.6
Genito-urinary tract	0	0.0	18	1.0	28	1.6	41	1.5	87	1.3
Naso/oro-pharynx	1	0.3	9	0.5	6	0.3	4	0.1	20	0.3
Larynx	0	0.0	1	0.1	4	0.2	6	0.2	11	0.2
Pericardium	0	0.0	3	0.2	6	0.3	9	0.3	18	0.3
Skin	2	0.7	17	0.9	15	0.8	11	0.4	45	0.7
Other sites	0	0.0	18	1.0	17	1.0	14	0.5	49	0.7
Case category										
New case	290	99.3	1744	94.3	1578	89.1	2339	83.8	5951	88.8
Relapse	1	0.3	81	4.4	174	9.8	426	15.3	682	10.2
Treatment after default	1	0.3	23	1.2	20	1.1	23	0.8	67	1.0
Failure of previous treatment	0	0.0	1	0.1	0	0.0	3	0.1	4	0.1
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Disease characteristics (pulmonary cases)										
Pretreatment smear +ve	81	31.0	443	28.2	497	32.3	779	29.8	1800	30.1
Pretreatment culture +ve	137	52.5	798	50.8	878	57.0	1578	60.4	3391	56.7
Extent = 1	129	49.4	924	58.8	828	53.7	1187	45.4	3068	51.3
Extent=1 & cavity=N	*119*	*45.6*	*829*	*52.8*	*749*	*48.6*	*1109*	*42.5*	*2806*	*46.9*
Extent=1 & cavity=Y	*10*	*3.8*	*95*	*6.0*	*79*	*5.1*	*78*	*3.0*	*262*	*4.4*
Extent = 2	73	28.0	356	22.7	407	26.4	755	28.9	1591	26.6
Extent=2 & cavity=N	*50*	*19.2*	*288*	*18.3*	*292*	*18.9*	*652*	*25.0*	*1282*	*21.4*
Extent=2 & cavity=Y	*23*	*8.8*	*68*	*4.3*	*115*	*7.5*	*103*	*3.9*	*309*	*5.2*
Extent=3	22	8.4	123	7.8	159	10.3	339	13.0	643	10.7
Extent=3 & cavity=N	*14*	*5.4*	*66*	*4.2*	*88*	*5.7*	*251*	*9.6*	*419*	*7.0*
Extent=3 & cavity=Y	*8*	*3.1*	*57*	*3.6*	*71*	*4.6*	*88*	*3.4*	*224*	*3.7*
Extent=not specified	37	14.2	168	10.7	147	9.5	331	12.7	683	11.4
Extent=ns & cavity=N	*37*	*14.2*	*165*	*10.5*	*143*	*9.3*	*327*	*12.5*	*672*	*11.2*
Extent=ns & cavity=Y	*0*	*0.0*	*3*	*0.2*	*4*	*0.3*	*4*	*0.2*	*11*	*0.2*
Cavity=N	220	84.3	1348	85.8	1272	82.5	2339	89.5	5179	86.5
Cavity=Y	41	15.7	223	14.2	269	17.5	273	10.5	806	13.5
Mode of diagnosis										
Bacteriological	172	58.9	1011	54.7	1086	61.3	1983	71.0	4252	63.4
Histological	33	11.3	275	14.9	207	11.7	197	7.1	712	10.6
Clinical-radiological	77	26.4	485	26.2	397	22.4	380	13.6	1339	20.0
Clinical only	2	0.7	9	0.5	17	1.0	10	0.4	38	0.6
Not recorded	8	2.7	69	3.7	65	3.7	221	7.9	363	5.4
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Histology										
Typical (with caseation)	18	-	131	-	105	-	59	-	313	-
Granulomatous inflammation	30	-	210	-	189	-	174	-	603	-
Other	7	-	49	-	38	-	49	-	143	-
Ziehl-Neelzen staining										
Positive	25	-	181	-	153	-	155	-	514	-

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	6	2.1	120	6.5	431	24.3	1021	36.6	1578	23.5
Diabetes mellitus	1	0.3	33	1.8	222	12.5	521	18.7	777	11.6
Lung cancer	0	0.0	1	0.1	17	1.0	84	3.0	102	1.5
Other malignancies	0	0.0	10	0.5	52	2.9	138	4.9	200	3.0
On cytotoxic drugs	0	0.0	3	0.2	3	0.2	6	0.2	12	0.2
On steroid	1	0.3	11	0.6	18	1.0	23	0.8	53	0.8
Chronic renal failure	0	0.0	2	0.1	16	0.9	60	2.1	78	1.2
HIV	0	0.0	17	0.9	11	0.6	1	0.0	29	0.4
Silicosis	0	0.0	0	0.0	19	1.1	42	1.5	61	0.9
Alcoholism	0	0.0	12	0.6	42	2.4	40	1.4	94	1.4
Drug abuser	0	0.0	20	1.1	46	2.6	16	0.6	82	1.2
Gastrectomy	0	0.0	2	0.1	5	0.3	21	0.8	28	0.4
General debilitation	2	0.7	0	0.0	5	0.3	201	7.2	208	3.1
Others	0	0.0	7	0.4	10	0.6	36	1.3	53	0.8
Factors affecting treatment choices										
Yes	13	4.5	127	6.9	238	13.4	648	23.2	1026	15.3
Hepatitis-B carrier	2	0.7	40	2.2	73	4.1	46	1.6	161	2.4
Chronic active hepatitis	0	0.0	10	0.5	19	1.1	12	0.4	41	0.6
Impaired renal function	0	0.0	1	0.1	12	0.7	99	3.5	112	1.7
Chronic renal failure	0	0.0	3	0.2	11	0.6	33	1.2	47	0.7
Impaired vision	3	1.0	24	1.3	66	3.7	273	9.8	366	5.5
Impaired heaering	1	0.3	1	0.1	8	0.5	59	2.1	69	1.0
Known drug reaction	1	0.3	5	0.3	14	0.8	28	1.0	48	0.7
Known drug resistance	2	0.7	19	1.0	8	0.5	30	1.1	59	0.9
Gout	0	0.0	2	0.1	10	0.6	59	2.1	71	1.1
Idiopathic thromb. purpura	0	0.0	0	0.0	3	0.2	5	0.2	8	0.1
Others	3	1.0	27	1.5	37	2.1	135	4.8	202	3.0
6-month short course treatment										
Yes	115	39.4	693	37.5	479	27.0	361	12.9	1648	24.6
2HRZE+4HR	90	30.8	574	31.0	372	21.0	258	9.2	1294	19.3
2HRZS+4HR	7	2.4	39	2.1	40	2.3	30	1.1	116	1.7
Other standard regimen based on HRZES										
Yes	131	44.9	769	41.6	838	47.3	1305	46.8	3043	45.4
Treatment side effects										
Yes	86	29.5	791	42.8	909	51.3	1406	50.4	3192	47.6
GI upset	45	15.4	377	20.4	352	19.9	507	18.2	1281	19.1
Skin rash	25	8.6	243	13.1	337	19.0	506	18.1	1111	16.6
Visual	7	2.4	48	2.6	96	5.4	167	6.0	318	4.7
Transient rise liver enzyme	10	3.4	80	4.3	101	5.7	146	5.2	337	5.0
Hepatitis	7	2.4	69	3.7	128	7.2	238	8.5	442	6.6
Vestibular	3	1.0	29	1.6	33	1.9	35	1.3	100	1.5
Arthropathy	4	1.4	38	2.1	58	3.3	115	4.1	215	3.2
Fever-chill	0	0.0	25	1.4	22	1.2	32	1.1	79	1.2
Dizziness	5	1.7	63	3.4	59	3.3	99	3.5	226	3.4
Thrombocytopenia	0	0.0	1	0.1	11	0.6	24	0.9	36	0.5
Leucopenia	1	0.3	2	0.1	5	0.3	9	0.3	17	0.3
Flush face	0	0.0	12	0.6	7	0.4	7	0.3	26	0.4
Others	2	0.7	50	2.7	64	3.6	108	3.9	224	3.3
Consequence of side effects										
Rx temporarily withheld	41	14.0	315	17.0	438	24.7	790	28.3	1584	23.6
Desensitiation or drug trial	18	6.2	176	9.5	263	14.8	450	16.1	907	13.5
Change in dosage/frequency	23	7.9	155	8.4	222	12.5	309	11.1	709	10.6
Change of drugs	23	7.9	228	12.3	338	19.1	729	26.1	1318	19.7

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%	193	66.1	1191	64.4	1179	66.5	1833	65.7	4396	65.6
>75%	30	10.3	187	10.1	159	9.0	144	5.2	520	7.8
>50%	16	5.5	143	7.7	132	7.4	129	4.6	420	6.3
>25%	10	3.4	46	2.5	62	3.5	67	2.4	185	2.8
≤25%	9	3.1	96	5.2	87	4.9	94	3.4	286	4.3
Not recorded	34	11.6	186	10.1	153	8.6	524	18.8	897	13.4
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	150	51.4	874	47.3	904	51.0	1529	54.8	3457	51.6
>75%	32	11.0	225	12.2	214	12.1	164	5.9	635	9.5
>50%	23	7.9	160	8.7	142	8.0	109	3.9	434	6.5
>25%	21	7.2	127	6.9	114	6.4	113	4.0	375	5.6
≤25%	28	9.6	214	11.6	182	10.3	174	6.2	598	8.9
Not recorded	38	13.0	249	13.5	216	12.2	702	25.2	1205	18.0
Under supervision by relatives (initial 2 months)										
>90%	16	5.5	11	0.6	11	0.6	42	1.5	80	1.2
>75%	1	0.3	7	0.4	5	0.3	21	0.8	34	0.5
>50%	0	0.0	7	0.4	15	0.8	15	0.5	37	0.6
>25%	2	0.7	14	0.8	12	0.7	15	0.5	43	0.6
≤25%	202	69.2	1333	72.1	1261	71.2	1706	61.1	4502	67.2
Not recorded	71	24.3	477	25.8	468	26.4	992	35.5	2008	30.0
Under supervision by relatives (subsequent 4 months)										
>90%	17	5.8	15	0.8	14	0.8	48	1.7	94	1.4
>75%	5	1.7	16	0.9	22	1.2	25	0.9	68	1.0
>50%	2	0.7	26	1.4	17	1.0	15	0.5	60	0.9
>25%	5	1.7	16	0.9	16	0.9	18	0.6	55	0.8
≤25%	190	65.1	1253	67.8	1191	67.2	1607	57.6	4241	63.3
Not recorded	73	25.0	523	28.3	512	28.9	1078	38.6	2186	32.6
Supplied for unsupervised treatment (initial 2 months)										
<5%	189	64.7	1142	61.8	1125	63.5	1722	61.7	4178	62.3
<10%	12	4.1	70	3.8	79	4.5	74	2.7	235	3.5
<15%	8	2.7	62	3.4	53	3.0	46	1.6	169	2.5
<25%	14	4.8	93	5.0	83	4.7	59	2.1	249	3.7
<50%	7	2.4	104	5.6	84	4.7	77	2.8	272	4.1
≥50%	13	4.5	108	5.8	116	6.5	106	3.8	343	5.1
Not recorded	49	16.8	270	14.6	232	13.1	707	25.3	1258	18.8
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	152	52.1	895	48.4	892	50.3	1500	53.7	3439	51.3
<10%	21	7.2	76	4.1	97	5.5	82	2.9	276	4.1
<15%	5	1.7	87	4.7	80	4.5	56	2.0	228	3.4
<25%	12	4.1	111	6.0	93	5.2	71	2.5	287	4.3
<50%	21	7.2	111	6.0	119	6.7	73	2.6	324	4.8
≥50%	30	10.3	275	14.9	233	13.1	210	7.5	748	11.2
Not recorded	51	17.5	294	15.9	258	14.6	799	28.6	1402	20.9
Defaulted (initial 2 months)										
<5%	202	69.2	1336	72.3	1343	75.8	1888	67.6	4769	71.1
<10%	4	1.4	47	2.5	36	2.0	30	1.1	117	1.7
<15%	1	0.3	28	1.5	33	1.9	16	0.6	78	1.2
<25%	13	4.5	36	1.9	30	1.7	30	1.1	109	1.6
<50%	3	1.0	34	1.8	18	1.0	15	0.5	70	1.0
≥50%	4	1.4	38	2.1	23	1.3	29	1.0	94	1.4
Not recorded	65	22.3	330	17.8	289	16.3	783	28.1	1467	21.9
Defaulted (subsequent 4 months)										
<5%	191	65.4	1234	66.7	1254	70.8	1788	64.1	4467	66.6
<10%	7	2.4	71	3.8	52	2.9	38	1.4	168	2.5
<15%	12	4.1	36	1.9	29	1.6	21	0.8	98	1.5
<25%	10	3.4	48	2.6	48	2.7	22	0.8	128	1.9
<50%	5	1.7	47	2.5	26	1.5	15	0.5	93	1.4
≥50%	6	2.1	50	2.7	40	2.3	36	1.3	132	2.0
Not recorded	61	20.9	363	19.6	323	18.2	871	31.2	1618	24.1

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

Age group	**0 to 19**		**20 to 39**		**40 to 59**		**60+**		**All**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Outcome at 6 months										
Cured/ treatment completed	159	54.5	821	44.4	608	34.3	662	23.7	2250	33.6
Still on treatment	113	38.7	761	41.2	938	52.9	1342	48.1	3154	47.0
Died	0	0.0	12	0.6	39	2.2	416	14.9	467	7.0
Transferred	6	2.1	123	6.7	68	3.8	96	3.4	293	4.4
Defaulted	6	2.1	77	4.2	53	3.0	55	2.0	191	2.8
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	8	2.7	55	3.0	66	3.7	220	7.9	349	5.2
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Among those cured/ treatment completed										
Bacteriological conversion	69	43.4	372	45.3	287	47.2	384	58.0	1112	49.4
Radiological improvement	120	75.5	705	85.9	474	78.0	466	70.4	1765	78.4
Other clinical improvement	51	32.1	174	21.2	115	18.9	118	17.8	458	20.4
No evidence of response	4	2.5	25	3.0	36	5.9	52	7.9	117	5.2
Among those still on treatment										
Reasons for still on treatment:										
Retreatment case	2	1.8	49	6.4	94	10.0	178	13.3	323	10.2
Extrapulmonary disease	35	31.0	304	39.9	248	26.4	200	14.9	787	25.0
Extensive disease	20	17.7	118	15.5	117	12.5	168	12.5	423	13.4
Interrupted treatment	23	20.4	174	22.9	208	22.2	364	27.1	769	24.4
Drug resistance	7	6.2	42	5.5	48	5.1	60	4.5	157	5.0
Poor response	14	12.4	43	5.7	56	6.0	58	4.3	171	5.4
Others	25	22.1	118	15.5	311	33.2	538	40.1	992	31.5
Among those died - causes of death:										
TB-related cause	0	-	3	25.0	4	10.3	34	8.2	41	8.8
Not TB-related	0	-	3	25.0	19	48.7	191	45.9	213	45.6
Unknown	0	-	6	50.0	16	41.0	191	45.9	213	45.6
Among those transferred, new sources of care:										
GP	1	16.7	17	13.8	7	10.3	8	8.3	33	11.3
Chest Clinic	0	0.0	9	7.3	10	14.7	21	21.9	40	13.7
Hospital	3	50.0	7	5.7	18	26.5	46	47.9	74	25.3
Outside HK	2	33.3	86	69.9	28	41.2	20	20.8	136	46.4
Not recorded	0	0.0	4	3.3	5	7.4	1	1.0	10	3.4
Among those defaulted										
Never found	4	66.7	62	80.5	39	73.6	33	60.0	138	72.3
Retreated after default	1	16.7	7	9.1	3	5.7	4	7.3	15	7.9
Treatment stopped by doctor	0	0.0	1	1.3	7	13.2	9	16.4	17	8.9
Not recorded	1	16.7	7	9.1	4	7.5	9	16.4	21	11.0

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

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%
Outcome at 12 months										
Cured/ treatment completed	257	88.0	1459	78.9	1375	77.6	1736	62.2	4827	72.0
Still on treatment	8	2.7	89	4.8	120	6.8	189	6.8	406	6.1
Died	0	0.0	14	0.8	51	2.9	465	16.7	530	7.9
Transferred	7	2.4	113	6.1	62	3.5	87	3.1	269	4.0
Defaulted	11	3.8	102	5.5	70	4.0	64	2.3	247	3.7
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	9	3.1	72	3.9	94	5.3	250	9.0	425	6.3
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Among those cured/ treatment completed										
Bacteriological conversion	127	49.4	697	47.8	710	51.6	1155	66.5	2689	55.7
Radiological improvement	194	75.5	1091	74.8	992	72.1	1266	72.9	3543	73.4
Other clinical improvement	85	33.1	464	31.8	443	32.2	420	24.2	1412	29.3
No evidence of response	7	2.7	32	2.2	60	4.4	74	4.3	173	3.6
After treatment completed:										
No relapse	201	78.2	1150	78.8	1118	81.3	1437	82.8	3906	80.9
Loss to follow up	14	5.4	114	7.8	56	4.1	58	3.3	242	5.0
Died	0	0.0	0	0.0	4	0.3	20	1.2	24	0.5
TB-related	*0*		*0*		*0*		*1*		*1*	
Not TB-related	*0*		*0*		*2*		*11*		*13*	
Unknown	*0*		*0*		*2*		*8*		*10*	
Relapse	0	0.0	1	0.1	3	0.2	4	0.2	8	0.2
Bacteriological	*0*		*1*		*2*		*2*		*5*	
Histological	*0*		*0*		*0*		*2*		*2*	
Clinico-radiological	*0*		*0*		*1*		*0*		*1*	
Not recorded	42	16.3	194	13.3	194	14.1	217	12.5	647	13.4
Among those still on treatment										
Reasons for still on treatment:										
Retreatment case	0	0.0	2	2.2	5	4.2	10	5.3	17	4.2
Extrapulmonary disease	4	50.0	26	29.2	23	19.2	24	12.7	77	19.0
Extensive disease	0	0.0	6	6.7	4	3.3	13	6.9	23	5.7
Interrupted treatment	3	37.5	34	38.2	58	48.3	94	49.7	189	46.6
Drug resistance	0	0.0	18	20.2	19	15.8	21	11.1	58	14.3
Poor response	3	37.5	11	12.4	12	10.0	13	6.9	39	9.6
Others	1	12.5	25	28.1	36	30.0	74	39.2	136	33.5
Among those died - causes of death:										
TB-related cause	0	-	3	21.4	6	11.8	35	7.5	44	8.3
Not TB-related	0	-	4	28.6	25	49.0	225	48.4	254	47.9
Unknown	0	-	7	50.0	20	39.2	205	44.1	232	43.8
Among those transferred, new sources of care:										
GP	1	14.3	13	11.5	6	9.7	5	5.7	25	9.3
Chest Clinic	0	0.0	7	6.2	8	12.9	16	18.4	31	11.5
Hospital	3	42.9	3	2.7	14	22.6	39	44.8	59	21.9
Outside HK	2	28.6	80	70.8	27	43.5	19	21.8	128	47.6
Not recorded	1	14.3	10	8.8	7	11.3	8	9.2	26	9.7
Among those defaulted										
Never found	8	72.7	81	79.4	46	65.7	36	56.3	171	69.2
Retreated after default	2	18.2	8	7.8	7	10.0	6	9.4	23	9.3
Treatment stopped by doctor	0	0.0	5	4.9	6	8.6	10	15.6	21	8.5
Not recorded	1	9.1	8	7.8	11	15.7	12	18.8	32	13.0

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	271	92.8	1581	85.5	1517	85.6	1946	69.7	5315	79.3
Still on treatment	0	0.0	2	0.1	6	0.3	7	0.3	15	0.2
Died	0	0.0	14	0.8	54	3.0	484	17.3	552	8.2
Transferred	6	2.1	105	5.7	62	3.5	78	2.8	251	3.7
Defaulted	8	2.7	101	5.5	66	3.7	55	2.0	230	3.4
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	7	2.4	46	2.5	67	3.8	221	7.9	341	5.1
Total	292	100.0	1849	100.0	1772	100.0	2791	100.0	6704	100.0
Among those cured/ treatment completed										
Bacteriological conversion	143	52.8	801	50.7	845	55.7	1351	69.4	3140	59.1
Radiological improvement	187	69.0	1157	73.2	1106	72.9	1422	73.1	3872	72.9
Other clinical improvement	78	28.8	586	37.1	548	36.1	538	27.6	1750	32.9
No evidence of response	6	2.2	35	2.2	49	3.2	66	3.4	156	2.9
After treatment completed:										
No relapse	192	70.8	1132	71.6	1201	79.2	1497	76.9	4022	75.7
Loss to follow up	42	15.5	332	21.0	221	14.6	221	11.4	816	15.4
Died	0	0.0	3	0.2	8	0.5	88	4.5	99	1.9
TB-related	*0*		*0*		*0*		*2*		*2*	
Not TB-related	*0*		*2*		*4*		*55*		*61*	
Unknown	*0*		*1*		*4*		*31*		*36*	
Relapse	0	0.0	13	0.8	10	0.7	17	0.9	40	0.8
Bacteriological	*0*		*4*		*5*		*10*		*19*	
Histological	*0*		*7*		*2*		*2*		*11*	
Clinico-radiological	*0*		*2*		*3*		*5*		*10*	
Not recorded	37	13.7	101	6.4	77	5.1	123	6.3	338	6.4
Among those still on treatment										
Reasons for still on treatment:										
Retreatment case	0	-	0	-	0	-	1	-	1	6.7
Extrapulmonary disease	0	-	0	-	1	-	0	-	1	6.7
Extensive disease	0	-	0	-	0	-	0	-	0	0.0
Interrupted treatment	0	-	0	-	3	-	2	-	5	33.3
Drug resistance	0	-	0	-	2	-	1	-	3	20.0
Poor response	0	-	0	-	2	-	0	-	2	13.3
Others	0	-	2	-	2	-	3	-	7	46.7
Among those died - causes of death:										
TB-related cause	0	-	3	21.4	7	13.0	36	7.4	46	8.3
Not TB-related	0	-	4	28.6	26	48.1	234	48.3	264	47.8
Unknown	0	-	7	50.0	21	38.9	214	44.2	242	43.8
Among those transferred, new sources of care:										
GP	1	16.7	10	9.5	6	9.7	3	3.8	20	8.0
Chest Clinic	0	0.0	7	6.7	7	11.3	16	20.5	30	12.0
Hospital	3	50.0	2	1.9	11	17.7	29	37.2	45	17.9
Outside HK	1	16.7	71	67.6	28	45.2	19	24.4	119	47.4
Not recorded	1	16.7	15	14.3	10	16.1	11	14.1	37	14.7
Among those defaulted										
Never found	6	75.0	78	77.2	39	59.1	34	61.8	157	68.3
Retreated after default	0	0.0	11	10.9	11	16.7	5	9.1	27	11.7
Treatment stopped by doctor	0	0.0	8	7.9	7	10.6	6	10.9	21	9.1
Not recorded	2	25.0	4	4.0	9	13.6	10	18.2	25	10.9

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	138	54.8	884	51.5	528	32.1	586	25.8	2136	36.3
Male	114	45.2	832	48.5	1119	67.9	1684	74.2	3749	63.7
Total	252	100.0	1716	100.0	1647	100.0	2270	100.0	5885	100.0
First presentation										
Private doctor	38	15.1	391	22.8	263	16.0	144	6.3	836	14.2
Private hospital	5	2.0	33	1.9	25	1.5	17	0.7	80	1.4
GOPC	11	4.4	56	3.3	90	5.5	129	5.7	286	4.9
Chest Clinic	59	23.4	297	17.3	381	23.1	440	19.4	1177	20.0
Other DH Clinic	5	2.0	56	3.3	53	3.2	49	2.2	163	2.8
HA Clinic	11	4.4	73	4.3	85	5.2	77	3.4	246	4.2
HA Hospital	118	46.8	765	44.6	713	43.3	1377	60.7	2973	50.5
Mainland	1	0.4	18	1.0	23	1.4	16	0.7	58	1.0
Overseas	3	1.2	13	0.8	5	0.3	5	0.2	26	0.4
Not recorded	1	0.4	14	0.8	9	0.5	16	0.7	40	0.7
Total	252	100.0	1716	100.0	1647	100.0	2270	100.0	5885	100.0
Symptomatic on presentation										
Y	225	89.3	1494	87.1	1451	88.1	2012	88.6	5182	88.1
N	27	10.7	212	12.4	190	11.5	238	10.5	667	11.3
Not recorded	0	0.0	10	0.6	6	0.4	20	0.9	36	0.6
Total	252	100.0	1716	100.0	1647	100.0	2270	100.0	5885	100.0
Chest symptoms	157	-	1032	-	1001	-	1473	-	3663	-
Systemic symptoms	21	-	181	-	184	-	281	-	667	-
Other site-specific symptoms	47	-	295	-	255	-	240	-	837	-
Reason for presentation										
Symptom	214	84.9	1436	83.7	1390	84.4	1887	83.1	4927	83.7
Contact screening	19	7.5	66	3.8	47	2.9	43	1.9	175	3.0
Pre-employment	5	2.0	72	4.2	13	0.8	1	0.0	91	1.5
Pre-emigration	3	1.2	6	0.3	10	0.6	2	0.1	21	0.4
Other body check	6	2.4	78	4.5	93	5.6	104	4.6	281	4.8
Incidental to other illness	4	1.6	38	2.2	84	5.1	208	9.2	334	5.7
Others	1	0.4	9	0.5	3	0.2	5	0.2	18	0.3
Not recorded	0	0.0	11	0.6	7	0.4	20	0.9	38	0.6
Total	252	100.0	1716	100.0	1647	100.0	2270	100.0	5885	100.0
Disease Classification										
Pulmonary TB only	189	75.0	1208	70.4	1241	75.3	1831	80.7	4469	75.9
Extrapulmonary TB only	27	10.7	259	15.1	223	13.5	142	6.3	651	11.1
Both	36	14.3	249	14.5	183	11.1	297	13.1	765	13.0
Total	252	100.0	1716	100.0	1647	100.0	2270	100.0	5885	100.0
6-month short course treatment										
Yes	102	40.5	657	38.3	457	27.7	297	13.1	1513	25.7
2HRZE+4HR	79	31.3	548	31.9	357	21.7	224	9.9	1208	20.5
2HRZS+4HR	7	2.8	35	2.0	39	2.4	25	1.1	106	1.8
Other standard regimen based on HRZES										
Yes	114	45.2	741	43.2	817	49.6	1252	55.2	2924	49.7

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%	185	73.4	1156	67.4	1158	70.3	1728	76.1	4227	71.8
>75%	30	11.9	187	10.9	159	9.7	140	6.2	516	8.8
>50%	16	6.3	143	8.3	132	8.0	127	5.6	418	7.1
>25%	10	4.0	46	2.7	62	3.8	65	2.9	183	3.1
≤25%	7	2.8	91	5.3	84	5.1	92	4.1	274	4.7
Not recorded	4	1.6	93	5.4	52	3.2	118	5.2	267	4.5
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	142	56.3	844	49.2	890	54.0	1486	65.5	3362	57.1
>75%	32	12.7	224	13.1	214	13.0	161	7.1	631	10.7
>50%	23	9.1	160	9.3	142	8.6	108	4.8	433	7.4
>25%	21	8.3	127	7.4	114	6.9	111	4.9	373	6.3
≤25%	26	10.3	210	12.2	179	10.9	171	7.5	586	10.0
Not recorded	8	3.2	151	8.8	108	6.6	233	10.3	500	8.5
Under supervision by relatives (initial 2 months)										
>90%	2	0.8	7	0.4	9	0.5	26	1.1	44	0.7
>75%	1	0.4	7	0.4	4	0.2	19	0.8	31	0.5
>50%	0	0.0	6	0.3	15	0.9	14	0.6	35	0.6
>25%	2	0.8	14	0.8	12	0.7	15	0.7	43	0.7
≤25%	202	80.2	1325	77.2	1258	76.4	1695	74.7	4480	76.1
Not recorded	45	17.9	357	20.8	349	21.2	501	22.1	1252	21.3
Under supervision by relatives (subsequent 4 months)										
>90%	3	1.2	11	0.6	12	0.7	33	1.5	59	1.0
>75%	5	2.0	16	0.9	21	1.3	23	1.0	65	1.1
>50%	2	0.8	25	1.5	17	1.0	14	0.6	58	1.0
>25%	5	2.0	16	0.9	16	1.0	18	0.8	55	0.9
≤25%	190	75.4	1245	72.6	1188	72.1	1600	70.5	4223	71.8
Not recorded	47	18.7	403	23.5	393	23.9	582	25.6	1425	24.2
Supplied for unsupervised treatment (initial 2 months)										
<5%	187	74.2	1134	66.1	1122	68.1	1705	75.1	4148	70.5
<10%	12	4.8	70	4.1	79	4.8	72	3.2	233	4.0
<15%	8	3.2	62	3.6	53	3.2	46	2.0	169	2.9
<25%	14	5.6	93	5.4	83	5.0	59	2.6	249	4.2
<50%	7	2.8	104	6.1	84	5.1	77	3.4	272	4.6
≥50%	11	4.4	87	5.1	104	6.3	100	4.4	302	5.1
Not recorded	13	5.2	166	9.7	122	7.4	211	9.3	512	8.7
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	151	59.9	887	51.7	889	54.0	1487	65.5	3414	58.0
<10%	20	7.9	76	4.4	97	5.9	81	3.6	274	4.7
<15%	5	2.0	87	5.1	80	4.9	55	2.4	227	3.9
<25%	12	4.8	111	6.5	93	5.6	71	3.1	287	4.9
<50%	21	8.3	111	6.5	119	7.2	73	3.2	324	5.5
≥50%	28	11.1	254	14.8	221	13.4	204	9.0	707	12.0
Not recorded	15	6.0	190	11.1	148	9.0	299	13.2	652	11.1
Defaulted (initial 2 months)										
<5%	199	79.0	1328	77.4	1339	81.3	1871	82.4	4737	80.5
<10%	4	1.6	47	2.7	36	2.2	30	1.3	117	2.0
<15%	1	0.4	28	1.6	33	2.0	16	0.7	78	1.3
<25%	13	5.2	36	2.1	30	1.8	30	1.3	109	1.9
<50%	3	1.2	34	2.0	18	1.1	15	0.7	70	1.2
≥50%	4	1.6	38	2.2	21	1.3	29	1.3	92	1.6
Not recorded	28	11.1	205	11.9	170	10.3	279	12.3	682	11.6
Defaulted (subsequent 4 months)										
<5%	188	74.6	1226	71.4	1250	75.9	1777	78.3	4441	75.5
<10%	7	2.8	71	4.1	52	3.2	38	1.7	168	2.9
<15%	12	4.8	36	2.1	29	1.8	21	0.9	98	1.7
<25%	10	4.0	48	2.8	48	2.9	22	1.0	128	2.2
<50%	5	2.0	47	2.7	26	1.6	15	0.7	93	1.6
≥50%	6	2.4	50	2.9	39	2.4	35	1.5	130	2.2
Not recorded	24	9.5	238	13.9	203	12.3	362	15.9	827	14.1

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

Age group	0 to 19		20 to 39		40 to 59		60+		All	
	N	%	N	%	N	%	N	%	N	%
Outcome at 6 months										
Cured/ treatment completed	133	52.8	775	45.2	584	35.5	629	27.7	2121	36.0
Still on treatment	109	43.3	743	43.3	924	56.1	1313	57.8	3089	52.5
Died	0	0.0	4	0.2	22	1.3	167	7.4	193	3.3
Transferred	4	1.6	108	6.3	51	3.1	61	2.7	224	3.8
Defaulted	5	2.0	73	4.3	48	2.9	53	2.3	179	3.0
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	1	0.4	13	0.8	18	1.1	47	2.1	79	1.3
Total	252	100.0	1716	100.0	1647	100.0	2270	100.0	5885	100.0
Outcome at 12 months										
Cured/ treatment completed	226	89.7	1397	81.4	1341	81.4	1690	74.4	4654	79.1
Still on treatment	8	3.2	88	5.1	117	7.1	186	8.2	399	6.8
Died	0	0.0	6	0.3	33	2.0	213	9.4	252	4.3
Transferred	5	2.0	96	5.6	46	2.8	49	2.2	196	3.3
Defaulted	10	4.0	99	5.8	66	4.0	60	2.6	235	4.0
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	3	1.2	30	1.7	44	2.7	72	3.2	149	2.5
Total	252	100.0	1716	100.0	1647	100.0	2270	100.0	5885	100.0
Outcome at 24 months										
Cured/ treatment completed	240	95.2	1516	88.3	1483	90.0	1900	83.7	5139	87.3
Still on treatment	0	0.0	2	0.1	6	0.4	7	0.3	15	0.3
Died	0	0.0	6	0.3	36	2.2	232	10.2	274	4.7
Transferred	4	1.6	88	5.1	45	2.7	40	1.8	177	3.0
Defaulted	7	2.8	98	5.7	62	3.8	51	2.2	218	3.7
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	1	0.4	6	0.3	15	0.9	40	1.8	62	1.1
Total	252	100.0	1716	100.0	1647	100.0	2270	100.0	5885	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	18	45.0	59	44.4	30	24.0	153	29.4	260	31.7
Male	22	55.0	74	55.6	95	76.0	368	70.6	559	68.3
Total	40	100.0	133	100.0	125	100.0	521	100.0	819	100.0
First presentation										
Private doctor	7	17.5	34	25.6	14	11.2	20	3.8	75	9.2
Private hospital	1	2.5	4	3.0	3	2.4	7	1.3	15	1.8
GOPC	2	5.0	2	1.5	1	0.8	3	0.6	8	1.0
Chest Clinic	1	2.5	5	3.8	7	5.6	22	4.2	35	4.3
Other DH Clinic	0	0.0	34	25.6	14	11.2	3	0.6	51	6.2
HA Clinic	0	0.0	4	3.0	7	5.6	17	3.3	28	3.4
HA Hospital	28	70.0	39	29.3	74	59.2	417	80.0	558	68.1
Mainland	0	0.0	1	0.8	1	0.8	3	0.6	5	0.6
Overseas	0	0.0	1	0.8	0	0.0	1	0.2	2	0.2
Not recorded	1	2.5	9	6.8	4	3.2	28	5.4	42	5.1
Total	40	100.0	133	100.0	125	100.0	521	100.0	819	100.0
Symptomatic on presentation										
Y	36	90.0	109	82.0	99	79.2	439	84.3	683	83.4
N	3	7.5	15	11.3	21	16.8	55	10.6	94	11.5
Not recorded	1	2.5	9	6.8	5	4.0	27	5.2	42	5.1
Total	40	100.0	133	100.0	125	100.0	521	100.0	819	100.0
Chest symptoms	24	-	76	-	72	-	328	-	500	-
Systemic symptoms	10	-	17	-	17	-	72	-	116	-
Other site-specific symptoms	2	-	19	-	14	-	54	-	89	-
Reason for presentation										
Symptom	35	87.5	99	74.4	88	70.4	394	75.6	616	75.2
Contact screening	1	2.5	0	0.0	1	0.8	1	0.2	3	0.4
Pre-employment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pre-emigration	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
Other body check	0	0.0	22	16.5	17	13.6	11	2.1	50	6.1
Incidental to other illness	3	7.5	2	1.5	11	8.8	72	13.8	88	10.7
Others	0	0.0	2	1.5	4	3.2	13	2.5	19	2.3
Not recorded	1	2.5	8	6.0	4	3.2	29	5.6	42	5.1
Total	40	100.0	133	100.0	125	100.0	521	100.0	819	100.0
Disease Classification										
Pulmonary TB only	24	60.0	91	68.4	103	82.4	409	78.5	627	76.6
Extrapulmonary TB only	4	10.0	19	14.3	8	6.4	37	7.1	68	8.3
Both	12	30.0	23	17.3	14	11.2	75	14.4	124	15.1
Total	40	100.0	133	100.0	125	100.0	521	100.0	819	100.0
6-month short course treatment										
Yes	13	32.5	36	27.1	22	17.6	64	12.3	135	16.5
2HRZE+4HR	11	27.5	26	19.5	15	12.0	34	6.5	86	10.5
2HRZS+4HR	0	0.0	4	3.0	1	0.8	5	1.0	10	1.2
Other standard regimen based on HRZES										
Yes	17	42.5	28	21.1	21	16.8	53	10.2	119	14.5

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%	8	20.0	35	26.3	21	16.8	105	20.2	169	20.6
>75%	0	0.0	0	0.0	0	0.0	4	0.8	4	0.5
>50%	0	0.0	0	0.0	0	0.0	2	0.4	2	0.2
>25%	0	0.0	0	0.0	0	0.0	2	0.4	2	0.2
≤25%	2	5.0	5	3.8	3	2.4	2	0.4	12	1.5
Not recorded	30	75.0	93	69.9	101	80.8	406	77.9	630	76.9
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)										
>90%	8	20.0	30	22.6	14	11.2	43	8.3	95	11.6
>75%	0	0.0	1	0.8	0	0.0	3	0.6	4	0.5
>50%	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
>25%	0	0.0	0	0.0	0	0.0	2	0.4	2	0.2
≤25%	2	5.0	4	3.0	3	2.4	3	0.6	12	1.5
Not recorded	30	75.0	98	73.7	108	86.4	469	90.0	705	86.1
Under supervision by relatives (initial 2 months)										
>90%	14	35.0	4	3.0	2	1.6	16	3.1	36	4.4
>75%	0	0.0	0	0.0	1	0.8	2	0.4	3	0.4
>50%	0	0.0	1	0.8	0	0.0	1	0.2	2	0.2
>25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≤25%	0	0.0	8	6.0	3	2.4	11	2.1	22	2.7
Not recorded	26	65.0	120	90.2	119	95.2	491	94.2	756	92.3
Under supervision by relatives (subsequent 4 months)										
>90%	14	35.0	4	3.0	2	1.6	15	2.9	35	4.3
>75%	0	0.0	0	0.0	1	0.8	2	0.4	3	0.4
>50%	0	0.0	1	0.8	0	0.0	1	0.2	2	0.2
>25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≤25%	0	0.0	8	6.0	3	2.4	7	1.3	18	2.2
Not recorded	26	65.0	120	90.2	119	95.2	496	95.2	761	92.9
Supplied for unsupervised treatment (initial 2 months)										
<5%	2	5.0	8	6.0	3	2.4	17	3.3	30	3.7
<10%	0	0.0	0	0.0	0	0.0	2	0.4	2	0.2
<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%	2	5.0	21	15.8	12	9.6	6	1.2	41	5.0
Not recorded	36	90.0	104	78.2	110	88.0	496	95.2	746	91.1
Supplied for unsupervised treatment (subsequent 4 months)										
<5%	1	2.5	8	6.0	3	2.4	13	2.5	25	3.1
<10%	1	2.5	0	0.0	0	0.0	1	0.2	2	0.2
<15%	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
<25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≥50%	2	5.0	21	15.8	12	9.6	6	1.2	41	5.0
Not recorded	36	90.0	104	78.2	110	88.0	500	96.0	750	91.6
Defaulted (initial 2 months)										
<5%	3	7.5	8	6.0	4	3.2	17	3.3	32	3.9
<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	2	1.6	0	0.0	2	0.2
Not recorded	37	92.5	125	94.0	119	95.2	504	96.7	785	95.8
Defaulted (subsequent 4 months)										
<5%	3	7.5	8	6.0	4	3.2	11	2.1	26	3.2
<10%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<15%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<25%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<50%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
≥50%	0	0.0	0	0.0	1	0.8	1	0.2	2	0.2
Not recorded	37	92.5	125	94.0	120	96.0	509	97.7	791	96.6

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	26	65.0	46	34.6	24	19.2	33	6.3	129	15.8
Still on treatment	4	10.0	18	13.5	14	11.2	29	5.6	65	7.9
Died	0	0.0	8	6.0	17	13.6	249	47.8	274	33.5
Transferred	2	5.0	15	11.3	17	13.6	35	6.7	69	8.4
Defaulted	1	2.5	4	3.0	5	4.0	2	0.4	12	1.5
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	7	17.5	42	31.6	48	38.4	173	33.2	270	33.0
Total	40	100.0	133	100.0	125	100.0	521	100.0	819	100.0
Outcome at 12 months										
Cured/ treatment completed	31	77.5	62	46.6	34	27.2	46	8.8	173	21.1
Still on treatment	0	0.0	1	0.8	3	2.4	3	0.6	7	0.9
Died	0	0.0	8	6.0	18	14.4	252	48.4	278	33.9
Transferred	2	5.0	17	12.8	16	12.8	38	7.3	73	8.9
Defaulted	1	2.5	3	2.3	4	3.2	4	0.8	12	1.5
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	6	15.0	42	31.6	50	40.0	178	34.2	276	33.7
Total	40	100.0	133	100.0	125	100.0	521	100.0	819	100.0
Outcome at 24 months										
Cured/ treatment completed	31	77.5	65	48.9	34	27.2	46	8.8	176	21.5
Still on treatment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Died	0	0.0	8	6.0	18	14.4	252	48.4	278	33.9
Transferred	2	5.0	17	12.8	17	13.6	38	7.3	74	9.0
Defaulted	1	2.5	3	2.3	4	3.2	4	0.8	12	1.5
Failure	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not recorded	6	15.0	40	30.1	52	41.6	181	34.7	279	34.1
Total	40	100.0	133	100.0	125	100.0	521	100.0	819	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	1683	93.5	3148	92.8	25	96.2
No	117	6.5	243	7.2	1	3.8
Total	1800	100	3391	100.0	26	100.0
Age group						
0 to 19	81	4.5	137	4.0	0	0.0
Female	48		77		0	
Male	33		60		0	
20 to 39	443	24.6	798	23.5	12	46.2
Female	216		375		3	
Male	227		423		9	
40 to 59	497	27.6	878	25.9	8	30.8
Female	109		212		2	
Male	388		666		6	
60+	779	43.3	1578	46.5	6	23.1
Female	170		370		1	
Male	609		1208		5	
Total	1800	100.0	3391	100.0	26	100.0
Female	543	30.2	1034	30.5	6	23.1
Male	1257	69.8	2357	69.5	20	76.9
Marital status						
Single	466	25.9	802	23.7	5	19.2
Married	1201	66.7	2341	69.0	20	76.9
Separated	10	0.6	16	0.5	0	0.0
Divorce	37	2.1	59	1.7	1	3.8
Widowed	43	2.4	90	2.7	0	0.0
Not recorded	43	2.4	83	2.4	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Smoking status						
Never	667	37.1	1314	38.7	14	53.8
Ex-smoker	586	32.6	1049	30.9	5	19.2
Current smoker	471	26.2	871	25.7	5	19.2
Not recorded	76	4.2	157	4.6	2	7.7
Total	1800	100.0	3391	100.0	26	100.0
Institution-related						
Yes	203	11.3	443	13.1	4	15.4
No	1576	87.6	2899	85.5	22	84.6
Not recorded	21	1.2	49	1.4	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Institution						
Client	157	-	330	-	4	-
Staff	10	-	40	-	0	-
Institution type						
Old age home	87	-	207	-	1	-
School	64	-	113	-	1	-
Hospital	12	-	38	-	0	-
Handicapped	3	-	5	-	0	-
Prison	17	-	34	-	2	-
Others	6	-	17	-	22	-

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	11	0.3	1	3.8
Cubicle bed space	15	0.8	33	1.0	0	0.0
Institution	102	5.7	241	7.1	3	11.5
Work quarter	7	0.4	13	0.4	0	0.0
Alone (not above)	187	10.4	327	9.6	1	3.8
With friends	45	2.5	78	2.3	0	0.0
With family	1411	78.4	2628	77.5	21	80.8
Not recorded	27	1.5	60	1.8	0	0.0
Residential status						
Permanent resident	1640	91.1	3124	92.1	17	65.4
Chinese immigrant	56	3.1	84	2.5	4	15.4
Imported worker	56	3.1	73	2.2	0	0.0
Tourist - 2 way permit Chinese	5	0.3	15	0.4	2	7.7
Other tourist	4	0.2	7	0.2	2	7.7
Vietnamese	5	0.3	12	0.4	1	3.8
Illegal immigrants	8	0.4	11	0.3	0	0.0
Not recorded	26	1.4	65	1.9	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Place of birth						
Hong Kong	681	37.8	1206	35.6	8	30.8
Mainland China	934	51.9	1842	54.3	14	53.8
Others	144	8.0	243	7.2	4	15.4
Not recorded	41	2.3	100	2.9	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Ethnicity						
Chinese	1674	93.0	3190	94.1	23	88.5
Other Asian	97	5.4	146	4.3	3	11.5
Caucasian	0	0.0	1	0.0	0	0.0
Others	3	0.2	5	0.1	0	0.0
Not recorded	26	1.4	49	1.4	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Previous BCG history						
Yes	510	28.3	895	26.4	11	42.3
No	612	34.0	1198	35.3	9	34.6
Unknown	678	37.7	1298	38.3	6	23.1
Total	1800	100.0	3391	100.0	26	100.0
BCG scar						
Yes	484	-	754	-	11	-
No	1093	-	131	-	12	-
Employment status						
Full-time	571	31.7	1004	29.6	8	30.8
Part-time	58	3.2	110	3.2	0	0.0
Retired	586	32.6	1192	35.2	6	23.1
Unemployed	269	14.9	481	14.2	2	7.7
Housewife	200	11.1	387	11.4	6	23.1
Student	76	4.2	132	3.9	1	3.8
Not recorded	40	2.2	85	2.5	3	11.5
Total	1800	100.0	3391	100.0	26	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	725	40.3	1337	39.4	10	38.5
White collar	194	10.8	360	10.6	1	3.8
Medical	0	0.0	2	0.1	0	0.0
Nursing	3	0.2	11	0.3	0	0.0
Paramedical	1	0.1	3	0.1	0	0.0
Supporting health staff	2	0.1	5	0.1	0	0.0
Not applicable	484	26.9	935	27.6	10	38.5
Not recorded	391	21.7	738	21.8	5	19.2
Total	1800	100.0	3391	100.0	26	100.0
First presentation						
Private doctor	256	14.2	443	13.1	3	11.5
Private hospital	22	1.2	42	1.2	0	0.0
GOPC	100	5.6	176	5.2	3	11.5
Chest Clinic	275	15.3	632	18.6	8	30.8
Other DH Clinic	42	2.3	85	2.5	2	7.7
HA Clinic	46	2.6	96	2.8	1	3.8
HA Hospital	1036	57.6	1867	55.1	9	34.6
Mainland	11	0.6	18	0.5	0	0.0
Overseas	3	0.2	7	0.2	0	0.0
Not recorded	9	0.5	25	0.7	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Symptomatic on presentation						
Y	1695	94.2	3085	91.0	24	92.3
N	97	5.4	283	8.3	2	7.7
Not recorded	8	0.4	23	0.7	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Chest symptoms	1410	-	2545	-	17	-
Systemic symptoms	265	-	402	-	1	-
Other site-specific symptoms	77	-	166	-	2	-
Reason for presentation						
Symptom	1636	90.9	2937	86.6	23	88.5
Contact screening	15	0.8	54	1.6	0	0.0
Pre-employment	6	0.3	24	0.7	1	3.8
Pre-emigration	2	0.1	8	0.2	0	0.0
Other body check	34	1.9	118	3.5	1	3.8
Incidental to other illness	94	5.2	220	6.5	1	3.8
Others	4	0.2	8	0.2	0	0.0
Not recorded	9	0.5	22	0.6	0	0.0
Total	1800	100.0	3391	100.0	26	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	89	4.9	180	5.3	0	0.0
No	1688	93.8	3160	93.2	0	0.0
Not recorded	23	1.3	51	1.5	26	100.0
Total	1800	100.0	3391	100.0	26	100.0
Contact type						
Household	57	-	114	-	0	-
Work	3	-	10	-	0	-
Casual	9	-	18	-	0	-
Time of contact						
Within 2 year	31	-	62	-	0	-
Over 2 year	33	-	49	-	0	-
Previous chemoprophylaxis						
Yes	9	-	20	-	0	-
Reason for chemoprophylaxis						
Contact	1	-	1	-	0	-
Silicosis	0	-	1	-	0	-
HIV	0	-	0	-	0	-
Old scar on CXR	1	-	1	-	0	-
Others	3	-	8	-	0	-
Disease Classification						
Pulmonary TB only	1677	93.2	3108	91.7	23	88.5
Both pulm & extrapulm	123	6.8	283	8.3	3	11.5
Total	1800	100.0	3391	100.0	26	100.0
Case category						
New case	1630	90.6	2973	87.7	17	65.4
Relapse	149	8.3	376	11.1	8	30.8
Treatment after default	21	1.2	41	1.2	1	3.8
Failure of previous treatment	0	0.0	1	0.0	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Disease characteristics (pulmonary cases)						
Extent = 1	616	34.2	1579	46.6	9	34.6
Extent=1 & cavity=N	*492*	*27.3*	*1400*	*41.3*	*4*	*15.4*
Extent=1 & cavity=Y	*124*	*6.9*	*179*	*5.3*	*5*	*19.2*
Extent = 2	727	40.4	1161	34.2	10	38.5
Extent=2 & cavity=N	*504*	*28.0*	*894*	*26.4*	*9*	*34.6*
Extent=2 & cavity=Y	*223*	*12.4*	*267*	*7.9*	*1*	*3.8*
Extent=3	395	21.9	489	14.4	6	23.1
Extent=3 & cavity=N	*218*	*12.1*	*296*	*8.7*	*1*	*3.8*
Extent=3 & cavity=Y	*177*	*9.8*	*193*	*5.7*	*5*	*19.2*
Extent=not specified	62	3.4	162	4.8	1	3.8
Extent=ns & cavity=N	*58*	*3.2*	*156*	*4.6*	*1*	*3.8*
Extent=ns & cavity=Y	*4*	*0.2*	*6*	*0.2*	*0*	*0.0*
Cavity=N	1272	70.7	2746	81.0	15	57.7
Cavity=Y	528	29.3	645	19.0	11	42.3
6-month short course treatment						
Yes	343	19.1	797	23.5	1	3.8
2HRZE+4HR	263	14.6	612	18.0	0	0.0
2HRZS+4HR	24	1.3	59	1.7	0	0.0
Other standard regimen based on HRZES						
Yes	960	53.3	1642	48.4	3	11.5

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%	1350	75.0	2448	72.2	22	84.6
>75%	145	8.1	274	8.1	1	3.8
>50%	100	5.6	218	6.4	0	0.0
>25%	46	2.6	94	2.8	0	0.0
≤25%	52	2.9	121	3.6	1	3.8
Not recorded	107	5.9	236	7.0	2	7.7
Under DOT at chest clinic, hospital, CNS or other health staff (subsequent 4 months)						
>90%	1065	59.2	1925	56.8	15	57.7
>75%	175	9.7	349	10.3	5	19.2
>50%	133	7.4	237	7.0	1	3.8
>25%	96	5.3	178	5.2	0	0.0
≤25%	136	7.6	295	8.7	2	7.7
Not recorded	195	10.8	407	12.0	3	11.5
Under supervision by relatives (initial 2 months)						
>90%	18	1.0	41	1.2	0	0.0
>75%	6	0.3	17	0.5	0	0.0
>50%	8	0.4	16	0.5	0	0.0
>25%	9	0.5	27	0.8	0	0.0
≤25%	1303	72.4	2428	71.6	22	84.6
Not recorded	456	25.3	862	25.4	4	15.4
Under supervision by relatives (subsequent 4 months)						
>90%	17	0.9	44	1.3	0	0.0
>75%	16	0.9	34	1.0	1	3.8
>50%	18	1.0	36	1.1	0	0.0
>25%	12	0.7	31	0.9	0	0.0
≤25%	1230	68.3	2292	67.6	19	73.1
Not recorded	507	28.2	954	28.1	6	23.1
Supplied for unsupervised treatment (initial 2 months)						
<5%	1261	70.1	2315	68.3	22	84.6
<10%	62	3.4	125	3.7	0	0.0
<15%	54	3.0	85	2.5	1	3.8
<25%	59	3.3	134	4.0	0	0.0
<50%	64	3.6	133	3.9	0	0.0
≥50%	79	4.4	153	4.5	0	0.0
Not recorded	221	12.3	446	13.2	3	11.5
Supplied for unsupervised treatment (subsequent 4 months)						
<5%	1051	58.4	1930	56.9	16	61.5
<10%	82	4.6	142	4.2	1	3.8
<15%	70	3.9	134	4.0	4	15.4
<25%	75	4.2	152	4.5	0	0.0
<50%	91	5.1	169	5.0	0	0.0
≥50%	179	9.9	352	10.4	0	0.0
Not recorded	252	14.0	512	15.1	5	19.2
Defaulted (initial 2 months)						
<5%	1402	77.9	2592	76.4	22	84.6
<10%	35	1.9	63	1.9	0	0.0
<15%	18	1.0	33	1.0	0	0.0
<25%	31	1.7	64	1.9	0	0.0
<50%	19	1.1	37	1.1	1	3.8
≥50%	18	1.0	50	1.5	0	0.0
Not recorded	277	15.4	552	16.3	3	11.5
Defaulted (subsequent 4 months)						
<5%	1296	72.0	2429	71.6	18	69.2
<10%	53	2.9	87	2.6	1	3.8
<15%	23	1.3	51	1.5	1	3.8
<25%	44	2.4	70	2.1	1	3.8
<50%	27	1.5	51	1.5	1	3.8
≥50%	41	2.3	71	2.1	0	0.0
Not recorded	316	17.6	632	18.6	4	15.4

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	513	28.5	1145	33.8	1	3.8
Still on treatment	1052	58.4	1759	51.9	22	84.6
Died	121	6.7	234	6.9	0	0.0
Transferred	58	3.2	110	3.2	1	3.8
Defaulted	44	2.4	107	3.2	2	7.7
Failure	0	0.0	0	0.0	0	0.0
Not recorded	12	0.7	36	1.1	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Outcome at 12 months						
Cured/ treatment completed	1334	74.1	2534	74.7	4	15.4
Still on treatment	158	8.8	262	7.7	16	61.5
Died	141	7.8	266	7.8	0	0.0
Transferred	51	2.8	97	2.9	1	3.8
Defaulted	71	3.9	143	4.2	5	19.2
Failure	0	0.0	0	0.0	0	0.0
Not recorded	45	2.5	89	2.6	0	0.0
Total	1800	100.0	3391	100.0	26	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	1508	83.8	2845	83.9	19	73.1
Still on treatment	4	0.2	6	0.2	0	0.0
Died	153	8.5	282	8.3	0	0.0
Transferred	46	2.6	87	2.6	1	3.8
Defaulted	68	3.8	132	3.9	6	23.1
Failure	0	0.0	0	0.0	0	0.0
Not recorded	21	1.2	39	1.2	0	0.0
Total	1800	100.0	3391	100.0	26	100.0
Among those cured/ treatment completed						
Bacteriological conversion	1468	97.3	2755	96.8	17	89.5
Radiological improvement	1327	88.0	2341	82.3	16	84.2
Other clinical improvement	370	24.5	693	24.4	8	42.1
No evidence of response	2	0.1	7	0.2	0	0.0
After treatment completed:						
No relapse	1176	78.0	2207	77.6	16	84.2
Loss to follow up	223	14.8	400	14.1	3	15.8
Died	22	1.5	64	2.2	0	0.0
TB-related	*1*		*1*		*0*	
Not TB-related	*15*		*39*		*0*	
Unknown	*6*		*24*		*0*	
Relapse	18	1.2	21	0.7	0	0.0
Bacteriological	*13*		*16*		*0*	
Histological	*3*		*3*		*0*	
Clinico-radiological	*2*		*2*		*0*	
Not recorded	69	4.6	153	5.4	0	0.0
Among those still on treatment						
Reasons for still on treatment:						
Retreatment case	0	-	0	-	0	-
Extrapulmonary disease	0	-	0	-	0	-
Extensive disease	0	-	0	-	0	-
Interrupted treatment	3	-	4	-	0	-
Drug resistance	1	-	1	-	0	-
Poor response	0	-	0	-	0	-
Others	1	-	2	-	0	-
Among those died - causes of death:						
TB-related cause	22	14.4	37	13.1	0	-
Not TB-related	80	52.3	151	53.5	0	-
Unknown	51	33.3	94	33.3	0	-
Among those transferred, new sources of care:						
GP	3	5.9	4	4.6	0	0.0
Chest Clinic	4	7.8	7	8.0	0	0.0
Hospital	4	7.8	9	10.3	0	0.0
Outside HK	30	58.8	54	62.1	1	3.8
Not recorded	5	9.8	13	14.9	0	0.0
Among those defaulted						
Never found	47	69.1	86	65.2	3	50.0
Retreated after default	10	14.7	21	15.9	1	16.7
Treatment stopped by doctor	7	10.3	11	8.3	1	16.7
Not recorded	4	5.9	14	10.6	1	16.7

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	132	7.7	224	7.0	16	64.0
Streptomycin - S	1581	92.3	2982	93.0	9	36.0
Isoniazid - R	96	5.6	165	5.1	26	100.0
Isoniazid - S	1618	94.4	3042	94.9	0	0.0
Rifampicin - R	21	1.2	32	1.0	26	100.0
Rifampicin - S	1692	98.8	3174	99.0	0	0.0
Ethambutol - R	16	0.9	31	1.0	12	50.0
Ethambutol - S	1695	99.1	3173	99.0	12	50.0
Pyrazinamide - R	6	8.1	13	9.6	4	26.7
Pyrazinamide - S	68	91.9	122	90.4	11	73.3
Ofloxacin - R	4	4.2	8	4.8	1	4.2
Ofloxacin - S	91	95.8	158	95.2	23	95.8
Smear conversion rates						
1. Smear at 2 month = N (a)	1001				11	
2. Smear at 2 month = P (b)	188				5	
2. Sm 2m (P); Sm 3m (N) (c)	101				3	
2. Sm 2m (P); Sm 3m (P) (d)	45				1	
2. Sm 2m (P); Sm 3m (U) (e)	42				1	
3. Smear at 2 month = U (f)	611				10	
3. Sm 2m (U); Sm 3m (N) (g)	210				3	
3. Sm 2m (U); Sm 3m (P) (h)	18				0	
3. Sm 2m (U); Sm 3m (U) (i)	383				7	
Overall percentage of smear conversion at 2m = (a)/ [(a)+(b)]						
	84.2		-		68.8	
Overall percentage of smear conversion at 3m = [(a)+(c)+(g)]/ [(a)+(c)+(d)+(g)+(h)]						
	95.4		-		94.4	
Culture conversion rates						
1. Culture at 2 month = N (a)			1771		9	
2. Culture at 2 month = P (b)			243		7	
2. Cu 2m (P); Cu 3m (N) (c)			126		3	
2. Cu 2m (P); Cu 3m (P) (d)			36		3	
2. Cu 2m (P); Cu 3m (U) (e)			81		1	
3. Culture at 2 month = U (f)			1377		10	
3. Cu 2m (U); Cu 3m (N) (g)			427		3	
3. Cu 2m (U); Cu 3m (P) (h)			21		0	
3. Cu 2m (U); Cu 3m (U) (i)			929		7	
Overall percentage of culture conversion at 2m = (a)/ [(a)+(b)]						
	-		87.9		56.3	
Overall percentage of culture conversion at 3m = [(a)+(c)+(g)]/ [(a)+(c)+(d)+(g)+(h)]						
	-		97.6		83.3	

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	1526	93.6	157	92.4
No	104	6.4	13	7.6
Total	1630	100.0	170	100.0
Age group				
0 to 19	81	5.0	0	0.0
Female	48		0	
Male	33		0	
20 to 39	428	26.3	15	8.8
Female	206		10	
Male	222		5	
40 to 59	452	27.7	45	26.5
Female	100		9	
Male	352		36	
60+	669	41.0	110	64.7
Female	157		13	
Male	512		97	
Total	1630	100.0	170	100.0
Female	511	31.3	32	18.8
Male	1119	68.7	138	81.2
Disease Classification				
Pulmonary TB only	1518	93.1	159	93.5
Both pulmon and extrapulm	112	6.9	11	6.5
Total	1630	100.0	170	100.0
6-month short course treatment				
Yes	325	19.9	18	10.6
2HRZE+4HR	255	15.6	8	4.7
2HRZS+4HR	23	1.4	1	0.6
Other standard regimen based on HRZES				
Yes	864	53.0	96	56.5
Outcome at 6 months				
Cured/ treatment completed	493	30.2	20	11.8
Still on treatment	932	57.2	120	70.6
Died	104	6.4	17	10.0
Transferred	54	3.3	4	2.4
Defaulted	36	2.2	8	4.7
Failure	0	0.0	0	0.0
Not recorded	11	0.7	1	0.6
Total	1630	100.0	170	100.0
Outcome at 12 months				
Cured/ treatment completed	1223	75.0	111	65.3
Still on treatment	142	8.7	16	9.4
Died	121	7.4	20	11.8
Transferred	46	2.8	5	2.9
Defaulted	58	3.6	13	7.6
Failure	0	0.0	0	0.0
Not recorded	40	2.5	5	2.9
Total	1630	100.0	170	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	1379	84.6	129	75.9
Still on treatment	3	0.2	1	0.6
Died	133	8.2	20	11.8
Transferred	40	2.5	6	3.5
Defaulted	55	3.4	13	7.6
Failure	0	0.0	0	0.0
Not recorded	20	1.2	1	0.6
Total	1630	100.0	170	100.0
Among those cured/ treatment completed				
Bacteriological conversion	1340	97.2	128	99.2
Radiological improvement	1215	88.1	112	86.8
Other clinical improvement	339	24.6	31	24.0
No evidence of response	2	0.1	0	0.0
After treatment completed:				
No relapse	1082	78.5	94	72.9
Loss to follow up	199	14.4	24	18.6
Died	19	1.4	3	2.3
TB-related	*0*		*1*	
Not TB-related	*14*		*1*	
Unknown	*5*		*1*	
Relapse	15	1.1	3	2.3
Bacteriological	*10*		*3*	
Histological	*3*		*0*	
Clinico-radiological	*2*		*0*	
Not recorded	64	4.6	5	3.9
Among those still on treatment				
Reasons for still on treatment:				
Retreatment case	0	-	0	-
Extrapulmonary disease	0	-	0	-
Extensive disease	0	-	0	-
Interrupted treatment	2	-	1	-
Drug resistance	1	-	0	-
Poor response	0	-	0	-
Others	1	-	0	-
Among those died - causes of death:				
TB-related cause	21	15.8	1	5.0
Not TB-related	69	51.9	11	55.0
Unknown	43	32.3	8	40.0
Among those transferred, new sources of care:				
GP	3	7.5	0	0.0
Chest Clinic	4	10.0	0	0.0
Hospital	3	7.5	1	16.7
Outside HK	26	65.0	4	66.7
Not recorded	4	10.0	1	16.7
Among those defaulted				
Never found	38	69.1	9	69.2
Retreated after default	7	12.7	3	23.1
Treatment stopped by doctor	6	10.9	1	7.7
Not recorded	4	7.3	0	0.0

Annex 1 (e) - Treatment defaulters - 01

Ever seen at chest clinics

Yes	218	94.8
No	12	5.2
Total	230	100.0

Age group

0 to 19	8	3.5
Female	2	
Male	6	
20 to 39	101	43.9
Female	42	
Male	59	
40 to 59	66	28.7
Female	11	
Male	55	
60+	55	23.9
Female	10	
Male	45	
Total	230	100.0
Female	65	28.3
Male	165	71.7

Marital status

Single	82	35.7
Married	128	55.7
Separated	1	0.4
Divorce	11	4.8
Widowed	4	1.7
Not recorded	4	1.7
Total	230	100.0

Smoking status

Never	68	29.6
Ex-smoker	41	17.8
Current smoker	110	47.8
Not recorded	11	4.8
Total	230	100.0

Institution-related

Yes	19	8.3
No	207	90.0
Not recorded	4	1.7
Total	230	100.0

Institution

Client	14	-
Staff	0	-

Institution type

Old age home	5	-
School	2	-
Hospital	0	-
Handicapped	0	-
Prison	10	-
Others	1	-

Annex 1 (e) - Treatment defaulters - 02

Living situation

Street-sleeper	5	2.2
Cubicle bed space	1	0.4
Institution	15	6.5
Work quarter	6	2.6
Alone (not above)	38	16.5
With friends	11	4.8
With family	145	63.0
Not recorded	9	3.9

Residential status

Permanent resident	183	79.6
Chinese immigrant	10	4.3
Imported worker	21	9.1
Tourist - 2 way permit Chinese	2	0.9
Other tourist	3	1.3
Vietnamese	4	1.7
Illegal immigrants	2	0.9
Not recorded	5	2.2
Total	230	100.0

Place of birth

Hong Kong	79	34.3
Mainland China	102	44.3
Others	44	19.1
Not recorded	5	2.2
Total	230	100.0

Ethnicity

Chinese	184	80.0
Other Asian	43	18.7
Caucasian	0	0.0
Others	0	0.0
Not recorded	3	1.3
Total	230	100.0

Employment status

Full-time	88	38.3
Part-time	6	2.6
Retired	49	21.3
Unemployed	66	28.7
Housewife	16	7.0
Student	1	0.4
Not recorded	4	1.7
Total	230	100.0

Occupation

Blue collar	107	46.5
White collar	20	8.7
Medical	0	0.0
Nursing	0	0.0
Paramedical	0	0.0
Supporting health staff	0	0.0
Not applicable	59	25.7
Not recorded	44	19.1
Total	230	100.0

Annex 1 (e) - Treatment defaulters - 03

First presentation

Private doctor	28	12.2
Private hospital	1	0.4
GOPC	11	4.8
Chest Clinic	46	20.0
Other DH Clinic	16	7.0
HA Clinic	10	4.3
HA Hospital	113	49.1
Mainland	3	1.3
Overseas	0	0.0
Not recorded	2	0.9
Total	230	100.0

Symptomatic on presentation

Y	194	84.3
N	35	15.2
Not recorded	1	0.4
Total	230	100.0

Chest symptoms	146	-
Systemic symptoms	22	-
Other site-specific symptoms	29	-

Reason for presentation

Symptom	181	78.7
Contact screening	6	2.6
Pre-employment	4	1.7
Pre-emigration	0	0.0
Other body check	20	8.7
Incidental to other illness	16	7.0
Others	2	0.9
Not recorded	1	0.4
Total	230	100.0

Contact with TB patients

Yes	11	4.8
No	214	93.0
Not recorded	5	2.2
Total	230	100.0

Contact type

Household	6	-
Work	0	-
Casual	1	-

Time of contact

Within 2 year	3	-
Over 2 year	5	-

Annex 1 (e) - Treatment defaulters - 04

Previous chemoprophylaxis

Yes	1	-

Reason for chemoprophylaxis

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

Disease Classification

Pulmonary TB only	191	83.0
Extrapulmonary TB only	20	8.7
Both	19	8.3
Total	230	100.0

Case category

New case	196	85.2
Relapse	15	6.5
Treatment after default	19	8.3
Failure of previous treatment	0	0.0
Total	230	100.0

Disease characteristics (pulmonary cases)

Pretreatment smear +ve	71	33.8
Pretreatment culture +ve	132	62.9
Extent = 1	125	59.5
Extent=1 & cavity=N	*112*	*53.3*
Extent=1 & cavity=Y	*13*	*6.2*
Extent = 2	53	25.2
Extent=2 & cavity=N	*41*	*19.5*
Extent=2 & cavity=Y	*12*	*5.7*
Extent=3	22	10.5
Extent=3 & cavity=N	*14*	*6.7*
Extent=3 & cavity=Y	*8*	*3.8*
Extent=not specified	10	4.8
Extent=ns & cavity=N	*10*	*4.8*
Extent=ns & cavity=Y	*0*	*0.0*
Cavity=N	177	84.3
Cavity=Y	33	15.7

6-month short course treatment

Yes	27	11.7
2HRZE+4HR	15	6.5
2HRZS+4HR	0	0.0

Other standard regimen based on HRZES

Yes	83	36.1

Among those defaulted

Never found	157	68.3
Retreated after default	27	11.7
Treatment stopped by doctor	21	9.1
Not recorded	25	10.9

Annex 1 (e) - Treatment defaulters - 05

Treatment supervision

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

>90%	78	33.9
>75%	33	14.3
>50%	27	11.7
>25%	11	4.8
≤25%	36	15.7
Not recorded	45	19.6

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

>90%	22	9.6
>75%	15	6.5
>50%	16	7.0
>25%	23	10.0
≤25%	53	23.0
Not recorded	101	43.9

Under supervision by relatives (initial 2 months)

>90%	0	0.0
>75%	2	0.9
>50%	0	0.0
>25%	0	0.0
≤25%	136	59.1
Not recorded	92	40.0

Under supervision by relatives (subsequent 4 months)

>90%	0	0.0
>75%	1	0.4
>50%	1	0.4
>25%	2	0.9
≤25%	97	42.2
Not recorded	129	56.1

Supplied for unsupervised treatment (initial 2 months)

<5%	136	59.1
<10%	7	3.0
<15%	3	1.3
<25%	16	7.0
<50%	3	1.3
≥50%	5	2.2
Not recorded	60	26.1

Supplied for unsupervised treatment (subsequent 4 months)

<5%	89	38.7
<10%	6	2.6
<15%	4	1.7
<25%	11	4.8
<50%	10	4.3
≥50%	6	2.6
Not recorded	51	22.2

Defaulted (initial 2 months)

<5%	76	33.0
<10%	8	3.5
<15%	12	5.2
<25%	19	8.3
<50%	23	10.0
≥50%	38	16.5
Not recorded	54	23.5

Defaulted (subsequent 4 months)

<5%	26	11.3
<10%	3	1.3
<15%	6	2.6
<25%	15	6.5
<50%	22	9.6
≥50%	58	25.2
Not recorded	100	43.5

Annex 1 (f) Sources completing Programme Forms

Sources completing Programme Forms	PFA	PFB1	PFB2	PFC	PFD
Chest Clinics	4443	5824	5832	5623	5700
Hospital Authority	2072	505	478	426	304
Private Practitioners/ Private Hospitals	51	38	43	40	8
Correctional Services and Others	95	49	44	31	19
Not Recorded	43	288	307	584	673
Total	6704	6704	6704	6704	6704

Breakdown for Hospital Authority:

Alice Ho Miu Ling Nethersole Hospital	62	24	21	18	8
Caritas Medical Centre	14	11	10	10	5
Castle Peak Hospital	11	12	14	12	5
Duchess of Kent Children Hospital	2	2	1	0	0
Fung Yiu King Hospital	1	0	0	0	0
Grantham Hospital	253	41	39	34	28
Haven of Hope Hospital	106	38	39	27	19
Kowloon Hospital	281	19	16	13	10
Kwong Wah Hospital	50	32	30	29	15
North District Hospital	57	38	40	38	32
Our Lady of Maryknoll Hospital	11	4	4	4	2
Pamela Youde Nethersole Eastern Hospital	13	8	8	8	6
Pok Oi Hospital	4	4	4	4	4
Prince of Wales Hospital	127	15	15	13	10
Princess Margaret Hospital	84	2	2	2	2
Queen Elizabeth Hospital	175	49	48	44	39
Queen Mary Hospital	45	8	10	9	5
Ruttonjee Hospital	165	56	52	43	26
Shatin Hospital	4	2	2	2	0
Tai Po Hospital	19	10	9	8	8
Tseung Kwan O Hosital	25	8	5	5	5
Tuen Mun Hospital	110	10	6	6	2
Tung Wah Eastern Hospital	4	1	0	0	0
Tung Wah Hospital	14	7	7	7	7
United Christian Hospital	111	49	43	39	24
Wong Tai Sin Hospital	304	44	43	41	33
Wong Chuk Hang Hospital	1	1	0	0	0
Yan Chai Hospital	19	10	10	10	9
Total	2072	505	478	426	304

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	2000	2001	2002	2003	2004
Notified TB cases who are Chinese New Immigrants (with years of arrival in Hong Kong)	≤1 year	36	42	43	66	27
	≤2 year	20	36	30	15	19
	≤3 year	18	26	13	15	13
	≤4 year	26	25	20	16	11
	≤5 year	15	28	26	24	9
	≤6 year	17	12	30	22	11
	≤7 year	20	23	24	19	20
	Total	152	192	186	177	110
Overall notified TB cases		7578	7262	6602	6024	6226

The above table shows the number of all notified TB cases in Hong Kong from 2000 to 2004 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 2000 to 2004 are 113.7, 108.0, 97.3, 88.5 and 90.5 respectively.

From Annex 2 (b), the overall estimated rates (per 100,000) among the new immigrants from 2000 to 2004 are 41.8, 50.6, 49.1, 47.7 and 30.7 respectively. The rates are lower than those of the general Hong Kong population. Although Mainland China has been classified by the World Health Organisation 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 (2000-2004)

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

	2000	2000	2000	2001	2001	2001	2002	2002	2002	2003	2003	2003	2004	2004	2004
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	7	8	15	10	20	30	15	13	28	12	12	24	4	12	16
20-39	14	69	83	26	77	103	16	77	93	23	77	100	8	56	64
40-59	6	31	37	14	32	46	12	34	46	8	21	29	8	12	20
60+	10	7	17	7	6	13	9	10	19	12	12	24	5	5	10
Total	37	115	152	57	135	192	52	134	186	55	122	177	25	85	110

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

	2000	2000	2000	2001	2001	2001	2002	2002	2002	2003	2003	2003	2004	2004	2004
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	8.3	10.2	9.2	11.6	24.4	17.9	17.8	16.0	16.9	15.4	15.8	15.6	5.3	16.3	10.8
20-39	59.8	64.6	63.7	102.5	67.0	73.4	65.3	64.5	64.7	96.8	59.5	65.3	34.9	42.5	41.4
40-59	76.5	62.1	64.1	172.6	65.6	80.9	148.8	73.0	84.2	96.3	51.7	59.3	94.2	36.8	48.7
60+	375.2	64.5	125.8	256.9	52.0	91.2	326.8	83.8	129.3	447.4	97.4	159.9	198.3	42.8	70.3
Total	31.4	46.7	41.8	46.7	52.5	50.6	43.6	51.7	49.1	48.8	47.2	47.7	22.9	34.1	30.7

Annex 2 (c)

TB Notification and Rates (All Cases) By Age & Sex (2000-2004)

All TB cases by age and sex

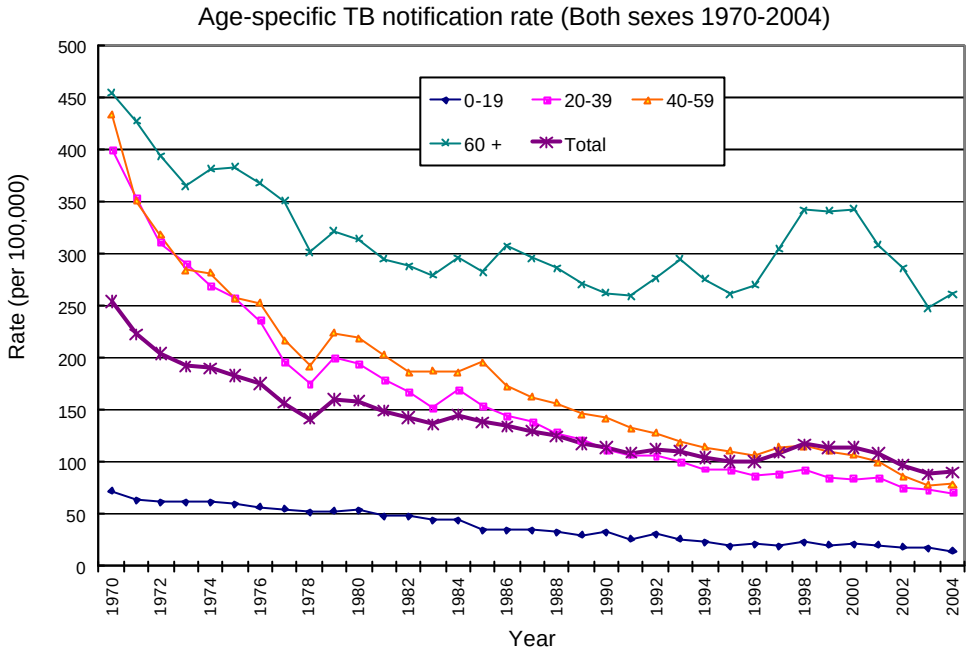
	2000	2000	2000	2001	2001	2001	2002	2002	2002	2003	2003	2003	2004	2004	2004
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	160	176	336	150	171	321	139	140	279	139	126	265	96	124	220
20-39	948	967	1915	951	983	1934	778	883	1661	744	832	1576	696	823	1519
40-59	1390	552	1942	1303	604	1907	1215	528	1743	1150	484	1634	1209	527	1736
60+	2475	910	3385	2268	832	3100	2157	762	2919	1895	654	2549	1987	764	2751
Total	4973	2605	7578	4672	2590	7262	4289	2313	6602	3928	2096	6024	3988	2238	6226

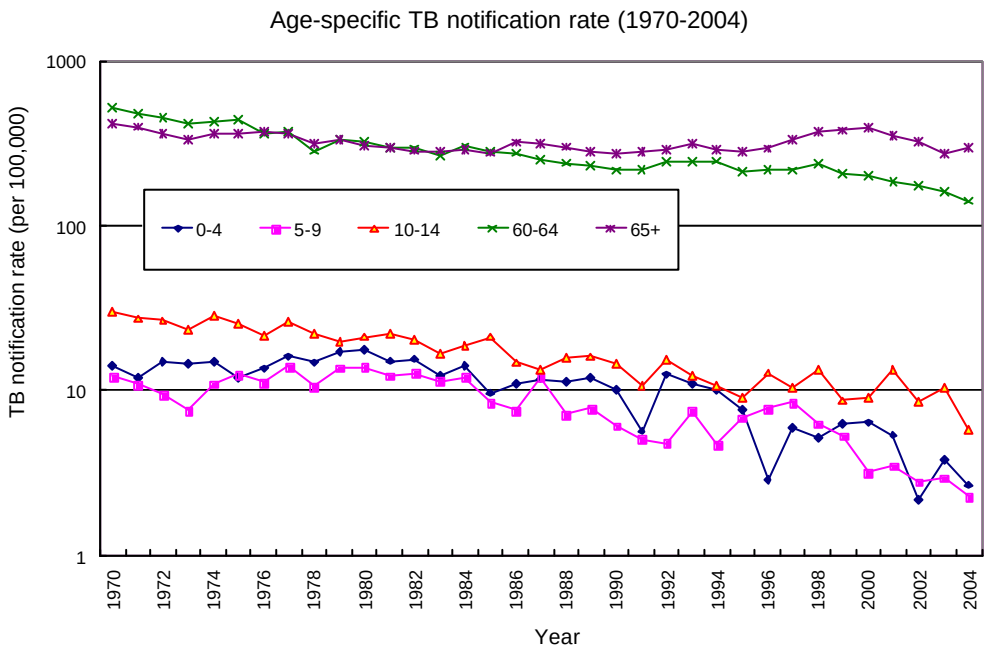
Rate of TB (all notified cases) (per 100,000)

	2000	2000	2000	2001	2001	2001	2002	2002	2002	2003	2003	2003	2004	2004	2004
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-19	19.5	23.0	21.2	18.7	22.8	20.7	17.6	18.8	18.2	17.9	17.3	17.6	12.6	17.2	14.8
20-39	90.0	79.2	84.2	91.9	80.2	85.6	76.6	73.0	74.7	75.3	70.5	72.7	71.3	70.0	70.6
40-59	149.4	62.3	106.9	134.5	64.2	99.8	120.9	52.6	86.7	110.7	45.5	77.7	112.8	46.8	79.0
60+	524.4	176.8	343.1	470.4	159.3	308.6	442.3	143.6	286.7	384.6	122.3	248.1	394.0	139.8	261.8
Total	151.8	76.9	113.7	142.1	75.3	108.0	130.0	66.3	97.3	119.2	59.7	88.5	120.3	62.7	90.5

Annex 3

Trend of age-specific TB notification rates (1970-2004)





- 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.

Part 4

SUPPLEMENT

Part 4 – Supplement: Contents

Supplement

1 Ambulatory treatment and public health measures for a patient with uncomplicated pulmonary tuberculosis (Update 2004)

2 Guidelines on tuberculin testing and treatment of latent TB infection among silicotic patients in Hong Kong (2004)

3 Notification forms
   (a) DH1A(s)(Rev.99) (for notification of TB to Department of Health)
   (b) LD483(Rev.11.6.1999) (for notification of occupational TB and other notifiable occupational diseases to Labour Department)

AMBULATORY TREATMENT AND PUBLIC HEALTH MEASURES FOR A PATIENT WITH UNCOMPLICATED PULMONARY TUBERCULOSIS

(UPDATE 2004)

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

TB&CS/DH0402

INTRODUCTION

In Hong Kong, there are around 7,000 notified cases of tuberculosis (TB) each year. Ambulatory chemotherapy has been the mainstay of anti-TB treatment. The majority of notified TB cases are managed in the chest clinics of the Tuberculosis & Chest Service (TB&CS) under the administration of the Department of Health (DH). Others are treated at various medical units of the Hospital Authority and in the private sector. It is a statutory requirement for every case of active TB to be notified to DH according to the Prevention of the Spread of Infectious Diseases Regulations under the Quarantine and Prevention of Disease Ordinance (Cap. 141). Notification serves two main purposes, namely, epidemiological surveillance and contact investigation. Prompt notification facilitates contact tracing procedures and helps to contain the spread of the infection. Details of the notification procedure can be found in the "Guidance notes for notification of tuberculosis" [1].

The TB&CS operates 18 chest clinics located at various sites in the Hong Kong Special Administrative Region. The services are free of charge to ensure that TB patients will not be denied access because of financial difficulty. Today, emphasis is placed on encouraging patients with symptoms suggestive of TB to seek medical attention early, so called "passive case finding", rather than indiscriminate screening of asymptomatic individuals. This article provides a general view of the practice of the TB&CS in the management of a patient with uncomplicated pulmonary TB.

MANAGEMENT OF THE PATIENT WITH TB

Aim

There are two main objectives in managing a TB patient. The first is to cure the individual patient. The second is to contain the spread of the infection. In this regard, the health care provider has a responsibility to monitor every TB patient for treatment adherence till completion.

History

As TB is endemic in Hong Kong, a high index of suspicion should be maintained, especially for patients presenting with symptoms like persistent cough for over 3 to 4 weeks, blood in sputum, weight loss, persistent fever, or night sweating. In assessing a patient presenting with persistent chest and/ or constitutional symptoms, a full

medical history is essential. Particularly important issues in the history include previous history of TB, coexisting medical illnesses, occupational history, contact history, and smoking status. If a positive culture of *Mycobacterium tuberculosis* has been isolated from the sputum of the probable source case, the sensitivity pattern may help in the choice of initial drug regimen for the patient. Any evidence of previous BCG vaccination is to be noted especially if the patient is a child.

Physical examination

Physical examination not uncommonly yields negative findings. Some features may be worth mentioning, including: general condition, cervical lymph node enlargement, features of pleural effusion, and unilateral wheeze related to endobronchial involvement. The physical findings may help in the consideration of differential diagnoses, e.g., a lung nodule is more likely to be a carcinoma than a tuberculoma in the presence of finger clubbing.

Investigation

Chest radiograph and sputum examination for acid fast bacilli (AFB) are essential tools employed for the diagnosis of pulmonary TB. The chest radiograph is a relatively simple and sensitive test. Typical radiographic changes, like apical lesions, tend to have a higher positive predictive value for TB in an endemic area like Hong Kong. Sputum samples, preferably collected on two to three consecutive mornings, are sent for direct smear and culture examination. Positive smear results are reported back to the clinics over the phone or by fax so that patients can be called back for early commencement of treatment. If direct smears are negative, clinico-radiological correlation is essential in deciding the next step of action. In certain situations, trial of antibiotics, and follow-up chest radiograph in one to two weeks may be required to differentiate TB from other types of community-acquired pneumonia. The use of radiometric cultures and the more advanced laboratory techniques like molecular and amplification tests can shorten the time required for bacteriological diagnosis and susceptibility tests, though at a higher cost. In more difficult cases, it may be necessary to resort to further investigations like CT scan, fibreoptic bronchoscopy, and percutaneous transthoracic fine needle aspirate. Thus, the diagnosis of active pulmonary TB may be based on any combination of clinical, radiological, bacteriological, and sometimes histological grounds. The use of tuberculin test is rather limited in the local setting, partly as a result of widespread BCG vaccination and revaccination, although the latter has been stopped since September 2000. Despite such limitation, the test may still give

useful information in certain clinical situations, especially among the younger age group, and in case assessment for need of treatment of latent TB infection is required.

In the TB&CS, identification and susceptibility tests to the first-line anti-TB drugs (isoniazid, rifampicin, ethambutol and streptomycin) are regularly preformed for all pretreatment culture isolates which are positive for *Mycobacteria tuberculosis*. Susceptibility tests to second-line drugs are performed, if there is multi-drug resistance (resistant to at least isoniazid and rifampicin), or with other clinical indications. The drug susceptibility test results provide a guide to the clinical management of the patient, and also allow epidemiological surveillance of drug resistance rates and evaluation of the local TB control programme.

Notification

Cases diagnosed as active pulmonary TB should be notified promptly to DH [1]. If the patient happens to be a health-care worker or working in other relevant occupations with increased risk of exposure to TB, notification to the Labour Department is required under the Occupational Safety and Health Ordinance [2].

Treatment

"Short course chemotherapy" is the current standard treatment for active pulmonary TB. The regimen consists of a two-month initial phase comprising four drugs, namely, isoniazid, rifampicin, pyrazinamide, and either ethambutol or streptomycin, plus a four-month continuation phase of two drugs, namely, isoniazid and rifampicin, making a total duration of six months [2,3,4]. The drugs can be given either daily or three times weekly at the appropriate dosages (Tables 1 and 2). The drugs should, as far as possible, be taken together in one single dose each time and not in split doses in order to achieve good therapeutic efficacy. Combined drug preparations (e.g. rifater, rifinah) are useful alternatives but have to be given daily. While they help to avoid monotherapy with a single drug, they do not allow flexible dosage adjustment of the individual components of the regimen. TB patients are generally managed as an outpatient for ambulatory care unless there are other indications for hospital admission.

Contraindications to the use of the anti-TB drugs should be noted prior to commencement of therapy, in particular: history of major diseases such as liver and renal diseases, visual problem, hearing problem, drug allergy, and concomitant treatment with other medications. Young females are counselled on pregnancy-related issues, especially

the reduced efficacy of oral contraceptives due to interaction with rifampicin, and alternative contraceptive methods may have to be recommended. Pretreatment blood tests for liver function, renal function, HBsAg [2,5] and HIV antibody (after counselling and obtaining patient's consent) are performed. Baseline vision tests for visual acuity and colour perception are also performed if ethambutol is to be started [2,6]. There have been accumulating evidences to indicate that closer monitoring of liver function for HBsAg carriers may be required during anti-TB treatment [5]. Health education is given on the nature of the disease, personal hygiene, necessity for full adherence with drug treatment, and the possible pharmacological and side effects of the anti-TB drugs (e.g., discoloration of urine, faeces, tear and other body fluids). This is supplemented by written educational materials. Self-reporting of side effects is also advised. The importance of health education on drug-induced hepatotoxicity and ocular toxicity have been emphasized in the two relevant sets of local guidelines [2,5,6]. The establishment of good rapport from the very beginning is essential for the success of the treatment programme.

Public health measures

The health nurses will enquire the patient about his close contacts (usually the household members), and contact screening will be offered to them. Casual contacts are, in general, not targeted for screening because of the low cost-effectiveness, although this has to be assessed on a case-by-case basis. Contact tracing normally follows the "stone-in-the-pond principle". Under this principle, contact tracing will be limited first to the innermost circle with the highest degree of close contact, and if more cases are found, consideration may be given to screen successively the outer circles with lesser degree of contact. However, examination of contacts should be considered mainly as an adjunctive measure in the overall TB control programme as only a relatively small proportion of TB cases can be found through this route. A more effective approach would be to emphasize on health education and early awareness of suspicious symptoms.

The sputum smear status is a general guide to the infectiousness of the TB patient. Those patients with severe cough, cavitatory disease, and positive sputum smear are likely to be highly infectious. Prompt initiation of treatment is crucial as infectiousness rapidly decreases with effective treatment. Health education, personal hygiene measures, maintenance of good indoor ventilation and screening of close contacts are useful adjunctive measures to reduce the risk of transmission. Sick leave may be granted for the period during which infectivity is considered significant on a case-by-case basis. In general, infectivity is reduced very significantly when two weeks of anti-TB

treatment containing rifampicin has been taken. Particular concern should be paid to infectious patients who are in frequent contact with susceptible people, such as teachers, staff of homes for the elderly, and medical personnel working for debilitated patients, where more stringent measures may be necessary.

DOT and other monitoring measures

In the chest clinics, anti-TB medication is given under direct observation by the health nurses to ensure full adherence. Directly observed treatment (DOT), complemented by holistic care, is strongly recommended by the World Health Organisation (WHO) as one of the most important TB control measures, and is crucial for the success of the treatment programme. DOT by a health care worker also facilitates closer clinical monitoring of adverse drug effects.

During the initial phase of chemotherapy, follow-up consultation is arranged monthly to assess progress, and to reinforce patient adherence. For patients at risk of drug-induced hepatitis, including HBsAg carriers, those with pre-existing liver diseases, the alcoholics, the very old, and the malnourished, it would be desirable to monitor liver function tests once every two weeks during the initial two months of treatment, or more frequently as clinically indicated [2,5]. In the absence of any risk factors, routine biochemical monitoring may not be necessary, but liver function test should be performed if clinical features suspicious of hepatitis arise, such as fever, nausea, vomiting, anorexia and jaundice.

There is controversy about the role of regular follow-up visual testing for patients put on ethambutol. This may, however, be considered if ethambutol is to be prescribed to some patients at a higher risk of oculotoxicity, especially when a high dose (25 mg/kg/day) is used or treatment is prolonged [2,6].

A chest radiograph is usually taken at the second or third month to assess progress. If the pretreatment bacteriology is positive, sputum examination after the second month will be done to assess whether there is conversion to negativity. If the bacteriology then is still positive, a further sputum examination after the third month is indicated. Prolongation of the treatment duration has been recommended by some authorities in case the sputum shows slow bacteriological conversion and cavitary disease is present [7].

Treatment defaulters will be approached by the health nurses through various

means, including telephone calls, visits, and mail. Adherence is positively enhanced through health education and an assisting approach. The underlying reasons for defaulting should be identified and possible solutions are provided to restore adherence. Through the work of the medical social workers, incentives like nutrition allowance or other forms of social assistance may be introduced for eligible patients to enhance treatment adherence. Minimizing non-adherence is vital for the overall success of the TB control programme.

At the end of six months' treatment, the patient is assessed with a repeat chest radiograph and sputum examination. After stopping treatment, further health education is delivered to the patient on issues like maintenance of a healthy lifestyle, and returning for assessment should symptoms suspicious of TB recur. Relapse of TB should be uncommon after adequate chemotherapy and regular follow up is not a necessity in general. However, for the purposes of outcome evaluation, TB patients are followed up in the chest clinics periodically for two or more years. In fact, standardized "Programme Forms" are being used for continuous evaluation of the service programme in the TB&CS since 1998 and an updated version of the Forms has been introduced since 2001 and extended for use to other health care sectors including the Hospital Authority and the private sector. Data collected include information on demography, past history of treatment, type of TB (pulmonary or extrapulmonary), extent of disease (if pulmonary), case category (new, relapse, treatment after default and treatment after failure), date of starting treatment (DOS), bacteriological status at certain time points, drug susceptibility test results, and treatment outcome at selected time intervals from DOS. Monitoring of treatment outcome is an essential component of the Directly Observed Treatment-Short Course Programme (DOTS) advocated by the WHO.

Complicating issues

From time to time, complicating issues may be present, including extensive disease, slow bacteriological conversion, poor general condition, diagnostic dilemma, treatment failure related to poor adherence and drug resistance, concurrent medical diseases, and adverse drug reactions etc. Opinion from experienced physicians in this field has to be sought and hospital admission may be required. Modification of the drug regimen may be necessary, for example, in cases with drug-induced hepatitis [5]. Transient rise of liver enzymes may occur, and it does not, by itself, represent genuine hepatotoxicity. The following cut-off levels are recommended for withholding potentially hepatotoxic anti-TB drugs in patients without symptoms: (i) alanine transaminase rising to three times the upper limit of normal or the baseline; or (ii) bilirubin

level rising to two times the upper limit of normal or the baseline. A more cautious approach should be adopted in the presence of symptoms suggestive of hepatitis, in which case anti-TB drugs may have to be stopped before the availability of the test results.

Care should also be taken not to add a single drug to a failing regimen (the addition phenomenon), otherwise resistance to the newly added drug will soon develop. Desensitization may be required with drug-induced hypersensitivity skin rash, but care should be taken not to induce emergence of drug-resistant organisms during this process. TB in children is more difficult to diagnose, and treatment with ethambutol should be avoided especially for those under six years old as they may not be able to report visual symptoms reliably. Thus, childhood TB should be managed by an experienced physician. On the other hand, TB in the elderly may have atypical presentations, and there is a higher incidence of side effects from drugs among this population.

The American Thoracic Society, Centres for Disease Control and Prevention and Infectious Diseases Society of America have recently issued a joint official statement on the treatment of tuberculosis [7]. The interested reader may also refer to it for further information.

CONCLUSION

The most important reason for failure of anti-tuberculous treatment is poor adherence. Studies have shown that there is no good way to predict adherence to drug therapy. DOT is thus the best available tool to ensure drug adherence. The cost of DOT is justified because it avoids the greater cost required for the management of failure cases, relapse cases, complications, late effects and even worse, drug-resistant cases. Furthermore, without an effective treatment programme, the spread of TB would lead to an even higher healthcare and economic burden. The management of a case of TB demands the combination of good professional knowledge in clinical medicine as well as adequate attention on public health measures.

Although the local TB situation has much improved in the past 50 years, it is certainly still a major public health concern. In fact, the notification rate has remained relatively stagnant, staying at around 100 per 100,000, in the past decade. The maintenance of a strong infrastructure for the delivery of anti-TB service is required to combat and prevent the resurgence of this disease. The rate of latent infection in the local population is still high, especially among senior citizens. Many more years of work will be required before any sign of elimination of the disease will come to light.

REFERENCES

1. *Leung CC, Tam CM. Guidance notes for notification of tuberculosis. Public Health & Epidemiology Bulletin 1999;8(4):36-9.*
2. *Website on "Tuberculosis in Hong Kong". <http://www.info.gov.hk/tb_chest>*
3. *The Tuberculosis Control Coordinating Committee of the Hong Kong Department of Health and the Tuberculosis Subcommittee of the Coordinating Committee in Internal Medicine of the Hospital Authority, Hong Kong. Chemotherapy of tuberculosis in Hong Kong: a consensus statement. Hong Kong Med J 1998;4:315-20.*
4. *The Tuberculosis Control Coordinating Committee of the Hong Kong Department of Health and the Tuberculosis Subcommittee of the Coordinating Committee in Internal Medicine of the Hospital Authority, Hong Kong. Chemotherapy of tuberculosis in Hong Kong – update in 2001: a consensus statement. Annual Report of TB & Chest Service of Hong Kong Department of Health; 2001 (Suppl).*
5. *The Tuberculosis Control Coordinating Committee of the Hong Kong Department of Health and the Tuberculosis Subcommittee of the Coordinating Committee in Internal Medicine of the Hospital Authority, Hong Kong. Monitoring for hepatotoxicity during antituberculosis treatment – general recommendations. Annual Report of TB & Chest Service of Hong Kong Department of Health; 2002(Suppl).*
6. *Tuberculosis & Chest Service of the Hong Kong Department of Health. Preventive measures against drug-induced ocular toxicity during antituberculosis treatment – internal guidelines. Annual Report of TB & Chest Service of Hong Kong Department of Health; 2002(Suppl).*
7. *American Thoracic Society/ Centers for Disease Control and Prevention/ Infectious Diseases Society of America: Treatment of tuberculosis. Am J Respir Crit Care Med 2003;167:603-62.*

Table 1: Standard regimen for anti-tuberculosis treatment

Initial phase (2 months)	Isoniazid+Rifampicin+Pyrazinamide+Ethambutol/Streptomycin
Continuation phase (4 months)	Isoniazid+Rifampicin

Table 2: Usual dosages of first-line anti-tuberculosis 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 ≥50	450 mg 600mg	10-12 three times/week	-	600 mg
Streptomycin *	12-15	<50 ≥50	500-750mg 750-1000 mg	12-15	<50 ≥50	500-750mg 750-1000 mg
Pyrazinamide	25-30	<50 ≥50	1.0-1.5 g 1.5-2.0 g	30-40 three times/week	<50 ≥50	2.0 g 2.5g
Ethambutol	15	-		30 three times/week	-	-

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

(Abstracted from Annual Report 2004 of the Chest Service of the Department of Health, HKSAR)

Guidelines on tuberculin testing and treatment of latent TB infection among silicotic patients in Hong Kong

(2004)

Internal guidelines of
the Pneumoconiosis Clinic 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. Silicotic subjects are at high risk of developing tuberculosis (TB). Two local studies have quantified the annual risk of TB in silicotic subjects, which is in the range of approximately 3-5% per annum [2,3]. The development of tuberculosis has often been associated with accelerated lung tissue injury, further deterioration in lung function and increase in mortality.
4. Tuberculin test has been in regular use for the diagnosis of LTBI for many years. A positive reaction can result from infection by *Mycobacterium tuberculosis*, previous BCG vaccination or cross-reaction caused by non-tuberculous mycobacteria. A higher cut-off point of 15mm or over is more likely to indicate LTBI than reaction of smaller sizes[4,5]. Most of our silicotic patients are over the age of 60. They are unlikely to have received BCG vaccination, because the practice was started only in the 1950s. However, it is uncertain whether infection with other environmental mycobacteria may lead to a false-positive tuberculin response.
5. 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].
6. 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].

7. In a previous study in Hong Kong[2], 6 months of isoniazid, 3 months of isoniazid plus rifampicin, and 3 months of rifampicin gave comparable results, and reduced the incidence of TB by about 50%.
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 silicotic patients in Hong Kong.

Tuberculin testing

Tuberculin test will be offered to all silicotic patients without a history of confirmed tuberculosis. Retesting will also be offered if the last tuberculin test was less than 10mm and taken more than 5 years ago.

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 be read 48 to 72 hours later, and entered into the medical records.

Patients with tuberculin reaction at 10 mm or above should be assessed to exclude active TB before treatment for LTBI is offered. Stable clinical condition, absence of systemic symptoms, stable radiological feature (apart from natural disease progression), and negative sputum smears (and cultures if available) are useful to exclude active disease.

For those with tuberculin reaction less than 10mm, there is no need to retest for booster phenomenon. Instead, retesting will be offered after 5 years.

Irrespective of tuberculin status, all silicotic patients should be given health education on early recognition of symptoms suggestive of TB.

Treatment of latent tuberculosis infection

Who to treat

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. Silicosis confirmed by the Pneumoconiosis Medical Board.
2. Profusion of category 1 or above
3. A positive tuberculin skin test response defined as an induration ≥ 10 mm in response to 2 units of PPD RT23.

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. Symptomatic hepatitis or known case of liver cirrhosis at enrollment
5. Alanine transaminase (ALT) above the upper limit of normal on at least 2 occasions separated by 2 weeks. (If the patient has been started on treatment with a single pretreatment ALT above the upper limit of normal (but < 1.5X), the treatment should be closely monitored, with the criteria for stopping treatment as stated in the section on management of drug-induced liver dysfunction below).
6. Alcoholism (habitual alcohol drinkers with alcohol **dependence**), even if alcohol use will be discontinued during treatment
7. Concurrently taking other medications commonly associated with clinically significant liver injury
8. Poor general condition
9. Reluctance and / or inability to take medications or attend for follow-up

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

Regimen for latent TB infection

A course of isoniazid 300 mg daily for 6 months (180 doses) will be offered. 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. An alternative regimen of rifampicin (450 mg for those weighed < 50kg, 600mg for those weighed ≥ 50 kg) daily for 4 months will be offered if there is past intolerance or probable resistance to isoniazid.

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. Biweekly LFT during the initial two months is also recommended for those aged 35 or above. In those situations where the patient is unable or unwilling to come to the chest clinics every two weeks, LFT should be checked at least monthly in the initial two months and whenever there is clinical suspicion of hepatitis.
4. The drug calendar will be reviewed at each visit to assess compliance with treatment.
5. Treatment will be terminated for any adverse drug reactions that entail treatment interruption for more than 1 month.
6. 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.
7. 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.

8. After treatment, all patients should be offered regular follow-up as usual for their silicosis. Besides periodic CXR assessment, further investigations for TB will be performed upon clinical suspicion.

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 LFT returns to normal.

Definition of symptomatic hepatitis:

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 LFT returns to normal.

References

1. Targeted tuberculin testing and treatment of latent tuberculosis infection. CDC Morbidity and mortality weekly report *MMWR* 2000 ; Vol. 49, No. RR-6.
2. Hong Kong Chest Service/ Tuberculosis Research Centre, Madras/ British Medical Research Council. A double-blind placebo-controlled clinical trial of three anti-tuberculosis chemoprophylaxis regimens in patients with silicosis in Hong Kong. Am Rev Respir Dis 1992; 145: 36 – 41.
3. Chang KC, Leung CC, Tam CM. Tuberculosis risk factors in a silicotic cohort in Hong Kong. Int J Tuberc Lung Dis. 2001;5:177-84.
4. Edwards LB, Acquaviva FA, Livesay VT et al. An altas of sensitivity to tuberculin, PPD-B, and histoplasmin in the United States. Am Rev Respir Dis 1969;99:1-132.
5. Chee CB, Soh CH, Boudville IC, Chor SS, Wang YT. Interpretation of the tuberculin skin test in Mycobacterium bovis BCG-vaccinated Singaporean schoolchildren. *Am J Respir Crit Care Med.* 2001;164:958-61.
6. International Union Against Tuberculosis, Committee on Prophylaxis. Efficacy of various durations of isoniazid preventive therapy for tuberculosis. *Bull World Health Organ*. 1982; 60: 555 – 564.
7. Ferebee, S. H., and F. W. Mount. 1962. Tuberculosis morbidity in a controlled trial of the prophylactic use of isoniazid among household contacts. 85:490–521.
8. Comstock, G. W., and S. H. Ferebee. 1970. How much isoniazid is needed for prophylaxis? *Am. Rev. Respir. Dis.* 101:780–782.
9. Comstock, G. W. 1999. How much isoniazid is needed for prevention of tuberculosis among immunocompetent adults? *Int. J. Tuberc. Lung Dis.* 3:847–850.
10. Snider, D.E., Jr., G. J. Caras, and J. P. Koplan. 1986. Preventive therapy with isoniazid: costeffectiveness of different durations of therapy. J.A.M.A. 255:1579–1583.
11. Gordin F, Chaisson RE, Matts JP, Miller C, De Lourdes Garcia M, Hafner R, et al. Rifampicin and pyrazinamide vs isoniazid for prevention of tuberculosis in HIV-infected persons. *JAMA* 2000; 283: 1445 – 1450.
12. Leung CC, Law WS, Chang KC. et al. Initial experience of a randomized controlled trial on the treatment of latent tuberculosis infection among silicotic subjects in Hong Kong: two months of rifampin and pyrazinamide versus six months of isoniazid. *Chest* 2003; 124: 2112-8.
13. Gordin F, Chaisson RE, Matts JP, et al. Rifampin and pyrazinamide vs isoniazid for prevention of tuberculosis in HIV-infected persons. *JAMA* 2000; 283: 1445 – 1450.
14. CDC. Fatal and severe hepatitis associated with rifampin and pyrazinamide for the treatment of latent tuberculosis infection—New York and Georgia, 2000. *MMWR* 2000;50:289–91.
15. American Thoracic Society. Update: Fatal and severe liver injuries associated with rifampin and pyrazinamide for latent tuberculosis infection, and revisions in American Thoracic Society/CDC recommendations-United States, 2001. *Am J Respir Crit Care Med* 2001;164:1319-20.
16. Centers for Disease Control. Update: Fatal and severe liver injuries associated with rifampin and pyrazinamide treatment for latent tuberculosis infection. *Morb Mortal Wkly Rep* 2002 Nov 8; 51(44): 998-9.
17. Jasmer RM, Saukkonen JJ, Blumberg HM, et al. Short-course rifampin and pyrazinamide compared with isoniazid for latent tuberculosis infection: a multicenter clinical trial. *Ann Intern Med* 2002;137:640-7.
18. Wong WM, Wu PC, Yuen MF, et al. Antituberculosis drug-related liver dysfunction in chronic hepatitis B infection. Hepatology 2000; 31(1): 201-206.
19. Leung CC, Yew WW, Chan CK, et al. Tuberculosis in older people: a retrospective and comparative study from Hong Kong. *J Am Geriatr Soc* 2002; 50 (7): 1219-26
20. Kopanoff DE, Snider DE, Caras GJ. Isoniazid-related hepatitis: A US Public Health Service cooperative surveillance study. *Am Rev Respir Dis* 1978;117:991.

FORM 1

QUARANTINE AND PREVENTION OF DISEASE ORDINANCE

(Cap. 141)

TUBERCULOSIS NOTIFICATION

Particulars of Infected Person

Name in English	Name in Chinese	Age/Sex:	I.D. Card/Passport No.
Address:			Telephone Number:
Place of Work/ School Attended:			Telephone Number:

Site of TB		Sputum			Disposal		Hospital/Clinic sent to (if any):
Resp. System			Smear	Culture	On Treatment		
Meninges		Positive			On Observation		
Bone & Joint		Negative			Referred		Hospital No.:
Other(s)		Unknown			Died		

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: _____

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

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

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: _____

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