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AN UPDATE ON THE INFLUENZA A (H9N2) IN THE HONG KONG SPECIAL ADMINISTRATIVE REGION

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In March 1999, atypical influenza A virus was isolated from nasopharyngeal aspirates of two girls, aged four years and 13 months respectively, who suffered from influenza-like illnesses. The virus isolates were sent to overseas WHO Influenza Collaborating Reference Laboratories in London, United Kingdom and Atlanta, Georgia, United States of America for further identification. Both laboratories confirmed on 7 April 1999 that the isolates were an influenza A (H9N2) virus. Both girls recovered uneventfully. Since then, no further human case of H9N2 infections was discovered in the local population.

Investigation

A series of epidemiological investigations have been conducted to determine the extent of H9N2 infection in the local population, the mode of transmission of the virus, the risk factors involved and the relation between H9 infection in poultry and other animals and people.

Detailed clinical history and information concerning exposure to birds were obtained from the case-patients. Blood specimens for detection of antibody to H9N2 virus and information concerning respiratory illness, exposure to birds, etc. were collected from family contacts, school contacts and control subjects recruited from hospitals. On the other hand, blood

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samples obtained from blood donors, hospital blood specimens and stored blood of poultry workers were tested for H9N2 antibody to determine the prevalence of the infection in the community.

Animal prevalence studies have also been conducted by the Agricultural and Fisheries Department (AFD) in local poultry farms, wholesale and retail markets, covering both local birds and consignments of imported poultry.

Preliminary Results of Serological Studies

It was found that antibody against the influenza A (H3N2) virus, which is the common influenza virus in human, cross reacts with the reagent used to test for H9N2. Thus, meticulous efforts to remove as far as possible this cross reaction had to be made and the preliminary results of the serological tests are summarised in Table 1.

In the case investigation, antibody to H9N2 virus was only found in one (0.4%) out of the 233 persons tested. This seropositive person was a health care worker who had no history of exposure to the two H9N2 patients nor poultry. None of the contacts at home and school and the hospital staff who had taken care of the patients had tested positive.

In the prevalence study, one out of the 200 blood donors, two out of the 100 poultry workers and none of the 200 hospital staff and patients had tested positive.

Serology tests conducted by the AFD indicated that over 70% of the batches of poultry tested had evidence of exposure to H9 virus.

Discussion

The blood results suggested that H9N2 infection was uncommon in the local community. It appears that the antibody may be relatively more common in poultry workers.

Table 1 Preliminary Results of Serological Tests on Influenza A (H9N2), 1999

	Number tested	Number positive (%)
Case investigation		
Family contacts	17	0 (0.0%)
School contacts	63	0 (0.0%)
Hospital staff and patients	153	1 (0.7%)
Total	233	1 (0.4%)
Prevalence studies		
Red Cross blood donors	200	1 (0.5%)
Hospital blood samples	200	0 (0.0%)
Poultry workers (1997/98 samples)	100	2 (2.0%)
Total	500	3 (0.6%)

Gene sequencing revealed that the genes of H9N2 virus isolated from the patients were all avian in nature without evidence of re-assortment with human influenza virus genes.

Although test results from the AFD showed that over 70% of batches of poultry tested had evidence of exposure to H9 virus, it was noted that the virus usually causes mild symptoms, if any, among birds and poultry.

All the available results suggested that poultry was the source of infection and the main mode of H9N2 transmission was from bird-to-human. However, the possibility of person-to-person transmission remained open. The overall low prevalence of antibody among the various groups tested indicated that the transmission of the isolated H9N2 virus among the local population was relatively rare and inefficient. It is unlikely that the influenza A (H9N2) would pose any imminent major threat to public health.

The discovery of H9N2 infections in humans further illustrates the need to maintain vigilance in influenza surveillance in both humans and animals.

MORTALITY TRENDS OF THE ELDERLY IN THE HONG KONG SPECIAL ADMINISTRATIVE REGION, 1961 - 1997

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Introduction

Over the past decades, the population of the Hong Kong Special Administrative Region (HKSAR) has been ageing. The proportion of the elderly (defined as those aged 65 and above) increased from 3.2% in 1961 to 10.4% in 1997. The projected figures for the years 2006 and 2016 are 11.2% and 13.3% respectively. The health status of the aged represents one of the major concerns. This article aims to provide an overview of the mortality trends of the elderly in the HKSAR from 1961 to 1997.

Overview of the Mortality Patterns

In spite of an increase in the number of deaths of the elderly, a decreasing trend in crude death rate is observed (Table 1). The number of the elderly deaths increased continuously from 4 524 in 1961 to 23 247 in 1997, giving an annual rate of increase of 4.7%. The crude death rate however decreased by 23.7% from 45.2 per 1 000 population aged 65 and above in 1961 to 34.5 in 1997.

Adjusting for differences in the composition of the elderly population over the years, the death rate of the elderly is standardized according to the world standard population published in the 1996 World Health Statistics Annual. Similar to that of the crude death rate, a downward trend is observed for the age-standardized death rate. The age-standardized death rate of the elderly was 50.1 per 1 000 population aged 65 and above in 1961. The figure dropped by 36.5% to 31.8 in 1997.

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Table 1 Number of Deaths, Crude Death Rate and Age-standardized Death Rate of the Elderly by Sex in the HKSAR, 1961 - 1997

Year	Number of deaths			Crude death rate (1)			Age-standardized death rate (2)		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
1961	1 923	2 601	4 524	60.1	38.2	45.2	65.0	43.1	50.1
1965	2 470	3 255	5 725	58.5	36.7	43.7	64.7	38.6	46.7
1969	3 338	4 340	7 678	63.3	39.5	47.2	69.6	40.8	49.9
1973	4 154	5 135	9 289	58.0	37.3	44.4	63.6	36.6	45.7
1977	5 303	6 623	11 926	54.8	40.3	45.7	61.3	38.8	47.0
1981	6 530	7 360	13 890	46.9	35.9	40.3	52.1	34.0	41.3
1985	7 412	7 895	15 307	43.5	33.5	37.7	48.1	30.7	37.6
1989	9 452	9 180	18 632	46.3	34.6	39.6	49.1	30.6	38.4
1993	10 666	10 266	20 932	44.1	33.7	38.3	45.4	29.7	36.7
1997	12 203	11 044	23 247	39.9	30.1	34.5	39.9	25.1	31.8

Notes : (1) Number of deaths of the elderly aged 65 and above per 1 000 population of the respective sex of this age group.

(2) The death rates are standardized according to the world standard population published in the 1996 World Health Statistics Annual.

*Cause-specific Mortality **

Malignant neoplasms, heart diseases (including hypertensive heart disease), pneumonia, cerebrovascular disease, and nephritis, nephrotic syndrome and nephrosis were the major killers of the elderly in 1997 (Table 2). In fact, the first four causes of death accounted for some 72% of all elderly deaths in 1997. It is also observed that the death rates of these causes of death of male were higher than those of female, except cerebrovascular disease.

The five leading causes of death observed in 1997 were in fact the same leading causes of death of the elderly throughout the years under study. Figure 1 shows the sex-cause-specific death rates of the major causes of death of the elderly from 1961 to 1997. It is observed that the death rate of malignant neoplasms of male increased substantially by 93.9% from 6.6 per 1 000 population of male aged 65 and above in 1961 to 12.8 in 1997 (11.4 in 1979). The corresponding figure of female increased by 67.4% from 4.3 per 1 000 population of female aged 65 and above in 1961 to 7.2 in 1997 (6.4 in 1979).

Concerning the trends of death rates of heart diseases and cerebrovascular disease, the death rates of male showed a more remarkable decline than those of female. The death rate of heart diseases of male dropped by 44.1% from 11.1 per 1 000 population of male aged 65 and above in

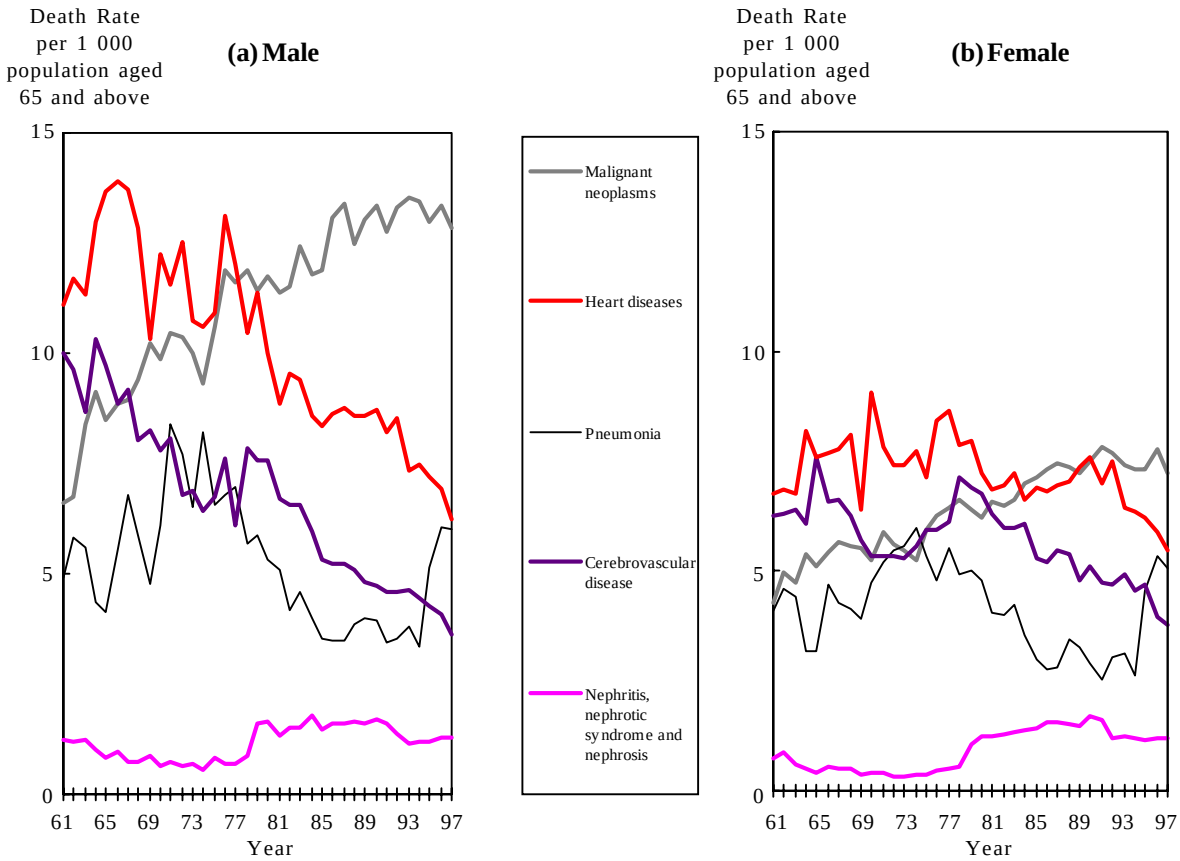
* Classification of causes of death in this article is based on the seventh (from 1961 to 1968), the eighth (from 1969 to 1978) and the ninth revisions (from 1979 to 1997) of the International Statistical Classification of Diseases (ICD). Conversions of the codes among the different revisions of the ICD are required in the compilation of statistics.

Table 2 Number of Deaths and Death Rate of Major Causes of Death of the Elderly by Sex in the HKSAR, 1997

Cause of Death [1]	Male		Female		Both Sexes	
	Number of Deaths	Death Rate [2]	Number of Deaths	Death Rate [2]	Number of Deaths	Death Rate [2]
Malignant neoplasms (140 - 208)	3 929	12.8	2 647	7.2	6 576	9.8
Heart diseases (390 - 429)	1 910	6.2	2 018	5.5	3 928	5.8
Pneumonia (480 - 486)	1 841	6.0	1 862	5.1	3 703	5.5
Cerebrovascular disease (430 - 438)	1 104	3.6	1 390	3.8	2 494	3.7
Nephritis, nephrotic syndrome and nephrosis (580 - 589)	389	1.3	440	1.2	829	1.2
Others	3 030	9.9	2 687	7.3	5 717	8.5
Total deaths	12 203	39.9	11 044	30.1	23 247	34.5

Notes : (1) Figures in brackets denote the detailed list numbers of the causes in the ninth Revision of ICD.
(2) Number of deaths of the elderly aged 65 and above per 1 000 population of the respective sex of this age group.

Figure 1 Death Rate of Major Causes of Death of the Elderly by Sex in the HKSAR, 1961 - 1997



1961 to 6.2 in 1997 (11.4 in 1979) while that of female decreased by 19.1% from 6.8 per 1 000 population of female aged 65 and above in 1961 to 5.5 in 1997 (8.0 in 1979).

The death rate of cerebrovascular disease of male dropped by 64.0% from 10.0 per 1 000 population of male aged 65 and above in 1961 to 3.6 in 1997 (7.6 in 1979). The corresponding figure of female was 6.3 per 1 000 population of female aged 65 and above in 1961. It decreased by 39.7% to 3.8 in 1997 (6.9 in 1979).

It is also worth noting that the death rates of pneumonia for both male and female had been increasing since 1995. The figures for 1997 were 6.0 for male and 5.1 for female, which were approaching to the death rates of heart diseases of both sexes in 1997.

The standardized death rates of the respective sex also depicted a similar pattern of the death rate of the major causes of death of the elderly over the years under study.

Regarding the proportionate mortality, malignant neoplasms accounted for an average of 15.1% of all deaths of the elderly from 1961 to 1979 while heart diseases accounted for an average of 19.7% during the same period (Figure 2). However, malignant neoplasms has replaced heart diseases as the top killer since 1980. The proportionate mortality of malignant neoplasms leaped from 19.6% in 1980 to 28.3% in 1997 while that of heart diseases dropped from 19.4% to 16.9% during the same period. On the other hand, more of the elderly deaths was caused by pneumonia in recent years (8.9% in 1993 and 15.9% in 1997).

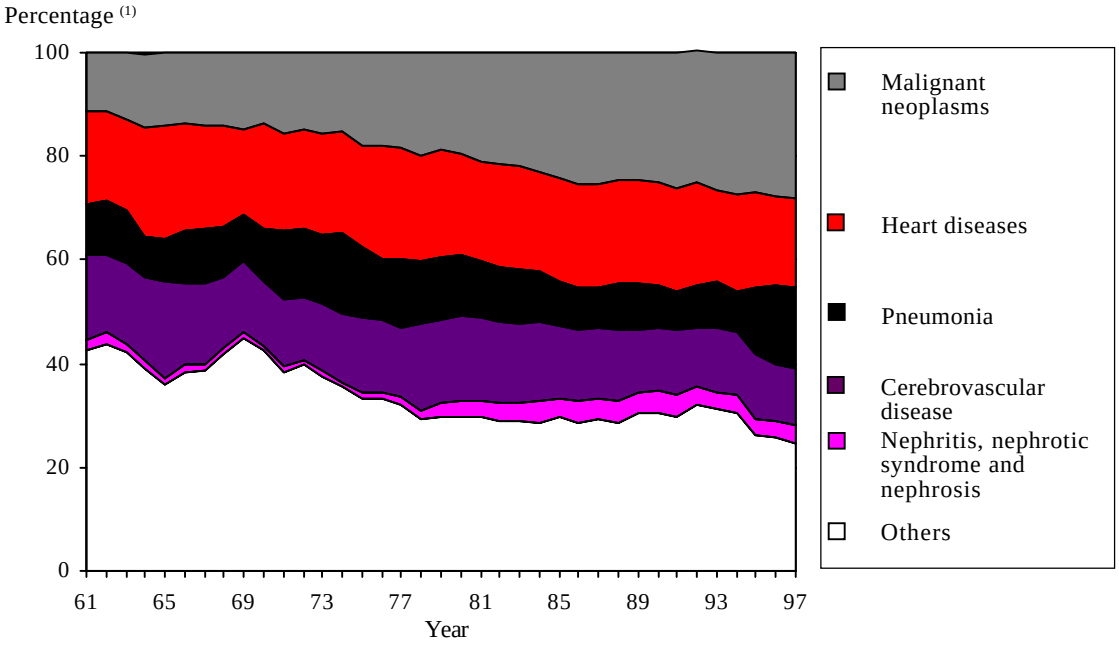
From 1961 to 1997, the proportionate mortality of malignant neoplasms of male increased at a faster pace than that of female (Table 3). In 1961, heart diseases accounted for 18.5% of all deaths of the elderly male, followed by cerebrovascular disease (16.6%) and malignant neoplasms (11.0%). In 1997, the top three killers of male were malignant neoplasms (32.2%), heart diseases (15.7%) and pneumonia (15.1%). Concerning the female, the same pattern is observed. In 1961, heart diseases accounted for 17.8% of all deaths of the elderly female, followed by cerebrovascular disease (16.4%) and malignant neoplasms (11.2%). In 1997, the top three killers of female were malignant neoplasms (24.0%), heart diseases (18.3%) and pneumonia (16.9%). The proportionate mortality of cerebrovascular disease dropped to 9.0% for male and 12.6% for female in 1997.

Discussion

It is shown that although the number of deaths of the elderly increased continuously during the period from 1961 to 1997, the corresponding crude death rate and age-standardized death rate decreased. Such decline in mortality rate among the elderly in the HKSAR was in line with the experience of many developed countries[1].

The increasing proportionate mortality rate of cancers among the elderly in the HKSAR probably reflected both the increasing cancer death rate and the effect of decreasing proportions of death from other major causes of death (except pneumonia). Among the various types of cancers, lung cancer was the leading cause of cancer deaths in both elderly male and female. The high lung cancer mortality in male is not unexpected, given the higher prevalence of smoking in male in the HKSAR in the earlier decades. According to a local study conducted in 1995 - 1996[2], the percentage of current smokers was 33% in male 65 years and over, and 32-41% among 25-64 years old male.

Figure 2 Proportionate Mortality [(1)] of Major Causes of Death of the Elderly in the HKSAR, 1961 - 1997



Note : (1) Percentage of cause-specific deaths of the elderly to all deaths of the elderly.

Table 3 Proportionate Mortality of Major Causes of Death of the Elderly by Sex in the HKSAR, 1961 - 1997

Year	Malignant neoplasms			Heart diseases			Pneumonia			Cerebrovascular disease			Nephritis, nephrotic syndrome and nephrosis			Others		
	Male (%)	Female (%)	Both sexes (%)	Male (%)	Female (%)	Both sexes (%)	Male (%)	Female (%)	Both sexes (%)	Male (%)	Female (%)	Both sexes (%)	Male (%)	Female (%)	Both sexes (%)	Male (%)	Female (%)	Both sexes (%)
1961	11.0	11.2	11.1	18.5	17.8	18.1	8.2	10.7	9.6	16.6	16.4	16.5	2.0	1.9	1.9	43.7	42.0	42.7
1965	14.5	13.9	14.1	23.3	20.7	21.8	7.1	8.7	8.0	16.6	20.7	19.0	1.4	1.1	1.2	37.0	35.0	35.8
1969	16.1	14.0	14.9	16.3	16.2	16.2	7.5	9.9	8.9	13.0	14.4	13.8	1.3	0.9	1.1	45.6	44.6	45.0
1973	17.3	14.6	15.8	18.5	19.9	19.3	11.3	15.0	13.3	11.9	14.2	13.2	1.2	0.8	1.0	39.9	35.5	37.5
1977	21.2	15.9	18.3	21.9	21.5	21.7	12.7	13.7	13.2	11.2	15.2	13.4	1.2	1.3	1.3	31.8	32.4	32.1
1981	24.2	18.4	21.1	18.8	19.1	19.0	10.8	11.3	11.1	14.3	17.5	16.0	2.9	3.5	3.2	29.0	30.2	29.6
1985	27.4	21.2	24.2	19.2	20.6	19.9	8.1	9.0	8.5	12.3	15.8	14.1	3.3	4.3	3.8	29.8	29.2	29.5
1989	28.2	21.0	24.6	18.6	21.3	19.9	8.6	9.5	9.0	10.4	13.8	12.1	3.4	4.3	3.9	30.8	30.2	30.5
1993	30.6	22.0	26.4	16.7	19.1	17.9	8.7	9.2	8.9	10.5	14.6	12.5	2.6	3.7	3.1	31.0	31.4	31.2
1997	32.2	24.0	28.3	15.7	18.3	16.9	15.1	16.9	15.9	9.0	12.6	10.7	3.2	4.0	3.6	24.8	24.3	24.6

Note : Figures may not add up to 100% due to rounding.

However, the high lung cancer mortality rate among female in the HKSAR, whose smoking rate has always been low (<8%), still eludes our explanation and effective intervention.

A decline in the mortality rates of heart diseases and cerebrovascular disease over the years under study is observed. Although the relative contribution by more efficacious medical services and healthier lifestyles to this decline remains debatable, it is most likely that both played a vital part in this success. The relatively high ranking of pneumonia as a cause of death in the elderly is not surprising, as pneumonia is a rather common terminal event or complication in the elderly. However, the rather abrupt rise in pneumonia mortality rates from 1995 to 1997 may warrant further investigation. The majority of elderly deaths of nephritis, nephrotic syndrome and nephrosis was due to chronic renal failure, of which diabetes mellitus and hypertension are the usual important causes.

Fortunately, with the advancement of scientific knowledge and epidemiology of chronic diseases in the past decades, many of these major diseases in the elderly are now amenable to more effective prevention and control. Furthermore, the fact that many of these diseases do share common risk factors like smoking, hypertension, diabetes mellitus, hyperlipidaemia, dietary imbalance (particularly excessive fat intake), overweight and physical inactivity, should also facilitate effective intervention. As the efficacy of different modes of intervention varies among these diseases or risk factors, from a strategic point of view, primary prevention could be usefully focused on the risk factors of smoking, excessive fat intake, overweight and physical inactivity; and secondary prevention (i.e. screening) and/or tertiary prevention (i.e. effective treatment) on hypertension, diabetes mellitus, hyperlipidaemia and breast cancer. Given the relatively long latent period (in terms of decades) of chronic diseases, many of these primary, secondary and/or tertiary interventions should ideally be instituted from a much earlier lifestage.

The mortality statistics depict only one facet of the health picture of the elderly. In addition to adding "years to life", a more important goal of public health is surely the adding of "life to years". Unfortunately, there is currently relatively sparse local data to allow us to measure the healthy life expectancy or disability-free life expectancy that has been gained by our elderly population during this period of lengthening lifespan.

Irrespective, the increasing proportion of the elderly in our population has and will continue to increase the demand for health (both preventive and curative) and social services in the community. In order to ensure that our senior citizens attain and maintain a satisfactory quality of life, long-term policies and strategies in these important areas need to be established, and appropriate health and social services provided. In this era of intersectoral collaboration, this challenge obviously applies to both government and non-government organizations/groups.

References

1. Myers GC. Comparative mortality trends among older persons in developed countries. In: Caselli G, Lopez AD (Editors). Health and mortality among elderly populations 1996. Clarendon Press, Oxford; 87-111.

2. Janus ED. Hong Kong Cardiovascular risk factor prevalence study 1995-1996. Cardiovascular Risk Factor Prevalence Study Group, 1997.

REVIEW OF OCCUPATIONAL DISEASES IN 1998

Dr Henry C C Ng[1] Dr W K Lo[2]

Under the Occupational Safety and Health Ordinance, medical practitioners are required to notify the Labour Department of cases of the specified occupational diseases that come to their attention. The Occupational Health Service of the Labour Department will promptly investigate all occupational diseases, gassing and chemical incidents upon notification so that causes of the diseases or accidents can be identified and remedial actions can be undertaken in the workplaces.

Occupational Diseases in 1998

There was a marked increase in the number of cases of occupational diseases in 1998 (948 cases) compared with 1997 (555 cases) and 1996 (522 cases). The number of cases of occupational diseases confirmed by the Occupational Health Service of the Labour Department from 1996 to 1998 is listed in Table 1. The increase was mainly confined to occupational deafness, tenosynovitis of hand or forearm, gas poisoning and tuberculosis in health care workers.

Occupational Deafness

The Occupational Deafness (Compensation) Ordinance, which was amended in June 1997, enables the workers suffering from hearing loss of 40 dB or more to be qualified to receive compensation. Prior to this amendment, only workers with hearing loss of 50 dB or more were eligible for compensation. As a result, there was an increase in the number of confirmed cases of occupational deafness in 1998.

Table 1 Confirmed Cases of Occupational Diseases in the HKSAR, 1996 to 1998

Occupational Disease	1996 Number (%)	1997 Number (%)	1998 Number (%)
Occupational deafness	268 (51.3%)	314 (56.6%)	631 (66.5%)
Silicosis	110 (21.1%)	118 (21.3%)	104 (11.0%)
Tenosynovitis of hand or forearm	54 (10.3%)	54 (9.7%)	71 (7.5%)
Gas poisoning	36 (6.9%)	23 (4.1%)	57 (6.0%)
Tuberculosis in health care workers	2 (0.4%)	10 (1.8%)	39 (4.1%)
Occupational dermatitis	25 (4.8%)	25 (4.5%)	34 (3.6%)
Asbestos-related diseases	9 (1.7%)	7 (1.3%)	5 (0.5%)
Chemical induced upper respiratory tract inflammation	9 (1.7%)	2 (0.4%)	4 (0.4%)
Compressed air illnesses	3 (0.6%)	1 (0.2%)	3 (0.3%)
Cramp of hand or forearm	1 (0.2%)	1 (0.2%)	0 (0.0%)
Others	5 (1.0%)	0 (0.0%)	0 (0.0%)
Total	522 (100%)	555 (100%)	948 (100%)

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Tenosynovitis of Hand or Forearm

There were 71 confirmed cases of tenosynovitis of hand or forearm caused by repetitive and forceful movement at work in 1998. Among them, 33 patients (46.5%) were manual labourers from factories and construction sites while 25 patients (35.2%) were working in the service sector. The rest of the patients comprised eight office workers (11.3%), four health care workers (5.6%) and a laboratory worker (1.4%).

Gas Poisoning

A total of 57 victims were affected in eight incidents of gas poisoning in 1998. There was no fatality. Causative agents were identified in four incidents which occurred in a restaurant kitchen, a manhole, a university workshop and a micro-electronics factory. The causative agents were carbon monoxide, hydrogen chloride, methyl vinyl ketone and chlorine respectively. The causes of the other four gassing incidents could not be identified. The increase in the number of gas poisoning cases in 1998 was mainly due to the incident of chlorine leakage in the micro-electronics factory where 26 workers were affected.

Tuberculosis in Health Care Workers

As a result of the wide circulation of the publication "Guidance Notes on the Diagnosis of Notifiable Occupational Diseases" prepared by the Labour Department, the awareness of the HKSAR doctors to notify occupational diseases has increased. The number of tuberculosis cases in health care workers increased nearly four times from ten cases in 1997 to 39 cases in 1998. Among the 39 cases in 1998, 30 of them worked in public hospitals and clinics, five cases in elderly homes and four cases in private doctors' clinics.

Pneumoconiosis

The number of pneumoconiosis cases in 1998 was of the same magnitude as the corresponding figure in 1996 and 1997. It is expected that the figure will be quite stable in the next few years and will decrease gradually because of restrictions on the use of open hand-dug caissons since 1995. It is worthwhile to note that the number of small caissons less than three metres used for foundation-pier construction has decreased significantly since the enactment of the Building (Amendment) Ordinance in 1995.

Occupational Dermatitis

A total of 34 confirmed cases of occupational dermatitis were notified in 1998. The major causative agents included cleansing agents in ten cases (29.4%), food additives in eight cases (23.5%), organic solvents in four cases (12.8%) and shampoo and hair dyes in three cases (8.8%). Engine oils, herbs, waste water in sewage drains and other industrial chemicals were responsible for the rest of the cases.

Chemical Induced Upper Respiratory Tract Inflammation

There were four cases of chemical induced upper respiratory tract inflammation in 1998. These patients, who worked in the same glass-making factory, inhaled sulphur dioxide due to accidental leakage from a malfunctioning switch.

Compressed Air Illness

Two cases of acute neurological decompression illness were reported in 1998. One acquired the disease during diving training and the other acquired it while attending patient in the recompression chamber. A medical staff suffered from sinus barotrauma while

treating patient in the recompression chamber.

New Notifiable Occupational Diseases

Two new diseases have recently been added to the list of notifiable occupational diseases (Table 2). These are (i) carpal tunnel syndrome occurring in workers engaged in repetitive use of hand-held vibrating tools such as pneumatic drill or portable grinder; and (ii) legionnaires' disease among those working on fresh water cooling system or on hot water service systems.

Table 2 Notifiable Occupational Diseases in the HKSAR

1. Radiation illness
2. Heat cataract
3. Compressed air illness
4. Cramp of hand or forearm
5. Beat hand
6. Beat knee
7. Beat elbow
8. Tenosynovitis of hand or forearm
9. Anthrax
10. Glanders
11. Leptospirosis
12. Extrinsic allergic alveolitis
13. Brucellosis
14. Tuberculosis in health care workers
15. Parenterally contracted viral hepatitis in health care workers
16. *Streptococcus suis* infection
17. Avian chlamydiosis
18. Lead poisoning
19. Manganese poisoning
20. Phosphorus poisoning
21. Arsenic poisoning
22. Mercury poisoning
23. Carbon bisulphide poisoning
24. Benzene poisoning
25. Poisoning by nitro-, amino- or chloro- derivatives of benzene
26. Dinitrophenol poisoning
27. Poisoning by halogen derivatives of hydrocarbons
28. Diethylene dioxide poisoning
29. Chlorinated naphthalene poisoning
30. Poisoning by oxides of nitrogen
31. Beryllium poisoning
32. Cadmium poisoning
33. Dystrophy of the cornea
34. Skin cancer
35. Chrome ulceration
36. Urinary tract cancer
37. Peripheral polyneuropathy
38. Localised papillomatous or keratotic new skin growth
39. Occupational vitiligo
40. Occupational dermatitis
41. Chemical induced upper respiratory tract inflammation
42. Nasal or paranasal sinus cancer
43. Byssinosis
44. Occupational asthma
45. Silicosis
46. Asbestos-related diseases
47. Occupational deafness
48. Carpal tunnel syndrome
49. Legionnaires' disease

The coverage of two existing occupational diseases has also been expanded. For occupational asthma, greater flexibility has been built into the list of agents that would lead to the disease by including 'any other sensitising agent inhaled at work'. As for traumatic inflammation of the tendons of the hand or forearm, the coverage of the disease has been extended to include the elbow. Lateral and medial epicondylitis (tennis & golfer's elbow) arising from repetitive movement of elbows at work are therefore included.

The two new occupational diseases and the enhanced coverage of the two existing diseases are also compensable under the Employees Compensation Ordinance.

Conclusion

Although the number of notifications of occupational diseases in 1998 was double that in 1997, the increase was mostly attributed to the enhanced coverage of occupational deafness and increased awareness of doctors to notify occupational diseases. Notification of occupational diseases is important to the control of such diseases and the monitoring of the health status of our working population. New notification forms can be obtained from the Occupational Health Service, Labour Department, 15/F, Harbour Building, 38 Pier Road, Central, Hong Kong (Tel. No.: 2852 4041, Fax no.: 2581 2049).

GUIDANCE NOTES FOR NOTIFICATION OF TUBERCULOSIS

Dr C C Leung[1] Dr C M Tam[2]

Background

Today, tuberculosis (TB) is still one of the major public health problems in many places in the world. The local TB notification rate reached a peak of 697.2 per 100 000 in 1952. Thereafter, this rate decreased to 100.9 in 1995, but started to increase slightly to 103.0 in 1996, 108.8 in 1997 and 114.7 in 1998. In fact, the TB notification rate in the Hong Kong Special Administrative Region (HKSAR) is still quite high, being more than ten times the rates reported in certain western developed countries.

According to the Prevention of the Spread of Infectious Diseases Regulations Cap. 141, a medical practitioner who makes a diagnosis of TB should notify the case to the Director of Health, using the notification form DH1A(s) (Rev.96). The aims of notification are to facilitate surveillance of the disease and implementation of public health measures like contact tracing and examination.

As regards the sources of TB notifications, the number of notifications from private practitioners and private hospitals increased from 276 cases in 1995 to more than 600 cases per year from 1996 to 1998 (Table 1). The number of notifications from public general hospitals also increased from 277 cases in 1995 to 740 cases in 1997 and 1 189 in 1998. These significant increases from previously rather minor notification sources suggest changes in notification behaviour, although a genuine resurgence of TB cannot be excluded. Increased awareness of the condition and increased readiness to notify

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Table 1 Sources of TB notifications in the HKSAR, 1994 - 1998

Sources	1994	1995	1996	1997	1998
Hospital Authority hospitals with Tuberculosis and Chest Specialist Service	1270	1349	1282	1591	1505
Other hospitals of Hospital Authority	327	277	287	740	1189
Private practitioners and private hospitals	73	276	678	642	653
Chest clinics of Department of Health	4631	4294	4251	4094	4319
Other Government Institutions	18	16	3	5	7
Total	6319	6212	6501	7072	7673

are certainly good signs for the improvement of TB surveillance in the HKSAR. However, short-term fluctuations in notification behaviour may confound the real trend of the disease, the correct interpretation of which should otherwise be required to assess this public health problem and to evaluate and guide the TB control strategies. Moreover, it has been observed that confusion exists in some areas on when to notify[1]. Hence, after consultation with various experts, the following set of guidance notes and case definitions are prepared to help minimize such variations and improve the quality of data in the local TB surveillance system.

Guidance Notes[2]

1. Case Definition of Tuberculosis

(a) Clinical Description

TB is a chronic bacterial infection caused by *Mycobacterium tuberculosis*, characterized pathologically by the formation of granulomas. The most common site of disease is the lung, but other organs may be involved. Classical symptoms of pulmonary tuberculosis include persistent cough, haemoptysis, afternoon fever, night sweating and weight loss. However, these may not be present in every case and symptom combinations do vary from case to case. Involvement of extrapulmonary sites may cause clinical features referable to the respective organ system. In cases of late stages or disseminated TB, overt systemic symptoms and signs affecting general being of the individual may predominate.

(b) Clinical Case Definition

A case that meets the following criteria:

(i) Signs and symptoms compatible with active tuberculosis;
(ii) Supporting evidence from relevant and clinically indicated diagnostic evaluation (e.g., abnormal, unstable [i.e. worsening or improving] chest radiographs);
(iii) The attending physician forms the opinion that treatment with anti-tuberculosis medications is required.

(c) Laboratory Criteria for Diagnosis

(i) Isolation of *Mycobacterium tuberculosis* from a clinical specimen (through culture and identification tests);
(ii) Demonstration of *Mycobacterium tuberculosis* from a clinical specimen by nucleic acid amplification test (e.g., polymerase chain reaction together with species-specific probe); or
(iii) Demonstration of acid-fast bacilli in a clinical specimen (e.g., histological examination);

where the clinical picture is compatible with the diagnosis of active tuberculosis.

2. Cases which should be notified:

(a) All cases that meet the clinical case definition should be notified. Where there is strong clinical suspicion of active tuberculosis, cases may be notified before all the criteria for clinical case definition are met, so as to facilitate the early implementation of public health measures.
(b) All cases that meet the laboratory criteria for diagnosis of TB should be notified. In case that the patient has died, TB notification should still be required.
(c) For those cases where anti-tuberculosis treatment may have been given for empirical trial, the attending physician may judge or seek expert advice on whether or not and when to notify, on a case by case basis.
(d) When a fresh episode of active tuberculosis (e.g., relapse of pulmonary tuberculosis) occurs in the same patient, notification should be made again.

3. Cases for which TB notification is not required:

(a) For cases without evidence of currently active disease, notification is not required. Examples include persons who are found to have old TB scars on chest radiographs which, according to the opinion of the attending physician, do not require treatment.
(b) Recent conversion of tuberculin skin test from negative to positive in persons without any evidence of active disease is not a specific indicator of active TB infection. Thus, persons with such result should not be considered as cases for notification.
(c) Cases given medications for TB chemoprophylaxis only are not required to be notified.
(d) Cases diagnosed as having disease caused by non-tuberculosis mycobacteria instead of *Mycobacterium tuberculosis* are not required to be notified.

Notification Forms

Notification forms can be obtained from the headquarters of the Department of Health (Tel: 2961 8570, Fax: 2893 9425), Statistics Unit in the Tuberculosis and Chest Service (Tel: 2572 3487, Fax: 2834 6627) or from any nearby chest clinic. Alternatively, notification forms may be downloaded from the homepage of the Department of Health (http://www.info.gov.hk/dh/). Prompt notification and accurate completion of all items on the form will facilitate the implementation of any necessary public health measures including contact tracing. In case certain

information (e.g., culture results) are not yet available at the time of notification, the results can be sent at a later date when available.

Summary

Today, TB is still a major public health problem in the HKSAR. A good surveillance system is essential for a vigilant TB control programme. It is a statutory requirement for TB cases to be notified to the Department of Health. However, grey areas and confusion do occur, e.g. on when to notify. With these guidance notes, it is hoped that most of these areas can be clarified and the variation in notification practice can be minimised. Complete and accurate data obtained from notification will allow continuous evaluation to follow the real trend of the disease. Cooperation of all medical practitioners is necessary to achieve this goal. With a quality surveillance programme, public health measures for TB can be planned, implemented and monitored more effectively. The fight against this important contagious illness is a long battle. Continuous and coordinated effort from all sectors is the key to success.

References

1. Hedley AJ, Hardie RM, McGhee SM, Tam CM, Leung CC, et al. Report on 'Services for the treatment of patients with tuberculosis in Hong Kong'. A collaborative study between the Department of Community Medicine of the University of Hong Kong, the Department of Health and the Hospital Authority. In preparation.

2. CDC. Case definitions for infectious conditions under public health surveillance. MMWR 1997;46: 40-41.

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NEWS IN BRIEF

Influenza Vaccination Programme for Elderly Residential Care Homes (November 1999)

The Department of Health will provide free influenza vaccination for all the elderly living in residential care homes between 15th and 27th November 1999 to protect the elderly from severe complications of the infection, and to minimize the occurrence of influenza outbreaks in residential care settings. The following vaccine composition recommended by the World Health Organization for 1999-2000 is used in this programme –

A/Sydney/5/97 (H3N2)-like virus
A/Beijing/262/95 (H1N1)-like virus
B/Shangdong/7/97-like virus

NUMBER OF NOTIFICATIONS OF INFECTIOUS DISEASES

DISEASE	3rd Quarter 1998	2nd Quarter 1999	3rd Quarter 1999
	Cases	Cases	Cases
1) Cholera	17	9	6
2) Plague	-	-	-
3) Yellow Fever	-	-	-
4) Acute Poliomyelitis	-	-	-
5) Amoebic Dysentery	-	1	-
6) Bacillary Dysentery	173	78	86
7) Chickenpox	NA	4 112	2 241
8) Dengue Fever	6	1	2
9) Diphtheria	-	-	-
10) Food Poisoning : *Outbreak*	151	139	190
Persons Affected	606	532	907
11) Legionnaires' Disease	1	1	-
12) Leprosy	3	5	3
13) Malaria	18	12	23
14) Measles	14	14	4
15) Meningococcal Infections	-	2	-
16) Mumps	6	20	19
17) Paratyphoid Fever	7	4	4
18) Rabies : *Human*	-	-	1
Animal	-	-	-
19) Relapsing Fever	-	-	-
20) Rubella	11	16	10
21) Scarlet Fever	3	50	25
22) Tetanus	-	2	2
23) Tuberculosis	1 905	2 048	1 967
24) Typhoid Fever	17	21	26
25) Typhus Fever	3	1	15
26) Viral Hepatitis :	88	156	88
- *A*	*39*	*92*	*37*
- *B*	*44*	*19*	*19*
- *Non-A Non-B*	*4*	*6*	-
- *Unclassified*	*1*	*39*	*32*
27) Whooping Cough	-	3	-

Notes : NA - Not Available.

Chickenpox has been made notifiable since 1.2.1999.

AIDS/HIV Surveillance

Cumulative Number of Cases	as at 31.3.99	as at 30.6.99
AIDS	390	409
HIV	1 192	1 255