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Contents

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Pandemic Influenza Preparedness Consultation Document for Ireland

On 15 January 2007, the Pandemic Influenza Expert Group published a draft consultation document on pandemic influenza preparedness for Ireland. The document provides authoritative information on pandemic influenza, outlines clear clinical guidance, and provides public health advice to health professionals and others involved in pandemic influenza preparedness and response. The contents are consistent with the revised WHO Global Influenza Preparedness Plan.

The information provided is relevant to many agencies and groups, including government departments, health service agencies, health professionals, the pharmaceutical industry, the media, and the public. Each chapter provides stand-alone information, with additional supplementary information provided for a number of chapters. Issues which are covered in the plan include:

- Phases of an influenza pandemic
- Epidemiology of pandemic influenza and its potential impact
- Surveillance, detection, and situation monitoring
- Public health response to pandemic influenza, dealing with antivirals, vaccines, and non-pharmaceutical public health interventions
- Case management
- Infection control
- A summary of the situation with regard to avian influenza and the implications for human health.

Following a three-month consultation period, a final amended version of this document will be published. This document is available for downloading on the Health Protection Surveillance Centre website at www.hpsc.ie. Comments are welcome and should be sent to expertgroup@mailx.hse.ie or

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The Department of Health and Children and the Health Service Executive also published the National Pandemic Influenza Plan on 15 January 2007. This plan reflects the advice of the Pandemic Influenza Expert Group. Its purpose is to limit the effects of influenza and to:
- Inform the public about pandemic influenza
- Explain what the government and the health services are doing to prepare for a possible pandemic
- Give information on what members of the public need to do if there is a pandemic.

It is available on the websites of the Department of Health and Children at www.doch.ie/publications/?2007 and the HSE at www.hse.ie/en/Publications/.

Five Nations Health Protection Conference

The Five Nations Health Protection Conference will take place on Tuesday 22 May and Wednesday 23 May 2007 at Belfast Waterfront Hall, Belfast, Northern Ireland. The conference will address important public health issues that have arisen since the last meeting and provide fresh perspectives on established areas of disease prevention and control.

Abstracts are invited for papers and posters for the following sessions:
- Emergency planning
- Incident management and control
- Risk assessment and communication
- Surveillance
- Travel and migration
- Late breakers/hot topics.

The latest date for receipt of abstracts is 16 February 2007 (9 March for late breakers/hot topics). Abstracts should be submitted on-line via the conference website at www.5nations.com. Details on registration are also available on this site. Closing date for registration is Friday 4 May 2007. For further information please contact Vivienne Fitch at Vivienne.fitch@hpa.org.uk.

Epidemiology of Tuberculosis in Ireland, 2004

WHO has estimated that globally, there were 8.9 million new cases of tuberculosis (TB) and 2 million TB deaths in 2004.[1] The Global Plan to Stop TB 2006-2015 was launched in January 2006 and plans to reduce the global prevalence of, and deaths due to TB by 50% by 2015 relative to 1990. In addition, it proposes to eliminate TB as a public health problem (<1 case per million population) by 2050.[2]

A review of the epidemiology of TB cases notified in Ireland during 2004 is presented. Provisional data for 2005 are also presented.

Methods

An enhanced TB notification form was completed by public health doctors for each case of TB notified in 2004. These forms summarise all available clinical, microbiological, histological and epidemiological data. Each HSE area provided finalised 2004 data with outcome information to HPSC in early to mid 2006. Data were validated with each area and national data were collated. Provisional 2005 data were obtained from each area in August 2006.

The case definitions used were as recommended in the report of the National TB Working Party, 1996.[3]

Table 1: Notified cases of TB in Ireland 1991-2004 with crude rates per 100,000 population and 3-year moving averages 1992-2003

Year	Number of cases	Crude rate per 100,000 population	3-year moving average
1991	640	18.2	
1992	604	17.1	612
1993	598	17.0	581
1994	524	14.5	526
1995	458	12.6	469
1996	434	12.0	436
1997	416	11.5	423
1998	424	11.7	433
1999	469	12.9	439
2000	395	10.1	410
2001	381	9.7	391
2002	408	10.4	401
2003	407	10.4	414
2004	432	11.0	

Results

Cases and rates

In 2004, 432 cases of TB were notified to HPSC, a national crude incidence rate of 11.0/100,000 population. The number of annual TB notifications together with crude rates and 3-year moving averages from 1991 to 2004 are provided in table 1.

A summary of the epidemiology of TB cases from 2001 to 2004 is shown in table 2.

Table 2: Summary of epidemiology of TB in Ireland, 2000-2004

	2000	2001	2002	2003	2004
Total number of cases	395	381	408	407	432
Notification rate per 100,000 population	10.1	9.7	10.4	10.4	11.0
Foreign born cases	44	63	123	89	129
% Culture positive patients	58	58.8	61.0	64.4	64.6
M. tuberculosis	222	204	234	250	268
M. bovis	2	7	5	5	5
M. africanum	3	1	1	1	0
% Smear positive pulmonary cases	47.2	44.4	38.4	48.8	43.9
Multi-drug resistant cases	2	2	0	1	2
Resistance to isoniazid	6	9	9	12	15
Deaths attributed to TB	5	5	5	6	5

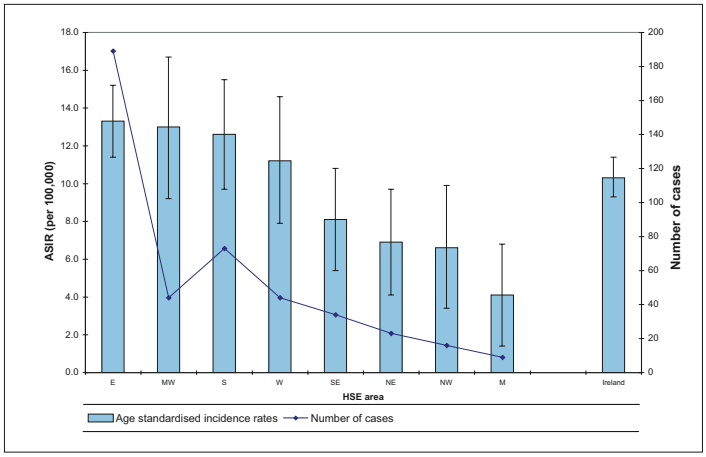

Figure 1: Age standardised TB incidence rates per 100,000 population by HSE area with 95% confidence intervals, 2004

Age-standardised incidence rates by HSE area

Age-standardised incidence rates (ASIR) for each HSE area are presented in figure 1. The highest ASIR was seen in HSE East at 13.3/100,000 population, followed by HSE Midwest (13.0) and HSE South (12.6). HSE Midlands reported the lowest ASIR at 4.1/100,000 population which was significantly lower than the national rate (10.3/100,000 population).

Age and sex

There were 257 (59.5%) cases of TB notified in males in 2004 and 175 (40.5%) in females, giving a male to female ratio of 1.5:1.

In 2004, the mean age of cases was 44.0 years (range: 2 years to 95 years). Rates were higher in males for all age-groups. The highest rate among males was in those aged over 64 years while the highest rate among females was in those aged 25-34 years. Figure 2 shows the age-specific rates of TB in Ireland from 2000 to 2004.

Geographic origin

Of the 432 TB cases notified in 2004, 290 (67.1%) were born in Ireland, 129 (29.9%) were born outside Ireland and for the remaining 13 cases, the country of birth was unknown. The majority (93.0%) of cases born outside Ireland were aged between 15 and 44 years with a median age of 29.6 years. The median age of those born in Ireland was 50.3 years with 46.4% of the cases aged greater than 55 years.

Table 3: Treatment outcome for all cases and smear positive cases, 2004

Treatment outcome	Total cases		Smear positive cases	
	Number	%	Number	%
Completed treatment	283	65.5	99	72.8
Lost to follow up	35	8.1	12	8.8
Treatment interrupted	11	2.5	4	2.9
Still on treatment	11	2.5	2	1.5
Died (attributed to TB)	5	1.2	1	0.7
Died (not attributed to TB)	19	4.4	3	2.2
Outcome unknown	68	15.7	15	11.0
Total	**432**	**100.0**	**136**	**100.0**

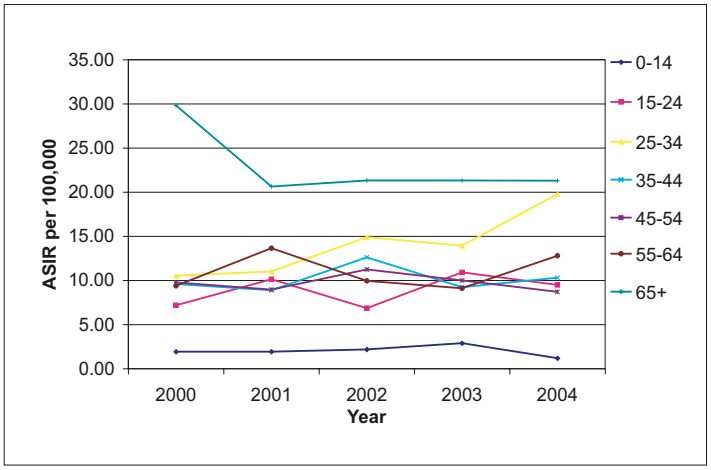

Figure 2: Age-specific rates of TB by year, 2000-2004

Site of disease

Of the 432 cases notified in 2004, 274 (63.4%) were pulmonary, 121 (28.0%) were extrapulmonary, and 36 (8.3%) were pulmonary and extrapulmonary. For one case (0.2%), the site was unspecified.

Pulmonary TB

There were 310 cases (71.8%) reported in 2004 with a pulmonary disease component. Of these, 140 (45.2%) were sputum positive for AFB by microscopy and 225 (72.6%) were culture positive. One hundred and thirty six cases (43.9%) were smear positive.

Extrapulmonary TB

One hundred and fifty seven (36.3%) cases reported in 2004 had an extrapulmonary disease component. The most frequent sites of extrapulmonary disease reported were pleura (26.1%) and extra-thoracic lymph nodes (21.0%).

TB meningitis

There were six cases of TB meningitis reported in 2004, an incidence rate of 0.15/100,000 population (1.5/million population). Two cases were culture confirmed. All cases were greater than 25 years old.

Bacteriological results

Two hundred and seventy nine (64.6%) TB cases notified in 2004 were culture positive. Of the culture-confirmed cases, 268 (96.1%) were *M. tuberculosis* and five (1.8%) were *M. bovis*. No cases of *M. africanum* were reported in 2004.

Of the 268 *M. tuberculosis* isolates, resistance was documented in 22 cases (5.1% of total cases), including two cases of multi-drug resistant TB (MDR-TB). Mono-resistance to isoniazid was recorded in 12 cases, to rifampicin in three cases, to streptomycin in two cases and to ethambutol and pyrazinamide in one case each. One further case was resistant to both isoniazid and streptomycin. Thirteen of the 22 (59.1%) drug resistant cases, including one of the MDR-TB cases, were born outside Ireland.

Treatment outcome

Outcome was recorded for 364 (84.3%) of the 432 cases notified in 2004. Of the 364 cases, 283 completed treatment. Nineteen cases died and TB was attributed as the cause of death in five cases. Details on treatment outcome for all cases and for smear positive cases are shown in table 3.

HIV status

Of the 432 cases, 13 were reported as being HIV positive. However, information on HIV status was not provided or was unknown for 408 of the cases notified in 2004.

Provisional 2005 data

There were 461 cases of TB provisionally notified in 2005. It is important to note that these data are provisional and **may change significantly following validation**.

Of the 461 cases provisionally notified in 2005,

- Pulmonary TB was diagnosed in 283 cases (61.4%), extrapulmonary TB in 126 cases (27.3%), and pulmonary and extrapulmonary TB in 36 cases (7.8%).
- Of the 319 cases with a pulmonary disease component, 155 (48.6%) were culture positive and 132 (41.4%) were smear positive.
- There were eight cases of TB meningitis provisionally notified (0.2/100,000 population).
- Two hundred and eighty eight cases were born in Ireland and 142 were born outside Ireland.
- There were 273 cases (59.2%) notified in males, 182 cases (39.5%) in females and the mean age of cases was 43.4 years.
- Resistance was reported in six cases, three were mono-resistant to isoniazid and three were MDR-TB.

A comprehensive report on 2004 data and a provisional report on 2005 data can be found at http://www.ndsc.ie/hpsc/A-Z/VaccinePreventable/Tuberculosis TB/Publications/AnnualReportsontheEpidemologyofTBinIreland/.

Discussion

In 2004, 432 cases of TB were notified to HPSC, a national crude incidence rate of 11.0/100,000 population. The rate increased slightly in 2004 compared to 2003 and 2002 but remains lower than the rates reported between 1991 and 1999. The overall notification rate in countries of the EU which reported to EuroTB was 12.8/100,000 in 2004.[4]

A regional variation was noted with the ASIR ranging from 4.1/100,000 in HSE Midlands to 13.3/100,000 in HSE East.

Continued page 4

The highest age-specific rate in 2004 occurred among those aged 65 years and over. This was similar to the rate observed in this age-group in 2003, 2002 and 2001. Between 2000 and 2004, the age-specific rate among the 25-34 year age-group increased from 10.5 to 19.8 per 100,000 population.

Thirty percent of TB cases notified in 2004 were born outside Ireland. This compares to 21.9% in 2003 and 30.1% in 2002. In 2004, among countries in the EU and Western Europe who reported data to the EuroTB network, 29% of notifications were in foreign born patients.[4] There was a notable difference in age between those born in Ireland and those born outside Ireland with a median age of 50 years and 30 years respectively.

There were six cases of TB meningitis in 2004, a rate of 0.15/100,000 population. Between 1998 and 2004, a total of 41 cases of TB meningitis have been reported with four of the cases reported among 0-4 year olds.

There were 22 drug resistant cases notified in 2004, including two cases of MDR-TB. Multi-drug resistant cases and cases resistant to isoniazid represented 0.5% (2 cases) and 3.5% (15 cases) of total cases respectively. This compares to 0.3% and 2.7% respectively in 2003. In 2004, combined multi-drug resistance and mean combined isoniazid resistance were 19% and 32% respectively in the Baltic States and 2% and 8% respectively in the 15 other countries in the EU and Western Europe.[4] There were no cases of extensively drug resistant TB (XDR-TB) notified to HPSC in 2004.

Drug resistance is an issue that needs to be kept under close surveillance especially with the recent emergence of XDR-TB. In September 2006, WHO called on countries to strengthen and implement measures to prevent the global spread of these virulent drug resistant strains of TB.[5]

In recent years, the quality of the data, and in particular data on treatment outcome, has improved greatly. The importance of good surveillance data should not be underestimated as it will help guide where resources should be directed in order to ensure effective control of TB in Ireland and to reach the global elimination target by 2050.

K O'Donnell, J O'Donnell, L Hickey, and D O' Flanagan, HPSC

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EPIET Fellowships

Subject to agreement on funding, the European Programme for Intervention Epidemiology Training invites applications for up to 16 fellowships for a 24-month training programme in communicable disease field epidemiology starting in September 2007. Applicants must be nationals of a EU member country, Switzerland or Norway and should have experience in public health, a keen interest in fieldwork, and be pursuing a career involving public health infectious disease epidemiology. They should have a good knowledge of English and of at least one other EU language, and be prepared to live in a different participating country for a period of 24 months.

The aim of the training is to enable the fellow to assume service responsibilities in communicable disease epidemiology. The in-service training will focus on outbreak investigations, disease surveillance, applied research, and communications with decision makers, the media, the public, and the scientific community. Fellows will attend a three-week intensive introductory course and then be located in a host institute in one of the 25 participating European countries, Switzerland or Norway. Further training modules are organised during the two-year programme.

Detailed information can be obtained from the EPIET programme website at www.epiet.org. Vacancy notice for application can be found on the ECDC website at http://ecdc.europa.eu/Recruitment.html.

Applications should be submitted electronically by 11 February 2007 to epietfellow@ecdc.eu.int.