EPI-INSIGHT

IONAD NAISIUNTA FAIRE GALAIR

DISEASE SURVEILLANCE REPORT OF NDSC, IRELAND

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IN THE NEWS!

Outbreak of legionellosis in Spain

An outbreak of legionellosis (Legionnaires' disease) was reported in the Murcia region, in south east Spain.[1] As of mid-July, 745 people presented with clinical symptoms, 315 of which were confirmed as Legionnaires' disease. This could be the largest outbreak of the disease since it was first recognised in 1976. Most were male (76%) and about two thirds were over 50 years of age.[2] One death was reported in a case in which *Legionella pneumophila* serogroup 1 was isolated. Most people affected are Spaniards in the northern neighbourhoods of Murcia city. No tourists have been identified as cases, to date. A current hypothesis is that cooling towers in four locations are the most likely sources of infection. A detailed epidemiological and environmental investigation is under way. The outbreak appears to be over now.

Legionellosis is an acute bacterial disease with two recognised clinical presentations: Legionnaires' disease and Pontiac fever. Incubation period is usually 2-10 days. Illness is often mild but may be serious enough to cause death. Typical early symptoms of legionellosis include: 'flu-like illness, muscle aches, headache, tiredness and dry cough, followed by high fever and chills. Antibiotics can be effective in treating the disease. Water is the natural habitat for the bacteria that cause legionellosis. Outbreaks are often associated with aerosols arising from contaminated artificial water sources, such as those found in large air-conditioning units. Human to human transmission does not occur. Diagnostic serology tests are available in some specialist microbiology laboratories in Ireland. A rapid urine antigen test is also available.

The Legionnaires' Disease Subcommittee of the National Disease Surveillance Centre in Ireland, recently published the draft document "The Management of Legionnaires' Disease in Ireland". The aim of the final document will be to enhance patient care of those with suspected and confirmed disease, to improve the notification of these cases and to safeguard the health of the general public.

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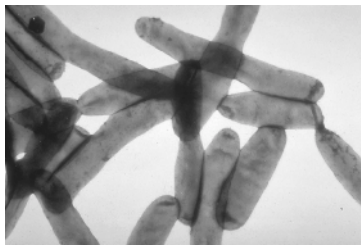

Figure 1: Scanning electron micrograph of legionella (courtesy of PHIL, CDC)

Severe systemic sepsis in injecting drug users (IDUs).

On 9th July 2001, an informal warning was issued in the United Kingdom that the contaminated batch of heroin, which was responsible for a number of deaths last year in Scotland, Ireland and various parts of England, may be in circulation again. A number of initial reports from Scotland suggested that this may be similar to the contaminated batch which was distributed in Dublin last summer and which claimed the lives of eight heroin users. There have been three definite cases in Scotland (all three necrotising fasciitis cases of which one was confirmed at post mortem) and five subsequent probable cases. A variety of organisms were isolated. To date, no cases have been identified in Ireland.

The illness is characterized by severe systemic sepsis related to soft tissue inflammation at a subcutaneous/intramuscular injection site in IDUs. Variable features including oedema (often extensive), myositis, erythema, cellulitis, bruised appearance, abscess-like (with little or no pus) blackened/blistered centre, necrosis, necrotising fasciitis. Several days after development of the local lesion, there may be a dramatic deterioration, with circulatory collapse, adult respiratory distress syndrome and/or disseminated intravascular coagulation and a very high white cell count (>30,000cells/mm^3). The patient will often remain mentally alert until a late stage in the illness.

Any case of local inflammation in a drug user with features consistent with the description given above and who has died or been sufficiently unwell to require admission to hospital should be reported to the local Director of Public Health.

A short fact sheet, containing advice for drug users, has been distributed through the Directors of Public Health and is available on the NDSC website (http://www.ndsc.ie).

Dr Mary Cronin, NDSC

The Epidemiology of AIDS in Ireland from 1983 to 1999

Background

Acquired Immunodeficiency Syndrome (AIDS) was first reported in the United States in June 1981.[1] It has since become a major worldwide pandemic. By the end of 2000, it was estimated that 36.1 million people were living with HIV/AIDS worldwide.[2] The features of the AIDS pandemic differ from country to country and surveillance systems have been established in order to identify the magnitude of the epidemic and to estimate trends. AIDS surveillance was introduced in Ireland in 1985 and in November 2000, the National Disease Surveillance Centre (NDSC) took over responsibility for AIDS reporting from the Department of Health and Children (DoHC).

AIDS reporting in Ireland

AIDS reporting in Ireland is a voluntary system. When an individual develops AIDS, the clinician completes an anonymised AIDS surveillance form. The form is then sent to the Regional AIDS Co-ordinator in the relevant Health Board, who in the past, forwarded this to the National AIDS co-ordinator in the DoHC. Every six months, a summary of AIDS surveillance information was published nationally and was notified to the European Centre for the Epidemiological Surveillance of AIDS. In November 2000, NDSC assumed responsibility for national AIDS surveillance from the DoHC. At this time, NDSC received the national AIDS database and this provided an opportunity to review the epidemiology of AIDS in Ireland since 1983. The following report is based on AIDS cases diagnosed from 1983 to December 1999 and reported up to December 2000. This allows a minimum of one year after AIDS diagnosis, for cases to be reported.

Epidemiology of AIDS in Ireland, 1983 to 1999

There have been 695 cases of AIDS diagnosed in Ireland between 1983 and 1999. AIDS incidence in Ireland increased rapidly through the 1980s and early 1990s. AIDS incidence peaked in 1993 and declined through the mid and late nineties (Figure 1). This decline is primarily attributed to the early use of highly active antiretroviral therapy (HAART), which was introduced in Ireland in early 1996.[3] This treatment delays the progression to AIDS for persons with HIV infection. However, it is important to note that the number of cases in any given year will be subject to revision as further reports are received. The incidence of AIDS in Ireland is relatively low when compared with other countries throughout Europe. The incidence rate (per million population) in Ireland in 1999 was 6.8 while the incidence rates (per million population) in the same year in various countries in Europe were: Britain: 11.9; Italy: 36.0; Spain: 77.1; Portugal: 88.3.[4]

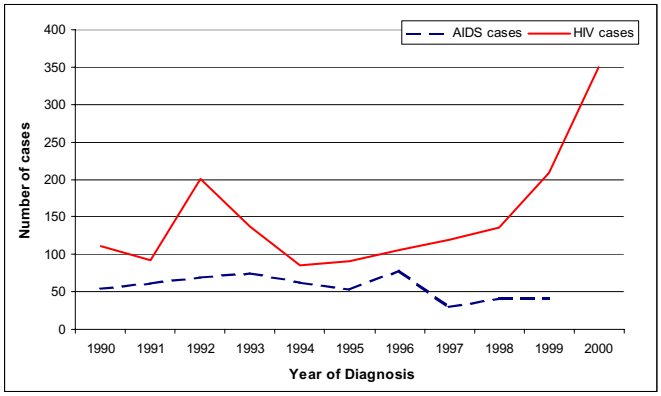

Figure 1: AIDS cases diagnosed in Ireland (1990 to 1999). HIV cases, 1990-2000, for comparison.

While the annual incidence of AIDS has been decreasing since the mid-1990s, the annual incidence of HIV infection has tripled in the last five years (Figure 1). There has been a large increase in the number of new HIV infections in the three commonest transmission categories, injecting drug users (IDUs), men who have sex with men (MSM) and heterosexuals. Therefore, it is extremely important to remember that a review of the epidemiology of AIDS in Ireland will not provide reliable information on the magnitude or trends of new HIV infections in Ireland.

Approximately 80% of AIDS cases reported in Ireland were male, though the percentage of AIDS cases in females has increased over the past five years. Eighty percent of patients with an AIDS diagnosis were in the age range 25-44 years (median age 32 years). Males were older than females at AIDS diagnosis (median age 33 and 29 years, respectively). IDUs were younger at AIDS diagnosis than both MSM and heterosexuals with a median age of 30 compared to 34 and 36 respectively (Table 1).

Table 1: Summary measures of age at diagnosis.

Transmission Category	Sex	Mean	Median	Minimum	Maximum
IDU	Male	30.9	31	18	48
	Female	29.5	29	22	40
Heterosexual	Male	39.1	37	22	63
	Female	33.6	33	21	58
MSM	Male	36.8	36	17	63

The three major groups affected by AIDS were IDUs (40.6%), MSM (34.3%) and heterosexuals (13.4%) (Table 2). The number of AIDS cases in all transmission categories has declined since the mid 1990s and this can be primarily attributed to increased use of HAART, which has delayed disease progression. The decline in the number of cases among MSM and IDUs has been greater than among persons exposed through heterosexual contact. However, it is important to note that the rate of AIDS in IDUs is much higher than the rate in the general population. It has previously been estimated that Dublin has between 3,000 and 15,000 drug users.[5] Taking the upper estimate of 15,000 as denominator, the incidence rate of AIDS in IDUs in 1999 was 466 per million population compared to an overall incidence rate of AIDS of 6.8 per million in the general population.

Table 2: AIDS cases by transmission category.

Transmission Category	Total	Male	Female
IDU	282	212	70
MSM	238	238	-
Heterosexual	93	48	45
Haemophiliac	33	33	-
Mother-to-Child	23	8	15
IDU+ MSM	10	10	-
Transfusion	3	2	1
Other/Undetermined	13	9	4
Total	**695**	**560**	**135**

Seventy eight percent of AIDS diagnoses occurred in patients who were resident in the Eastern Regional Health Authority (ERHA) area and fifteen percent were resident outside the ERHA area. In the remaining 7% of cases, the area of residence was not identified. Due to small numbers and in order to maintain anonymity, cases are classified as ERHA and non-ERHA and are not detailed further. In 1999 the incidence of AIDS (per million population) in the ERHA area was 13.9 compared to 3.0 in non-ERHA areas. In particular, almost all AIDS cases (98%) among IDUs occurred in the ERHA area.

Of the 695 cases of AIDS reported between 1983 and 1999, 357 (51%) have died. Since 1995, the annual number of deaths among persons with AIDS has decreased (Figure 2). The mortality rate for AIDS cases in Ireland has dropped from 13.8 deaths per million population in 1995 to 4.7 deaths per million population in 1999. This decrease in AIDS related deaths again reflects the improved survival among persons with AIDS due to improvements in medical care and the effect of HAART.[3] The use of antimicrobial prophylaxis to delay or prevent the development of a number of opportunistic infections has also contributed to improved survival.[6]

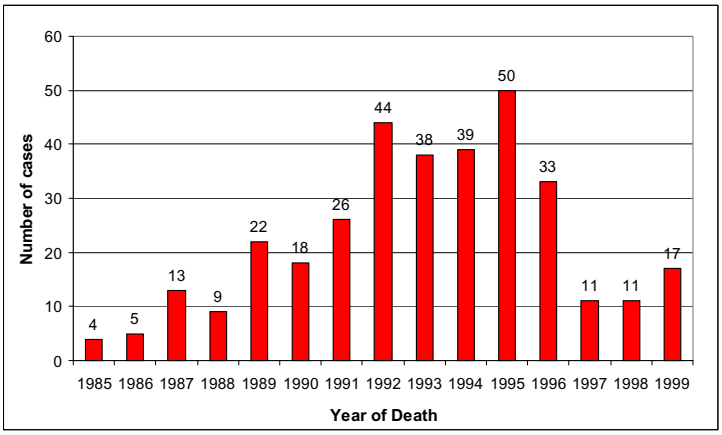

Figure 2: AIDS related deaths in Ireland, 1985 to 1999.

The Future

AIDS surveillance in Ireland is a voluntary reporting system which has been in place since 1985. It has proven extremely valuable for a number of reasons. AIDS surveillance data is essential in order to assess the magnitude of the epidemic in Ireland. In the past, it has allowed us to identify the burden on healthcare services and examine trends in access to care and treatment outcomes. However, it is clear that monitoring trends in the AIDS epidemic alone no longer reliably reflects trends in HIV infection. It is therefore extremely important that all diagnosed HIV infections are reported so that the appropriate prevention strategies and services can be put in place.

HIV case-based reporting

Prior to July 2001, the National Virus Reference Laboratory provided information on newly diagnosed HIV infections. This information was published by the DoHC and more recently by the NDSC on a twice-yearly basis. Following a recommendation from the National AIDS Strategy Committee, HIV case-based reporting was introduced in Ireland on July 1st 2001.[7] The new system will collect demographic and risk transmission information on individual HIV positive cases. All cases of AIDS will continue to be reported through this new system. The Director of Public Health in each health board will collect this information and report, nationally, to NDSC. A new joint HIV/AIDS surveillance form has been designed and will replace the current AIDS surveillance report form. The aim of this new system is to provide reliable information about the incidence, demographics and future trends of HIV infection. In time, it will be possible to link newly diagnosed AIDS cases to previously identified HIV positive cases, thus enabling progression of the disease from HIV infection to AIDS to be monitored.

We anticipate that an evaluation of this new system will be carried out in 2002. A report will be compiled in association with the HIV Case-based Reporting Group and Dr Colm Bergin, St James's Hospital (on behalf of the consultants in infectious disease/genito-urinary medicine).

Acknowledgements

We wish to acknowledge the following: consultants in infectious disease/genito-urinary medicine, National Virus Reference Laboratory, regional AIDS co-ordinators, the Surveillance Sub-Committee of the National AIDS Strategy Committee (NASC).

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Dr Kate O'Donnell, Dr Mary Cronin and Dr Derval Igoe, NDSC

Key Points:

- A total of 695 cases of AIDS were diagnosed in Ireland from 1983 to 1999 and there has been a decrease in the annual incidence of AIDS since the mid-1990s
- Despite the decrease in the number of AIDS cases in Ireland, the number of new HIV infections tripled from 1994 to 1999.
- The majority of affected people were in the age range 25-44 years. Eighty percent of cases were male, and males were older at diagnosis then females
- The major groups affected by AIDS in Ireland were injecting drug users, men who have sex with men and heterosexuals
- Seventy eight percent of AIDS cases were resident in the ERHA area
- Fifty one percent of AIDS cases in Ireland have died
- A new improved system for monitoring trends in HIV infection was introduced in Ireland in July 2001. This system aims to ensure the collection of accurate and complete epidemiological data on the trends of the HIV epidemic in Ireland.

Influenza Surveillance 2000/2001 Update

The National Disease Surveillance Centre (NDSC) has worked in collaboration with the National Virus Reference Laboratory (NVRL) and the Irish College of General Practitioners (ICGP) for the first year of the influenza surveillance scheme.

Sentinel General Practitioners (GPs) reported consultations for influenza-like illness (ILI) from week 40, 2000 to week 20 (May 20th), 2001 (Figure 1). Peak incidence occurred during week 8 and coincided with an increase in influenza B. The consultation rate for week 8 was 121 per 100,000 population. A second smaller peak occurred during week 11, with a consultation rate of 109 per 100,000. From week 13, the consultation rate decreased steadily until week 20. The peak age specific consultation rate was in the 15-44 year age group. Fifty-one percent of consultations for ILI were male and 49% were female.

The NVRL received 329 swabs from sentinel GPs; 42.6% were positive for influenza virus. The highest number of positive samples occurred during the period of peak clinical activity. Influenza A accounted for 39.3% of positive swabs; 35% were influenza A (H1N1), 2.9% were influenza A (H3N2), and 1.4% were unsubtyped influenza A. Influenza B accounted for 60.7% of the positive swabs. Influenza A was the predominant strain from week 40, 2000 until week 6, 2001, after which influenza B predominated. No swabs were positive for influenza virus after week 15 (Figure 2). The highest number of positive swabs was in the 15-44 year age group. Of the 140 positive swabs, 52.1% were male, 47.1% were female, and 0.7% was of unknown sex. The 2000/2001 influenza vaccine protected against all virus isolates antigenically characterised by the WHO laboratory in London. Further improvements to the influenza surveillance scheme, next season, will include data on school absenteeism, hospital admission rates, levels of illness in nursing homes and an increase in the number of sentinel GPs.

Ms L Domegan, Dr N Mullins, Dr D O'Flanagan, NDSC; Dr D Nolan, Dr P McCormick, ICGP, & Dr S Coughlan, Mr S Dooley, Mr P Quinn, NVRL.

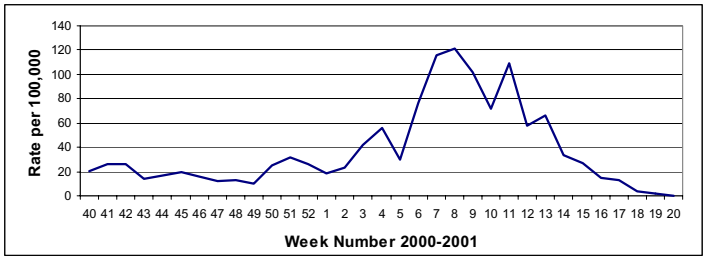

Figure 1: GP consultation rate for ILI per 100,000 population by report week

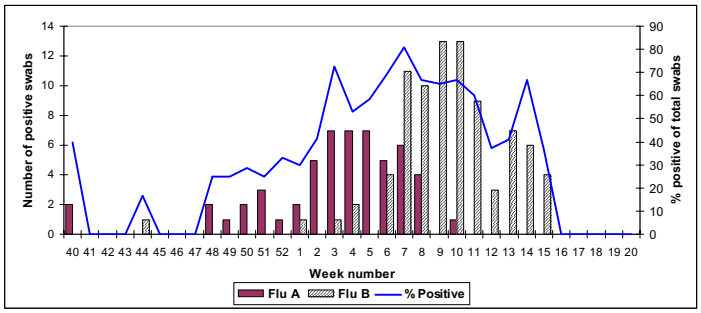

Figure 2: Number of positive swabs by flu type and % positive of total swabs by week

Annual Conference on epidemiology and control of communicable diseases and environmental hazards

The annual conference on epidemiology and control of communicable diseases and environmental hazards takes place from Monday 5th to Wednesday 7th November 2001, at Dublin Castle, Dublin. This is the first time that this prestigious international conference, involving England, Wales, Scotland, Northern Ireland and Ireland will be held outside London. It is being organised jointly by the five surveillance institutes and there are five main themes for the conference: antimicrobial resistance and hospital acquired infection; immunisation; social inequalities and infectious disease; environmental hazards; and control and prevention policies: evidence and effectiveness. The conference will address important public health issues that have arisen in the past year and will provide fresh perspectives on established areas of disease prevention and control. Short papers on recent outbreaks and surveillance initiatives will also be presented. Abstracts are now invited for papers and posters on these themes. The conference is aimed primarily at those working in public health who have responsibility for infectious diseases and environmental health, but will also be of interest to consultants in infectious diseases, microbiologists, infection control nursing professionals and environmental health officers.

For further information on the conference and details on submission of abstracts, please go to **www.ndsc.ie** or contact Dr Derval Igoe at the National Disease Surveillance Centre.

Congratulations to Eurosurveillance!

The National Library of Medicine has selected *Eurosurveillance* (monthly) to be indexed and included in Index Medicus and MEDLINE on the MEDLARS system. *Eurosurveillance* was established in 1996 and aims to increase awareness of communicable disease incidence trends and outbreaks, to foster links between those working in the prevention and control of communicable diseases, and to promote better working practices.

Eurosurveillance is available on the internet at:

HTTP://WWW.EUROSURV.ORG

For further information, the Irish representative on the editorial board of *Eurosurveillance* is Dr Lelia Thornton: thornton@ehbph.iol.ie

Salmonella Monthly Report (June 2001):

Strains are allocated to months based on the date of receipt of the isolate from the referring laboratory. These figures are provisional as work may not be finished on particular strains at the time of publication. Data are provided courtesy of Prof Martin Cormican and Dr Geraldine Corbett-Feeney, INSRL.

Health Board	E	M	MW	NE	NW	SE	S	W	Total
S.Typhimurium	7	0	5	2	1	1	0	2	18
S.Enteritidis	13	1	0	1	0	3	5	4	27
S.Bredeney	0	0	0	0	0	1	0	0	1
S.Dublin	1	0	0	0	0	0	0	0	1
S.Hadar	1	0	0	0	0	0	1	1	3
S.Heidelberg	0	2	0	0	0	0	0	0	2
S.Othmarschen	1	0	0	0	0	0	0	0	1
Total	23	3	5	3	1	5	6	7	53