

IN THE NEWS

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A large outbreak of Legionnaires' disease is being investigated in Barrow-in-Furness, Cumbria in North West England.¹ As of 13th August 2002, 116 cases have been confirmed.² There have been three deaths among confirmed cases. The only common factor linking the cases was a visit to the town centre within the incubation period for Legionnaires' disease.

Extensive environmental investigations were carried out on all wet cooling systems in the town, and for other potential sources of infection. The local environmental health department identified potential problems with the air conditioning unit in a council-owned building in the centre of the town. The building was closed down. *Legionella pneumophila* serogroup 1 has been identified from pond water samples from the air conditioning unit in this building. Many cases reported walking down a lane at the side of this building. There were also anecdotal reports of large amounts of aerosol and water droplets emerging from an air conditioning vent in the lane. It is thought that the council-owned building may be the source of the outbreak.

A European alert was sent out on 1st August to the European Working Group for Legionella Infections (EWGLI) and to the World Health Organisation in order to identify possible cases in tourists visiting the area. To date this has not revealed any further cases.³

This outbreak highlights the importance of ensuring that wet air conditioning systems are properly maintained and tested as they have the potential to infect a large number of people if contaminated with *Legionella*.¹

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2. PHLS. Outbreak of legionnaires' disease in Barrow-in-Furness - update. *Commun Dis Rep CDR Wkly* 2002; **12** (33).
3. Calvert N, Astbury J. Legionnaires' disease outbreak in England. *Eurosurveillance Weekly*, [Serial online] 2002 [cited, 8 August 2002] **32**. Available at <http://www.eurosurv.org/update/news.html>

Useful sources of information

1. Legionnaires' disease: the control of Legionella bacteria in water systems. Approved code of practice and guidance. ISBN 0717617726 available at HSE Books in the UK.
2. NDSC. The management of Legionnaires' disease in Ireland. A consultation draft of this document is available at www.ndsc.ie
3. The European Working Group for Legionella Infections website at www.ewgli.org

Waterborne Cryptosporidiosis Consultation Document

Cryptosporidiosis is a diarrhoeal illness in humans caused by a protozoal parasite *Cryptosporidium*. In 2000, the Department of Health and Children asked the National Disease Surveillance Centre to advise on the risk to public health from waterborne cryptosporidiosis and on the surveillance activities that should be undertaken. A subgroup of the Scientific Advisory Committee was established with the following terms of reference:

- To advise on the risk to public health from *Cryptosporidium* in drinking water supplies and in water used for recreational purposes.
- To advise on appropriate surveillance activities that should be undertaken to detect and prevent waterborne cryptosporidiosis.
- To draw up national guidelines for the public health response to the detection of *Cryptosporidium* in water supplies.
- To advise on prevention strategies that would minimise the risk in the general population and in target groups such as immunocompromised individuals.

A consultation document "Report of Waterborne Cryptosporidiosis" is now available for comment on the NDSC website www.ndsc.ie

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HIV/AIDS in Ireland and Worldwide, 2001

Background

Since the HIV/AIDS epidemic began over twenty years ago, it has been estimated that more than 60 million people have been infected with the virus.¹ HIV/AIDS is now the leading cause of death in sub-Saharan Africa and the fourth biggest killer worldwide.¹

For many years the epidemiological monitoring of HIV was based on AIDS surveillance, with back projection to give estimates of the incidence and modes of transmission of HIV infections. Recent trends in AIDS have been affected by improved antiretroviral treatments and no longer serve as indicators of HIV transmission trends.² While national AIDS surveillance data are still useful, reporting of all cases of HIV is an essential component of surveillance. As recommended in the Report of the National AIDS Strategy Committee,³ HIV case based reporting was introduced in Ireland on July 1st 2001. The aim of HIV case based reporting is to ensure the collection of accurate and complete epidemiological data on the distribution and mode of transmission of HIV infection and to allow linkage between reports of HIV infection and AIDS.

Results

HIV in Ireland, 2001

A total of 299 cases of HIV infection were newly diagnosed in Ireland during 2001 compared to 290 cases in 2000. The cumulative total of HIV positive cases reported to the end of 2001 is 2,645.

Exposure category

Table 1 lists the number of newly diagnosed HIV infections in Ireland in 2001, and the cumulative total by exposure category. Figure 1 show the trends in the number of newly diagnosed cases of HIV between 1995 and 2001 in the three most common exposure categories: heterosexuals, men who have sex with men (MSM) and injecting drug users (IDUs). Over the last five years, the number of newly diagnosed HIV infections among heterosexuals has increased six fold. There has also been an increase in the number of newly diagnosed cases among MSM, with the number of cases almost doubling since 1998.

Table 1. Newly diagnosed HIV infections 2001, and cumulative total in Ireland by exposure category

Exposure Category	2001		Total to end of 2001	
	Number	%	Number	%
Heterosexual	173	57.9	712	26.9
MSM	73	24.4	643	24.3
IDU	38	12.7	1034	39.1
Children	6	2.0	55	2.1
Transfusion recipient	2	0.7	7	0.3
Haemophiliac	-	-	104	3.9
Other	-	-	79	2.9
Undetermined	7	2.3	11	0.5
Total	299	100.0	2645	100.0

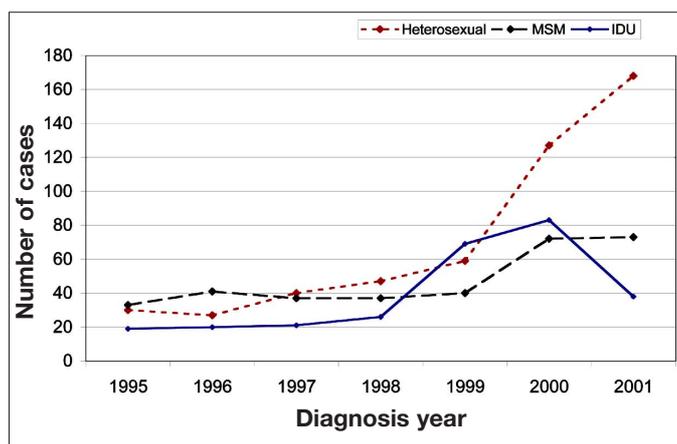


Figure 1. Newly diagnosed HIV infections in Ireland among heterosexuals, MSM and IDUs (1995 to 2001)

Sex and age group

Of the 299 newly diagnosed HIV infections, 55% were male and 45% were female. The majority of cases (77%) were aged between 20 and 40 years. In general, females were younger at HIV diagnosis than males with the majority of cases diagnosed aged between 20 and 29 years. The majority of cases in males were aged between 30 and 39 years at diagnosis.

Area of residence

In 2001, 62% of cases were resident in the Eastern Regional Health Authority (ERHA) area at HIV diagnosis. By exposure category, 58% of heterosexuals, 70% of MSM and 82% of IDUs were resident in the ERHA area.

Geographic origin

Data on the geographic origin of cases was collected for the first time in Quarter 3 and 4 of 2001. Classification by geographic origin is that used by the European Centre for the Epidemiological Monitoring of AIDS (EuroHIV). In the third and fourth quarters of 2001, a total of 138 newly diagnosed HIV infections were reported. Of the 82 heterosexual cases reported, 61 (74%) were born in sub-Saharan Africa and 12 (15%) were born in Ireland. Among MSM, 75% of cases were born in Ireland and among IDUs, 91% of cases were born in Ireland.

AIDS in Ireland, 2001

There were 12 cases of AIDS reported in Ireland in 2001. However, there is a significant reporting delay with AIDS cases and the number reported may not accurately reflect the number of new diagnoses in any given year. Of the 12 cases reported, 6 were heterosexual and 6 were MSM. The total number of AIDS cases reported in Ireland to the end of 2001 is 719. There were three reports of AIDS related deaths in 2001. This brings the total number of AIDS related deaths reported in Ireland to 365. Figure 2 compares the number of AIDS cases reported in the last ten years with the number of HIV cases diagnosed.

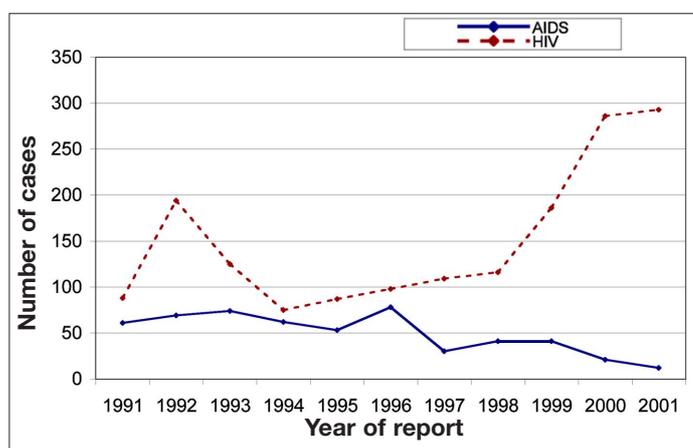


Figure 2. AIDS cases reported and HIV cases diagnosed in Ireland (1991 to 2001)

Discussion

HIV/AIDS in Ireland, 2001

In recent years, the epidemiology of HIV and AIDS in Ireland has undergone considerable change. While there has been a decrease in the annual incidence of AIDS in Ireland, the annual incidence of HIV infection has increased dramatically.

The number of AIDS cases in all exposure categories has declined since the mid 1990s and this can be primarily attributed to highly active antiretroviral therapy (HAART).² Conversely, there has been an increase in the number of HIV infections in all exposure categories. The increase among MSM is worrying in the context of the current syphilis outbreak in Ireland,⁴ and indications from both Europe and America that the practice of safer sex in this group is declining.^{5,6} Among IDUs, there was a reduction in the number of newly diagnosed HIV infections from 2000 to 2001. While this is to be welcomed and may reflect investment in harm reduction and treatment services over the past number of years, the decrease must be interpreted with caution and it remains to be seen whether it will be sustained in future years.

In 2001, 88 children were born to HIV infected mothers and three of the children are known to be infected. This reflects the effectiveness of the antenatal HIV screening programme and treatment and follow up services for HIV infected pregnant women in Ireland.

There was a disproportionately high number of newly diagnosed HIV infections in people resident in the ERHA area. In 2001, the incidence of HIV infection (per million population) in the ERHA area was 141.9 compared to 41.6 in non-ERHA areas. In particular, 82% of newly diagnosed HIV cases among IDUs were resident in the ERHA area.

Seventy four percent of heterosexual cases in Quarter 3 and 4 of 2001 were from sub-Saharan Africa. This is not unexpected, given that sub-Saharan Africa is the region of the world most severely affected by the global HIV epidemic.⁷ Although it is clear that people from sub-Saharan Africa who are infected with HIV do not form a homogeneous group, these data highlight the specific need for culturally appropriate prevention and treatment services for migrants and ethnic minorities in Ireland.

HIV/AIDS worldwide, 2001

Worldwide, there were an estimated five million new HIV infections in 2001, with eight hundred thousand cases (16%) occurring among children. There were approximately 14,000 new infections every day and it is estimated that 40 million people are now living with HIV worldwide¹ (table 2).

In 2001, there were an estimated three million deaths in people with AIDS bringing to 20 million the number of people who have died from AIDS. It is estimated that 14 million children, under the age of 14, have lost a mother, a father or both parents to AIDS. According to UNAIDS, this number could exceed 25 million by 2010.¹

Table 2. HIV/AIDS worldwide to the end 2001

HIV/AIDS Worldwide	Total (Million)	Adults (Million)	Children (Million)
People newly infected with HIV in 2001	5.0	4.2	0.8
Number of people living with HIV/AIDS	40.0	37.0	3.0
AIDS deaths in 2001	3.0	2.4	0.6

Sub-Saharan Africa is the area of the world most severely affected by HIV/AIDS. Approximately 3.5 million new HIV infections occurred in 2001, bringing to 28.5 million the total number of people living with HIV/AIDS in sub-Saharan Africa. At the end of 2001, it was estimated that about 0.1% of the HIV positive population in this region are benefiting from antiretroviral treatment compared to 33% in high-income countries.¹ However, there is evidence that, in some areas, prevention efforts are bearing fruit. In Uganda, the prevalence of HIV infection has continued to fall since the early 1990s and this decline has been attributed to changes in sexual behaviour.⁷

Other areas severely affected by the epidemic include Latin America and the Caribbean. More recently, in certain countries in eastern Europe and central Asia, HIV is spreading very swiftly and several countries including the Russian Federation and Ukraine are experiencing rapidly emerging epidemics.¹

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Vancomycin-Resistant *Staphylococcus Aureus* Isolated in the United States, 2002.

One of the biggest fears with regard to antimicrobial resistance has now been realised following a recent report from the United States of an isolate of methicillin-resistant *Staphylococcus aureus* (MRSA) that is fully resistant to vancomycin.¹ Previously, up to June 2002, eight cases of vancomycin- or glycopeptide-intermediate *S. aureus* (VISA or GISA) were reported in the US. These are isolates with reduced susceptibility to vancomycin {vancomycin minimum inhibitory concentration (MIC) = 8 mg/L} and have been associated with treatment failure. The big concern up to now has been that, with the occurrence of VISA, this would lead to the development of fully resistant isolates.

In June 2002, the first high-level vancomycin-resistant isolate of *S. aureus* (VRSA) was identified from a catheter exit site and foot ulcer of a diabetic patient in Michigan. In addition to VRSA, vancomycin-resistant *Enterococcus faecalis* was recovered from the foot ulcer. The VRSA isolate, which was also methicillin-resistant (oxacillin MIC >16mg/L), was found to have an MIC of >128mg/L for vancomycin and 32mg/L for teicoplanin and to contain the enterococcal *vanA* resistance gene consistent with this glycopeptide resistance profile. Although conjugative transfer of vancomycin resistance determinants from enterococci to *S. aureus* was previously demonstrated in vitro as far back as 1992,² this is the first report of in vivo transfer. It is thought that the *E. faecalis* isolate was the source of the *vanA* gene, however, further studies will be required to confirm this. No further transmission of this VRSA strain has been demonstrated and studies are underway to assess the risk to other patients, health-care workers, family and other close contacts. The patient has responded well as an out-patient to a combination of aggressive wound care and treatment with systemic cotrimoxazole. The organism was also susceptible in vitro to other antimicrobial agents, including chloramphenicol, minocycline and tetracycline.

Two new agents with anti-staphylococcal activity, linezolid and synergid (quinupristin/dalfopristin), are now available to treat glycopeptide-resistant MRSA infections. However, although these agents have excellent inhibitory activity, preventing growth and replication, they do not kill the bacteria.³ It should also be stressed that not all strains of MRSA are susceptible to some of the older agents that are available, for example, the multi-resistant EMRSA-17 strain recently described in the UK.⁴ Therefore, more prudent antimicrobial use and appropriate infection control measures, in addition to good surveillance, are required to prevent the emergence and subsequent spread of resistance to both older and newer agents among nosocomial pathogens. Laboratories isolating *S. aureus* strains with suspected resistance or reduced susceptibility to glycopeptide antibiotics should contact the National MRSA Reference Laboratory.

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Reminder of Annual Conference on Epidemiology and Control of Communicable Diseases and Environmental Hazards

The annual conference on epidemiology and control of communicable diseases and environmental health hazards will be held at CDSC Colindale, London from Monday 4th November to Wednesday 6th November 2002. This year the conference will celebrate the 25th anniversary of CDSC.

The various conference themes include: immunisation – new vaccines/current controversies; health protection – new approaches "Getting Ahead of the Curve"; assessing and communicating risks; surf and turf – food, water and animals; surveillance, control and prevention – expanding the evidence base; emerging hazards/emerging infections.

The closing date for registration is Friday 18th October 2002. For further details and registration contact Vivienne Fitch at PHLS/CDSC, 61 Colindale Avenue, London NW9 5EQ, tel: 00 44 208 200 6868 ext. 4569, fax: 00 44 208 200 7868, e-mail: vfitch@phls.org.uk

Salmonella Monthly Report (July 2002):

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-Feeny, INSRL.

Health Board	E	M	MW	NE	NW	SE	S	W	Total
S. Typhimurium	8	0	1	0	3	1	0	2	15
S. Enteritidis	7	1	1	3	0	4	7	3	26
S. Agona	1	0	0	1	0	0	0	0	2
S. Dublin	0	0	1	0	0	0	0	0	1
S. Give	2	0	0	0	0	0	0	0	2
S. Hadar	0	0	0	0	0	1	0	0	1
S. Kottbus	0	0	0	2	0	0	0	0	2
S. Menston	0	0	0	0	0	0	0	1	1
S. Panama	0	0	0	0	0	1	0	0	1
S. Singapore	0	0	1	0	0	0	0	0	1
S. Stanley	1	0	0	0	0	0	0	0	1
S. Virchow	1	0	0	0	1	1	0	0	3
Total	20	1	4	6	4	8	7	6	56