EPI-INSIGHT

IONAD NAISIUNTA FAIRE GALAIR

Disease Surveillance Report of NDSC, Ireland

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IN THE NEWS

Legionellosis Outbreak in Norway

The first identified outbreak of legionellosis in Norway has been reported in the city of Stavanger, situated on the west coast.[1] As of 4th September, seventeen confirmed cases and two probable cases have been identified, with the first case presenting on the 26th July. The patients range in age from 30 to 94 years. Nine are local residents, ten are residents of other municipalities in Norway and one is a foreign businessman who was travelling through the city. All the patients had visited a limited area of the city-centre within ten days of onset of symptoms. All the confirmed cases have been diagnosed by urinary antigen detection. One confirmed and one probable case have died. The source of the outbreak has not yet been identified.

There have been several outbreaks of legionellosis in Europe over the last few years. One of the largest reported outbreaks occurred in Murcia, Spain in June and July, 2001.[2] As of 18th July, three hundred and fifteen cases have been confirmed as Legionnaires' disease by urinary antigen detection. One confirmed case died.

In Ireland, 2 cases were notified in 2001 (as of Week 36). A further travel-associated case has been reported via the EWGLI system (European Working Group for Legionella Infections) in a tourist who spent the incubation period holidaying in the West of Ireland.

Ireland has one of the lowest reported rates of Legionnaires' disease in Europe (0.6 per million population in 1999) even in comparison with neighbouring countries such as Northern Ireland, Scotland, England and Wales (rates of 2.94, 6.81 and 3.72 per million population respectively in 1999). This suggests a large degree of under-diagnosis and under-reporting currently exists in Ireland. Recently urinary antigen detection became available in Ireland. This should improve diagnosis. The NDSC Scientific Advisory Committee has reviewed the management of Legionnaires' disease in Ireland. The report has completed the consultation phase and will be published shortly. A GP fact sheet is available on the NDSC website at http://www.ndsc.ie

1. Aavitsland P. Outbreak of legionellosis in Stavanger, Norway - update. Eurosurveillance Weekly, [Serial online] 2001 [cited, 6 September 2001] 36. Available at http://www.eurosurv.org/update/

2. Navarro C, Garcia-Fulgueiras A. Update on the outbreak of Legionnaires' disease in Murcia, Spain. Eurosurveillance Weekly, [Serial online] 2001 [cited, 19 July 2001] 29. Available at http://www.eurosurv.org/update/

vCJD: A New Probable Case Reported in France

A new probable case of vCJD has been identified in France. This is the fourth probable or confirmed case identified in France since 1996.[1]

There has been a total of 99 deaths of confirmed vCJD in the UK from 1995 to 3rd September 2001. In addition, there are two vCJD probable deaths awaiting autopsy results and five cases of probable vCJD who are still alive. Figures for 2000 in the UK showed a noticeable increase on previous years[2] but total case numbers are not yet sufficient to show a definite trend. In Ireland, there has been one confirmed case of vCJD identified in 1999 in a 32-year-old female who had resided in the United Kingdom for a number of years.

1. Institut de Veile Sanitaire. Available at http://www.invs.sante.fr
2. UK Department of Health. Monthly Creutzfeldt-Jakob Disease Statistics. Available at http://www.doh.gov.uk/cjd/stats/sept01.htm

Conference Notice: Outbreaks of Illness among Drug Injectors in Scotland, Ireland and England.

A conference on the outbreaks of illness among drug injectors in Scotland, Ireland and England in spring and summer 2000, will be held in the Royal College of Physicians and Surgeons, Glasgow, on Monday 15th and Tuesday 16th October 2001. The conference is being hosted by Greater Glasgow Health Board, in collaboration with the Scottish Centre for Infection and Environmental Health, Public Health Laboratory Service, Eastern Regional Health Authority (Ireland) and the Centers for Disease Control and Prevention, Atlanta. The conference will discuss the investigation and management of the outbreaks, and the public health implications.

The closing date for registration is 7th October 2001. To register, please contact the Conference Secretariat, at Conference Point Ltd., McGregor House, Southbank Business Park, Kirkintilloch, Scotland G66 1XF. Phone: +44 141 5782242. Fax: +44 141 5780098. E-mail: sonnda@conferencepoint.co.uk.

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ENTEROVIRAL INFECTIONS: A COMMON CAUSE OF VIRAL MENINGITIS

Enteroviruses are a common cause of infection in the community, particularly among children (Table 1). They can cause a number of different illnesses, with viral meningitis being one of the most important. Enteroviruses are small RNA viruses divided into 5 groups and many types, including polioviruses (3 types), coxsackieviruses A (23 types), coxsackieviruses B (6 types), echoviruses (31 types), and other enteroviruses (4 types, EV-68 to EV-71). Echoviruses and group B coxsackieviruses account for 90% of lab-confirmed cases of viral meningitis. Although enteroviruses are the commonest cause of viral meningitis, overall advances in molecular diagnostic techniques show that other viruses such as HSV2 may be associated with cases in adults which previously had no laboratory confirmation.

Table 1: The distribution of notified cases of viral meningitis by age group, Ireland, 2000.

Age Group (yrs)	No. of cases (%)	Rate per 100,000
0-4	17 (17.3)	6.8
5-9	17 (17.3)	6.0
10-14	22 (22.4)	6.7
15-19	9 (9.2)	2.7
20-24	5 (5.1)	1.7
25-34	5 (5.1)	1.0
35-44	1 (1.0)	0.2
45+	0 (0.0)	0
Unknown	22 (22.4)	-
Total	98	2.7

In the last two years there has been an increase in enteroviral infections reported in the UK[1] and Ireland. During 2000 there were 44 isolates of echovirus 13 at the Virus Reference Laboratory (VRL), compared with eight isolates in 1999. This year to date, the VRL has reported 100 isolates of non-polio enteroviruses, 58 of these were confirmed as echovirus type 30. In parallel with the increased isolation of enteroviruses there has been an increase in the number of cases of viral meningitis in Ireland notified to NDSC (Figure 1).

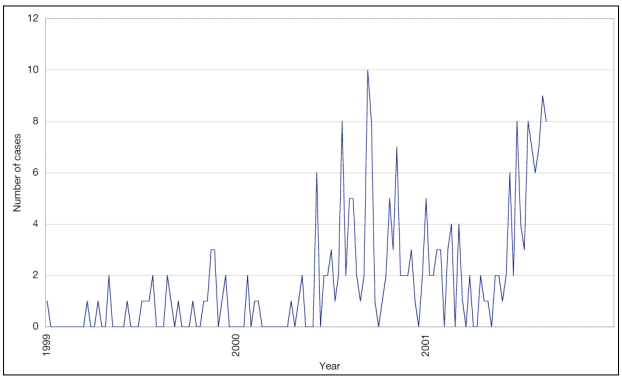

Figure 1: Weekly notifications of viral meningitis, 1999 - 2001

In 2000, 98 cases of acute viral meningitis were notified in Ireland compared to 27 in 1999. So far this year, 108 cases have been notified (up to 25/08/2001) compared to 46 for the same period last year. The distribution of cases according to health board/authority in 2000 is shown in Table 2.

Table 2: The distribution of notified cases of viral meningitis by Health Board, 2000.

Health Boards	Number of Cases	Rate per 100,000 population
ERHA	33	2.5
MHB	8	3.9
MWHB	4	1.3
NEHB	12	3.9
NWHB	12	5.7
SEHB	11	2.8
SHB	13	2.4
WHB	5	1.4
Total	98	2.7

Epidemiology

Enteroviruses are primarily spread by the faecal-oral route or through contact with respiratory secretions via fingers or fomites. Infection is primarily seen in young children but adults can also be infected. Enteroviruses are shed in the upper respiratory tract for 1-3 weeks and in the faeces for up to 8 weeks after primary infection. Activities such as nappy changing are a risk factor. Indirect transmission is often associated with poor sanitary conditions and may occur via numerous routes including contaminated water, food, and fomites. Enteroviral infections tend to peak in summer and autumn in temperate regions. Outbreaks of infections have been reported worldwide and may be very large, affecting entire countries.

Clinical Manifestations

The majority of enteroviral infections in children are asymptomatic. Severe complications are rare, but include encephalitis, myocarditis and acute flaccid paralysis. The principal clinical presentations include:

• *Nonfocal, Acute Febrile Illness*: This is the most common presentation. Enteroviruses may account for over half of such illness among infants seen in casualty departments during the summer and autumn months. Infants with enterovirus-induced fever recover within 2-10 days without complications.

• *Hand-Foot-Mouth Disease (HFMD)*: This should not be confused with Foot and Mouth Disease, an animal disease caused by an unrelated virus. HFMD is associated with fever, blisters and rash on the hands, feet and buttocks and mouth ulcers. It is usually caused by coxsackieviruses and resolves spontaneously in 7-10 days.

• *Viral Meningitis*: Enteroviruses are the commonest cause of viral meningitis. Children under four years of age are most at risk, with the highest incidence in children aged less than one year. There is usually a sudden onset of fever. Neck stiffness is present in about half of all cases, but is frequently absent in children aged less than one year. Older children and adults will often have a severe headache and aversion to bright light. Other symptoms such as rashes, vomiting, diarrhoea, cough, sore throat and muscle aches may also be present. Viral meningitis usually

resolves spontaneously in less than one week, though the illness may be more prolonged in adults.

• *Encephalitis:* Enteroviruses account for 10% to 20% of viral encephalitis. The clinical manifestations may be similar to herpes simplex virus encephalitis. Children with immunodeficiencies e.g. Bruton's agammaglobulinaemia, are at particular risk.

• *Myelitis*: The non-polio enteroviruses, particularly enterovirus 71, may rarely cause a syndrome of acute motor weakness and paralysis that is clinically and pathologically indistinguishable from poliomyelitis, though usually much less severe and without longterm sequelae.

• *Myopericarditis*: Group B coxsackieviruses account for one third to one half of all cases of sporadic, acute myopericarditis. Physically active adolescents and young adults are particularly vulnerable. Fatalities occur in 5% of diagnosed cases.

• *Ophthalmic Infection*: Acute hemorrhagic conjunctivitis (AHC) is a highly contagious infection characterized by eye pain, eyelid swelling and subconjuntival hemorrhages. AHC is transmitted directly from person to person via fingers and fomites and contagion is favoured by crowding and poor sanitation, re-use of water for bathing and sharing towels.

• *Neonatal Infections*: Neonates are at risk of serious and sometimes fatal disease resulting from enteroviral infection acquired during the perinatal period. The most severe manifestations, which are usually limited to infants younger than 10 days, are myocarditis with or without encephalitis, hepatitis, and pneumonia.

Laboratory Confirmation

Samples that should be submitted for laboratory investigation of viral meningitis include CSF, throat washings and faecal samples. CSF is the most important of these as a positive result confirms the diagnosis. In the case of aseptic meningitis in adults, CSF should be submitted for HSV PCR. Isolation of an enterovirus from throat washings or faecal samples is suggestive but not necessarily diagnostic, as enteroviruses may be carried by a proportion of the general population. Unfortunately there is no easily performed accurate serological test.

Preventive Measures

Hand washing is the single most important preventative measure for controlling the spread of enteroviral infections in the community, childcare and hospital settings. Cleaning of environmental surfaces, shared equipment and toys is also important, particularly in outbreak settings. There is no anti-viral therapy available at this time for serious enteroviral infections. However, in line with increasing advances in anti-viral therapy, an anti-enteroviral agent called Pleconaril is undergoing extensive clinical trials in the U.S. with promising early results.

Control of Viral Meningitis in the Community and Childcare Settings (summary of recommendations)

• The US Centers for Disease Control and Prevention (CDC) and the UK Public Health Laboratory Service (PHLS) do not recommend routine exclusion of children with enteroviral infections from childcare settings. However the decision to exclude children from childcare settings during an enteroviral outbreak will depend on the severity of symptoms and the likely transmissibility of the causative virus.[2]

• Interventions needed to control very large enteroviral outbreaks have included school closures and closing of public swimming areas. Educational campaigns, emphasising hygiene and preventative measures, may be required.

• CDC states that the period of infectivity is from day 3 after exposure to about 10 days after the onset of symptoms. Presumably this is based on the period of respiratory shedding and maximal GI shedding.

• Hand washing is the mainstay of prevention of transmission and control of outbreaks. Children and carers should wash their hands before eating or preparing food, after using the toilet or handling nappies, after contact with an ill child, after contact with animals and whenever hands are visibly soiled. The CDC's website has a useful document which details when and how to wash hands effectively: http://www.cdc.gov/ncidod/hip/abc/practic6.htm

• Most authorities recommend using soap and running water for effective hand washing. There is some evidence that disinfectant hand rubs, containing >80% ethanol, are effective in neutralising enteroviruses on hands, provided the hands are already physically clean. Solutions containing isopropanol, n-propnol or lower concentrations of ethanol do not appear to be effective. Consideration should be given to using hand disinfectants in outbreak settings, particularly where hand-washing facilities are less than optimal.

• Children should not share food or utensils.

• Environmental surfaces, toys and any shared items should be cleaned and disinfected with hypochlorite 1000 ppm (one part household bleach to ten parts water). In outbreak settings common surfaces should be wiped with this solution at least once every day and more frequently if visibly soiled.

• CDC has a useful information page on viral meningitis for parents and carers at http://www.cdc.gov/ncidod/dvrd/virlmen.htm

A more detailed version of this article is available on the NDSC website at http://www.ndsc.ie

Dr Robert Cunney, NDSC

Acknowledgement:
I would like to thank the Virus Reference Laboratory for the data they provided

1. PHLS. Viral meningitis in England and Wales associated with an increase of echovirus type 30. CDR Weekly [Serial online] 2001 [cited, 31 August 2001]. Available at http://www.phls.co.uk/publications/CDR%20Weekly/index.html
2. PHLS. Guidelines on the Management of Communicable Diseases in Schools and Nurseries. Available at http://www.phls.co.uk/advice/schools/enterovirus.htm

Immunisation Uptake Statistics for Ireland

Childhood vaccinations have had a major impact on the reduction and elimination of many causes of morbidity and mortality among children. Monitoring immunisation uptake rates is vital in identifying under-vaccinated groups and to evaluate the effectiveness of efforts to increase uptake rates.

The immunisation uptake statistics for children 12 months and 24 months of age in Quarter 4, 2000 (Table 1) and in Quarter 1, 2001 (Table 2), having completed the primary immunisation schedule, are presented in this report (more detailed updated reports will shortly be available on the NDSC website, http://www.ndsc.ie). These statistics relate to children who have received three doses of vaccines against diphtheria (D_3), pertussis (P_3), tetanus (T_3), *Haemophilus influenzae* type b (Hib_3), polio ($Polio_3$) and one dose of vaccine against measles, mumps and rubella (MMR_1, uptake at 24 months only).

A downward trend in immunisation uptake rates both at 12 and 24 months was observed in Ireland in Quarter 1, 2001 when compared with the previous quarter. There was a 2% reduction in uptake rates at 12 months, while national uptake rates at 24 months dropped by 1% for D_3, P_3, T_3 and Hib_3, 2% for $Polio_3$ and an alarming 4% for MMR_1. The upward trend seen with MMR_1 uptake since Quarter 2, 2000 reversed in Quarter 1, 2001 (Figure 1). These uptake rates compare badly with the rates obtained in the United Kingdom for Quarter 1, 2001 - greater than 90% uptake was reached for D_3, P_3 and Hib_3 at 12 and 24 months. In the same quarter, the uptake for MMR_1 was 86% in the UK, with rates of 90.4% and 90.7% reported by Northern Ireland and Scotland, respectively.[1]

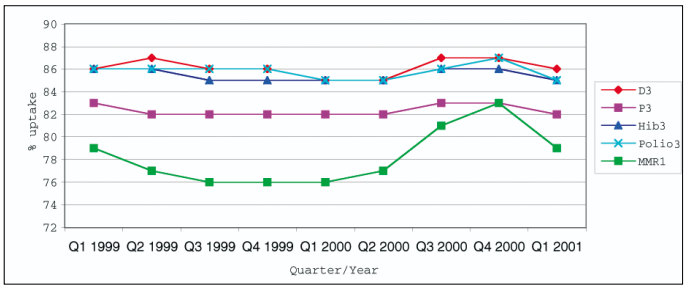

Figure 1: Quarterly immunisation uptake rates at 24 months in Ireland.

The reversal of any improvement in immunisation uptake in Q1, 2001 is a cause for serious concern. Factors contributing to the decline may include the need for 3 separate shots in the primary schedule, the oral polio/CJD scare at the end of 2000 and the ongoing media attention to alleged vaccine adverse events from MMR vaccine. The introduction of combination vaccines (4 in 1 and 5 in 1 combinations of DTaP, Hib and IPV) will hopefully address the former and the recent Report on Childhood Immunisation from the Joint Committee on Health and Children (available from Government Publications Sales Office and on the Oireachtas website at http://www.gov.ie/committees-01/c-health/rep-childhood/default.htm should help address the latter. This report makes many excellent recommendations in relation to improvement of the vaccination programme. Importantly, the Joint Committee concluded that:

1. There is no evidence of a proven link between MMR and autism.

2. There is no evidence to show that separate vaccines are any safer than the combined vaccines.

3. Babies are very susceptible to measles, mumps and rubella which are killer diseases, so they must be protected as soon as possible. This can only be done with the MMR vaccine.

4. Giving separate measles, mumps and rubella vaccines would leave children unnecessarily exposed and vulnerable.

We would like to thank the health boards, especially the Specialists in Public Health Medicine and the System Analysts for providing these data.

Dr Margaret Fitzgerald & Dr Darina O'Flanagan, NDSC

1. COVER programme, January to March 2001. CDR Weekly. [Serial online] 2001 [cited, 21 June 2001] 25. Available at http://www.phls.co.uk/publications/CDR%20Weekly/PDF%20files/cdr2501.pdf

Table 1: Completed Primary Immunisations by 12 and 24 months in Ireland (October – December 2000)

	% Uptake at 12 months Cohort born 01/10/1999 — 31/12/1999					% Uptake at 24 months Cohort born 01/10/1998 — 31/12/1998					
Health Board	**D_3**	**P_3**	**T_3**	**Hib_3**	**$Polio_3$**	**D_3**	**P_3**	**T_3**	**Hib_3**	**$Polio_3$**	**MMR_1**
ERHA	74	72	74	73	73	85	82	85	84	84	81
MHB	72	69	72	72	72	83	79	83	83	83	80
MWHB	72	71	72	72	72	83	80	83	83	82	83
NEHB	*	*	*	*	*	97	**	97	97	97	82
NWHB	75	**	75	75	74	85	**	85	84	84	77
SEHB	86	83	86	86	86	90	85	90	90	90	92
SHB	78	76	78	78	78	87	83	87	86	86	82
WHB	79	77	79	79	79	91	87	91	90	91	85
Total - Ireland	**76**	**74**	**76**	**76**	**76**	**87**	**83**	**87**	**86**	**87**	**83**

* Unable to provide uptake date at 12 months
** P3 uptake could not be accurately calculated as DTaP/DT uptake was reported as a combined value

Table 2: Completed Primary Immunisations by 12 and 24 months in Ireland (January – March 2001

	%Uptake at 12 months Cohort born 01/01/2000 — 31/03/2000					%Uptake at 24 months Cohort born 01/01/1999 — 31/03/1999					
Health Board	**D_3**	**P_3**	**T_3**	**Hib_3**	**$Polio_3$**	**D_3**	**P_3**	**T_3**	**Hib_3**	**$Polio_3$**	**MMR_1**
ERHA	69	68	69	69	69	82	80	82	81	82	77
MHB	71	68	71	71	71	82	77	82	81	81	77
MWHB	77	74	77	74	74	82	80	82	81	82	78
NEHB	*	*	*	*	*	94	**	94	94	94	77
NWHB	71	**	71	71	71	85	**	85	85	85	75
SEHB	87	84	87	87	86	91	87	91	91	91	90
SHB	76	74	76	76	76	86	83	86	86	86	80
WHB	80	78	80	80	80	91	88	91	90	91	84
Total-Ireland	**74**	**73**	**74**	**74**	**74**	**86**	**82**	**86**	**85**	**85**	**80**

* Unable to provide uptake data at 12 months
** P3 uptake could not be accurately calculated as DTaP/DT uptake was reported as a combined value

Conference Reminder

The Annual Conference on Epidemiology and Control of Communicable Diseases and Environmental Hazards will take place from Monday 5th to Wednesday 7th November 2001, at Dublin Castle, Dublin, Ireland. 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. The closing date for registration is 12th October 2001.

For further information on the conference, please go to http://www.ndsc.ie or contact Dr Derval Igoe at the National Disease Surveillance Centre.

Salmonella Monthly Report (August 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	19	5	0	2	0	1	3	0	30
S. Enteritidis	18	0	3	0	2	2	15	2	42
S. Abony	1	0	0	0	0	0	0	0	1
S. Derby	0	0	0	0	0	0	1	0	1
S. Infantis	1	0	0	0	0	0	0	0	1
S. Molade	0	0	0	0	0	0	0	1	1
S. Rissen	1	0	0	0	0	0	0	0	1
S. Typhi	*5	0	0	0	0	0	0	0	*5
S. Virchow	2	1	0	1	0	0	0	0	4
Total	**47**	**6**	**3**	**3**	**2**	**3**	**19**	**3**	**86**

* refers to one case only

Acknowledgement

The Editorial Committee would like to acknowledge the work and dedication of Dominic Whyte, former editor of EPI-INSIGHT. We wish him the very best in his new post with the Mid-Western Health Board.