

6.2 Viral Meningitis

Summary

Number of cases, 2008: 97
 Number of cases, 2007: 45
 Number of cases, 2006: 148
 Crude incidence rate, 2008: 2.3/100,000

Not all viral infections are notifiable, but many can and do cause meningitis. In this chapter, the focus is on those viral pathogens that cause meningitis, but are not notifiable in their own right.

In 2008, 97 cases (2.3/100,000 total population) of viral meningitis were notified in Ireland. Most of the cases were classified as confirmed (89%, n=86), 10 (10%) as probable and one (1%) where the case classification was not specified. The numbers of cases in both sexes were similar with 49 cases in males and 47 in females, giving a ratio of 1.04:1.0. Gender was not reported for one case.

Cases ranged in age from two weeks to 79 years with a median age of 12 years. Two cases in 2008 had no age details. Eighty one percent (n=79) of all cases were <35 years of age. Children <1 year of age had the highest incidence rate: 44.2 per 100,000, followed by those in the 1-4, year group, 3.3/100,000 (table 1).

In 2008 the overall incidence of viral meningitis in Ireland was highest in the HSE-NE area (4.1/100,000) followed by the HSE-E area (3.2/100,000) (table 2).

Of the 97 cases notified in 2008 the causative agent was reported as enterovirus (n=60; 62%), herpes simplex virus (n=8; 8%), varicella zoster virus (n=7; 7%), echovirus (n=1; 1%), and unknown (n=21; 21%) (table 1).

In Ireland, viral meningitis activity tends to be highest in the second half of the year. In 2008 the numbers of cases peaked in July (n=24), August (n=14), October (n=15) and November (n=12), with an average of 12 cases per month (total n=75) between July and December. In contrast, viral meningitis was low during the first six months of the year with a monthly average of four cases (total n=22).

Although the number of viral meningitis cases fluctuates from year to year, the number of cases notified in 2008 (n=97) exceeded the yearly average (n=66) between 1997 and 2008 (range 23-161) (figure 1).

High numbers of cases occurred in 2000 (n=98), 2001 (n=161) and 2006 (n=148). These upsurges in notifications coincided with an increase in reports by the National Virus Reference Laboratory (NVRL) of

Table 1. Number and age specific incidence rates of viral meningitis notifications by causative organism, 2008

Age Group	Enterovirus	Herpes simplex virus	Varicella zoster virus	Echo-virus	Unknown	Total	ASIR
<1	21	1	0	1	4	27	44.2
1-4	5	0	0	0	3	8	3.3
5-9	6	0	0	0	1	7	2.4
10-14	5	0	1	0	1	7	2.6
15-19	3	2	1	0	1	7	2.4
20-24	5	1	1	0	4	11	3.2
25-34	8	2	0	0	2	12	1.7
35-44	4	0	1	0	0	5	0.8
45-54	0	1	1	0	1	3	0.6
55-64	1	0	1	0	0	2	0.5
65+	2	1	0	0	3	6	1.3
Total	60	8	7	1	21	97	2.3

ASIR, age specific incidence rate

laboratory confirmed non-polio enterovirus isolates. Towards the end of 2005 NVRL introduced PCR testing of CSF samples for enteroviral nucleic acid. This was in addition to the routine method of viral isolation from stool samples.

The figures presented in this summary are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) system on 6th July 2009.

Based on data obtained from NVRL, it is evident that there was some under-reporting of viral meningitis cases in 2008, when 157 cases were diagnosed (excluding three cases caused by the mumps virus): 78 (49.7%) were attributable to enterovirus, 46 (29.3%) to herpes simplex virus, 28 (17.8%) to varicella zoster virus, four (2.5%) to Epstein-Barr virus and one (0.6%) to cytomegalovirus.

No deaths due to viral meningitis were reported in 2008. Only one death from viral meningitis (a probable case) has ever been notified since 1997, the causative organism of which was not reported.

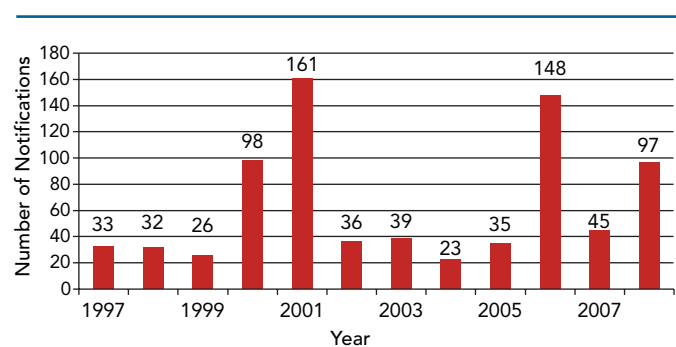


Figure 1. Annual number of viral meningitis notifications, 1997-2008

Table 2. Age specific incidence rates of viral meningitis notifications by HSE area, 2008

HSE Area	<1	1-4	5-9	10-14	15-19	20-24	25+	Total
E	107.6	6.0	2.1	2.3	1.0	1.4	1.2	3.2
M	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.4
MW	0.0	0.0	0.0	4.2	7.8	3.5	0.0	1.1
NE	31.5	11.8	6.7	3.7	3.7	7.1	1.6	4.1
NW	29.7	0.0	5.8	0.0	0.0	0.0	0.7	1.3
SE	14.8	0.0	3.0	3.1	0.0	3.1	1.7	2.0
S	0.0	0.0	0.0	5.0	2.4	4.2	0.7	1.3
W	0.0	0.0	3.6	0.0	6.8	6.2	1.1	1.9
Ireland	44.2	3.3	2.4	2.6	2.4	3.2	1.0	2.3