

6.2 Viral Meningitis

Summary

Viral Meningitis, not otherwise specified (NOS)
 Number of cases 2013: 281
 Number of cases 2012: 235
 Number of cases 2011: 220
 Crude incidence rate, 2013: 6.1/100,000

Meningitis due to viruses not otherwise specified (NOS) are notifiable under the disease category 'viral meningitis'. Details of viral meningitis caused by other specified notifiable diseases (such as mumps and influenza viruses, if any) are presented in other chapters in this report.

The sharp, steady increase in annual notifications which began in 2007 continued in 2013 when 281 were reported. The latter number is still less than the 300 cases notified back in 1990, the highest ever recorded

in a single year (figure 1). However, a recent paper has shown that there was underreporting of viral meningitis notifications in Ireland between 2005 and 2008.¹ Also, the total number of cases reported in 2013 does not include the late notification of seven cases (based on their specimen dates) reported during weeks 5 and 6 of 2014.

Since 1997, only seven deaths have been reported with cases of viral meningitis (NOS), only one of which was attributable to the infection itself. There were none reported in 2013.

Of the 281 cases notified in 2013, 266 were classified as confirmed (94.7%), six as probable (2.1%) and nine as possible (3.2%). There were slightly more cases among males (n=142) than in females (n=132), giving a male to female ratio of 1.08:1.0. Seven cases were reported with unknown gender details in 2013.

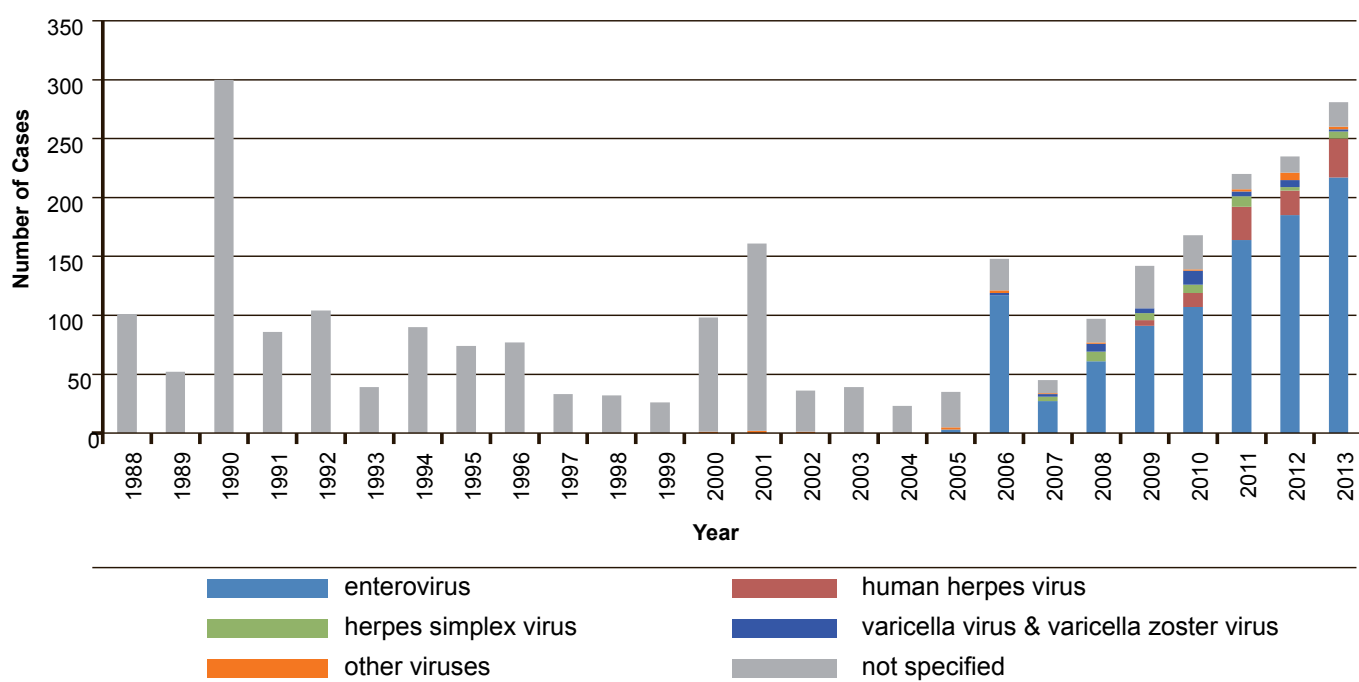


Figure 1. Number of viral meningitis (NOS) cases by organism type and year, Ireland, 1988-2013*
 * excludes the late notification of seven cases in 2013 reported in early 2014

In 2013 the highest frequency of cases was in children aged 1 to 2 months (n=52) and in those aged between 15 to 39 years (n=113) with an overall median age of 13.6 years (range one week to 78 years) (figure 2). Over 67% of cases (n=189) occurred in those under 25 years of age (figure 3, table 1).

The highest age specific incidence rate (ASIR) in 2013 was in infants <1 year of age (165.7/100,000; n=120). The next highest ASIR was in the 20 to 24 year age group (9.5/100,000; n=27). The lowest rates were reported in the older age groups, 55 to 64 and 65+ years with rates of 0.4/100,000 (n=2) and 0.6/100,000 (n=3), respectively (table 1).

The national crude incidence rate in 2013 was 6.1 (95% CI 5.4–6.8) cases per 100,000 population, a 19.6% increase compared with the previous year when 235 cases were notified (5.1/100,000). The incidence rate in 2013 was highest in HSE W at 14.4/100,000 (95%CI 10.9–17.9) and lowest in HSE S at 2.3/100,000 (95%CI

1.1-3.4) with both rates significantly different from the national rate (figure 4).

In 2013, enteroviruses were the most common pathogen associated with viral meningitis, accounting for nearly 77.2% (n=217/281) of all notifications (figure 3, table 1). As a cause of viral meningitis, enteroviruses have accounted for more than 60% of all cases each year since 2008. In 2013, human herpes virus (type 6) (HHV) was the causative pathogen for 11.7% (n=33) notifications, herpes simplex virus (HSV) for 2.1% (n=6) with varicella virus/varicella zoster virus and echovirus each accounting for 0.7% (n=2 each) of cases (figure 3, table 1).

Enterovirus was also the most common pathogen in infants under one year of age with viral meningitis (NOS) in 2013 in 86 out of 120 cases (71.7%). Between 2007 and 2013 enteroviruses accounted for 71.7% (n=852/1188) of all viral meningitis (NOS) cases, with typical summer peaks observed each year (figure 5).

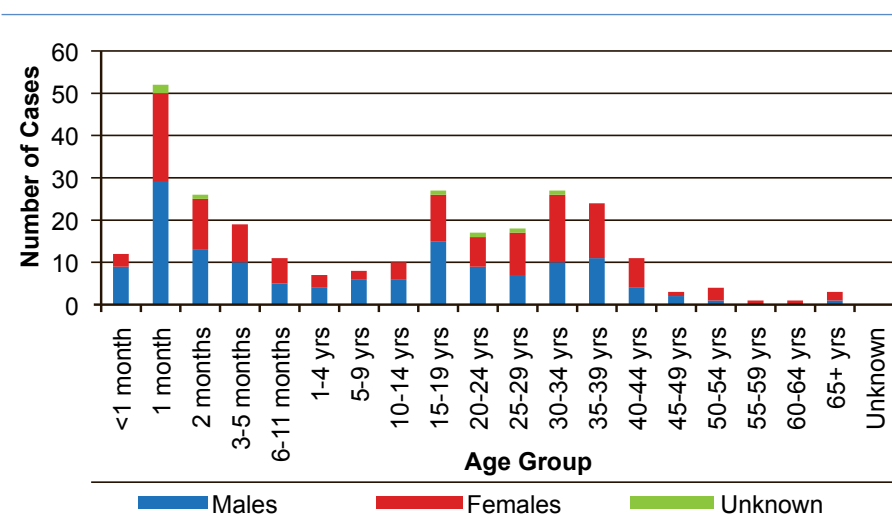


Figure 2. Number of viral meningitis (NOS) cases by age group and gender, Ireland, 2013*

* excludes the late notification of seven cases in 2013 reported in early 2014

Table 1. Number, age-specific incidence rates and proportion of viral meningitis (NOS) notifications by age group and causative pathogen, Ireland, 2013*

* excludes the late notification of seven cases in 2013 reported in early 2014

Age Group	Causative pathogen						Total	ASIR	% Proportion
	entero-virus	human herpes virus	herpes simplex virus	varicella virus & varicella zoster virus	echo-virus	not specified			
<1	86	28	0	0	0	6	120	165.7	42.7
1-4	2	4	0	0	0	1	7	2.5	2.5
5-9	6	1	0	0	0	1	8	2.5	2.8
10-14	9	0	0	0	0	1	10	3.3	3.6
15-19	23	0	0	0	1	3	27	9.5	9.6
20-24	13	0	0	0	1	3	17	5.7	6.0
25-34	39	0	3	0	0	3	45	6.0	16.0
35-44	32	0	0	1	0	2	35	5.0	12.5
45-54	4	0	1	1	0	1	7	1.2	2.5
55-64	2	0	0	0	0	0	2	0.4	0.7
65+	1	0	2	0	0	0	3	0.6	1.1
All Ages	217	33	6	2	2	21	281	6.1	100
% Total	77.2	11.7	2.1	0.7	0.7	7.5	100		

ASIR, age specific incidence rate per 100,000 population

The figures presented in this report are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) system on 27th August, 2014. These figures may differ from those published previously due to ongoing updating of notification data in CIDR.

Reference

1. Kelly TA, O’Lorcain P, Moran J, Garvey P, McKeown P, Connell J, Cotter S. Underreporting of viral encephalitis and viral meningitis, Ireland, 2005-2008. *Emerg Infect Dis.* 2013;19(9):1428-36

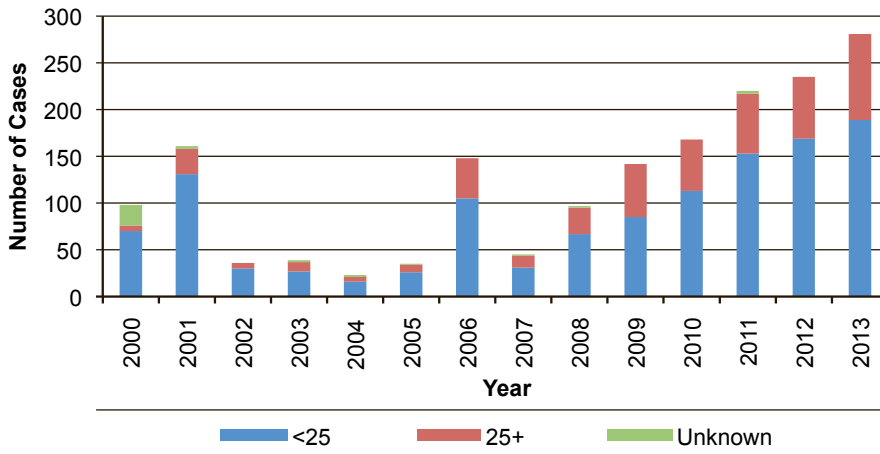


Figure 3. Number of viral meningitis (NOS) cases by age group (<25, >25 years of age) and year, Ireland, 2000-2013*
* excludes the late notification of seven cases in 2013 reported in early 2014

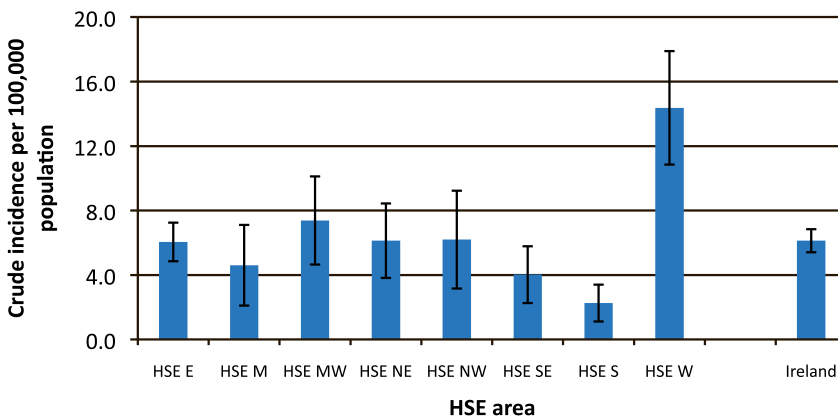


Figure 4. Crude incidence rates per 100,000 population with 95% confidence intervals for viral meningitis (NOS) cases by HSE area, Ireland, 2013*
* excludes the late notification of seven cases in 2013 reported in early 2014

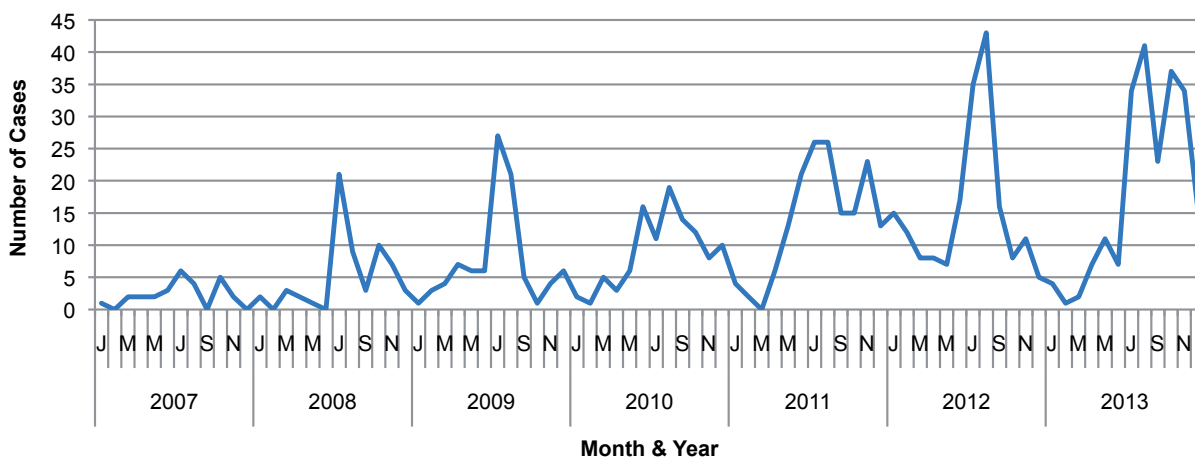


Figure 5. Monthly number of enterovirus-related meningitis notifications, 2008-2013*
* excludes the late notification of seven cases in 2013 reported in early 2014