

Annual Epidemiological Report

July 2018

Viral Encephalitis, Not Otherwise Specified (NOS), in Ireland, 2017

Key Facts

In 2017, 71 cases of viral encephalitis (NOS) (VE) were notified in Ireland (1.49/100,000 population) compared to 61 (1.28/100,000) in 2016

The median age of cases was 44 years (range one month to 88 years)

All but five had a causative pathogen identified: Varicella/herpes zoster virus (n=41), herpes simplex virus types 1 and 2 (HSV) (n=15), human herpes virus type 6 (n=7) and parechovirus (n=3)

Epidemiology

Encephalitis due to viruses not otherwise specified (NOS) are notifiable under the disease category 'viral encephalitis'. Details of viral encephalitis cases caused by other notifiable diseases, if any, are presented in other annual reports.

In 2017, 71 cases of viral encephalitis (NOS) (VE) were notified in Ireland (1.49/100,000 population) compared to 61 (1.28/100,000) in the previous year (Figure 1). One contributing factor to the increase in numbers can be attributable to an increase in the number of varicella/herpes zoster virus cases from 24 to 41 cases.

The number of VE cases among males (n=39) was higher than in females (n=32), an M:F ratio of 1.22:1, a reversal of what was observed in 2016 with a ratio of 0.66:1. The median age of cases was 44 years (range one month to 88 years); 20 (28.2%) cases occurred in those aged 65 or more years and 11 cases (15.5%) in children under five years of age in 2017. There were 11 cases of varicella/herpes zoster virus (VZV) and six herpes simplex virus type 1 (HSV1) among the 20 VE cases in those aged >65 years (Figure 1, Table 1).

All but one of the 71 VE cases were laboratory tested positive and case classified as confirmed. All but five had a causative pathogen identified: VZV (n=41; 57.8%), herpes simplex virus types 1 and 2 (HSV) (n=15; 21.1%), human herpes virus type 6 (HHV 6) (n=7; 9.9%), parechovirus (n=3; 4.2%) and not specified (n=5; 7.0%) (Figure 2).

Caution is advised regarding the detection of HHV 6 DNA in cerebral spinal fluid (CSF) specimens, especially in those cases aged less than three months as HHV 6 DNA can be chromosomally integrated as it may not be clinically relevant. Three of the seven cases of HHV 6-related encephalitis in 2017 however, occurred in patients less than three months of age.

There were no reported deaths in 2017, nor were there imported cases associated with VE in 2017.

The figures presented in this report are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) system on 31st July, 2018. No enhanced surveillance is currently in place on CIDR for viral encephalitis (NOS). However, the increase in the number of cases in recent years is probably a reflection of better surveillance reporting generally rather than an increase in the burden of this disease in the population. The figures in this report will differ from those published previously due to on-going updating of notification data in CIDR.

Further information available on HPSC website:

<http://www.hpsc.ie/a-z/other/viralencephalitis/>

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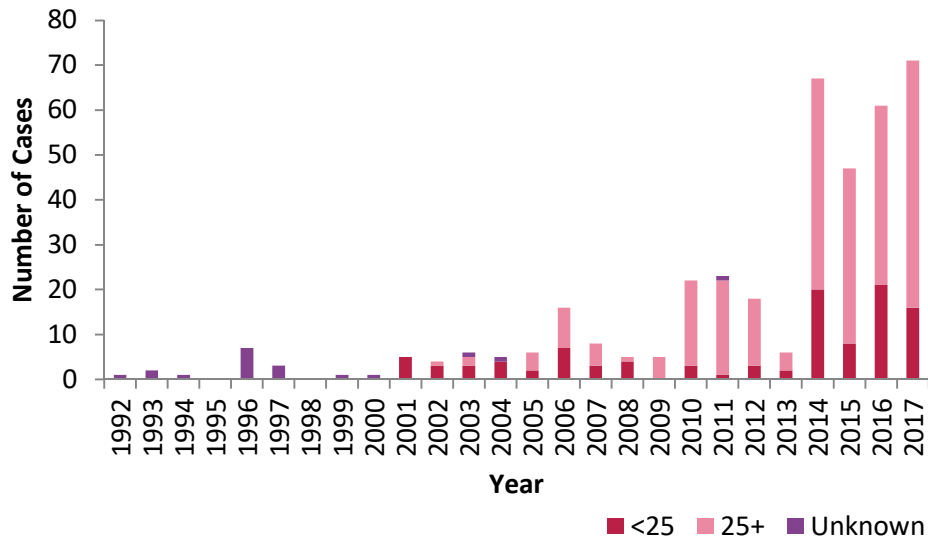


Figure 1. Number of viral encephalitis (NOS) cases by age group and year, Ireland, 1992-2017*
 *includes the late notification of 15 cases in 2013 reported in early 2014

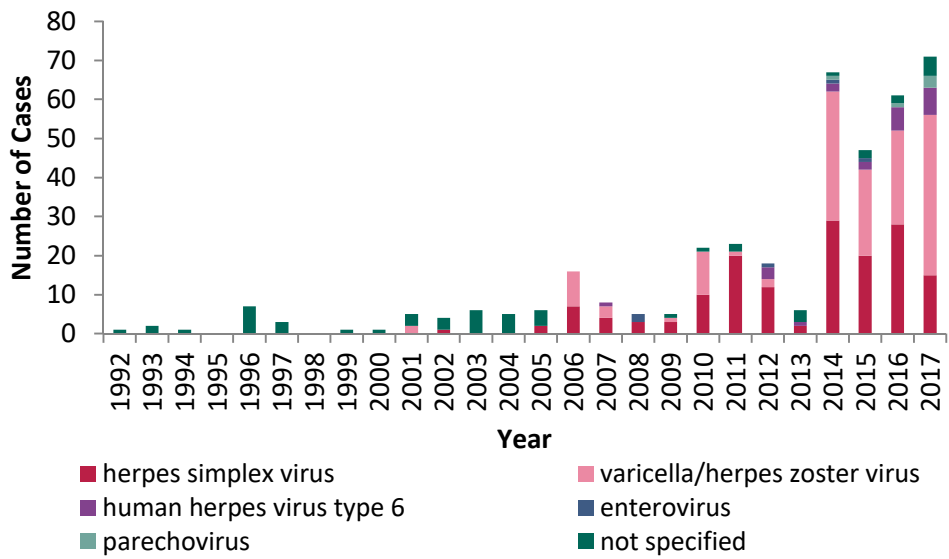


Figure 2. Number of viral encephalitis (NOS) cases by causative pathogen and year, Ireland, 1992-2017*
 *includes the late notification of 15 cases in 2013 reported in early 2014

Table 1. Number, age-specific incidence rates and proportion of viral encephalitis (NOS) cases by age group, Ireland, 2017

Age Group	Causative pathogen						Total	ASIR	%
	herpes simplex virus (HSV)	varicella/herpes zoster virus (VZV)	human herpes virus type 6 (HHV6)	Parechovirus	not specified				
<1	0	2	5	3	0	10	16.06	14.1	
1-4	0	0	1	0	0	1	0.37	1.4	
5-14	1	0	0	0	1	2	0.30	2.8	
15-24	0	2	1	0	0	3	0.52	4.2	
25-44	5	15	0	0	0	20	1.42	28.2	
45-64	3	11	0	0	1	15	1.32	21.1	
65+	6	11	0	0	3	20	3.14	28.2	
All ages	15	41	7	3	5	71	1.49	100	
% total cases	24.6	67.2	11.5	4.9	8.2	100			