

1.5 Other forms of Bacterial Meningitis

Summary

Bacterial meningitis, Not Otherwise Specified

Number of cases, 2008: 40

Number of cases, 2007: 33

Number of cases, 2006: 46

Crude incidence rate, 2008: 0.94/100,000

Apart from *Neisseria meningitidis*, which is considered the most common cause of bacterial meningitis in Ireland, other forms of the disease do occur, including those caused by non-notifiable organisms, details of which are presented below. For information on invasive meningococcal disease (*Neisseria meningitidis*), see a separate chapter within this report. The figures presented in this chapter are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) system on 6th and 7th July 2009.

Haemophilus influenzae

In 2008, three cases of meningitis due to *H. influenzae* were notified, all of whom were under one year of age. Two of the cases were attributable to a type f infection and the third was caused by a type b disease. The latter patient had been incompletely vaccinated. No deaths were reported. See a separate chapter on invasive *H. influenzae* disease for further details.

***Leptospira* species**

One case of leptospirosis meningitis was notified in 2008 in an adolescent male following a leisure-related river water contact. The causative organism was identified as a *Leptospira interrogans* serovar *icterohaemorrhagiae*. See a separate chapter on non-IID zoonotic diseases for further details.

***Listeria* species**

Two cases of listeriosis meningitis were notified in males in 2008, one of whom was over 65 years of age. No deaths were reported. See a separate chapter on listeriosis disease for further details.

Streptococcus pneumoniae

In 2008, 32 cases of pneumococcal meningitis were notified, compared to 35 in 2007 and 24 in 2006. Cases in 2008 ranged in age from one week to 85 years. There were five pneumococcal meningitis related reported deaths, all but one were adults. See a separate chapter on invasive pneumococcal disease for further details.

***Streptococcus pyogenes* (Streptococcus group A infection (invasive) (iGAS))**

There were two reported cases of iGAS causing meningitis in 2008, both of whom recovered. In contrast, there were no cases in 2007, but there was one each in 2006 and 2005. See a separate chapter on iGAS infection for further details.

***Mycobacterium* species**

In 2008, five tuberculosis meningitis cases were notified (provisional). Cases ranged in age from 10-73 years. One tuberculosis meningitis death was also reported. See a separate chapter on tuberculosis for further details.

Bacterial meningitis (not otherwise specified)

In total 40 cases of meningitis under this disease category were notified in 2008, among which two patients died. The causative pathogens were identified in 23 of these. No causative pathogen was identified for 17 of the 40 (42.5%) notifications in 2008, a decrease compared to 2007 (66.7%; n=22/33) and 2006 (78.2%; n=36/46).

Among the bacterial meningitis (not otherwise specified) cases notified in 2008 were 11 cases of *Escherichia coli*

meningitis, all but one was one month old or less, with no deaths reported. Six cases of Group B streptococci meningitis were also notified in 2008 with all but one being under five months of age and with no deaths reported. In addition, three cases of meningitis caused by *Staphylococcus aureus* were reported in 2008, one of which died. Other meningitis notifications include one each caused by the following pathogens: *Citrobacter koseri* in a one month infant, *Enterococcus* species in an adult and *Serratia liquefaciens* in a 3-month old infant, all of whom recovered.

Table 1. Annual notifications of bacterial meningitis other than meningococcal disease, 2006-2008

Notified under	Causative organism	2006	2007	2008	2006-2008
<i>Haemophilus influenzae</i> disease (invasive)	<i>Haemophilus influenzae</i>	4	2	3	9
Leptospirosis	<i>Leptospira</i> species	1	1	1	3
Listeriosis	<i>Listeria</i> species	1	1	2	4
<i>Streptococcus pneumoniae</i> infection (invasive)	<i>Streptococcus pneumoniae</i>	24	35	32	91
Streptococcus Group A infection (invasive)	Streptococcus Group A (<i>S. pyogenes</i>)	1	0	2	3
Tuberculosis*	<i>Mycobacterium</i> species	7	7	5	19
	<i>Citrobacter koseri</i>	0	0	1	1
	Coagulase Negative Staphylococci	1	0	0	1
	<i>Escherichia coli</i>	3	0	11	14
	<i>Enterococcus</i> species	0	0	1	1
Bacterial meningitis, NOS	<i>Gemella</i> species	0	1	0	1
(not otherwise specified)	<i>Klebsiella pneumoniae</i>	1	0	0	1
	<i>Proteus mirabilis</i>	0	1	0	1
	<i>Serratia liquefaciens</i>	0	0	1	1
	<i>Staphylococcus aureus</i>	1	0	3	4
	Streptococcus Group B (<i>S. agalactiae</i>)	4	9	6	19
	Unknown	36	22	17	75
	Total Bacterial Meningitis, NOS	46	33	40	119
Total**		84	79	85	248

Notes

* Tuberculosis meningitis figures for 2007 and 2008 are provisional