

# 1.5 Other forms of Bacterial Meningitis

## Summary

Bacterial meningitis, Not Otherwise Specified  
Number of cases, 2009:39  
Number of cases, 2008:40  
Number of cases, 2007:33  
Crude incidence rate, 2009: 0.9/100,000

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 7<sup>th</sup> July 2010. These figures may differ from those published previously due to ongoing updating of notification data on CIDR.

### ***Haemophilus influenzae***

In 2009, three cases of meningitis due to *H. influenzae* were notified, two of whom were under one year of age, with the remaining case aged between 5-9 years. One of the cases was attributable to a type e infection, the second was not typeable and the third was not typed. 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 2009 in a young adult female, a canoeist aged 25-29 years. 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**

One case of listeriosis meningitis was notified in a 45-49 year old in 2009. See a separate chapter on listeriosis disease for further details.

### ***Streptococcus pneumoniae***

In 2009, 28 cases of pneumococcal meningitis were notified, compared to 32 in 2008 and 35 in 2007. Cases in 2009 ranged in age from one month to 81 years. There were three pneumococcal meningitis related deaths reported aged between five and 18 years. See a separate chapter on invasive pneumococcal disease for further details.

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

There were no reported cases of iGAS causing meningitis in 2009. See a separate chapter on iGAS infection for further details.

### **Bacterial meningitis by other specified notifiable diseases**

One fatal case of *Salmonella enterica enteritidis* related meningitis in a 45-49 year old was reported in 2009.

### ***Mycobacterium* species**

In 2009, eight tuberculosis meningitis cases were notified (provisional). Cases ranged in age from four months to 76 years. No tuberculosis meningitis deaths were reported. See a separate chapter on tuberculosis for further details.

### **Bacterial meningitis (not otherwise specified)**

In total, 39 cases of meningitis under this disease category were notified in 2009, among whom one patient died. The causative pathogens were identified in 15 of these. No causative pathogen was identified in the remaining 24 (61.5%) cases in 2009, an increase compared to 2008 when 17 cases had no organism identified (42.5%; n=17/40).

Among the bacterial meningitis (not otherwise specified) cases notified in 2009 were three cases of *Escherichia coli* meningitis, one of whom was a four month old infant and another (an adult aged 35-39 years) that died. Seven cases of Group B streptococci meningitis were also notified in 2009, with all but one being under four months of age, and with no deaths reported. In addition, two cases of meningitis caused by *Staphylococcus aureus* were reported in 2009, neither of whom died. Other meningitis notifications include one each caused by the following pathogens: *Streptococcus bovis* in a one month old infant, *Streptococcus Group D* infection in a two month old infant and *Enterococcus Faecalis* in a 25-29 year old adult, all of whom recovered.

Table 1. Annual notifications of bacterial meningitis other than meningococcal disease, 2007-2009

Notified under	Causative organism	2007	2008	2009	2007-2009
<i>Haemophilus influenzae</i> disease (invasive)	<i>Haemophilus influenzae</i>	2	3	3	8
Leptospirosis	<i>Leptospira</i> species	1	1	1	3
Listeriosis	<i>Listeria</i> species	1	2	1	4
Salmonellosis	<i>Salmonella enteritidis</i>	0	0	1	1
<i>Streptococcus pneumoniae</i> infection (invasive)	<i>Streptococcus pneumoniae</i>	35	32	28	95
Streptococcus Group A infection (invasive)	Streptococcus Group A ( <i>S. pyogenes</i> )	0	2	0	3
Tuberculosis*	<i>Mycobacterium</i> species	6	6*	8*	20
	Beta Haemolytic Streptococcus Group B	9	6	7	22
	<i>Escherichia coli</i>	0	11	3	14
	<i>Staphylococcus aureus</i>	0	3	2	5
	<i>Enterococcus faecalis</i>	0	1	1	2
Bacterial meningitis, NOS	<i>Citrobacter koseri</i>	0	1	0	1
(not otherwise specified)	<i>Gemella</i> species	1	0	0	1
	<i>Proteus mirabilis</i>	1	0	0	1
	<i>Serratia liquefaciens</i>	0	1	0	1
	<i>Streptococcus bovis</i>	0	0	1	1
	Streptococcus Group D	0	0	1	1
	Unknown	22	17	24	63
	Total Bacterial Meningitis, NOS	33	40	39	112
<b>Total</b>		<b>78</b>	<b>86</b>	<b>81</b>	<b>245</b>

Notes

\* Tuberculosis meningitis figures for 2008 and 2009 are provisional