

# 1.5 Other forms of Bacterial Meningitis

## Summary

Bacterial meningitis, Not Otherwise Specified

Number of cases, 2010:42

Number of cases, 2009:40

Number of cases, 2008:40

Crude incidence rate, 2010: 1.0/100,000

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 4<sup>th</sup> August 2011. These figures may differ from those published previously due to ongoing updating of notification data on CIDR.

### ***Haemophilus influenzae***

In 2010, two cases of meningitis due to *H. influenzae* were notified. One was aged between 20 and 24 years, was infected with a type b strain and was unvaccinated. The other was aged between 40-44 years and was infected with a type f strain. No deaths were reported. See a separate chapter on invasive *H. influenzae* disease for further details.

### ***Leptospira species***

No case of leptospirosis meningitis was reported in 2010. See a separate chapter on non-IID zoonotic diseases for further details.

### ***Listeria species***

Three cases of listeriosis meningitis were notified in 2010: two in women aged between 70 and 74 years, and in a man aged between 55 and 59 years (for whom the country of infection was France). See a separate chapter on listeriosis disease for further details.

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

One probable case of iGAS causing meningitis was notified in a 35-39 year old male in 2010. See a separate chapter on iGAS infection for further details.

### ***Streptococcus pneumoniae***

In 2010, 20 cases of pneumococcal meningitis were notified, compared to 28 in 2009 and 32 in 2008. Cases in 2010 ranged in age from two months to 67 years. One pneumococcal meningitis related death in 2010 was reported in a child aged between one and four years. This child had not been vaccinated and developed a serotype 6B infection (a serotype that is included in the PCV7 vaccine). See a separate chapter on invasive pneumococcal disease for further details.

### ***Mycobacterium species***

In 2010, eight tuberculosis meningitis cases were notified (provisional). Cases ranged in age from 28 to 78 years. One tuberculosis meningitis death was reported. See a separate chapter on tuberculosis for further details.

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

No cases of meningitis caused by other specified notifiable diseases were reported in 2010.

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

In total, 42 cases of meningitis under this disease category were notified in 2010, among which three patients died. The causative pathogens were identified in 21 of the cases. No causative pathogen was identified in the remaining 21 (50%) cases in 2010, a decrease compared to 2009 when 25 cases had no organism identified (62.5%; n=25/40).

Among the bacterial meningitis (not otherwise specified) cases notified in 2010 were 10 cases of Beta Haemolytic Streptococcus Group B (*Streptococcus agalactiae*) occurring in eight infants aged six months or less and in two adults aged between 35 and 67 years, all of whom recovered. *Staphylococcus aureus* occurred in six

patients, two of whom died, (age range two weeks to 81 years). *Escherichia coli* meningitis, was reported in two cases (age range 1 week to 61 years), both of whom recovered. Other meningitis notifications include one each caused by *Mycoplasma pneumoniae* in a 5-9 year old, by *Staphylococcus capitis* in a one month old infant and by *Streptococcus* species in a three week old infant, all of whom recovered.

Table 1. Annual notifications of bacterial meningitis other than meningococcal disease, 2008-2010

Notified under	Causative organism	2008	2009	2010	2008-2010
<i>Haemophilus influenzae</i> disease (invasive)	<i>Haemophilus influenzae</i>	3	3	2	8
Leptospirosis	<i>Leptospira</i> species	1	1	0	2
Listeriosis	<i>Listeria</i> species	3	1	3	7
Salmonellosis	<i>Salmonella enteritidis</i>	0	1	0	1
<i>Streptococcus pneumoniae</i> infection (invasive)	<i>Streptococcus pneumoniae</i>	32	28	20	80
Streptococcus Group A infection (invasive)	Streptococcus Group A ( <i>S. pyogenes</i> )	2	0	1	3
Tuberculosis*	<i>Mycobacterium</i> species	6	8*	8*	22
	Beta Haemolytic Streptococcus Group B	6	7	10	23
	<i>Escherichia coli</i>	11	3	2	16
	<i>Staphylococcus aureus</i>	3	2	6	11
	<i>Enterococcus faecalis</i>	1	1	0	2
Bacterial meningitis, NOS	<i>Citrobacter koseri</i>	1	0	0	1
(not otherwise specified)	<i>Mycoplasma pneumoniae</i>	0	0	1	1
	<i>Serratia liquefaciens</i>	1	0	0	1
	<i>Staphylococcus capitis</i>	0	0	1	1
	<i>Streptococcus bovis</i>	0	1	0	1
	Streptococcus Group D	0	1	0	1
	<i>Streptococcus</i> species	0	0	1	1
	Unknown	17	25	21	63
	Total Bacterial Meningitis, NOS	40	40	42	122
<b>Total</b>		<b>87</b>	<b>82</b>	<b>76</b>	<b>245</b>

#### Notes

\* Tuberculosis meningitis figures for 2009 and 2010 are provisional