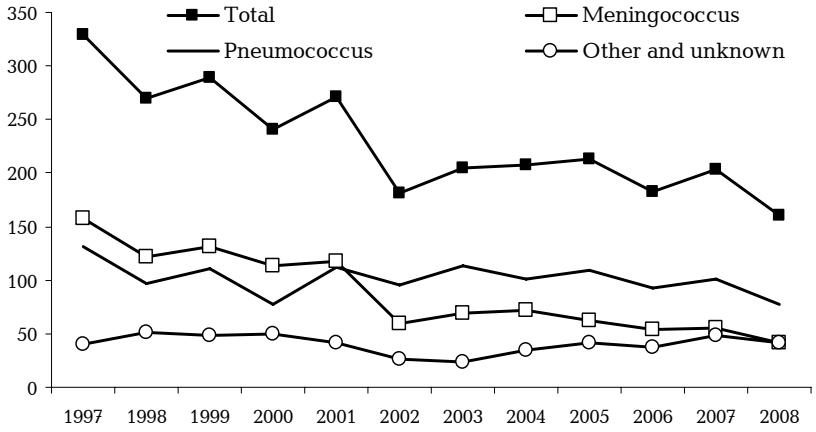
2008 saw 161 notified cases of purulent meningitis. Figure 1 and Table 1 show the distribution by aetiology and age. Meningococcal disease has previously been described, EPI-NEWS 15-16/09.

Figure 1. Notified cases of purulent meningitis by aetiology, 1997-2008



Pneumococcal meningitis
Among the notified cases, a total of 78 (48%) had pneumococcal meningitis, including 39 males. In 53 (68%) cases, information on predisposing factors was provided, including 20 with otitis media, seven with sinusitis, nine with other infections, four with splenectomy, four with past head and neck surgery, two with dural defects and seven cases with other underlying conditions. Among the 16 (21%) who died, a total of 13 were more than 60 years old and three were 45-50 years old. Among the 62 survivors, 31 reported no sequelae, five suffered hearing-loss, three neurological sequelae and four had other, minor sequelae. In 19 cases, sequelae were either not known or unresolved.
Vaccination and invasive pneumococcal disease will be the subject of a separate, future issue of EPI-NEWS.

Other streptococci
Other streptococci than S. pneumoniae were detected in 11 cases. Seven of the cases were 0-16 days old. Six patients, of whom two died, were infected with group B streptococci (GBS) and one with group A. The remaining four patients were all above 50 years; one died with group A streptococci and one, who had S. oralis recovered fully. Sequelae to the disease were not stated for two of the cases which had group C and G streptococci, respectively.

Haemophilus influenzae meningitis
H. influenzae was detected in seven cases, including one serotype b patient. The patient was a 13-month-old child who had received two of the three offered Hib vaccines during his first year. An adult had undergone a neurological intervention, and another adult and a child had otitis media. The infection caused no deaths.

Listeria meningitis
L. monocytogenes was detected in a patient receiving therapy with TNF-alpha inhibitors and other drugs.

Other and unknown aetiology
Two cases of E. coli meningitis were notified: A two-month-old child who survived, possibly with hearing-loss, and a 60-year-old who suffered cognitive sequelae. A child had S. aureus meningitis and one elderly patient Klebsiella; both survived. In a total of 18 cases, notification was made on the basis of clinical tests and/or cerebrospinal fluid tests consistent with purulent meningitis, but without detection of bacterial aetiology. All survived; 13 without sequelae, one with double vision, one with hearing-loss and in three cases late sequelae were unknown.

Commentary
The number of notified cases in 2008 was lower than in 2007. This may be explained by fewer cases of meningococcal and pneumococcal meningitis. The incidence was higher among infants, and 2008, like previous years, saw a series of streptococci cases, EPI-NEWS 45/08. Furthermore, in 2008, the reference laboratory received more GBS isolates from children below 3 months of age than in the previous five years. Thus, in addition to the mentioned meningitis cases, a total of 18 infants had BGS detected in their blood in 2008. It is currently not known if this was caused by a real increase in the occurrence or by an increase in notification and submission of isolates.
(L. Lambertsen, Z.B. Harboe, J.J. Christensen, DBMP, G. St-Martin, (K. Mølbak, Department of Epidemiology)

16 September 2009

Table 1. Cases of purulent meningitis 2008 (2007), by age, aetiology and incidence per 10^5

Age (years)	Meningo-coccus	Pneumo-coccus	H. influ-enzae	Listeria	Strepto-coccus	Other	Unknown	Total	Inci-dence
0	8	7	1	0	7	1	0	24	36.9
1-5	11	5	1	0	0	0	4	21	6.4
6-10	7	0	0	0	0	0	0	7	2.1
11-15	2	1	0	0	0	1	1	5	1.4
16-20	7	0	0	0	0	0	3	10	3.0
21-30	2	0	0	1	0	0	4	7	1.1
31-40	0	7	0	0	0	0	2	9	1.2
41-50	0	10	2	0	0	0	1	13	1.6
51-60	1	12	0	0	1	1	1	16	2.2
61-70	1	21	1	0	2	0	2	27	4.3
71+	3	15	2	0	1	1	0	22	4.0
Total 2008	42	78	7	1	11	4	18	161	2.9
Total 2007	55	101	2	7	15	3	24	207	3.8

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2009 figures are preliminary)

Table 1	Week 37 2009	Cum. 2009 [1]	Cum. 2008 [1]
AIDS	0	27	28
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	1
Creutzfeldt-Jakob	0	9	4
Diphtheria	0	0	0
Food-borne diseases	11	390	586
of these, infected abroad	1	70	99
Gonorrhoea	3	397	275
Haemorrhagic fever	0	0	0
Hepatitis A	2	24	28
of these, infected abroad	0	15	14
Hepatitis B (acute)	0	20	17
Hepatitis B (chronic)	0	118	135
Hepatitis C (acute)	0	13	6
Hepatitis C (chronic)	5	203	258
HIV	4	173	168
Legionella pneumonia	6	97	85
of these, infected abroad	1	19	30
Leprosy	0	0	0
Leptospirosis	0	0	2
Measles	0	9	10
Meningococcal disease	0	50	42
of these, group B	0	27	17
of these, group C	0	17	14
of these, unspec. + other	0	6	11
Mumps	0	11	21
Neuroborreliosis	1	25	37
Ornithosis	0	9	2
Pertussis (children < 2 years)	0	78	80
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	5	3
Listeria monocytogenes	0	4	1
Streptococcus pneumoniae	0	55	67
Other aethiology	0	9	17
Unknown aethiology	0	10	17
Under registration	5	25	-
Rabies	0	0	0
Rubella (congenital)	0	0	2
Rubella (during pregnancy)	0	0	0
Shigellosis	1	74	58
of these, infected abroad	1	59	47
Syphilis	10	193	88
Tetanus	0	0	2
Tuberculosis	10	268	279
Typhoid/paratyphoid fever	0	18	23
of these, infected abroad	0	15	18
Typhus exanthematicus	0	0	0
VTEC/HUS	4	102	104
of these, infected abroad	2	28	34

[1] *Cumulative number 2009 and in corresponding period 2008*

Selected laboratory diagnosed infections

Number of specimens, isolates, and/or notifications received in SSI laboratories

Table 2	Week 37 2009	Cum. 2009 [2]	Cum. 2008 [2]
Bordetella pertussis (all ages)	5	161	144
Gonococci	4	312	259
of these, females	1	85	53
of these, males	3	227	206
Listeria monocytogenes	2	55	35
Mycoplasma pneumoniae			
Resp. specimens [3]	0	46	58
Serum specimens [4]	2	82	65
Streptococci [5]			
Group A streptococci	0	111	110
Group B streptococci	2	86	91
Group C streptococci	0	27	13
Group G streptococci	4	121	96
S. pneumoniae	6	763	668
Table 3	**Week 35 2009**	**Cum. 2009 [2]**	**Cum. 2008 [2]**
MRSA	18	500	450
Pathogenic int. bacteria [6]			
Campylobacter	74	2059	2205
S. Enteritidis	13	406	391
S. Typhimurium	13	628	1354
Other zoon. salmonella	7	476	708
Yersinia enterocolitica	2	154	221
Verocytotoxin-producing E. coli	4	96	98
Enteropathogenic E. coli	13	155	116
Enterotoxigenic E. coli	5	199	252

[2] *Cumulative number 2009 and in corresponding period 2008*

[3] *Resp. specimens with positive PCR*

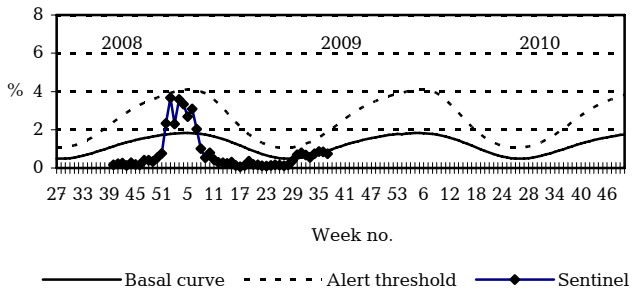
[4] *Serum specimens with pos. complement fixation test*

[5] *Isolated in blood or spinal fluid*

[6] *See also www.germ.dk*

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2008/2009/2010



Sentinel:	Influenza consultations (as percentage of total consultations)
Basal curve:	Expected frequency of consultations under non-epidemic conditions
Alert threshold:	Possible incipient epidemic

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