EPI-NEWS

NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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INFLUENZA EPIDEMIC UPDATE

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Denmark experienced a minor primary pandemic wave in weeks 29-32, 2009, which was followed by a second and more substantial wave beginning in week 40, 2009.

Laboratory data

At the end of week 48, a total of 4,504 cases of influenza A(H1n1)v had been detected, including 768 in the initial wave and 3,736 in the second. In the first wave, 452 (59%) were aged 10-29 years, while the second wave has seen a high occurrence of children and adolescents aged 1-19 years and also adults aged 30-39 years, Table 1. Distribution by type of influenza among all confirmed cases of influenza virus has documented total dominance of influenza A(H1N1)v.

Table 1. Age and gender distribution of laboratory-confirmed cases of influenza A(H1N1)v, weeks 40-48, 2009

Age(yrs)	Males	Females	Total
< 1	34	36	70
1-4	224	186	410
5-9	399	319	718
10-19	584	522	1106
20-29	144	212	356
30-39	134	311	445
40-49	132	197	329
50-59	100	112	212
60+	40	50	90
Total	1791	1945	3736

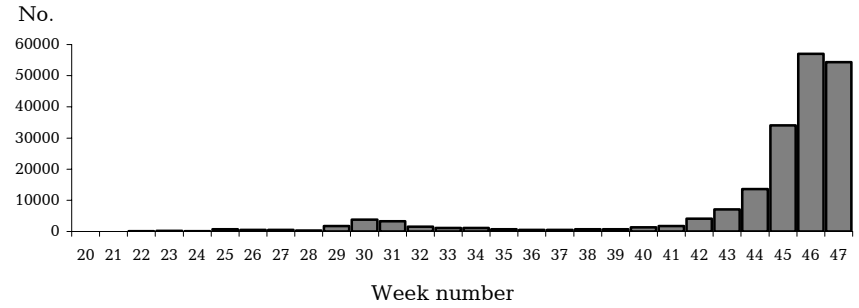
Sentinel surveillance

The general practitioners who participate in the sentinel surveillance have continued reporting throughout the summer months. Additionally, more physicians have joined the sentinel surveillance scheme which has increased the number of physicians who report weekly to more than 250.
The frequency of influenza-like disease (ILS) consultations increased as from week 40 and peaked by week 47 when 5% of all consultations concerned ILS.

Emergency service monitoring

In 2007-8, the SSI established national surveillance of ILS in cooperation with the emergency service physicians. Such efforts have facilitated day-to-day monitoring of epidemic developments, see www.ssi.dk (Danish language). The ILS incidence has been at its highest among children < 5 years and peaked with 448 ILS consultations per 10^5 inhabitants in week 46. For comparison, the ILS incidence in the winter of 2008/9 peaked in week four with 87 complaints per 10^5.
The increase during the second wave as from week 40 counted more 5-14-year-olds, followed by the remaining age groups. However, the incidence among persons aged ≥ 65 years has remained low.

Figure 1. Estimated weekly cases of influenza A(H1N1)v, weeks 20-47, 2009



The overall disease burden

In cooperation with Danish Broadcasting Corporation, a web-based questionnaire has been used to collect data on behaviour among persons with ILS. For each person seeing his or her GP for ILS, it is estimated that a total of seven persons in Denmark had ILS. The corresponding factor for emergency service physicians is 18. Based on these figures and the proportion of samples submitted for ILS which have tested positive for influenza A(H1N1)v, it is estimated that a minimum of 57,000 persons had influenza in week 46 and that at least 200,000 persons have had influenza A(H1N1)v up to and including week 47, Fig. 1.

Influenza A(H1N1)v vaccination

By the end of week 48, the SSI had distributed nearly 500,000 vaccine doses, primarily to cover risk group vaccination. In the next weeks another 500,000 doses will be distributed and efforts to offer vaccination to health staff will be intensified.
A report of the coverage will be published at a later point in time.
The Danish Medicines Agency assesses that the adverse events reported at present are as expected, see www.dkma.dk.

Commentary

The second wave of the influenza epidemic is receding, and influenza activity is expected to return to normal by the year's end. However, a third minor wave in the beginning of 2010 cannot be excluded.
As the load caused on hospitals and in particular intensive care units (ICUs) is delayed in time relative to the time of infection, an increased load on bed wards and ICUs may be seen at Danish hospitals over the coming weeks.
As at least 1/3 of infections are asymptomatic, it is estimated that a minimum of 10% of the population will have had influenza A(H1N1)v by the year's end.
(K. Mølbak, S. Glismann, Dept. of Epidemiology)

INFLUENZA A(H1N1)v VACCINATION: ADJUSTMENT OF RECOMMENDATIONS

New data published by the European Medicines Agency (EMEA) have demonstrated that one dose of Pandemrix® is sufficient in children as from the age of 10 years and in adults and elderly persons without immune deficiencies.
Consequently, the National Board of Health now adjusts Danish vaccination recommendations. Thus, only one vaccine dose is recommendded for risk group patients, unless their immune system is weakened.
Furthermore, it is assessed that pregnancy is not an independent cause of reduced vaccine efficacy and therefore one dose is also sufficient for pregnant women.
However, the National Board of Health still recommends two doses in the following groups:
1. Risk group children below the age of 10 years.
2. Patients who have a weakened immune system, regardless of whether the deficiency is congenital, acquired or induced by treatment.
If it is unclear whether a patient's immune system is weakened and he or she has e.g. experienced repeated pulmonary infections, two doses should be administered.
It is stressed that the adjustment is due exclusively to the fact that the vaccine has proven to be more effective than expected. The adjustment is not introduced due to any increase in secondary or otherwise harmful effects. It is therefore essential that the above mentioned groups receive two doses.
(National Board of Health)

2 December 2009

Individually notifiable diseases

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

Table 1	Week 48 2009	Cum. 2009 [1]	Cum. 2008 [1]
AIDS	3	39	36
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	1
Creutzfeldt-Jakob	1	9	5
Diphtheria	0	0	0
Food-borne diseases	5	493	809
of these, infected abroad	1	87	134
Gonorrhoea	7	515	339
Haemorrhagic fever	0	0	0
Hepatitis A	0	30	46
of these, infected abroad	0	23	26
Hepatitis B (acute)	0	22	22
Hepatitis B (chronic)	1	148	163
Hepatitis C (acute)	0	15	6
Hepatitis C (chronic)	2	257	258
HIV	4	236	233
Legionella pneumonia	4	131	118
of these, infected abroad	2	32	45
Leprosy	0	0	0
Leptospirosis	0	0	7
Measles	0	9	10
Meningococcal disease	0	64	56
of these, group B	0	37	26
of these, group C	0	20	17
of these, unspec. + other	0	7	13
Mumps	1	15	26
Neuroborreliosis	1	53	55
Ornithosis	0	12	5
Pertussis (children < 2 years)	1	103	90
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	5	5
Listeria monocytogenes	0	5	1
Streptococcus pneumoniae	0	65	79
Other aethiology	0	9	19
Unknown aethiology	0	16	20
Under registration	4	21	-
Rabies	0	0	0
Rubella (congenital)	0	0	3
Rubella (during pregnancy)	0	0	0
Shigellosis	4	99	79
of these, infected abroad	4	82	65
Syphilis	4	260	124
Tetanus	0	0	2
Tuberculosis	17	341	353
Typhoid/paratyphoid fever	0	25	32
of these, infected abroad	0	22	26
Typhus exanthematicus	0	0	0
VTEC/HUS	3	144	139
of these, infected abroad	0	34	50

[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 48 2009	Cum. 2009 [2]	Cum. 2008 [2]
Bordetella pertussis			
(all ages)	0	186	182
Gonococci	6	415	340
of these, females	3	109	70
of these, males	3	306	270
Listeria monocytogenes	3	86	45
Mycoplasma pneumoniae			
Resp. specimens [3]	4	84	78
Serum specimens [4]	5	125	84
Streptococci [5]			
Group A streptococci	5	136	127
Group B streptococci	2	121	120
Group C streptococci	0	33	21
Group G streptococci	4	163	119
S. pneumoniae	34	973	842

Table 3	Week 46 2009	Cum. 2009 [2]	Cum. 2008 [2]
MRSA	13	672	692
Pathogenic int. bacteria [6]			
Campylobacter	29	3115	3169
S. Enteritidis	6	583	607
S. Typhimurium	12	744	1869
Other zoon. salmonella	15	669	946
Yersinia enterocolitica	1	211	303
Verocytotoxin-producing E. coli	1	154	146
Enteropathogenic E. coli	2	205	197
Enterotoxigenic E. coli	6	297	380

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

[3] *Resp. specimens with positive PCR*

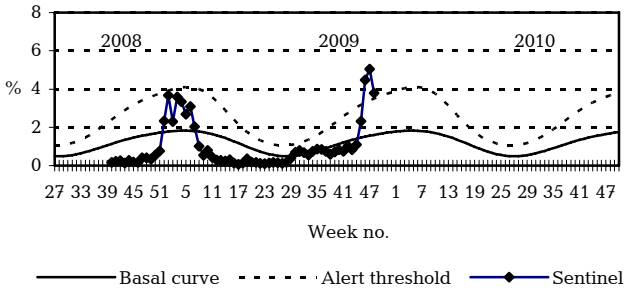
[4] *Serum specimens with pos. complement fixation test*

[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

2 December 2009