EPI-NEWS

NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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INFLUENZA PANDEMIC STATUS

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International experiences

The Southern Hemisphere has currently entered the winter influenza season. The new influenza virus A (H1HN1)v has been dominant without completely displacing other influenza A viruses in circulation.

In New Zealand, influenza-like disease (ILS) and verified influenza A (H1N1)v infection increased in June. The occurrence dropped steeply after 4-6 weeks which was surprising as New Zealand is currently in the middle of the influenza season. On the basis of the initial 16 of 17 influenza- associated deaths, corresponding to a 0.005% mortality rate, it is assessed that the risk of death among young persons is no higher than that of seasonal influenza. Australia has also seen reports of a decreasing influenza A (H1N1)v occurrence. On 21 August 2009, a total of 4,082 admissions and 131 deaths had been reported. The Australian deaths primarily occurred among persons with an underlying disease, and the median age was lower (54 years) than for seasonal influenza (83 years).

From a total of 477 influenza-related deaths in the US, 36 were children < 18 years, including seven < 5 years. A total of 67% of the children had underlying diseases, particularly severe neurological conditions.

In ten children, a concurrent bacterial infection was found, including five $\geq$ 5 years with no known risk of serious influenza disease. This is comparable to e.g. seasonal influenza 2003/4 in the US, where a total of 153 deaths were reported in children < 18 years, including 96 < 5 years, of whom 33% pertained to a risk group.

European experiences

In the EU and EFTA countries, influenza activity was reported during the summer. In the majority of countries, the occurrence is currently low. A few countries have reported a slightly increased occurrence.

A total of 121 deaths have been reported, the majority occurring in Great Britain (70), Spain (23) and France (14).

Danish experiences

Danish influenza activity increased in July, EPI-NEWS 30-33/09, and has since remained stable, apart from a minor increase over the last week. The ILS occurrence established via emergency service surveillance amounts to approx. two visits per 100,000 inhabitants. When the winter influenza peaked during the 2008/09 season, the ILS incidence observed by the emergency service surveillance reached 3.5 per 100,000. The number of verified influenza A (H1N1)v cases is decreasing, in part due to the changed testing indication, EPI-NEWS 27-29/09.

Commentary

As new evidence on the new influenza virus A (H1N1)v is gathered, we begin to discern an image of a virus which is no more infectious than seasonal virus and has a similar clinical picture. One important difference with respect to seasonal influenza is that the risk of infection with the new virus is lower in the elderly, which means that morbidity and mortality reports predominantly comprise patients aged < 50 years. Death and serious disease is primarily seen among risk group patients. Overall it is assumed that the number of deaths caused by influenza A (H1N1)v will be lower than the expected corresponding number for a seasonal influenza epidemic, and considerably lower than initially expected. Several countries have reported deaths among otherwise healthy persons, which also occur during seasonal influenza epidemics. It is estimated that the risk of death among younger, healthy persons is comparable to that observed for seasonal influenza.

Our experience with the current pandemic remains limited and uncritical extrapolation from the winter scenarios of Australia or New Zealand to the upcoming Danish winter is not advisable as infection, demographic and climate factors are different. From previous pandemics we know that several waves may occur and that the epidemiology may change from one to the next. Even though the pandemic seems to be much milder than assumed in the original planning scenarios, the handling may yet prove to be a challenge to the health care system, including to the intensive care facilities of the hospitals. Therefore, the upcoming vaccination efforts, which will target e.g. risk group persons and health personnel, remains an essential initiative to limit the influenza's effect on public health and society in general.

(K. Mølbak, S. Glismann, Dept. of Epidemiology)

NEW JAPANESE ENCEPHALITIS VACCINE

A new, approved Japanese encephalitis (JE) vaccine (IXIARO®) replaces the previously used vaccine (JE vaccine GCC®). The IXIARO® item number is 76602. The vaccine consists of an inactivated JE virus strain manufactured in vero cells and adsorbed to aluminium hydroxide. The vaccination dose is 0.5 ml, administered as an i.m. injection. The primary vaccination series consists of two doses given at a minimum 4-week interval. The primary series should be concluded at least one week prior to JE virus exposure. IXIARO® has only been approved for use in adults. Effect and adverse reactions in children have yet to be sufficiently tested. The Danish Medicines Agency assesses that children aged 1-3 years may receive primary vaccination administering half an adult dose, i.e. 0.25 ml per dose. Children $\geq$ 3 years should be given the adult dose. This assessment is based on data from a study in which it was shown that half the adult IXIARO® dose in infants provides immunogenicity and safety equivalent to both the adult dose of IXIARO® and a previously used JE vaccine. The duration of the protective effect is unknown, and the need for revaccination is currently being investigated. There is no documentation to suggest that previous vaccination with another JE vaccine may be boosted using IXIARO®. In case of a continued need for JE virus protection, another primary vaccination series comprising two doses of IXIARO® should be given prior to potential exposure. Secondary effects of IXIARO® are expected in approx. 40% of vaccinated persons. They are generally mild and recede within a few days. The most frequent effects are muscle pain and local reactions at the injection site.

Persons who have recently initiated vaccination using the previously used JE vaccine (GCC®) may conclude the primary vaccination series using such vaccine. The SSI carries surplus stock which will be available at the mentioned indication for a limited period of time.

JE vaccination is normally only recommended for stays exceeding 1 month in rural areas within the JE transmission zone.

(P. H. Andersen, Dept. of Epidemiology, T. Nielsen, Reg. Centr. Jutland)

9 September 2009

Individually notifiable diseases

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

Table 1	Week 36 2009	Cum. 2009 [1]	Cum. 2008 [1]
AIDS	0	27	24
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	1
Creutzfeldt-Jakob	0	9	4
Diphtheria	0	0	0
Food-borne diseases	15	378	558
of these, infected abroad	3	69	93
Gonorrhoea	18	394	266
Haemorrhagic fever	0	0	0
Hepatitis A	5	22	28
of these, infected abroad	5	15	14
Hepatitis B (acute)	0	20	15
Hepatitis B (chronic)	1	118	132
Hepatitis C (acute)	0	13	6
Hepatitis C (chronic)	5	198	258
HIV	3	168	164
Legionella pneumonia	1	91	82
of these, infected abroad	0	18	29
Leprosy	0	0	0
Leptospirosis	0	0	2
Measles	0	9	9
Meningococcal disease	0	50	41
of these, group B	0	27	17
of these, group C	0	17	13
of these, unspec. + other	0	6	11
Mumps	1	11	20
Neuroborreliosis	5	24	32
Ornithosis	0	9	2
Pertussis (children < 2 years)	1	78	79
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	1	21	-
Rabies	0	0	0
Rubella (congenital)	0	0	2
Rubella (during pregnancy)	0	0	0
Shigellosis	5	73	55
of these, infected abroad	4	58	46
Syphilis	10	183	84
Tetanus	0	0	1
Tuberculosis	5	258	274
Typhoid/paratyphoid fever	3	18	23
of these, infected abroad	3	15	18
Typhus exanthematicus	0	0	0
VTEC/HUS	10	98	96
of these, infected abroad	2	26	33

[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 36 2009	Cum. 2009 [2]	Cum. 2008 [2]
Bordetella pertussis (all ages)	3	156	137
Gonococci	5	308	255
of these, females	0	84	53
of these, males	5	224	202
Listeria monocytogenes	1	53	33
Mycoplasma pneumoniae			
Resp. specimens [3]	1	46	52
Serum specimens [4]	1	80	64
Streptococci [5]			
Group A streptococci	2	111	108
Group B streptococci	3	84	87
Group C streptococci	2	27	13
Group G streptococci	5	117	94
S. pneumoniae	5	757	666
Table 3	**Week 34 2009**	**Cum. 2009 [2]**	**Cum. 2008 [2]**
MRSA	22	481	421
Pathogenic int. bacteria [6]			
Campylobacter	74	1934	2103
S. Enteritidis	15	393	360
S. Typhimurium	24	615	1298
Other zoon. salmonella	25	466	686
Yersinia enterocolitica	1	151	214
Verocytotoxin-producing E. coli	7	91	95
Enteropathogenic E. coli	9	141	106
Enterotoxigenic E. coli	12	194	239

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

[3] *Resp. specimens with positive PCR*

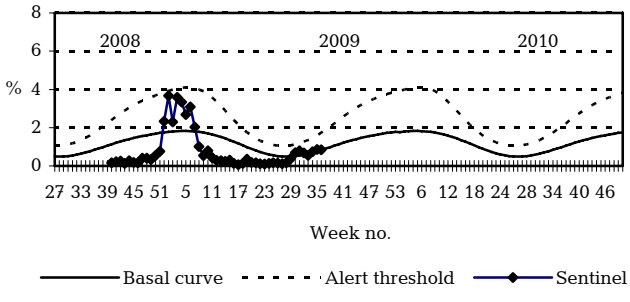
[4] *Serum specimens with pos. complement fixation test*

[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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