



## ACUTE AND CHRONIC HEPATITIS B 2006

No. 39, 2007

### ACUTE HEPATITIS B 2006

2006 saw 18 notifications of acute hepatitis B virus (HBV) infection, [Table 1](#).

**Table 1. Notified cases of acute HBV infection in 2006 and incidence per 10<sup>5</sup> in 2006 and 2005, by county**

County	No.	Incidence	
		2006	2005
Cph. Municip.	4	0.8	1.2
Frb. Municip.	0	-	-
Cph. County	2	0.3	0.8
Frederiksborg	0	-	0.3
Roskilde	0	-	0.4
West Zealand	2	0.7	-
Storstrom	1	0.4	-
Bornholm	0	-	-
Funen	1	0.2	0.4
South Jutland	0	-	0.4
Ribe	1	0.4	0.4
Vejle	0	-	0.8
Ringkobing	0	-	-
Aarhus	5	0.8	0.6
Viborg	0	-	-
North Jutland	2	0.4	0.8
Unknown	0	-	-
<b>Total</b>	<b>18</b>	<b>0.3</b>	<b>0.6</b>

Ten of the cases were males and eight were females, [Table 2](#). The median age was 37 years (range 0-61).

**Table 2. Notified cases of acute HBV infection in 2006, by age and sex**

Age (yrs)	M	F	Total
0-9	1	1	2
10-19	0	1	1
20-29	3	1	4
30-39	2	3	5
40-49	1	0	1
50+	3	2	5
<b>Total</b>	<b>10</b>	<b>8</b>	<b>18</b>

Among the notified persons, 13 (72%) were Danish-born, and five were immigrants.

Fourteen patients were infected in Denmark, of these, 11 Danish-born and three immigrants. Among the 14 patients, eight were infected by sexual contact, two by close social contact, one by IV drug use, and in three cases, mode of infection was unknown.

Four were infected abroad, including two Danish-born persons infected by sexual contact, and two persons of foreign origin infected by close social contact in their countries of origin.

### CHRONIC HEPATITIS B 2006

In 2006, a total of 226 cases of chronic HBV infection were notified, [Table 3](#).

**Table 3. Notified cases of chronic HBV infection in 2006 and incidence per 10<sup>5</sup> in 2006 og 2005, by county**

County	No.	Incidence	
		2006	2005
Cph. Municip.	38	7.6	5.6
Frb. Municip.	1	1.1	4.4
Cph. County	47	7.6	3.1
Frederiksborg	22	5.8	6.1
Roskilde	10	4.1	2.9
West Zealand	10	3.3	1.3
Storstrom	5	1.9	-
Bornholm	1	2.3	4.7
Funen	15	3.1	1.7
South Jutland	9	3.6	1.2
Ribe	6	2.7	2.2
Vejle	23	6.4	3.6
Ringkobing	9	3.3	0.7
Aarhus	14	2.1	1.8
Viborg	3	1.3	3.0
North Jutland	12	2.4	1.0
Unknown	1	-	-
<b>Total</b>	<b>226</b>	<b>4.2</b>	<b>2.7</b>

A total of 69 (31%) were males and 157 (69%) were females, [Table 4](#). The median age was 30 years (1-68) for males, and 30 years (3-63) for females.

**Table 4. Notified cases of chronic HBV infection in 2006, by age and sex, and incidence per 10<sup>5</sup>**

Age (yrs)				Incidence	
	M	F	Total	M	F
0-9	9	4	13	2.6	1.2
10-19	9	6	15	2.6	1.9
20-29	15	60	75	4.8	19.4
30-39	17	70	87	4.3	18.0
40-49	13	11	24	3.3	2.8
50-59	4	5	9	1.1	1.4
60+	2	1	3	0.4	0.2
<b>Total</b>	<b>69</b>	<b>157</b>	<b>226</b>	<b>2.6</b>	<b>5.7</b>

Among the notified persons, 23 (10%) were born in Denmark and 203 (90%) were of foreign origin; 109 (48%) were Asian, 43 (19%) African, 25 (11%) Turkish, 22 (10%) European, while three were from Greenland and one from the US. Mode of infection by origin is shown in [Table 5](#).

Among the perinatally infected, 21 were former adoptees who had probably been infected by their birth mother in their country of origin.

### Commentary

In 2006, only 18 cases of chronic HBV infection were notified, representing the lowest number recorded since the introduction of mandatory notification for acute HBV infection in 1983. In the period 1986-1995, the

**Table 5. Notified cases of chronic HBV infection in 2006, by mode of infection and origin**

Mode of infection	Origin	
	Danish	Foreign
IV drug use	6	1
Sex	3	11
Mother-to-child	1	118
Hospital system	0	2
Close social contact	1	9
Tattooing/piercing	1	0
Unkn/Other known	11	62
<b>Total</b>	<b>23</b>	<b>203</b>

average number of notified cases was 105 annually. The corresponding number for the period 1996-2005 was 64 cases annually.

Chronic HBV infection is notified with considerable delay relative to the time of infection. In 2006, twelve persons currently aged 2-30 years were notified as infected at birth in Denmark. Among these, seven were children of foreign origin and one child was Danish, all of whom were under the age of 13 in 2006. The infection of these children could, in all probability, have been avoided if the mothers had been screened for hepatitis B infection during pregnancy and the children vaccinated at birth. The increased incidence of chronic HBV infection observed among females aged 20-39 in 2006, may be attributed to the about 100 notifications generated by the universal hepatitis screening of pregnant women. The incidence among males in the corresponding age group is probably sub-estimated, as this group has not been screened for HBV infection.

The National Board of Health recommends that persons from areas with intermediary or high hepatitis B incidence be checked for chronic HBV infection. The objective is to offer assessment and treatment to persons infected with chronic hepatitis B and to prevent the infection from spreading by vaccinating HBV susceptible members of the household, sexual partners, or others who are recommended vaccination. For more information, please refer to the National Board of Health Guidelines on the prevention of viral hepatitis (in Danish language).

Since 1 August 2006, free hepatitis vaccination has been extended to a broader group of particularly exposed persons than previously, EPI-NEWS 33/06.

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## Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2007 figures are preliminary)

Table 1	Week 38 2007	Cum. 2007 <sup>1)</sup>	Cum. 2006 <sup>1)</sup>
AIDS	2	41	32
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	6	15
Diphtheria	0	0	0
Food-borne diseases	18	465	399
of these, infected abroad	6	91	97
Gonorrhoea	2	270	327
Haemorrhagic fever	0	0	0
Hepatitis A	1	19	27
of these, infected abroad	0	7	15
Hepatitis B (acute)	3	22	15
Hepatitis B (chronic)	46	247	249
Hepatitis C (acute)	0	4	6
Hepatitis C (chronic)	183	456	379
HIV	7	213	166
Legionella pneumonia	5	82	88
of these, infected abroad	0	16	24
Leprosy	0	0	0
Leptospirosis	0	10	7
Measles	0	2	27
Meningococcal disease	0	52	61
of these, group B	0	28	30
of these, group C	0	18	13
of these, unspec. + other	0	6	18
Mumps	0	4	12
Neuroborreliosis	4	68	52
Ornithosis	0	7	9
Pertussis (children < 2 years)	1	55	35
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	2	3
Listeria monocytogenes	0	8	7
Streptococcus pneumoniae	0	81	69
Other aethiology	0	11	8
Unknown aethiology	0	11	17
Under registration	2	11	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	6	145	45
of these, infected abroad	0	31	39
Syphilis	0	74	53
Tetanus	0	2	2
Tuberculosis	7	300	267
Typhoid/paratyphoid fever	1	17	22
of these, infected abroad	1	16	21
Typhus exanthematicus	0	2	0
VTEC/HUS	1	115	104
of these, infected abroad	0	31	34

<sup>1)</sup> Cumulative number 2007 and in corresponding period 2006

## Selected laboratory diagnosed infections

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

Table 2	Week 38 2007	Cum. 2007 <sup>2)</sup>	Cum. 2006 <sup>2)</sup>
Bordetella pertussis (all ages)	2	146	148
Gonococci	7	268	321
of these, females	0	41	57
of these, males	7	227	264
Listeria monocytogenes	1	41	35
Mycoplasma pneumoniae			
Resp. specimens <sup>3)</sup>	9	276	299
Serum specimens <sup>4)</sup>	5	327	268
Streptococci <sup>5)</sup>			
Group A streptococci	4	89	115
Group B streptococci	2	73	71
Group C streptococci	0	16	17
Group G streptococci	0	90	108
S. pneumoniae	14	753	729
Table 3	Week 36 2007	Cum. 2007 <sup>2)</sup>	Cum. 2006 <sup>2)</sup>
MRSA	15	424	-
Pathogenic int. bacteria <sup>6)</sup>			
Campylobacter	113	2851	2209
S. Enteritidis	12	371	426
S. Typhimurium	4	243	279
Other zoon. salmonella	5	486	479
Yersinia enterocolitica	5	195	125
Verocytotoxin- producing E. coli	4	118	106
Enteropathogenic E. coli	9	134	194
Enterotoxigenic E. coli	11	188	180

<sup>2)</sup> Cumulative number 2007 and in corresponding period 2006

<sup>3)</sup> Resp. specimens with positive PCR

<sup>4)</sup> Serum specimens with pos. complement fixation test

<sup>5)</sup> Isolated in blood or spinal fluid

<sup>6)</sup> See also [www.germ.dk](http://www.germ.dk)

## Chronic hepatitis B & C

From one single department, the Dept. of Epidemiology has received 41 notifications on chronic hepatitis C and 174 notifications on chronic hepatitis B. The majority of the notifications refer to illness diagnosed in previous years and are thus not outbreak-related.

(Department of Epidemiology)