



2006 saw 42 notified cases of acute hepatitis A infection; 22 females and 20 males, representing an all time low since surveillance was initiated in 1980, [Figure 1](#).

Occurrence

Most cases were notified in the Copenhagen area, [Table 1](#). A total of 18 of the 42 patients (43%) became ill in August and September.

Table 1. Notified hepatitis A cases by county, and incidence per 10⁵, 2006 and 2005

County	No.	Incidence	
		2006	2005
Cph. Municip.	5	1.0	2.8
Frb. Municip.	2	2.2	4.4
Copenhagen	14	2.3	1.8
Frederiksborg	2	0.5	1.6
Roskilde	2	0.8	0.4
West Zealand	2	0.7	0.3
Storstrom	2	0.8	0.4
Bornholm	2	4.6	0.0
Funen	0	0.0	0.6
South Jutland	1	0.4	0.8
Ribe	1	0.4	0.4
Vejle	2	0.6	0.0
Ringkobing	1	0.4	0.0
Aarhus	2	0.3	0.2
Viborg	0	0.0	0.9
North Jutland	4	0.8	0.2
Other	0	-	-
Total	42	0.8	0.9

Of all patients, 25 (60%) were immigrants, and among these, 22 (88%) were < 20 years. Among the 17 Danish-born patients, 16 (94%) were > 20 years. The age distribution is presented in [Table 2](#).

Table 2. Notified hepatitis A cases by age and origin, and incidence per 10⁵, 2006

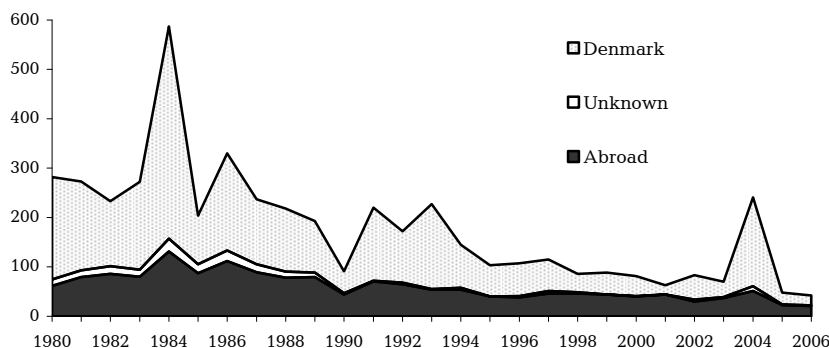
Age (yrs)	Danish-born	Immigrants	Total	Incidence
0-9	1	9	10	1.5
10-19	0	13	13	2.0
20-29	4	1	5	0.8
30-39	1	2	3	0.4
40-49	2	0	2	0.3
50-59	5	0	5	0.7
60+	4	0	4	0.4
Total	17	25	42	0.8

Mode of transmission

Among the 20 persons who had become infected in Denmark, two were infected by a household member,

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Figure 1. Notified hepatitis A cases in Denmark by place of infection, 1980-2006



three by other family members and one by other personal contact. In 14 cases, the source of infection was unknown.

A total of 21 cases had become infected abroad, [Table 3](#).

Table 3. Notified hepatitis A cases in Denmark by origin and place of infection, 2006

	Place of infection			Total
	DK	Abroad	Unkn.	
Danes	15	1	1	17
Immigrants	5	20	0	25
Total	20	21	1	42

Among these, the only Danish-born case in the group had become infected in Hungary. The remaining 20 immigrants infected abroad had become infected in their countries of origin, including nine in Pakistan, three in Iraq and two in Morocco. The other cases had become infected in six different countries.

Outbreaks

Four outbreaks were recorded, each counting two to four cases. Two immigrant children were infected in Denmark by their uncle who had been in contact with a 4-year-old child with jaundice during a stay in Turkey. The outbreak furthermore included a Danish-born case with close contact to the family. A girl of Pakistani origin was infected by her cousin, who had been infected by his brother during a journey they both made to Pakistan. Two brothers were infected by their cousin during a stay in Iraq, their country of origin.

Two Danish parents were probably infected by their 3-year-old daughter who had an asymptomatic infection

and who herself had become infected by another child in a day-care centre.

Commentary

[Figure 1](#) shows a decrease in the total number of notified hepatitis A cases in the period 1980-2006. During the entire period, a substantial proportion of the cases were imported, while the peaks mainly reflect the below-mentioned major Danish outbreaks.

In 1984, a cluster of cases was found among IV drug users in Copenhagen, Vejle and Aarhus, EPI-NEWS 43/86. 1991 saw several major outbreaks in Copenhagen child-care institutions, EPI-NEWS 18/92, and an outbreak among men who have sex with men (MSM). In 1993, another outbreak among IV drug users was found, EPI-NEWS 48/93. And in 2004, another MSM outbreak was recorded, EPI-NEWS 52/04.

The number of hepatitis A cases found in Denmark in 2006 was low, and the majority was related to journeys abroad or close contact to persons infected abroad.

In most cases, immigrant children raised in Denmark have not been exposed to infection with hepatitis A virus and are therefore not immune. It is thus essential to vaccinate such children against hepatitis A before they visit their countries of origin. When immunoprophylaxis is offered in connection with hepatitis A cases among immigrants, it should be considered that some immigrant families have close contact to family members not forming part of the household.

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Individually notifiable diseases

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

Table 1	Week 39 2007	Cum. 2007 ¹⁾	Cum. 2006 ¹⁾
AIDS	1	42	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	17	482	417
of these, infected abroad	1	92	104
Gonorrhoea	12	282	334
Haemorrhagic fever	0	0	0
Hepatitis A	0	19	28
of these, infected abroad	0	7	16
Hepatitis B (acute)	0	22	15
Hepatitis B (chronic)	5	252	254
Hepatitis C (acute)	1	5	6
Hepatitis C (chronic)	11	467	385
HIV	10	224	175
Legionella pneumonia	2	84	94
of these, infected abroad	0	16	27
Leprosy	0	0	0
Leptospirosis	0	10	8
Measles	0	2	27
Meningococcal disease	0	52	65
of these, group B	0	28	34
of these, group C	0	18	13
of these, unspec. + other	0	6	18
Mumps	1	5	15
Neuroborreliosis	2	71	53
Ornithosis	0	7	9
Pertussis (children < 2 years)	2	57	37
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	13	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	12	157	46
of these, infected abroad	0	32	40
Syphilis	2	76	53
Tetanus	0	2	2
Tuberculosis	10	310	281
Typhoid/paratyphoid fever	0	18	22
of these, infected abroad	0	17	21
Typhus exanthematicus	0	2	0
VTEC/HUS	3	119	107
of these, infected abroad	3	36	35

¹⁾ 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 39 2007	Cum. 2007 ²⁾	Cum. 2006 ²⁾
Bordetella pertussis (all ages)	3	149	153
Gonococci	3	271	323
of these, females	0	41	57
of these, males	3	230	266
Listeria monocytogenes	0	41	36
Mycoplasma pneumoniae			
Resp. specimens ³⁾	3	279	307
Serum specimens ⁴⁾	6	333	276
Streptococci ⁵⁾			
Group A streptococci	0	89	117
Group B streptococci	0	73	73
Group C streptococci	0	16	18
Group G streptococci	0	90	109
S. pneumoniae	23	776	743
Table 3	Week 37 2007	Cum. 2007 ²⁾	Cum. 2006 ²⁾
MRSA	12	436	-
Pathogenic int. bacteria ⁶⁾			
Campylobacter	56	2907	2285
S. Enteritidis	10	386	443
S. Typhimurium	5	249	285
Other zoon. salmonella	3	486	494
Yersinia enterocolitica	6	201	126
Verocytotoxin- producing E. coli	3	121	108
Enteropathogenic E. coli	9	144	198
Enterotoxigenic E. coli	12	200	185

²⁾ Cumulative number 2007 and in corresponding period 2006

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

Patients with laboratory diagnosed RS and rotavirus infection

1st & 2nd quarter 2007 compared with 1st & 2nd quarter 2006

	RS virus		Rotavirus	
	2007	2006	2007	2006
January	193	167	17	28
February	229	129	17	30
March	88	277	20	73
April	104	102	41	66
May	8	10	41	49
June	6	0	31	29
Total	628	685	167	275