

GENERAL HEPATITIS B SCREENING DURING PREGNANCY No. 18, 2006

From 1 November 2005, general screening of pregnant women for hepatitis B virus (HBV) infection was introduced as a 2-year experimental programme. The Department of Epidemiology, Statens Serum Institut, is responsible for assessing the programme and, in cooperation with the Danish blood banks, for monitoring; EPI NEWS 41/05 and 2/06.

Monitoring

On a monthly basis, the blood banks of each Danish county report how many pregnant women have had their blood group determined in connection with their first pregnancy examination. Almost all pregnant women have their blood group determined, and consequently the number of pregnant women who should be HBV screened equals the number of blood group tests performed at first pregnancy examination. Furthermore, blood banks report the number of pregnant women screened for HBV, the number of women refusing HBV screening, and the number of positive tests found. Blood banks forward individual results for HBsAg-positive pregnant women. Maternity wards will be contacted to secure vaccination of the infant, and the GP will be informed with a view to further vaccination of the infant and screening of family members.

Coverage

In the five months following the programme's initiation, national coverage has risen from 88% to 97%, [Table 1](#), calculated as the number of HBV tested women per blood type determination after the first pregnancy examination.

Table 1. Number of blood type determinations and HBV screenings of pregnant women

	Number		%
	Blood typed	Screened	
Nov-05	5607	4946	88%
Dec-05	6040	5563	92%
Jan-06	7015	6737	96%
Feb-06	5787	5638	97%
Mar-06	7026	6824	97%
Total	31475	29708	94%

Coverage by county is shown in [Table 2](#). One county did not report the number of blood type determinations performed. In this county, coverage was set to 100% leading to a modest overestimation at the national level. By 31 March 2006, a total of 29,708 women had been HBV screened.

Table 2. Blood typing and screening for HBV of pregnant women, distributed on counties, November 05-March 06

County	Number		
	Blood typed	Screened	Positive
Cph/Frb. Mun.	6494	6494	15
Copenhagen	3045	3045	20
Frederiksborg	1867	1867	6
Roskilde*	1252	1252	3
West Zealand	1815	1815	6
Storstrom	756	755	0
Bornholm	161	142	0
Funen	2600	2578	6
South Jutland	1180	1180	1
Ribe	1069	889	1
Vejle	2376	1718	2
Ringkobing	1432	1432	1
Aarhus	3697	3077	12
Viborg	1194	927	0
North Jutland	2537	2537	3
Total	31475	29708	76

* Actual number of blood typings unknown

According to available information, 22 women rejected the screening. A limited number of these had been vaccinated or tested recently. Non-screening of pregnant women who had not refused to be screened was only observed in counties where the blood type determination is performed separately from the screening, and GPs consequently need to submit two blood sample vials.

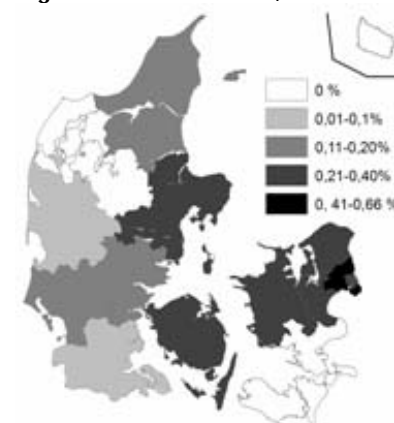
Pregnant HBV carriers

The period from 1 November to 31 March 2006 saw detection of a total of 76 pregnant HBV carriers, [Table 2](#). [Table 3](#) shows the number of HBV carriers known by the GP and the number of cases recorded by statutory notification on form 1515. Among carriers, 63 had foreign-sounding names, nine had Danish-sounding names but had been adopted from countries with a high HBV incidence. The remaining four were Danish-born. Two of the Danish-born and two of the adopted pregnant women were known by their own GP as HBV carriers, while one of the Danish-born and five of the adoptees were not known HBV carriers. For one Danish-born and two adopted pregnant women HBV status was not stated. HBV carriers originated from

21 countries, most frequently from Turkey, Vietnam or Korea.

The geographic variation in the proportion of screened women who were HBV carriers is shown in [Figure 1](#).

Figure 1. HBV carriers, % of screened



Comments

The majority of HBV carriers detected via the general screening were born in highly endemic countries. This confirms current knowledge about the Danish HBV prevalence pattern. Among the women screened, 0.26% were HBV carriers. In approximately half of these their HBV carrier status was known.

Three surveys performed in the Greater Copenhagen Area 1999-2001 demonstrated that selective screening coverage among pregnant women from highly endemic areas varied from 32% to 77%. On the basis of these results and the preliminary results from the general screening, another approximately 50 pregnant HBV carriers are expected to be found yearly; carriers who were not known formerly and who would not have been detected through selective screening.

Free vaccination of relatives

The Danish National Board of Health informs that free hepatitis B vaccination will be available to steady sexual partners and members of households of persons with chronic HBV infection within a few months. When the provisions and date of the free vaccination are released, they will be published in EPI NEWS.

(S. Cowan, K. Qureshi, J. Bagdonaite, Department of Epidemiology).

3 May 2006

Table 3. Pregnant HBV carriers, known by GP and discovered by screening

	Known HBV	Newly detected HBV	Not stated	Total
Previously notified to SSI	13	-	-	13
Notified in connection with screening	15	18	-	33
Not notified	9	10	11	30
Total	37	28	11	76

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2006 figures are preliminary)

Table 1	Week 17 2006	Cum. 2006 ¹⁾	Cum. 2005 ¹⁾
AIDS	0	14	26
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	6	2
Diphtheria	0	0	0
Foodborne diseases	5	113	96
of these, infected abroad	0	2	2
Gonorrhoea	11	141	194
Haemorrhagic fever	0	0	0
Hepatitis A	1	5	34
of these, infected abroad	0	1	8
Hepatitis B (acute)	1	9	19
Hepatitis B (chronic)	3	156	47
Hepatitis C (acute)	2	5	1
Hepatitis C (chronic)	6	248	99
HIV	4	71	109
Legionella pneumonia	2	23	20
of these, infected abroad	0	2	2
Leprosy	0	0	0
Leptospirosis	0	3	9
Measles	2	16	0
Meningococcal disease	0	24	42
of these, group B	0	14	24
of these, group C	0	2	7
of these, unspec. + other	0	8	11
Mumps	0	8	3
Neuroborreliosis	1	15	16
Ornithosis	0	6	7
Pertussis (children < 2 years)	2	22	71
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	1	0
Listeria monocytogenes	0	3	1
Streptococcus pneumoniae	0	20	52
Other aethiology	0	1	3
Unknown aethiology	0	5	8
Under registration	9	26	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	0	21	34
of these, infected abroad	0	19	31
Syphilis	2	25	35
Tetanus	0	0	2
Tuberculosis	17	136	141
Typhoid/paratyphoid fever	0	11	11
of these, infected abroad	0	11	10
Typhus exanthematicus	0	0	0
VTEC/HUS	1	36	52
of these, infected abroad	0	10	22

¹⁾ Cumulative number 2006 and in corresponding period 2005

Selected laboratory diagnosed infections

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

Table 2	Week 17 2006	Cum. 2006 ²⁾	Cum. 2005 ²⁾
Bordetella pertussis (all ages)	4	90	228
Gonococci	12	144	148
of these, females	0	28	23
of these, males	12	116	125
Listeria monocytogenes	1	10	10
Mycoplasma pneumoniae			
Resp. specimens ³⁾	5	207	557
Serum specimens ⁴⁾	4	173	435
Streptococci ⁵⁾			
Group A streptococci	7	61	55
Group B streptococci	3	36	20
Group C streptococci	0	7	8
Group G streptococci	3	43	46
S. pneumoniae	29	468	513
Table 3	Week 15 2006	Cum. 2006 ²⁾	Cum. 2005 ²⁾
Pathogenic int. bacteria ⁶⁾			
Campylobacter	8	447	560
S. Enteritidis	3	81	99
S. Typhimurium	5	72	91
Other zoon. salmonella	7	131	140
Yersinia enterocolitica	0	48	60
Verocytotoxin-producing E. coli	2	33	36
Enteropathogenic E. coli	0	58	62
Enterotoxigenic E. coli	4	55	68

²⁾ Cumulative number 2006 and in corresponding period 2005

³⁾ Resp. specimens with positive PCR

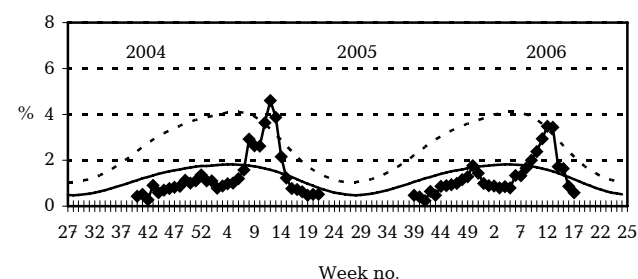
⁴⁾ Serum specimens with pos. complement fixation test

⁵⁾ Isolated in blood or spinal fluid

⁶⁾ See also www.germ.dk

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2004/2005/2006



◆ Sentinel — Basal curve - - - Alert threshold

Sentinel: Influenza consultations (as percentage of total consultations)

Basal curve: Expected frequency of consultations under non-epidemic conditions

Alert threshold: Possible incipient epidemic