



HEPATITIS B, HIV AND SYPHILIS SCREENING OF PREGNANT WOMEN, 2010 No. 15, 2011

The general screening of pregnant women for hepatitis B was introduced on 1 November 2005, EPI-NEWS 41/05, while screening for HIV and syphilis were instituted as from 1 January 2010, EPI NEWS 27-33/10.

In 2010 a total of 67,831 blood type analyses were performed in pregnant women. Among these, 67,640 (99.7%) were tested for hepatitis B (HBsAg), 64,282 (94.8%) for HIV and 63,835 (94.1%) for syphilis. The degree of screening completeness varied between blood banks, [Table 1](#).

Table 1. Share of specimens screened for HBsAg, HIV & syphilis, by blood banks, 2010

	No. of tests	HBsAg %	Hiv %	Syphilis %
Esbjerg	2357	100	100	100
Holstebro*	1234	100	100	100
Naestved	8292	100	100	100
Odense	5341	100	100	100
Cph Uni Hosp	24276	100	100	99
Roenne**	270	98	98	-
Skejby***	9876	100	89	93
Soenderborg	2444	100	100	100
Vejle	3558	100	82	75
Viborg	3742	100	100	100
Aalborg	6441	100	100	100

* Holstebro: Jan-May 2010 only

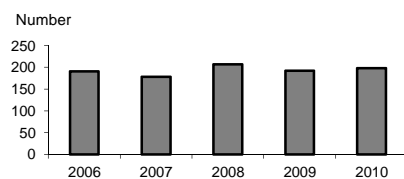
** Roenne: syphilis-screening at Cph. University Hosp.

*** Skejby: HIV & syphilis % estimate from March 2010

HBsAg-positive pregnant women

Of the 67,640 tests, a total of 198 were positives (0.3%) which is at par with the level observed in previous years, [Figure 1](#).

Figure 1. HBsAg-positive pregnant women, 2006-2010



A total of 66 women notified in the 2010 pregnancy screening, had tested HBsAg-positive in the general screening during previous pregnancies. Of these, 64% were registered via the statutory notification system, while only 41% of who tested HBsAg-positive for the first time in the general screening had been registered. HBeAg was found in 31 of the 195 women (16%) who were tested. The HBeAg occurrence was higher among women from South-East Asia, [Table 2](#). Sixteen were adopted; 14 from Korea and two from India. Of these, 8 had been registered in the statutory notification system.

HIV-positive pregnant women

Among the 64,282 HIV tests, 45

Table 2. Pregnant women who tested positive for HBsAg, by origin and HBeAg status, 2010

	HBsAg neg.	HBeA g	To- tal	HBeAg %
South-East Asia	64	22	86	26
Middle East	41	3	44	7
Africa	24	2	26	8
Eastern Europe	19	2	21	10
Denmark incl.				
Greenland	8	2	10	20
South America	3	0	3	0
Ewastern Europe	3	0	3	0
Indian Subcont.	2	0	2	0
Total	164	31	##	16

(0.07%) were positive, ten in women with newly diagnosed HIV and 35 in women with known HIV. All 45 had been notified via the statutory notification system.

Furthermore, three pregnant women were notified with HIV via the national surveillance system without previously having been notified via the pregnancy screening initiative.

Two of these were newly diagnosed and one was known with HIV and had already commenced treatment. Among the newly diagnosed cases, two were Danes, one Asian and nine African. Among the ten immigrants with newly diagnosed HIV, three had immigrated within 1-3 years, six in 2010 and one had immigrated 12 years ago and had been infected in Denmark. Among the women who were known with HIV, eight were Danes, three Asians and 25 Africans. One of these cases had been HIV positive since birth.

Pregnant women with syphilis

Among the 63,835 screening tests, a total of 155 were positives. Subsequently, 148 were retested, and hereof seven (0.01%) came out positive in a full confirmatory test. The positives comprised two Danes, two Africans and one person of East European origin, and all were notified via the statutory notification system.

Commentary

The majority of the women who tested positive for hepatitis B, HIV or syphilis, belonged to risk groups previously covered by the selective screening. However, a surprisingly high number of women were found who would not otherwise have been diagnosed even in an optimally performed selective screening. Particularly, it should be noted that seven unexpected laboratory-confirmed cases of syphilis were detected. This seems to indicate that syphilis is in the process of becoming reintroduced into the general public. The objective of the screening is to

avoid mother-to-child infection with the three conditions in the majority of cases through vaccination of the neonate (hepatitis B) or treatment of the pregnant woman (HIV and syphilis). Presently, in Denmark no children of HIV-positive mothers who were in treatment during pregnancy have been infected at birth. The fact that uninfected children are currently born by women who were themselves HIV-positive from birth demonstrates that HIV treatment has progressed considerably.

Notably, 30% of the HIV-positive immigrant women diagnosed during the screening had resided in Denmark for several years. The National Board of Health (NBH) recommends testing of immigrants from countries with a high HIV occurrence as quickly as possible after their arrival to Denmark as HIV treatment is more effective when implemented early, and as treatment impedes further transmission, EPI NEWS 46/09. The finding of one of the three conditions should not lead to recommendation of a provoked abortion; rather such cases should be referred to a Department of Infectious Diseases. It is essential that the hepatitis B screening result be noted in the antenatal record so that the place of birth may institute timely vaccination of the neonate, EPI-NEWS 41/05.

Furthermore, it is important that the record states that HIV and syphilis screenings have been performed and that the midwife offers to take a specimen, particularly in women of non-Danish origin and women who belong to a risk group.

The NBH guideline states that the GP shall ensure that pregnant women who have screened positive for syphilis have a blood sample taken for full serological analysis, EPI-NEWS 27-33/10.

The general hepatitis B screening was not initially complete, EPI-NEWS 18/06. Nor so was the general HIV and syphilis screening as not all blood banks have yet succeed in introducing well-functioning work procedures. However, at a national level, the overwhelming majority of pregnant women were screened in 2010. All blood banks are expected to start using test kits with a superior specificity in 2011 to overcome the high share of false-positive results currently associated with syphilis screening tests.

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Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2011 figures are preliminary)

Table 1	Week 14 2011	Cum. 2011 ¹⁾	Cum. 2010 ¹⁾
AIDS	1	19	17
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	2	24
Diphtheria	0	0	0
Food-borne diseases	2	41	58
of these, infected abroad	0	8	19
Gonorrhoea	4	95	154
Haemorrhagic fever	0	0	0
Hepatitis A	0	5	11
of these, infected abroad	0	3	3
Hepatitis B (acute)	1	2	9
Hepatitis B (chronic)	10	52	58
Hepatitis C (acute)	0	4	0
Hepatitis C (chronic)	4	71	131
HIV	4	78	72
Legionella pneumonia	0	24	29
of these, infected abroad	0	4	5
Leprosy	0	1	0
Leptospirosis	1	0	0
Measles	4	35	1
Meningococcal disease	1	37	20
of these, group B	0	9	13
of these, group C	0	18	4
of these, unspec. + other	1	10	3
Mumps	0	2	3
Neuroborreliosis	2	5	6
Ornithosis	0	2	4
Pertussis (children < 2 years)	2	18	27
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	1	0
Listeria monocytogenes	0	0	2
Streptococcus pneumoniae	1	32	34
Other aethiology	0	3	6
Unknown aethiology	0	1	7
Under registration	0	2	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	2	20	26
of these, infected abroad	1	16	20
Syphilis	7	130	97
Tetanus	0	0	0
Tuberculosis	6	123	81
Typhoid/paratyphoid fever	0	4	14
of these, infected abroad	0	4	12
Typhus exanthematicus	0	0	0
VTEC/HUS	3	30	36
of these, infected abroad	0	12	10

¹⁾ Cumulative number 2011 and in corresponding period 2010

Selected laboratory diagnosed infections

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

Table 2	Week 14 2011	Cum. 2011 ³⁾	Cum. 2010 ³⁾
Bordetella pertussis (all ages)	1	25	40
Gonococci	4	61	143
of these, females	0	12	40
of these, males	4	49	103
Listeria monocytogenes	0	7	15
Mycoplasma pneumoniae			
Resp. specimens ³⁾	2	186	32
Serum specimens ⁴⁾	5	150	76
Streptococci ⁵⁾			
Group A streptococci	3	72	56
Group B streptococci	4	42	31
Group C streptococci	1	15	12
Group G streptococci	4	45	42
S. pneumoniae	32	665	386
Table 3	Week 13 2011	Cum. 2011 ²⁾	Cum. 2010 ²⁾
MRSA	13	263	177
Pathogenic int. bacteria ⁶⁾			
Campylobacter	29	414	548
S. Enteritidis	2	49	65
S. Typhimurium	3	50	75
Other zoon. salmonella	11	129	133
Yersinia enterocolitica	2	37	33
Verocytotoxin- producing E. coli	1	25	36
Enteropathogenic E. coli	2	31	35
Enterotoxigenic E. coli	3	54	119

²⁾ Cumulative number 2010 and in corresponding period 2009

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

EPI-NEWS will not be published in week 16

Unless special circumstances arise, EPI-NEWS will not be published in week 16. The EPI-NEWS editorial board wish readers a happy Easter. a happy Easter.

(Department of Epidemiology)