EPI-NEWS **NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES**
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ACUTE AND CHRONIC HEPATITIS B AND C INFECTIONS, PART II

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Investigation of hepatitis B status

Acute hepatitis B virus (HBV) infection is diagnosed by collating the history, clinical and biochemical findings with the demonstration of HBsAg and/or anti-HBc IgM. In most cases both will be positive. IgM antibodies against the hepatitis B core antigen (anti-HBc IgM) are usually only found in acute HBV infection, while HBsAg is positive in both acute and chronic HBV infections, Table 1. Chronic HBV infection is diagnosed when HBsAg can be demonstrated for more than six months. If the infection produces chronic inflammation, the patient has chronic hepatitis, which can be diagnosed histologically by liver biopsy. Patients with chronic HBV infection should be tested for HBeAg and anti-HBe, as the prognosis and possible treatment depend on the results. HBV immune status. Prior to deciding on vaccination it may in certain circumstances be relevant to determine whether a person is immune to HBV. This may be the case for persons from areas with endemic hepatitis B. HBV immunity is investigated by testing for HBsAg/anti-HBs. Immunity after vaccination is determined by measuring anti-HBs only, Table 1. Monitoring of patients with chronic HBV infection on antiviral therapy is by HBeAg and anti-HBe tests supplemented with quantitative determination of HBV DNA by PCR.

Investigation of hepatitis C status

Acute clinical hepatitis C virus (HCV) infection is rarely seen, but can be diagnosed by collating the history, clinical and biochemical findings with the demonstration of HCV RNA by PCR. Other aetiologies such as HAV, HBV, CMV, EBV and parvovirus B19 should be excluded. HCV RNA can be demonstrated before the rise in transaminases and several weeks before the development of anti-HCV, which is first demonstrable four to six weeks after the onset of symptoms. Chronic HCV infection is diagnosed by demonstrating anti-HCV and HCV RNA for more than six months. If the infection gives rise to chronic inflammation, the patient has chronic hepatitis which can be demonstrated histologically by liver biopsy. Monitoring of patients with chronic HCV infection on antiviral therapy is by quantitative determination of HCV RNA by PCR. HCV genotyping can be used for epidemiological investigations and before starting antiviral therapy. The response to antiviral therapy is largely dependent on the genotype.

Infective risk

Of patients with chronic HBV infections, those positive for HBeAg are usually more infectious than patients positive for anti-HBe, Table 1. The infective risk is not graded in patients with chronic HCV infection.
(C. Bohn Christiansen, Dept. of Clin. Microbiol., B. Faber Vestergaard, Dept. of Virol., Statens Serum Institut, K. Krogsgaard, Clin. Res. Unit, Hvidovre Hospital.)

Notification of hepatitis B and C

Acute hepatitis B and C have been notifiable diseases for several years. In the revised regulations for the notification of infectious diseases by physicians of May 2000, chronic hepatitis B and C infections were also made notifiable. The guidelines give the following criteria for notification (case definitions):
- acute hepatitis B: clinical diagnosis plus demonstration of HBsAg.
- chronic hepatitis B: either the presence of HBsAg for more than six months, or histological features of chronic hepatitis plus demonstration of HBsAg.
- acute hepatitis C: clinical diagnosis plus demonstration of HCV RNA.
- chronic hepatitis C: either the presence of HCV RNA for more than six months, or histological features of chronic hepatitis plus demonstration of HCV RNA. Notifications are made on form 1515 to the local Medical Office of Health and to the Department of Epidemio-logy. The Department of Epidemio-logy also accepts notifications of persons with HCV infections when only anti-HCV has been found.
(J. Duus, Dept. of Epidemiology)

ADDENDUM TO EPI-NEWS 5/01

In EPI-NEWS 5/01 it was stated that the National Board of Health recommends vaccination of children and staff at day-care institutions where there is an HBsAg-positive child. This only applies if the child is also HBeAg-positive.
(Department of Epidemiology)

I**NFLUENZA** (see overleaf)

31 January 2001

Table 1. Investigation of hepatitis B status

Status in question	Investigations	Results	Interpretation
Acute hepatitis B	HBsAg and/or anti-HBc IgM	HBsAg+/anti-HBc IgM+	Acute hepatitis B
Chronic hepatitis B infection	HBsAg HBeAg, anti-HBe	HBsAg+ for > 6 months	Chronic hepatitis B infection
Infective risk	HBsAg, HBeAg, anti-HBe	HBsAg+/HBeAg+/anti-HBe- HBsAg+/HBeAg-/anti-HBe+	Major infective risk Lesser infective risk
HBV immune status	HBsAg, anti-HBs	HBsAg+/anti-HBs-	Hepatitis B infection. No indication for immunization.
		HBsAg-/anti-HBs+	Previous hepatitis B or vaccination. No indication for immunization.
		HBsAg-/anti-HBs-	Susceptible to hepatitis B. Indication for immunization.

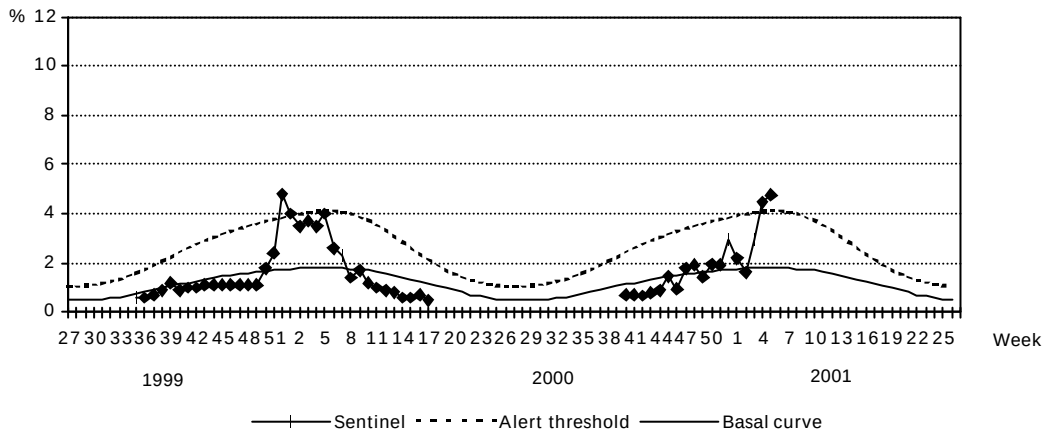
Monthly no. of serum specimens positive for Mycoplasma pneumoniae by complement fixation test, Statens Serum Institut, 4th quarter 2000

	October	November	December
Positive specimens 2000	36	54	37
Positive specimens 1999	101	131	127
Average for the 5 preceding years	134	208	168

(Dept. of Respiratory Infections, Meningitis and STIs)

Sentinel surveillance of influenza activity

Weekly percentage of consultations, 1999/2000/2001



Sentinel: Influenza consultations as % of total consultations

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

Alert threshold: Possible incipient epidemic

Sentinel specimen taking 2000/2001

Week	40-51	52	1	2	3	4	5
Specimens received	33	1	3	2	10	30	19
Influenza A, H1N1		1	1		3	6	4
Influenza A, untyped						1	1

Sentinel surveillance is still indicating a high incidence of influenza.

Thirteen isolates have been typed as A (H1N1)/New Caledonia-like strains and two as A (H1N1)/Johannesburg-like strains. The first strain is included in this year's vaccine while the other was included in previous years' vaccines.

(Dept. of Epidemiology, Dept. of Virology)