EPI·NEWS
NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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PNEUMOCOCCAL VACCINATION

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Pneumococcal vaccine has now been registered for use in patients at risk of frequent or serious pneumococcal infections.
The vaccine should continue to be used for splenectomized patients, but should also be considered for offering to other groups, as in other Scandinavian countries and the USA.
The vaccine is a 23-valent polysaccharide preparation which covers 90% of the types of pneumococci that cause serious infections in Denmark.

Fig. 1. Pneumococcal isolates from blood and CSF received by Statens Serum Institut, 1986-96

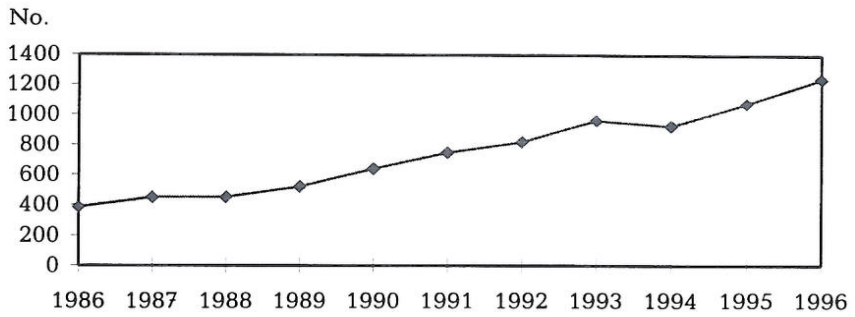
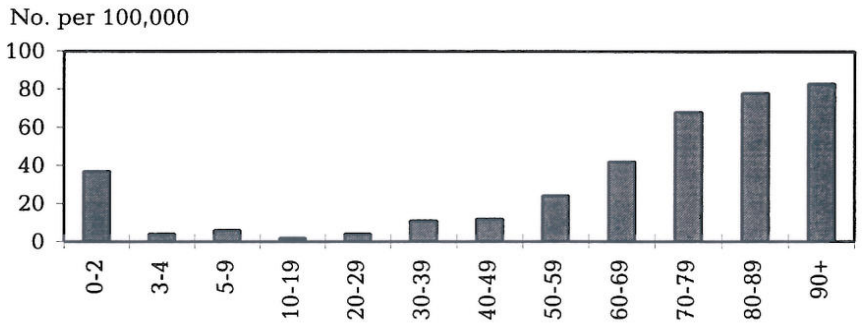


Fig. 2. Pneumococcal isolates from blood and CSF received by Statens Serum Institut, 1995, by age



Invasive pneumococcal infection
Pneumococcal infections occur in all age groups, but are most frequent in smaller children, the elderly and immunocompromised patients.
Invasive pneumococcal disease appears most often as septicaemia or meningitis, but pneumococci may also cause joint infections, pleuritis, pericarditis and peritonitis. Pneumococcal isolates from cerebrospinal fluid make up 5-10% of the total, most of the rest being from blood.
Pneumococcal infection is the commonest cause of septicaemia and among the commonest causes of meningitis in both children and adults.
In recent years the number of invasive pneumococcal infections has been rising steadily, from 385 in 1986 to 1095 in 1995, Fig. 1.. A similar rise has been noted in other western countries. The cause of this rise is unknown.
In Denmark the incidence of invasive pneumococcal infections in persons over 60 years is 65 per 100,000 per year. This corresponds to about 50% of isolates obtained from patients with invasive pneumococcal disease, Fig. 2..
Pneumococci were isolated from cerebrospinal fluid from 95 patients in 1995. Only 50 cases were notified, 40% of which were in patients over 65 years, even though bacterial meningitis is notifiable on the National Board of Health's form 1507.

Pneumonia
Pneumococci are a frequent cause of serious pneumonia. 4-8 cases per 1000 persons over 65 years occur annually, corresponding to about 4000 cases in Denmark. The mortality is 10-15%, and part of the excess mortality associated with influenza epidemics is due to pneumococcal infections. The figures are somewhat uncertain, however, partly because it can be difficult to demonstrate the aetiological agent in lung infections.

The pneumococcal vaccine
The pneumococcal vaccine gives about 70% protection against invasive disease. It produces few adverse reactions, which are seldom serious and comprise primarily local reactions and fever during the first few days.
Children under 2 years will usually not benefit from vaccination, as polysaccharide vaccines are not immunogenic in small children.

Vaccination suggestions
Because of the risk of invasive disease and pneumonia the following risk groups may benefit from vaccination:
- Splenectomized patients
- Immunocompromised patients, e.g. with HIV infection, lymphoma or Hodgkin's disease.
- Patients with chronic heart, lung liver or kidney disease or diabetes mellitus
- Patients with cerebrospinal fluid rhinorrhoea, e.g. after skull fracture
- Persons over 65 years, especially those with a history of pneumonia.

The vaccine is given only once, which usually provides long-term protection. Splenectomized patients should be tested for antibodies every 5 years to determine their need for revaccination (EPI-NEWS 16/96). Studies now in progress will determine whether antibodies should also be measured before revaccination in other risk groups because of possible adverse reactions. The vaccine will usually have to be paid for by the patient.
(Anne-Marie Plesner, Dept. of Epid., Helle Bossen Konradsen, Strep. Unit, Tove Rønne, Dept. of Epid.)

Unless special circumstances arise, the next issue of EPI-NEWS will not appear until after the New Year. The staff of the Department of Epidemiology wish everyone a Merry Christmas and a Happy New Year.

18 December, 1996

Viral infections diagnosed in the Dept. of Virology, 1996

		September	October	November
Respiratory viruses	Adeno	-	8	2
	Influenza A	-	-	1
	Influenza B	-	-	-
	Parainfluenza	-	-	-
	RSV	-	1	-
Enteroviruses	Polio, Coxsackie A, Coxsackie B, Echo	28	24 [1]	18 [4]
Viruses of "childhood illnesses"	Morbilli	3	2	-
	Parotitis	1	2	2
	Rubella	4	3	2 [5]
	Parvovirus B19	1	2	1
Herpesviruses	Herpes simplex	120	164 [2]	144 [6]
	Varicella-zoster	17	21	20
	CMV	42	47	44
	Epstein Barr	67	69	63
	Herpes virus 6	1	1	2
Gastroenteritis viruses	Rota	6	1	2
	Adeno	8	5	10
	Norwalk-like viruses	4	9	4
Hepatitis viruses	Hepatitis A	8	15	12
	Hepatitis B	34	15	11
	Hepatitis C	34	41 [3]	24 [7]
	Hepatitis E	1	-	-

(Dept. of Virology)

[1] Enterovirus demonstrated in 16 patients, 11 in cerebrospinal fluid (one isolate was typed as coxsackie B5), and 5 in faeces (one isolate was typed as echovirus 19). Enterovirus IgM antibodies were demonstrated in 8 patients.

[2] 13 of these by isolation in tissue culture.

[3] 29 of these were positive by PCR

[4] Enterovirus demonstrated in 10 patients, 6 in cerebrospinal fluid and 5 in faeces (of the latter, one was typed as echovirus 18 and another as coxsackie B5). Enterovirus IgM antibodies were demonstrated in 8 patients.

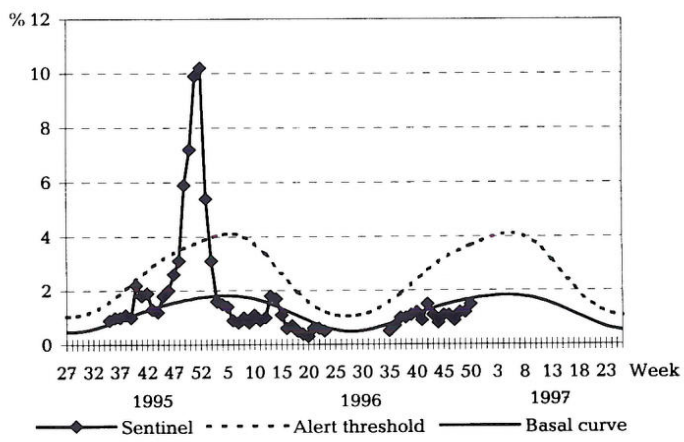
[5] 1 of these in a pregnant woman.

[6] 10 of these by isolation in tissue culture.

[7] 22 of these were positiive by PCR.

Influenza activity

Weekly percentage of consultations, 1995/96/97



Sentinel: Influenza consultations as % total consultations

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

Alert threshold: Possible incipient epidemic