

Editor: Susanne Samuelsson

Statens Serum Institut - 5 Artillerivej - 2300 Copenhagen S - Denmark

Tel: +45 3268 3268 - Fax: +45 3268 3874

www.ssi.dk - serum@ssi.dk - ISSN: 1396-4798

SURVEILLANCE OF INFECTIOUS DISEASES AT THE BEGINNING OF 2002 No. 1-2, 2002

Dept. of Epidemiology

The Dept. of Epidemiology was established at Statens Serum Institut in its present form in 1979. At that time, 3 physicians and 4½ secretaries were employed. Today the department employs 2 senior medical officers, 2 staff specialist grade doctors, 2 registrars, 2 nurses, 1 IT assistant, 2 database secretaries and 2 conventional secretaries, whose tasks include co-ordinating the writing and printing of EPI-NYT (the Danish version), EPI-NEWS and the presentation on SSI's website. The first issue of EPI-NYT was published in January 1980, as a topical newsletter concerning the occurrence of infectious diseases, vaccines, vaccinations and outbreaks, domestic as well as foreign. Over the years, EPI-NYT has changed its appearance slightly, while the objective remains the same. Both EPI-NYT and EPI-NEWS are accessible under Public Health on SSI's website: www.ssi.dk.

Surveillance in Denmark

In Denmark, a national registration of the occurrence of infectious diseases can be traced all the way back to the 17th century. Surveillance of the occurrence of infectious diseases is a key function in their prevention, ensuring an insight into both changes in the incidence of the infections monitored and the effect of preventive measures that have been implemented. This interaction requires an up-to-date, adequate and ongoing registration, for which reason collaboration with reporting physicians is absolutely crucial for the quality of the surveillance and thus the usefulness of the result. The altered composition of the population has involved changes in the incidence of certain infections and has naturally placed new demands on the preventive work. The compulsory clinical notification system appointed by The National Board of Health deals with a whole range of infections, using the patient's name and personal registration number as well as anonymous notification systems for proven HIV infection, gonorrhoea and syphilis. The results of the serological screening of donor blood are also monitored. There also exist compulsory laboratory-based notification systems, e.g. for enteropathogenic bacteria and malaria. Influenza is monitored by means of a voluntary sentinel-based system, established by the Dept. of Epidemiology in 1994. In

addition, the Danish childhood vaccination programme is under ongoing surveillance, validation and updating.

The year 2001

In 2001, the Dept. of Epidemiology received just under 4,000 notifications of infectious diseases. The equivalent statistic was approx. 3,200 in 1990. Today, most notifications are received for the following infections: food-borne illness, tuberculosis, meningococcal disease, HIV, and whooping cough in children under 2 years of age. In 1990, the picture was the same, except that the number of AIDS cases at that time was also high. In 2001, there were small outbreaks of hepatitis A, tuberculosis, food-borne illness and meningococcal disease. Compliance with childhood vaccination programmes is crucial to their success. MMR vaccination has been the subject of an increased effort for several years, and compliance reached a satisfactory level in 2000. The number for 2001 is not yet available.

International surveillance and cooperation

Denmark participates in the international surveillance cooperation under the auspices of both WHO and the EU. WHO has for many years shared the responsibility for the global monitoring of infectious diseases, and has supported vaccination programmes and other monitoring procedures, primarily in the developing countries. It is also WHO that is responsible for the current "International Health Regulations", which include a recommendation for yellow fever vaccination on certain journeys and allow for restrictions on transport of goods between countries. These guidelines are under revision. The EU membership in the last approx. five years has brought with it a dramatic increase in the extent of collaborative tasks. A decision of the EU parliament in 1998 meant that all member countries are now obliged to enter into what are known as co-operation networks for the surveillance of a total of 35 infectious diseases. For each infection, a surveillance centre is to be established, to which the other member countries continuously report. Thus, the Dept. of Epidemiology is the centre for EU surveillance of vaccine-preventable infections, known as EUVAC-NET. To attend to this task, an epidemiologist

and a database technician have been employed. Denmark also participates in the EU surveillance of TB, HIV and AIDS, influenza, meningococcal disease and travel-associated legionella. The second half of 2001 was distinguished, on a global scale, by the terrorist attack of 11 September. In almost all countries, attention was focused on the national biological emergency plan and on international cooperation. In Denmark, a proposal for guidelines for a biological emergency plan has been drawn up, and a Biological Emergency Contingency Centre has been established at SSI. Along with the diagnostic departments and the Dept. of Epidemiology at SSI, as well as external partners, the Centre will ensure up-to-date knowledge of biological terrorism and co-ordinate efforts in the event of suspected attack. A network has been created under the auspices of the EU, to function as a quick decision-making channel and to host fora for communication and discussion. The risk of biological terror has also focused attention on the importance of good ongoing national surveillance, offering flexibility and facilities for rapid response.

Future challenges

Along with developments in microbiology, especially in virology, specific microbiological diagnostic data should form a central part of the case definitions for many of the infectious diseases that are monitored. Thus, the coming years should ensure a better integration of clinical and laboratory-based surveillance. Other important tasks include monitoring of the development of resistance, strategies for smallpox vaccination and the preparation of emergency provisions for influenza pandemic. IT developments have brought new challenges. The Institute's website is undergoing overall improvement, and the Dept. of Epidemiology will be able to offer access to selected surveillance data via the website in the course of 2002.

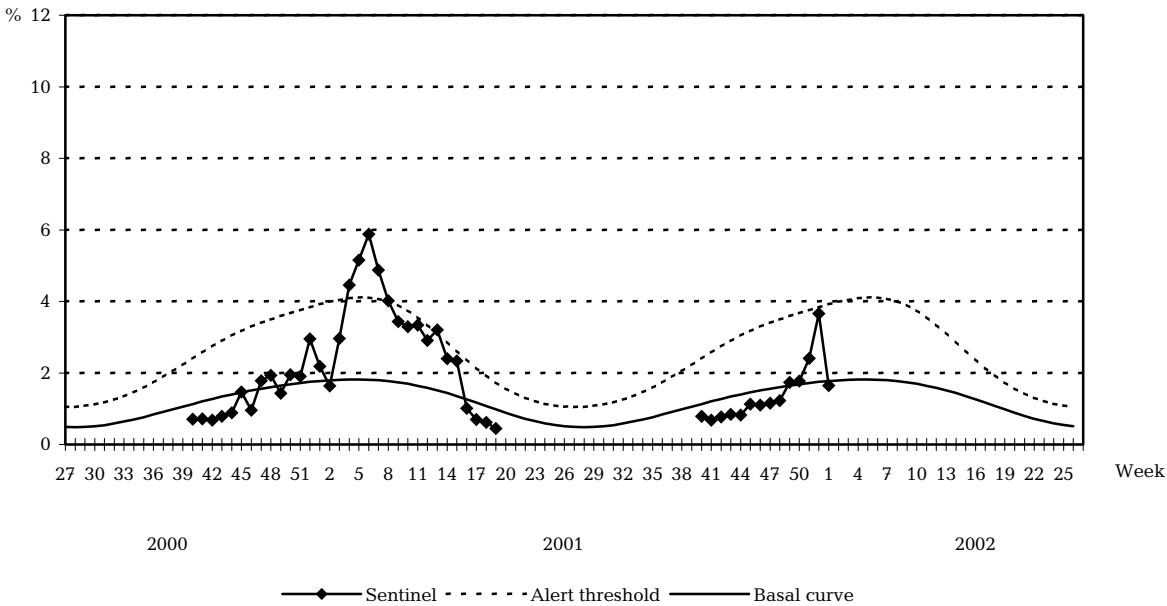
SSI will celebrate its 100th anniversary in September 2002. This will be commemorated by events including a major international vaccine symposium focusing on future vaccines, including vaccines against HIV, malaria and tuberculosis. A provisional programme is available on SSI's website.

(E. Smith, Dept. of Epidemiology)

9 January 2002

Sentinel surveillance of influenza activity

Weekly percentage of consultations, 2000/2001/2002



Sentinel: Influenza consultations as % of total consultations
Basal curve: Expected frequency of influenza consultations under non-epidemic conditions
Alert threshold: Possible incipient epidemic

Sentinel specimens received 2001/2002

Week no.	40-44	45	46	47	48	49	50	51	52	1
Specimens received	2	9	6	10	4	3	7	2	0	1

Influenza virus has not yet been isolated in Denmark.

(Dept. of Epidemiology, Dept. of Virology)