

ZOONOTIC INTESTINAL INFECTIONS 2001

No. 11, 2002

Bacterial zoonoses are diseases that are transferred from animals to humans, who may become sick after consumption of polluted foodstuffs or water, or after contact with infected animals. Developments for the most important zoonotic bacteria are described below: Campylobacter, Salmonella, Yersinia enterocolitica and verotoxin-producing E. coli (VTEC), all of which cause a usually self-limiting gastroenteritis. In seldom cases, the infections may be complicated by reactive arthritis, septicaemia (particularly Salmonella), Guillain-Barré syndrome (Campylobacter) and haemolytic uraemic syndrome, also known as HUS (VTEC).

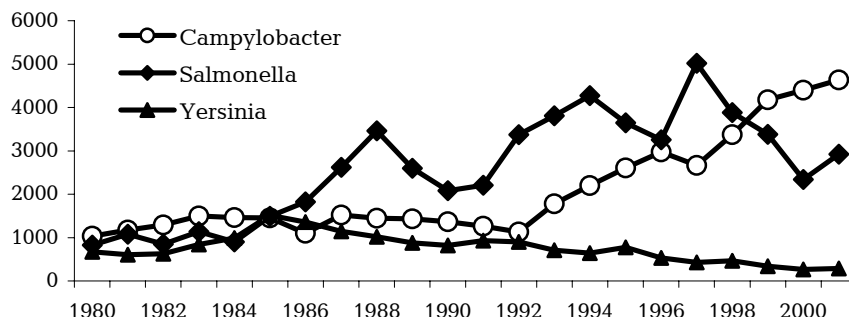
General development

Development in the number of diagnosed enteric infections with Campylobacter, Salmonella and Yersinia enterocolitica appear in Fig. 1. For Campylobacter, the number of notified cases increased in relation to the year before by 5.3% to a total of 4,637 cases. The number of Campylobacter infections has been increasing for the last 10 years. Many of the infections are acquired during foreign travel. The main source of infections acquired in Denmark is thought to be infected poultry, both imported and Danish-produced. There are no action plans directed towards Campylobacter in food production. The number of Salmonella infections increased in relation to the year before by 25.6% to a total of 2,920 cases, having been falling since 1997. The increase includes both the traditionally most common serotypes, S. enteritidis and S. typhimurium, and the remaining group of serotypes, as shown in Table 1.

Table 1. Most frequent Salmonella serotypes, 2001

Serotype	No.	(%)
S. Enteritidis	1,426	(49)
S. Typhimurium	595	(20)
S. Bovismorbificans	174	(6)
S. Agona	132	(5)
S. Hadar	62	(2)
S. Thompson	42	(1)
S. Virchow	39	(1)
S. Derby	38	(1)
S. Newport	35	(1)
S. Dublin	26	(1)
Others	351	(12)
Total	2,920	(100)

Fig. 1. Number of registered infections caused by Campylobacter, Salmonella and Yersinia enterocolitica, 1980-2001



One third of the rise can be ascribed to an epidemic of the serotype Bovismorbificans, EPI-NEWS 25/01 and 37/01. The number of cases caused by serotype Agona has almost doubled in 2001, which might suggest that there was an unacknowledged epidemic. However, the isolated strains have had many different DNA-fingerprints. In food production, this serotype is found particularly in turkey meat.

An increase in the number of Salmonella-infected chicken flocks in consumer egg production and the hot summer of 2001 may explain most of the remainder of the increase. 285 cases of Yersinia enterocolitica were registered, and this is more or less status quo.

Multi-resistant S. typhimurium DT104

The number of infections with the multi-resistant type S. typhimurium DT104 increased in 2001 to 84 cases. A total of 15/42 (36%) patients had been abroad. For the remaining 42 patients, this information was not provided. 18 (21%) of the 84 patients were infected with strains that were resistant to nalidixic acid, a quinolone. This is worrying, because this means that one cannot be sure of treatment effect with the modern fluoroquinolones, which are today the drugs of first choice for the treatment of Salmonella infections. For nine of these patients, information about foreign travel was available; eight had been to the diving resort of Hurghada in Egypt, and one to Israel.

Verotoxin-producing E. coli (VTEC)

In 2001, 90 cases of VTEC were registered in the laboratory reporting system, of which two were double in-

fections. This represents an increase of 35% in relation to 2000. A total of 22 cases occurred in association with foreign travel. 35 infections occurred in children under the age of three; 24 were caused by serotype O157, which is traditionally considered to be the most virulent. Six cases of HUS were notified; all children under the age of three. Two were caused by serotype O157.

In 2001, the Department of Epidemiology received 92 notifications of VTEC infection, of which seven were complicated with HUS. In addition, notification was made of one case of clinical HUS. Infection with VTEC and clinical HUS has been individually notifiable since 1 May 2000, EPI-NEWS 37/00. A more detailed report on VTEC infections will be published in a later issue of EPI-NEWS. (P. Gerner-Smidt, Dept. of Gastrointestinal Infections)

GUIDE TO PRION DISEASES

Statens Serum Institut has published the guide: "Prion disease. Hygienic precautions for the prevention of infection in the health care sector". The guide was prepared in order to secure the necessary preparedness and to give health staff the opportunity to assess risks of infection in specific situations of possible or confirmed prion disease. The guide covers prion diseases, including vCJD, and diagnostics, as well as handling of instruments and equipment with a view to eliminating or reducing the already small – but undoubted – risk of iatrogenic prion infection. The guide can be ordered from tel. +45 3268 3751.

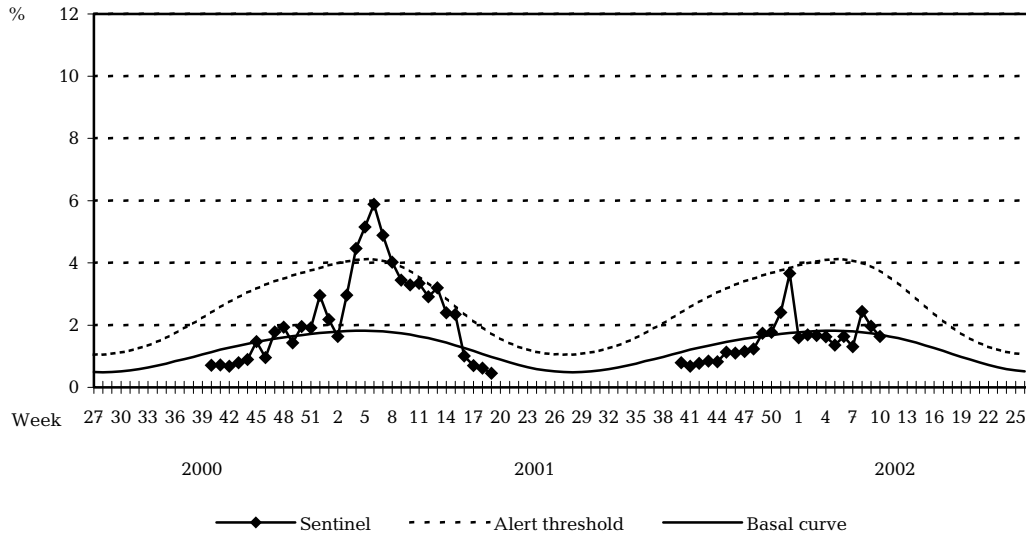
(O. B. Jepsen, Central Department for Hospital Hygiene)

Patients with laboratory-diagnosed RSV or rotavirus infections, Nov-Jan, 2001/2002

November		December		January	
RSV	Rota	RSV	Rota	RSV	Rota
36	1	136	12	314	36

Reported from the following Clinical Microbiology Departments:
 Aalborg Hospital (South), Aarhus Municipal Hospital, Herning Central Hospital,
 Hvidovre Hospital, Odense University Hospital, Slagelse Central Hospital,
 Viborg Hospital and the Dept. of Virology, Statens Serum Institut.

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

(Dept. of Epidemiology)