

ZOONOTIC ENTERIC INFECTIONS 2003

No. 9, 2004

Zoonoses are diseases which are transmitted from animals to humans. Zoonotic enteric infections arise after consumption of contaminated food-stuffs or water, or after contact with infected animals.

General development

Since 1999, *Campylobacter jejuni/coli* has been the most common bacterial zoonosis. In the laboratory notification system, 3542 cases (66 per 10⁵) were recorded in 2003. The number increased continuously from 1992 to 2001, but decreased by 5% in 2002 and by 19% in 2003 relative to the previous year, [fig. 1](#).

Apart from a minor increase in 2001, the incidence of *Salmonella* has been declining since 1997. In 2003, a total of 1724 cases were registered (32 per 10⁵), 17% less than in 2002, which is the lowest number since 1985. The overall figure constitutes a 33% decline for *S. Enteritidis*, an 18% increase for *S. Typhimurium* and an 8% decline for the group of other serotypes. *S. Enteritidis*, which is primarily transmitted from hen's eggs, is still the most common serotype, [table 1](#).

The incidence of *S. Typhimurium*, which is primarily transmitted from pork and poultry, is approaching that for *S. Enteritidis*. The increased number of *S. Typhimurium* cases in 2003 is partially due to a large outbreak (40 cases) arising in a restaurant in the summer of 2003, EPI-NEWS 42/03.

Table 1. Number of Salmonella episodes by serotype, 2003

Serotype	No.	(%)
<i>S. Enteritidis</i>	746	(43)
<i>S. Typhimurium</i>	455	(26)
<i>S. Virchow</i>	40	(2)
<i>S. Agona</i>	38	(2)
<i>S. Dublin</i>	34	(2)
<i>S. Newport</i>	27	(2)
<i>S. Derby</i>	26	(2)
<i>S. Infantis</i>	26	(2)
<i>S. Stanley</i>	26	(2)
<i>S. Uganda</i>	19	(1)
Other	287	(17)
Total	1724	(100)

A total of 245 cases of *Yersinia enterocolitica* were notified (4.5 per 10⁵), which leaves the level unchanged since 2002. A total of 128 cases of verocytotoxin-producing *E. coli* (VTEC) were registered (2.4 per 10⁵), a decrease of 11% relative to 2002. In 2003, 28 cases (22%) were caused by the O157 O group, which has traditionally been considered to be

Fig. 1. Number of registered infections caused by Campylobacter, Salmonella and Yersinia enterocolitica, 1980-2003

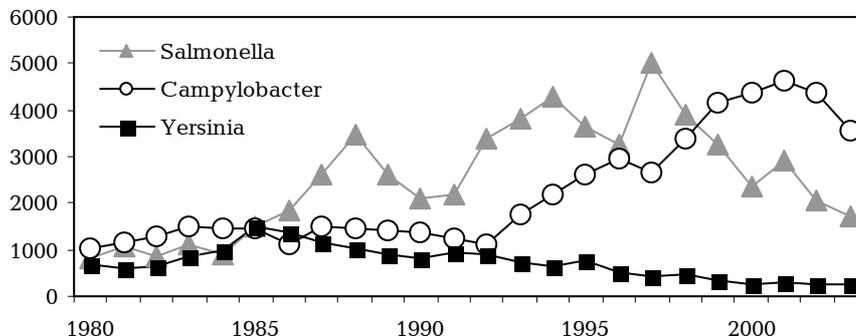


Table 2. Age-specific incidence per 10⁵ for patients with zoonotic intestinal infections, 2003

Age (yrs)	Campylobacter	<i>S. Enteritidis</i>	<i>S. Typhimurium</i>	Other salmonella	<i>Yersinia enterocolitica</i>	VTEC
< 1	70	20	23	58	31	8
1-4	116	30	19	25	29	12
5-14	49	13	8	5	6	2
15-24	115	16	9	11	3	2
25-44	85	10	8	9	3	2
45-64	43	15	7	9	2	2
65+	28	12	7	7	2	1
Total	66	14	8	10	5	2

the most virulent. There were two notified cases of haemolytic uraemic syndrome (HUS) in 2003, and both patients had verified VTEC infections. The patients' age-specific incidence follows the pattern from the preceding years, [table 2](#).

Comments

The main source of *Campylobacter* infections is thought to be poultry. The declining number of infections can probably be ascribed to efforts against *Campylobacter* in fresh poultry, which the poultry industry in collaboration with the Danish Veterinary and Food Administration has carried out during the last couple of years. In order to assess which measures have been particularly effective, it is vital that the industry and the authorities document this effort. Future surveillance will reveal whether the initiative may lead to a continued decline.

The incidence of salmonella has been declining since the record year of 1997. This propitious development may be ascribed to the great effort that has been made to combat salmonella in poultry and eggs, as well as in pork production. A five-fold decline in the incidence of *S. Enteritidis* is mainly due to the action plan to combat salmonella in consumer egg production, which must be consid-

ered a very successful preventive initiative.

Since registration commenced, this is the first time that the annual number of cases of VTEC has not increased. There are many routes of infection for VTEC, including contact with ruminant animals and their faeces, contact with other infected persons and a range of foodstuffs of bovine origin, such as unpasteurised milk. Since the laboratories' diagnostic practice is not uniform, VTEC is still underdiagnosed.

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COUNSELLING OF PRIVATE INDIVIDUALS

The SSI is experiencing an increasing number of enquiries from private individuals stating that their GP has referred them for counselling about travel vaccination or the like. The SSI does not normally provide counselling for private individuals. Counselling should take place via the patient's own GP or other health personnel, who in case of doubt or in-depth questions may contact the Institute. Answers to many questions may be found on www.ssi.dk. (Department of Epidemiology)

Patients with confirmed *Listeria monocytogenes* infection

4th quarter of 2003 compared with 4th quarter of 2002, and the total years of 2003 and 2002

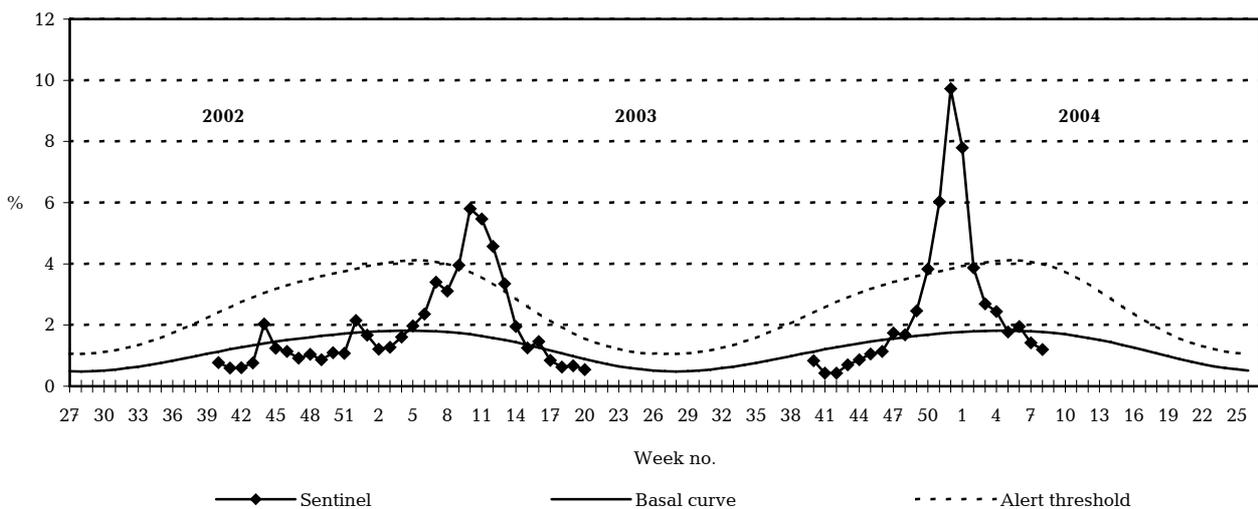
	4th quarter 2003	4th quarter 2002	Total 2003	Total 2002
Mother/child infection	1	-	4	2
Septicaemia	4	4	19	19
Meningitis	-	-	4	5
Other	1 *	-	2	3
Total	6	4	29	29

* Pleuritis/peritonitis in patient with liver cirrhosis

(DBMP)

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2002/2003/2004



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

(Dept. of Epidemiology)

Secretion specimens received from the sentinel surveillance system

Week no.	2003										2004																		
	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
No. received	0	5	6	12	9	10	23	28	15	10	19	9	8	5	0	11	22	1											
Influenza A												0	1			2	2												
A/H3				3	1	6	7	12	4	3	3	4	2																
A/H1																													
Influenza B																													

(Depts. of Epidemiology & Virology)