



## TUBERCULOSIS 2008, PART I

No. 50, 2009

2008 saw a total of 367 notified cases of tuberculosis (TB), 145 (40%) in persons of Danish origin and 222 (60%) in immigrants. The overall incidence was 6.7 per 10<sup>5</sup>.

The M/F ratio was 2 for Danes and 1.4 for immigrants. The median age was 49 years (3-93 years) for Danes and 37 years (2-79 years) for immigrants. **Table 1** shows the distribution by ethnicity and part of country.

A total of 37 (10%) patients were notified with relapse, including 16 Danes. Information on concurrent HIV infection and therefore AIDS was present in four cases. As previously explained, this should be regarded a minimum number, EPI-NEWS 51/08.

Alcohol abuse and/or homelessness were noted for 53 patients (14%) of whom 37 were Danes and 16 immigrants.

In 17 cases aged 34-93 years (13 males and four females), the patient had died at the time of notification. This group counted ten Danes (eight males and two females). In one of the cases, in which the patient had died, immune deficiency was reported. In the remaining cases no additional information was reported. Two cases were notified by a department of pathology and an institute of forensic medicine.

**Table 2** shows the distribution of TB localization by ethnicity and part of country.

**Table 2. Notified tuberculosis cases, by localization, Danes and immigrants, 2008**

TB-lokalization	Danes	Immigrants	Total
Pulmonary	129	126	255
Pleural	3	8	11
Lymph-node	5	43	48
Bone	1	11	12
Gastrointestinal	0	3	3
Urogenital	0	4	4
Cerebral	1	2	3
Skin	0	2	2
Miliary	2	1	3
Other	0	2	2
Pulmonary & pleural	1	3	4
Pulm & lymph-node	0	6	6
Pulmonary & bone	1	1	2
Pulm & gastroint	1	3	4
Pulm & cerebral	0	1	1
Pulmonary & skin	1	0	1
Pulmonary & other	0	2	2
Several concurrent, not pulmonary, cerebral, miliary	0	3	3
Unknown	0	1	1
<b>Total</b>	<b>145</b>	<b>222</b>	<b>367</b>

### Country of infection and ethnicity

A total of 163 cases were infected in

**Table 1. Notified tuberculosis cases and incidence per 10<sup>5</sup> in Danes and immigrants, by part of country, 2008**

Area	Danish origin		Other origin		Total	
	No.	Incidence	No.	Incidence	No.	Incidence
Copenhagen City	38	7.1	74	60.3	112	17.1
Copenhagen subs	14	3.3	22	29.2	36	7.1
Northern Zealand	9	2.2	6	16.1	15	3.4
Bornholm	2	4.8	0	0.0	2	4.7
Eastern Zealand	0	0	10	54.9	10	4.3
W & S Zealand	24	4.3	10	29.5	34	5.8
Funen	10	2.2	13	35.3	23	4.8
Southern Zealand	7	1.1	25	47.6	32	4.5
Eastern Jutland	20	2.7	30	44.9	50	6.2
Western Jutland	7	1.7	10	43.2	17	4
Northern Jutland	12	2.2	9	30.6	21	3.6
Unknown	2	-	13	-	15	-
<b>Total</b>	<b>145</b>	<b>2.9</b>	<b>222</b>	<b>44.6</b>	<b>367</b>	<b>6.7</b>

Denmark, incl. 127 of Danish origin. A total of 36 immigrants were presumably infected in Denmark, including 16 from Greenland, seven from Somalia and the remaining 13 cases from nine other countries.

Six Danes were presumably infected on four different continents. In the remaining 12 Danes, the mode of infection was unknown.

A total of 155 immigrants were presumably infected in their countries of origin, including 19 Somalis, 13 Pakistanis, 11 Filipinos and ten Greenlanders. For a total of 67 immigrants, the country of infection was unknown.

### Au pair employees

In 2008, five notifications concerned persons in whom TB was detected while they were staying in Denmark as au pairs, including two with lymph-node TB and three with pulmonary TB. Two of the pulmonary TB cases had positive microscopies and were thus infectious. In one of the infectious cases, no transmission was detected. For the other infectious case, no transmission information was available.

### Occupational infection

Two patients of Danish origin are presumed to have been infected occupationally: One in connection with stationing in Africa and one via employment at an institution in Denmark. In one case of non-Danish origin, infection in connection with employment at a hospital could not be excluded.

### TB in children

A total of 22 cases of TB in children below the age of 15 years were notified, including eight (36%) below the age of five years. Seven children were Danes; all had been infected in Denmark. Among 15 immigrant children, seven (47%) were infected in Denmark and four (27%) in their countries

of origin. In the remaining four children, the country of infection was unknown.

A total of 15 (68%) children, including six Danes, were presumably infected by a member of their family.

A total of 18 (82%) children, including seven Danes and 11 immigrants, had pulmonary TB. Three immigrant children had extrapulmonary TB exclusively, including lymph-node TB (2) and bone TB (1). In the last immigrant child, TB localization was unknown.

### TB and long-distance flights

According to international WHO guidelines, the national health authorities of the country of destination shall be informed in case of long-distance flights comprising possible TB exposure where a passenger subsequently tests positive for TB. Contact tracing of passengers is normally only performed for flights with a flight time exceeding eight hours, if the person infected with TB is assumed to have been infectious at the time of the flight, and tracing only comprises passengers in the same row of seats and the two rows in front of and behind the index case.

In 2008 the Department of Epidemiology, via the Medical Officer of Health, in five cases contacted a total of 30 persons residing in Denmark, who had been exposed to TB infection on planes. In three cases the national health authorities of other countries were informed of possible TB exposure of persons residing in other countries.

To our knowledge, TB infection of flight contacts traced in Denmark has not yet occurred.

(C. Kjølse, P. H. Andersen, Department of Epidemiology)

**Comments will follow in part II.**

## Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2009 figures are preliminary)

Table 1	Week 49 2009	Cum. 2009 <sup>1)</sup>	Cum. 2008 <sup>1)</sup>
AIDS	1	39	36
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	1
Creutzfeldt-Jakob	0	9	5
Diphtheria	0	0	0
Food-borne diseases of these, infected abroad	11 3	504 91	822 135
Gonorrhoea	17	532	362
Haemorrhagic fever	0	0	0
Hepatitis A of these, infected abroad	0 0	30 23	48 27
Hepatitis B (acute)	0	22	24
Hepatitis B (chronic)	5	153	167
Hepatitis C (acute)	0	15	6
Hepatitis C (chronic)	1	258	258
HIV	7	249	236
Legionella pneumonia of these, infected abroad	5 0	136 32	121 46
Leprosy	0	0	0
Leptospirosis	0	0	8
Measles	0	9	10
Meningococcal disease of these, group B of these, group C of these, unspec. + other	0 0 0 0	64 37 20 7	58 28 17 13
Mumps	1	16	26
Neuroborreliosis	2	55	55
Ornithosis	0	12	6
Pertussis (children < 2 years)	0	103	91
Plague	0	0	0
Polio	0	0	0
Purulent meningitis Haemophilus influenzae Listeria monocytogenes Streptococcus pneumoniae Other aethiology Unknown aethiology Under registration	0 0 0 0 0 0 2	5 5 65 9 16 23	5 1 81 19 21 -
Rabies	0	0	0
Rubella (congenital)	0	0	3
Rubella (during pregnancy)	0	0	0
Shigellosis of these, infected abroad	2 0	101 82	80 66
Syphilis	8	270	135
Tetanus	0	0	2
Tuberculosis	7	348	361
Typhoid/paratyphoid fever of these, infected abroad	0 0	25 22	32 26
Typhus exanthematicus	0	0	0
VTEC/HUS of these, infected abroad	2 0	146 34	140 51

<sup>1)</sup> Cumulative number 2009 and in corresponding period 2008

## Selected laboratory diagnosed infections

Number of specimens, isolates, and/or notifications received in SSI laboratories

Table 2	Week 49 2009	Cum. 2009 <sup>2)</sup>	Cum. 2008 <sup>2)</sup>
Bordetella pertussis (all ages)	2	188	183
Gonococci of these, females of these, males	5 2 3	420 111 309	348 73 275
Listeria monocytogenes	3	89	47
Mycoplasma pneumoniae Resp. specimens <sup>3)</sup> Serum specimens <sup>4)</sup>	6 7	90 132	80 94
Streptococci <sup>5)</sup> Group A streptococci Group B streptococci Group C streptococci Group G streptococci S. pneumoniae	3 2 0 4 22	139 123 33 167 995	127 120 21 119 868
Table 3	Week 47 2009	Cum. 2009 <sup>2)</sup>	Cum. 2008 <sup>2)</sup>
MRSA	20	692	702
Pathogenic int. bacteria <sup>6)</sup> Campylobacter S. Enteritidis S. Typhimurium Other zoon. salmonella Yersinia enterocolitica Verocytotoxin- producing E. coli Enteropathogenic E. coli Enterotoxigenic E. coli	28 2 4 6 1 1 3 9	3153 585 750 675 21 157 198 308	3227 614 1900 955 307 146 198 386

<sup>2)</sup> Cumulative number 2009 and in corresponding period 2008

<sup>3)</sup> Resp. specimens with positive PCR

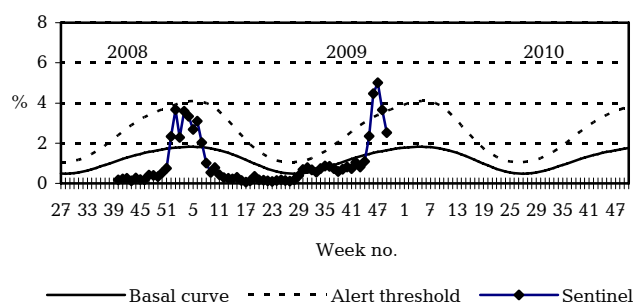
<sup>4)</sup> Serum specimens with pos. complement fixation test

<sup>5)</sup> Isolated in blood or spinal fluid

<sup>6)</sup> See also [www.germ.dk](http://www.germ.dk)

## Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2008/2009/2010



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

9 December 2009