



## TUBERCULOSIS 2006, PART I

No. 49, 2007

2006 saw a total of 377 notified cases of tuberculosis (TB) of which 161 (43%) were Danes and 216 (57%) immigrants.

The overall incidence was 7 per 10<sup>5</sup>, Table 1. This represents a minor decrease compared with 2005 (7.8 per 10<sup>5</sup>), EPI-NEWS 48/06. The decrease was primarily observed among immigrants.

The M/F-ratio was 2.3 for Danes and 1.0 for immigrants. The age distribution for Danes and immigrants is shown in Figure 1. Among immigrants, the male and female age distribution was nearly identical.

Among Danes, an increased number of cases was observed in males aged 35-64 years.

Median age was 49 years (3-89 years) for Danes and 35 years (0-81 years) for immigrants. Among immigrants, 55 (25%) were from Somalia, 20 (9%) from Greenland, 12 (6%) from Pakistan and Vietnam, 11 (5%) from Thailand and 10 (5%) from India. The remaining 96 (44%) were from 44 different countries.

A total of 37 (10%) cases were notified with relapse; 13 Danes and 24 immigrants.

Eleven cases (3%), three Danes and eight immigrants, had concurrent HIV infection and thus AIDS. Alcohol abuse and/or homelessness was noted for 50 (13%) of patients, 44 Danes and six immigrants, including three from Greenland.

### TB localisation

A total of 275 patients (73%) had pulmonary TB, among these, seven (2%) had concurrent extrapulmonary TB. A total of 100 (27%) patients had extrapulmonary TB alone. The most common extrapulmonary manifestations among immigrants were TB in the lymph nodes 48% (41), gastrointestinal area 12% (10), bone 8% (7) and pleura 8% (7).

Among Danes, the most common extrapulmonary manifestations were TB in the lymph nodes 38% (8), gastrointestinal TB 14% (3) and pleura TB 24% (5).

Six immigrants had cerebral TB. Five immigrants and one Dane had military TB. For two immigrants the TB localisation was unknown.

### Country of infection

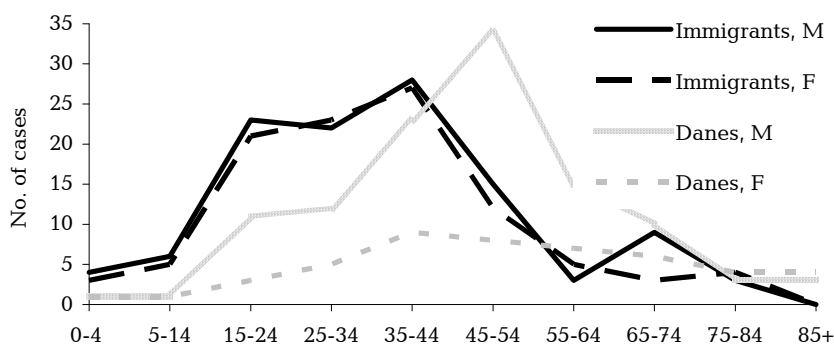
A total of 142 (90%) adult Danes were thought to have been infected in Denmark and 6 (4%) abroad. For 9 (6%) of the adult Danes, country of infection was unknown.

A total of 26 (13%) adult immigrants

**Table 1. TB cases, incidence per 10<sup>5</sup> in 2006 and average number of cases 2001-2005, in Danes and immigrants, by county**

| County        | Danes      |            | Immigrants |            | Total      |            | Incidence per 10 <sup>5</sup> , 2006 |             |            |
|---------------|------------|------------|------------|------------|------------|------------|--------------------------------------|-------------|------------|
|               |            |            |            |            |            |            | Da-                                  | Immi-       | Total      |
|               | 2006       | 01-05      | 2006       | 01-05      | 2006       | 01-05      | nes                                  | grants      |            |
| Cph. Mun.     | 31         | 38         | 48         | 75         | 79         | 113        | 7.7                                  | 49.5        | 15.8       |
| Frb. Mun.     | 4          | 4          | 4          | 7          | 8          | 11         | 5.0                                  | 31.8        | 8.7        |
| Copenhagen    | 25         | 24         | 40         | 38         | 65         | 62         | 4.6                                  | 50.1        | 10.5       |
| Frederiksborg | 1          | 7          | 7          | 11         | 8          | 18         | 0.3                                  | 22.2        | 2.1        |
| Roskilde      | 2          | 2          | 10         | 5          | 12         | 7          | 0.9                                  | 56.6        | 5.0        |
| West Zealand  | 3          | 5          | 9          | 8          | 12         | 13         | 1.0                                  | 48.8        | 3.9        |
| Storstrom     | 23         | 13         | 2          | 7          | 25         | 20         | 9.2                                  | 14.9        | 9.5        |
| Bornholm      | 3          | 1          | 0          | 0          | 3          | 1          | 7.2                                  | 0.0         | 6.9        |
| Funen         | 11         | 9          | 21         | 20         | 32         | 29         | 2.5                                  | 60.1        | 6.7        |
| South Jutland | 9          | 3          | 3          | 3          | 12         | 6          | 3.8                                  | 16.1        | 4.7        |
| Ribe          | 3          | 5          | 8          | 6          | 11         | 11         | 1.4                                  | 60.2        | 4.9        |
| Vejle         | 16         | 9          | 6          | 9          | 22         | 18         | 4.7                                  | 25.0        | 6.1        |
| Ringkobing    | 6          | 5          | 0          | 10         | 6          | 15         | 2.3                                  | 0.0         | 2.2        |
| Aarhus        | 8          | 15         | 25         | 36         | 33         | 51         | 1.3                                  | 47.4        | 5.0        |
| Viborg        | 3          | 5          | 6          | 8          | 9          | 13         | 1.3                                  | 64.7        | 3.8        |
| North Jutland | 10         | 13         | 21         | 20         | 31         | 33         | 2.1                                  | 86.3        | 6.3        |
| Other/unkn.   | 3          | 1          | 6          | 3          | 9          | 4          | -                                    | -           | -          |
| <b>Total</b>  | <b>161</b> | <b>159</b> | <b>216</b> | <b>266</b> | <b>377</b> | <b>425</b> | <b>3.2</b>                           | <b>46.6</b> | <b>7.0</b> |

**Figure 1. Notified TB cases in 2006, by age group**



were thought to have been infected in Denmark and 119 (60%) abroad, including 30 (15%) in Somalia, 13 (6%) in East European countries, 10 (5%) in Pakistan, eight (4%) in Thailand and in the Philippines, seven in Vietnam and five (2%) in Greenland. For 53 (27%) adult immigrants, the country of infection was unknown.

### TB in children

A total of 22 children below the age of 15 years were notified with TB, including nine (41%) below the age of five years. In all, 18 children had immigrated or had been born in Denmark by immigrant parents, eight (44%) of whom were of Somali origin and three (17%) of Indian origin.

Five immigrant children, including four (22%) of Somali origin, had been infected in Denmark. Eleven immigrant children were thought to

have been infected in their countries of origin. For two children of Somali origin, the country of infection was unknown.

Four children were of Danish origin, all of whom were thought to have been infected in Denmark.

A total of 14 (78%) children, including four (100%) Danes and 10 (56%) immigrants had pulmonary TB. A single immigrant child had concurrent bone TB.

Seven (39%) immigrant children had extrapulmonary TB alone, including pleural, gastrointestinal, cerebral and military TB.

In 13 (72%) children the diagnosis was verified by culture.

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**Comments will follow in part II**

## Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2007 figures are preliminary)

| Table 1                        | Week 48<br>2007 | Cum.<br>2007 <sup>1)</sup> | Cum.<br>2006 <sup>1)</sup> |
|--------------------------------|-----------------|----------------------------|----------------------------|
| AIDS                           | 0               | 44                         | 43                         |
| Anthrax                        | 0               | 0                          | 0                          |
| Botulism                       | 0               | 0                          | 0                          |
| Cholera                        | 0               | 0                          | 0                          |
| Creutzfeldt-Jakob              | 0               | 8                          | 18                         |
| Diphtheria                     | 0               | 0                          | 0                          |
| Food-borne diseases            | 11              | 587                        | 530                        |
| of these, infected abroad      | 2               | 109                        | 129                        |
| Gonorrhoea                     | 7               | 334                        | 401                        |
| Haemorrhagic fever             | 0               | 0                          | 0                          |
| Hepatitis A                    | 1               | 24                         | 37                         |
| of these, infected abroad      | 0               | 10                         | 19                         |
| Hepatitis B (acute)            | 0               | 28                         | 19                         |
| Hepatitis B (chronic)          | 1               | 290                        | 294                        |
| Hepatitis C (acute)            | 1               | 8                          | 7                          |
| Hepatitis C (chronic)          | 6               | 547                        | 427                        |
| HIV                            | 6               | 296                        | 224                        |
| Legionella pneumonia           | 2               | 116                        | 116                        |
| of these, infected abroad      | 0               | 32                         | 29                         |
| Leprosy                        | 0               | 0                          | 0                          |
| Leptospirosis                  | 0               | 13                         | 8                          |
| Measles                        | 0               | 2                          | 27                         |
| Meningococcal disease          | 0               | 62                         | 80                         |
| of these, group B              | 0               | 35                         | 40                         |
| of these, group C              | 0               | 19                         | 19                         |
| of these, unspec. + other      | 0               | 8                          | 21                         |
| Mumps                          | 0               | 11                         | 16                         |
| Neuroborreliosis               | 0               | 92                         | 83                         |
| Ornithosis                     | 0               | 9                          | 11                         |
| Pertussis (children < 2 years) | 1               | 75                         | 48                         |
| Plague                         | 0               | 0                          | 0                          |
| Polio                          | 0               | 0                          | 0                          |
| Purulent meningitis            |                 |                            |                            |
| Haemophilus influenzae         | 0               | 2                          | 4                          |
| Listeria monocytogenes         | 0               | 10                         | 7                          |
| Streptococcus pneumoniae       | 0               | 93                         | 80                         |
| Other aethiology               | 0               | 12                         | 12                         |
| Unknown aethiology             | 0               | 13                         | 18                         |
| Under registration             | 3               | 5                          | -                          |
| Rabies                         | 0               | 0                          | 0                          |
| Rubella (congenital)           | 0               | 0                          | 0                          |
| Rubella (during pregnancy)     | 0               | 0                          | 0                          |
| Shigellosis                    | 2               | 210                        | 61                         |
| of these, infected abroad      | 1               | 48                         | 51                         |
| Syphilis                       | 8               | 98                         | 66                         |
| Tetanus                        | 0               | 2                          | 2                          |
| Tuberculosis                   | 12              | 372                        | 353                        |
| Typhoid/paratyphoid fever      | 0               | 22                         | 27                         |
| of these, infected abroad      | 0               | 21                         | 25                         |
| Typhus exanthematicus          | 0               | 2                          | 0                          |
| VTEC/HUS                       | 0               | 149                        | 135                        |
| of these, infected abroad      | 0               | 49                         | 47                         |

<sup>1)</sup> Cumulative number 2007 and in corresponding period 2006

## Selected laboratory diagnosed infections

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

| Table 2                                | Week 48<br>2007 | Cum.<br>2007 <sup>2)</sup> | Cum.<br>2006 <sup>2)</sup> |
|--|-----------------|----------------------------|----------------------------|
| Bordetella pertussis (all ages)        | 1               | 198                        | 207                        |
| Gonococci                              | 8               | 324                        | 395                        |
| of these, females                      | 2               | 56                         | 69                         |
| of these, males                        | 6               | 268                        | 326                        |
| Listeria monocytogenes                 | 0               | 52                         | 52                         |
| Mycoplasma pneumoniae                  |                 |                            |                            |
| Resp. specimens <sup>3)</sup>          | 4               | 347                        | 471                        |
| Serum specimens <sup>4)</sup>          | 9               | 392                        | 385                        |
| Streptococci <sup>5)</sup>             |                 |                            |                            |
| Group A streptococci                   | 0               | 102                        | 129                        |
| Group B streptococci                   | 4               | 92                         | 88                         |
| Group C streptococci                   | 0               | 20                         | 20                         |
| Group G streptococci                   | 2               | 113                        | 135                        |
| S. pneumoniae                          | 27              | 952                        | 872                        |
| Table 3                                | Week 46<br>2007 | Cum.<br>2007 <sup>2)</sup> | Cum.<br>2006 <sup>2)</sup> |
| MRSA                                   | 14              | 605                        | -                          |
| Pathogenic int. bacteria <sup>6)</sup> |                 |                            |                            |
| Campylobacter                          | 57              | 3703                       | 2915                       |
| S. Enteritidis                         | 17              | 528                        | 533                        |
| S. Typhimurium                         | 0               | 324                        | 376                        |
| Other zoon. salmonella                 | 11              | 658                        | 645                        |
| Yersinia enterocolitica                | 3               | 252                        | 188                        |
| Verocytotoxin-producing E. coli        | 1               | 146                        | 135                        |
| Enteropathogenic E. coli               | 4               | 173                        | 248                        |
| Enterotoxigenic E. coli                | 7               | 281                        | 210                        |

<sup>2)</sup> Cumulative number 2007 and in corresponding period 2006

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

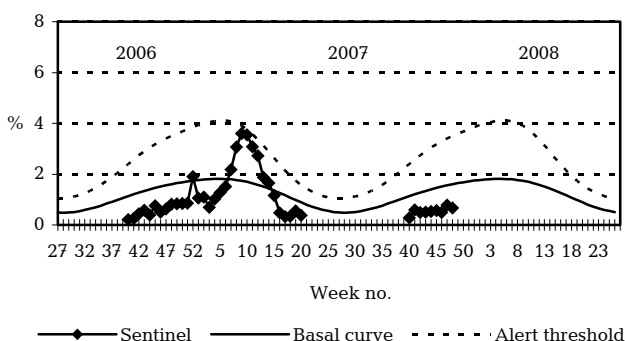
<sup>4)</sup> Serum specimens with pos. complement fixation test

<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, 2006/2007/2008



◆ Sentinel — Basal curve - - - Alert threshold

Sentinel: Influenza consultations (as percentage of total consultations)

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

Alert threshold: Possible incipient epidemic

5 December 2007