



TUBERCULOSIS 2008, PART II

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Table 1. EU case definition of TB disease

Confirmed case	Clinical criteria * fulfilled	Either Detection of <i>M. tuberculosis</i> complex (ex. <i>M. bovis</i> BCG) by culture or Detection of <i>M. tuberculosis</i> complex by PCR and detection of mycobacteria by microscopy
Probable case	Clinical criteria * fulfilled	Either Detection of mycobacteria by microscopy or Detection of <i>M. tuberculosis</i> complex by PCR or Detection of giant cell granuloma by histology
Possible case	Clinical criteria * fulfilled	None of the above criteria fulfilled

* Clinical criteria:

Findings, symptoms and/or X-ray findings compatible with active TB, regardless of anatomical localisation

and

A clinician's decision to initiate a full anti-tuberculosis treatment regimen

or

Post-mortem pathological findings compatible with active TB, which would have triggered TB treatment if the disease had been diagnosed at an earlier stage

Microbiological diagnosis

In 2008, the diagnosis of TB was verified by culture and subsequent identification in 283 out of 367 (77%) notified cases, including 121 out of 145 (83%) among Danes and 162 out of 222 (73%) among immigrants.

In 2008 a TB case definition was approved by the EU, [Table 1](#).

On the basis of this definition, 283 (77%) were confirmed cases, 29 (8%) probable cases, and 55 (15%) possible cases.

Among a total of 275 notified cases of pulmonary TB (\pm other localisation), 226 (82%) cases were verified by culture, comprising 114 of 133 (86%) Danish cases and 112 of 142 (79%) immigrant cases.

Among 97 Danes with culture-verified pulmonary TB (\pm other localisation) and a minimum of one sputum or tracheal secretion test, 68 (70%) had positive microscopy and were regarded as infectious. Among immigrants, the proportion of infectious pulmonary TB reached 52% (52 of 100 patients with culture verification and a minimum of one tested sample).

In 2008 one fatal case of disseminated TB caused by *Mycobacterium africanum* was detected in an African seaman. The patient had processes in the lungs, pericardium, in and by the spleen, and enlarged lymph glands in the abdomen, thoracic cavity, and the mediastinum. *M. africanum* was detected in sample material from the spleen, skin, lymph glands and spinal fluid. The other 282 culture-verified cases were caused by classic *Mycobacterium tuberculosis*.

Resistance

Drug resistance results were available for all 282 patients with culture-verified TB (confirmed cases) caused by *M. tuberculosis*: 121 Danes and 161 immigrants. The single case of *Mycobacterium africanum* was susceptible to rifampicin, isoniazid, ethambutol and pyrazinamid.

Among 254 patients (108 Danes and 146 immigrants) notified with confirmed first-time TB, 11 patients, five Danes and six immigrants, had isoniazid mono-resistance, and in one immigrant ethambutol mono-resistance was detected.

There were no cases of rifampicin resistance among patients notified in 2008 and therefore neither multi-resistant nor extreme drug-resistant (XDR) TB cases.

A total of 37 cases of TB recurrence were notified. In 28 cases the diagnosis was confirmed by culture, 13 Danes and 15 immigrants. No resistance was found against the first-choice drugs in this group.

(V.Ø. Thomsen, Mycobacteriology Laboratory)

Commentary, parts I and II

The number of TB notifications has been decreasing in recent years, and in 2008 it was at par with the levels seen at the beginning of the previous decade. The decrease has primarily been observed among immigrants, while the share of TB among persons of Danish origin has followed a slightly increasing trend, EPI-NEWS 50/08.

In 2008 the share of persons who had only extrapulmonary TB was 25%.

This somewhat high share is due to immigrants having extrapulmonary TB more frequently than Danes, EPI-NEWS 50/09. Such patients should also be examined for pulmonary TB to identify infectious cases.

Immigrants with pulmonary TB are infectious to a less extent than Danes at the time of diagnosis. This difference may be due to a difference with regards to "patient's delay" and "doctor's delay".

2008 saw only few cases of resistant TB among first-time TB patients and no resistance among relapse cases. This can be interpreted as an indication that spreading of TB in Denmark is limited and that treatment to a

wide extent obstructs any development of resistance. Reports on treatment outcomes from previous years show that the overwhelming majority of patients successfully complete treatment, EPI-NEWS 51/07.

The fatal TB case caused by *M. africanum* illustrates the importance of improved diagnostic differentiation within the *M. tuberculosis* complex to achieve further knowledge of optimal treatment of the rare species over time.

A survey of patients notified with TB from 2007 demonstrated that only 40% had been tested for HIV. Preliminary data for TB patients notified in 2008 shows that the share of HIV tested cases has increased to approx. 60%. The National Board of Health now recommends HIV testing of all TB patients, EPI-NEWS 46/09.

TB exposure in connection with flights is increasing and entails contact-tracing of travellers in Denmark as well as abroad.

(V. Ø. Thomsen, Mycobacteriology Laboratory, P. H. Andersen, Department of Epidemiology)

Merry Christmas & Happy New Year

The staff at the Department of Epidemiology wishes everyone a merry Christmas and a Happy New Year. The next edition of EPI-NEWS will be published in week the first week of 2010, unless special circumstances arise.

16 December 2009

Individually notifiable diseases

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

Table 1	Week 50 2009	Cum. 2009 ¹⁾	Cum. 2008 ²⁾
AIDS	0	39	36
Cholera	0	0	1
Creutzfeldt-Jakob	0	9	5
Food-borne diseases	6	510	828
of these, infected abroad	2	93	136
Gonorrhoea	14	546	374
Hepatitis A	3	33	49
of these, infected abroad	2	25	28
Hepatitis B (acute)	1	24	24
Hepatitis B (chronic)	1	155	172
Hepatitis C (acute)	0	15	6
Hepatitis C (chronic)	6	264	258
HIV	1	250	243
Legionella pneumonia	0	136	124
of these, infected abroad	0	32	46
Leptospirosis	0	0	8
Measles	0	9	11
Meningococcal disease	0	64	62
of these, group B	0	37	31
of these, group C	0	20	17
of these, unspec. + other	0	7	14
Mumps	0	16	26
Neuroborreliosis	5	60	55
Ornithosis	0	12	6
Pertussis (children < 2 years)	2	105	94
Purulent meningitis			
Haemophilus influenzae	0	5	5
Listeria monocytogenes	0	5	1
Streptococcus pneumoniae	0	65	82
Other aethiology	0	9	19
Unknown aethiology	0	16	21
Under registration	6	29	-
Rubella (during pregnancy)	0	0	4
Rubella (congenital)	0	0	0
Shigellosis	3	104	82
of these, infected abroad	0	82	68
Syphilis	9	279	139
Tetanus	0	0	2
Tuberculosis	5	353	368
Typhoid/paratyphoid fever	0	25	32
of these, infected abroad	0	22	26
VTEC/HUS	1	147	144
of these, infected abroad	0	34	52

Table 1, comments

In 2009, none of the following have been reported: Anthrax, botulism, cholera, diphtheria, haemorrhagic fever, leprosy, plague, polio, rabies, typhus exanthematicus

1) Cumulative no. 2009 and corresponding period 2008

Selected laboratory diagnosed infections

Number of specimens, isolates, and/or notifications received at Statens Serum Institut

Table 2	Week 50 2009	Cum. 2009 ²⁾	Cum. 2008 ²⁾
Bordetella pertussis (all ages)	0	188	189
Gonococci	12	432	352
of these, females	2	113	73
of these, males	10	319	279
Listeria monocytogenes	2	91	48
Mycoplasma pneumoniae			
Resp. specimens ³⁾	6	96	97
Serum specimens ⁴⁾	6	138	101
Streptococci ⁵⁾			
Group A streptococci	4	143	129
Group B streptococci	1	124	123
Group C streptococci	1	34	23
Group G streptococci	2	169	123
S. pneumoniae	14	1009	886

Table 3	Week 48 2009	Cum. 2009 ²⁾	Cum. 2008 ²⁾
MRSA	14	704	739
Pathogenic int. bacteria ⁶⁾			
Campylobacter	28	3196	3293
S. Enteritidis	2	587	614
S. Typhimurium	5	755	1927
Other zoon. salmonella	13	694	965
Yersinia enterocolitica	1	213	310
Verocytotoxin-prod. E.coli	4	162	150
Enteropathogenic E. coli	7	205	201
Enterotoxigenic E. coli	0	308	394

Tables 2 & 3, comments

2) Cumulative no. 2009 and corresponding period 2008

3) Respiratory specimens with positive PCR

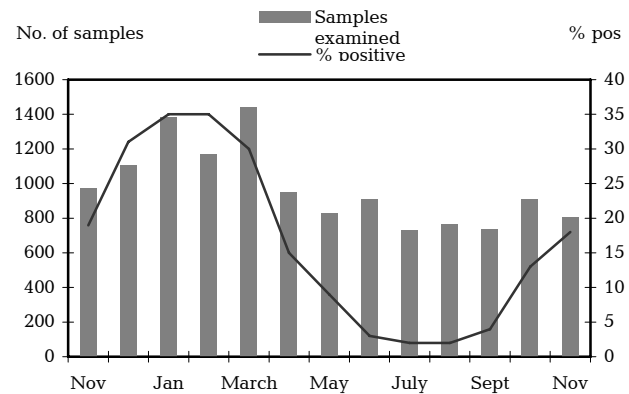
4) Serum specimens with pos. complement fixation test

5) Isolated in blood or spinal fluid

6) See also www.germ.dk

Norovirus 2008-2009

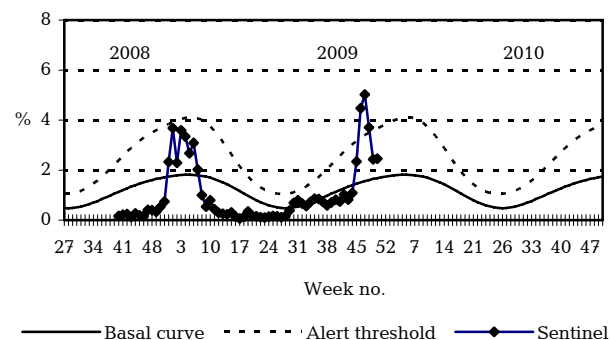
Examined samples and percent positive, Nov 08 - Nov 09



Samples from clinical microbiology departments at Odense University Hospital, Copenhagen University Hospital, and the Department of Virology, SSI

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

16 December 2009