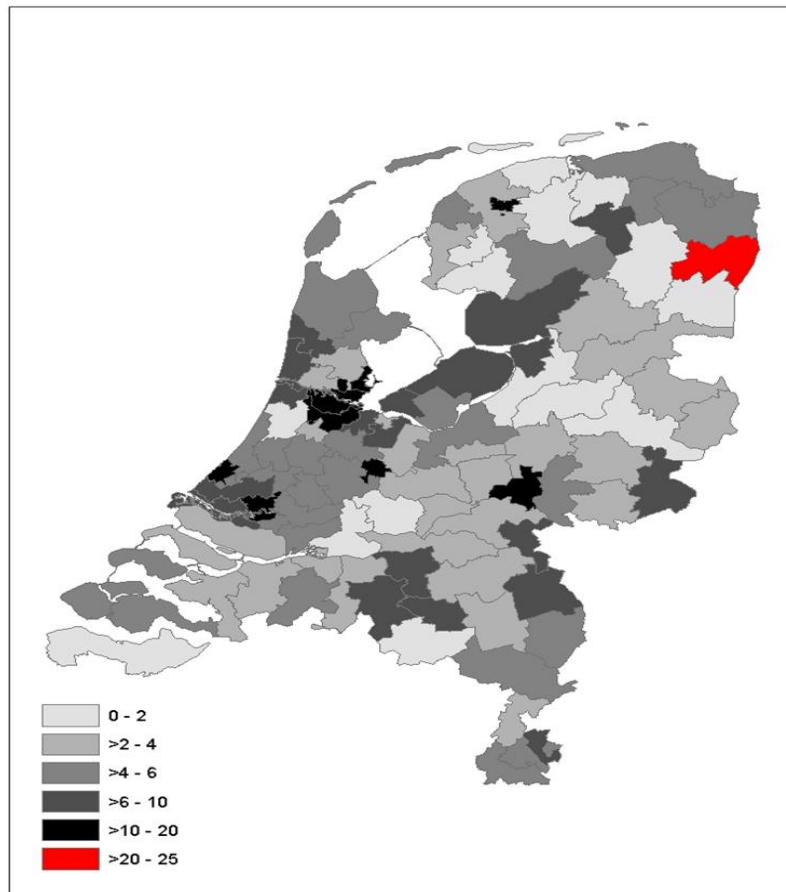


Tuberculosis in the Netherlands 2011

Summary surveillance report 2011

Tables and Figures



Incidence of tuberculosis per 100,000 inhabitants, 2011

Summary Tuberculosis in the Netherlands 2011

In 2011 1,007 cases of tuberculosis (TB) were reported in the Netherlands; 5% less than in 2010, and 13% less than in 2009. In 2011 the incidence rate was 6.0 per 100,000 population. In 2010 the incidence rate was 6.4 per 100,000 population.

Nineteen percent of all TB cases in 2011 was sputum-smear positive. In 2011 the incidence rate of smear-positive pulmonary TB decreased with 9% compared to 2010.

The majority of TB patients was foreign born (70%). The incidence among foreign-born persons decreased with 11% from 45.4 in 2010 to 40.3 per 100,000 persons. Remarkably, the incidence rate of second generation immigrants increased from 3.6 to 4.6 per 100,000 population. The incidence among native Dutch population decreased from 1.6 to 1.5 per 100,000 inhabitants.

Like in previous years the largest population group with TB in 2011 were Somalians, although the absolute number of TB patients coming from Somalia was lower (155) than in 2010 (200) and 2009 (236). The percentage of TB patients born in Somalia decreased from 19% in 2010 to 15% in 2011.

The number of TB patients with extrapulmonary disease declined less than the number of TB patients with pulmonary disease. The percentage extrapulmonary cases is highest among foreign born patients, especially TB patients born in Somalia: 70% of Somalian TB patients in 2011 had isolated extrapulmonary TB. Tuberculosis of the extra thoracic lymphnodes is the most common site of disease in extrapulmonary cases.

In 72% of the registered in 2011 the diagnosis was confirmed with a positive culture. In patients with pulmonary TB culture was more often confirmed (81%) than in patients with extrapulmonary TB (61%). In total 15 patients with multidrug-resistant (MDR) tuberculosis were registered. None of these cases had extensively drug-resistant (XDR) tuberculosis.

In 2011 no large outbreaks of tuberculosis in the Netherlands were registered. Three existing clusters showed growth of more than five patients, but in all cases the number of new patients in these clusters was lower than in 2010.

The percentage TB patients tested for hiv increased to 46% in 2011 (from 28% in 2008). Hiv-status was known in 63% of TB patients coming from hiv endemic areas, like sub-Saharan Africa (2010: 52%).

In 2011, 179 (18%) TB patients were reported with serious co-morbidity or immune disorders. This percentage was similar in 2010 (17%). The number of hiv-infected TB patients was lower than in 2010, but the number of TB patients associated with TNF-alfa inhibitors treatment and/or other immunosuppressive medication increased (13 in 2010, 20 in 2011). Respectively 16 (1.6%) and 13 (1%) TB patients in 2010 and 2011 died of tuberculosis. Respectively 39 (4%) and 16 (1.6%) TB patients in 2010 and 2011 died of other causes.

Treatment outcome

In 2010 84% of all TB patients completed treatment successfully. This is a lower percentage than in 2009 (85%) and in previous years. Of new cases with pulmonary TB in 2010 83% completed treatment successfully. Of patients with pulmonary TB who were previously treated 73% completed treatment successfully. On average patients with extrapulmonary TB more often complete treatment successfully (88% in 2010).

Active case-finding

The percentage TB patients detected by active case finding among risk groups for tuberculosis is steadily declining in the last ten years: from 23% in 2002 to 16% in 2011. Especially the percentage of TB patients found through screening of risk groups is decreasing for some time now; in 2002 15% of all TB patients was detected through screening, in 2011 only 9%. The number and percentage of cases found through contact investigation stayed more or less the same : 8% in 2002 and 7% in 2011.

Latent tuberculosis infection (LTBI)

In 2011 1,291 new cases of LTBI were reported: 818 of these cases (63%) were detected through contact investigation and 813 of 1,291 (63%) received preventive treatment. The total number of reported new LTBI cases has decreased with 40% since 2005. The decrease in the number of persons diagnosed with LTBI occurred mainly among persons born in the Netherlands (70%). In contrast, the total number of foreign born persons with LTBI found through contact investigation and receiving preventive treatment tripled since 2005. These trends can be explained by more common use of IGRAs for the diagnosis of LTBI. In 805 cases (62%) of the reported LTBI cases diagnosis was (also) based on the results of the IGRA-test.

Eighty-eight percent of all persons with LTBI who received preventive treatment completed treatment successfully.

Transfer of TB surveillance

In 2012 KNCV Tuberculosis Foundation transferred TB surveillance for the Netherlands to the National Institute for Public Health and the Environment (RIVM), Centre for Infectious Disease Control.

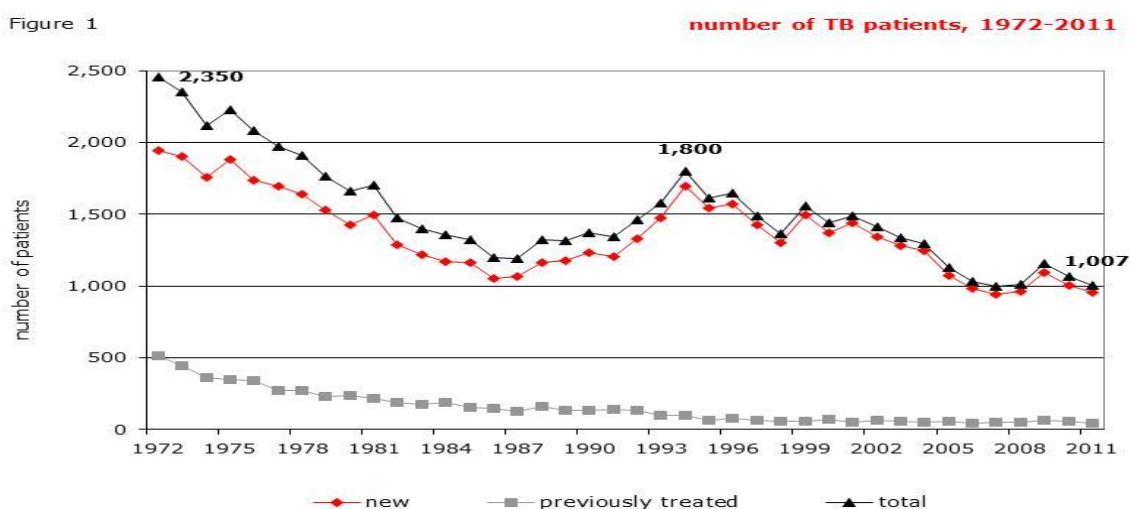
May 2013, The Hague/ Bilthoven



National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

Tables and Figures

Figure 1



summary tuberculosis surveillance data the Netherlands 2010 and 2011 versus WHO European region 2010*

Table 1	Netherlands		European Union and Western Europe 2010	
	2010	2011	Europe 2010	N #
Total population according to CBS (x 1,000,000)/ absolute	16,62	16,69	506.3	29
Registered TB-patients	1,065	1,007	73,996	29
Incidence per 100.000	6,4	6,0	14.6	29
Average annual change in incidence, 2006-2010/2007-2011	-1.0%	-0.6%	-4.4%	29
Median age category (years)	35-44	35-44		
Age < 15 years	3,2%	5,6%	4.1%	29
Age > 64 years	15,3%	13,7%		29
Sex ratio (man versus woman)	1,3	1,3	1.8	29
Foreign born	74%	71%	25%	29
% living in 4 large cities	30%	33%		
Previous episode of tuberculosis (treatment)	5.5%	4.7%	12%	29
Pulmonary TB cases (PTB & ETB) ‡	56%	57%	78%	29
Sputumpositive lungtuberculosis per 100.000	1.2	1.1	4,1 ^	29
% Culture positive	66%	72%	61%	29
hiv co-infection	4,5%	3,1%	1.4%	15
Co-morbidity (other than hiv)	12%	15%		
Active case finding	16%	16%		
TB mortality per 100.000	0,38	0,32	1.1	29
Resistance against TB drugs	2010	2011	2010	
Isoniazid resistance, % new cases	5,3%	4,7%	7,8% ^^	26
Multiresistance, % new cases	1,0%	1,3%	2.4%	29
Isoniazid resistance, % previously treated cases	8,5%	4,3%	26,6% ^^	26
Multiresistance, % previously treated cases	1,7%	6,4%	17.6%	29
Treatment result, new lungtuberculosis patients	2009	2010	2009	
Succesfull (cured/completed treatment)	83%	82%	79%	24
Died (due to tuberculos & due to other causes)	9%	7%	7%	24
Other (still under treatment, interrupted, treatment continued elsewhere, info missing)	8%	11%	15%	23
% DOTS	37%	36%		
# Number of countries with data available				
‡ Countries that use the classification for pulmonary tuberculosis				
^ EU: incidence of sputum positive new pulmonary cases				
^^ EU: resistance among new pulmonary cases				
^^^ EU: resistance among previously treated pulmonary cases				
* Source: ECDC 'Tuberculosis surveillance in Europe 2012' European Centre for Disease Prevention and Control/WHO Regional Office for Europe, Stockholm, 2012				

Figure 2

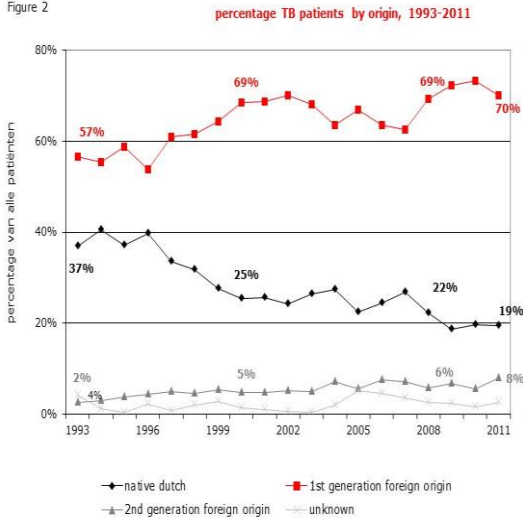


Figure 3

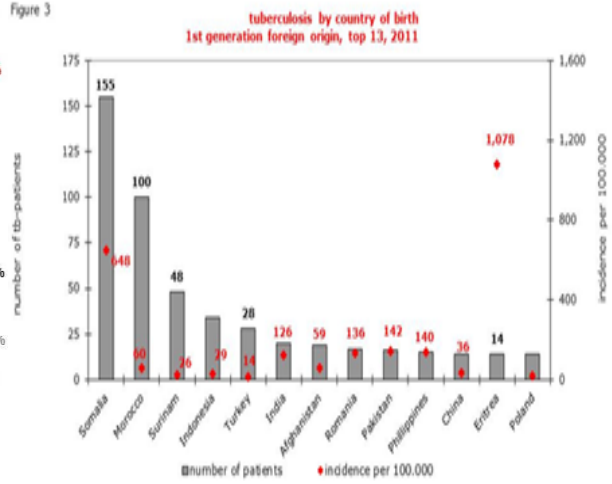


Figure 4

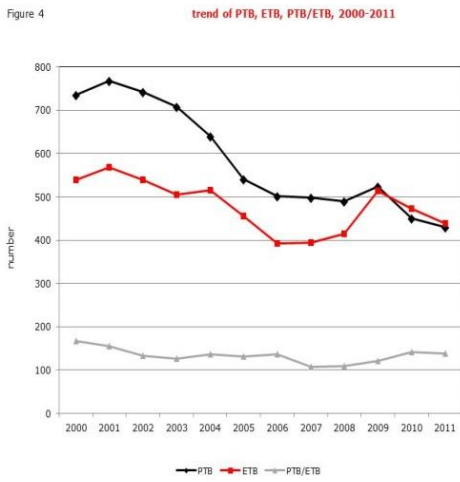


Figure 5

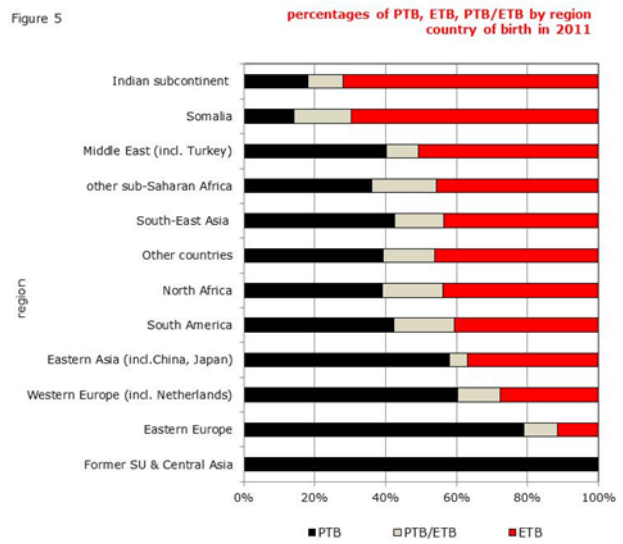


Figure 6

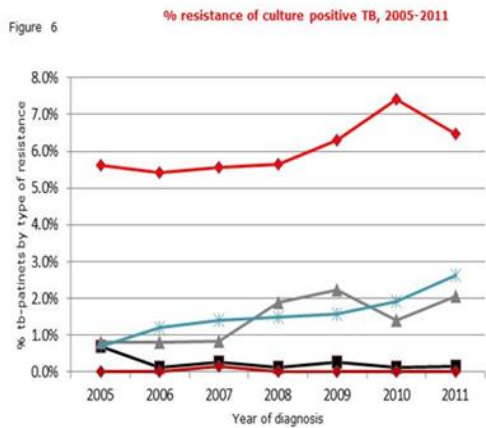
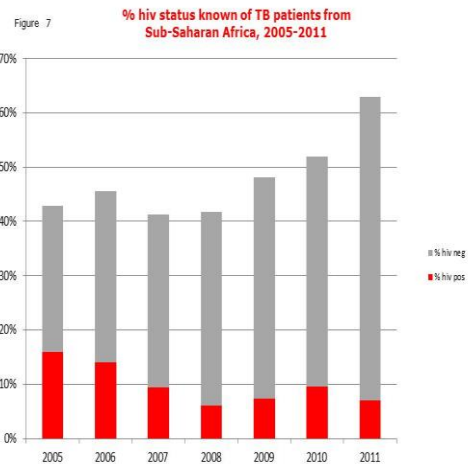


Figure 7



	causes of co-morbidity in TB patients, 2007-2011									
	2007		2008		2009		2010		2011	
	number	%	number	%	number	%	number	%	number	%
hiv-infection	33	3%	39	4%	42	4%	48	5%	31	3%
diabetes	40	4%	37	4%	38	3%	42	4%	50	5%
malignancy	27	3%	26	3%	40	3%	42	4%	27	3%
renal insufficiency /dialysis	15	2%	12	1%	9	1%	20	2%	15	1%
organ transplantation	4	0%	4	0%	2	0%	1	0%	2	0%
TNF-alpha inhibitors	16	2%	9	1%	7	1%	13	1%	16	2%
other immune suppressive medication	6	1%	6	1%	8	1%	0	0%	4	0%
addicted to alcohol	6	1%	21	2%	20	2%	17	2%	15	1%
other causes for immune disorders	3	0%	1	0%	2	0%	2	0%	4	0%
other causes for co-morbidity	5	1%	6	1%	10	1%	8	1%	12	1%
Total notified TB patients	999		1013		1158		1065		1007	

Figure 8 treatment outcome, 1993-2010

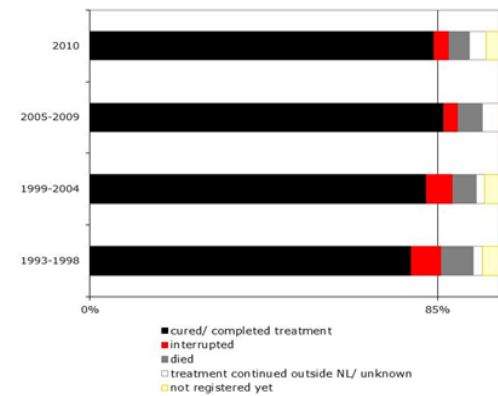
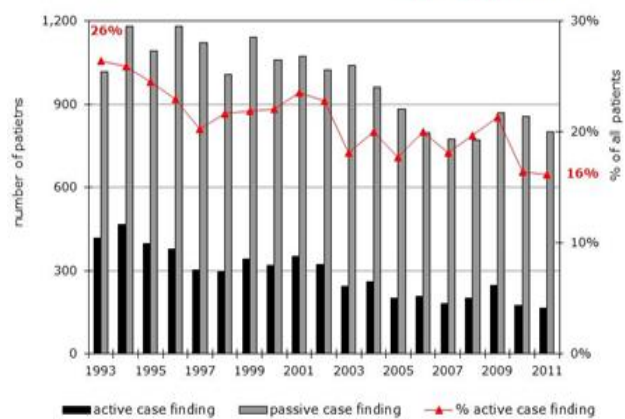


Figure 9 diagnosis through active or passive case finding, 1993-2011



Latent tuberculosis infection (LTBI)

Figure 10 number LTBI with preventive treatment by origin among persons detected through contact investigation, 2005-2010

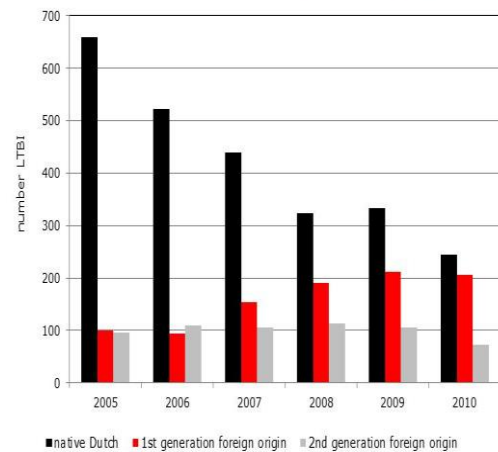


Figure 11 treatment outcome LTBI, 1993-2010

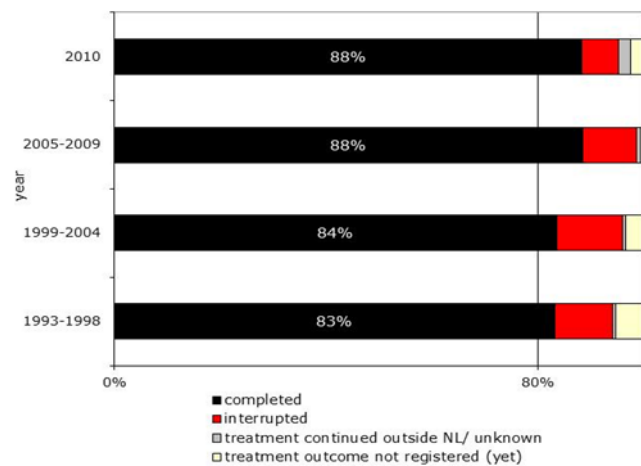


Figure 12 diagnosis of LTBI with IGRA by reason for examination, 2005-2011

