



Tuberculosis Keypoints 2016

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- More patients with tuberculosis (TB) were notified in the Netherlands in 2016 than the year before: 889 in 2016 versus 861 in 2015, an increase of 3%. The steady decline in previous years, from 1995 until 2014, was reversed in 2015 when the number of TB patients increased with 6%.
- The higher number of TB patients is mainly due to an increase of asylum seekers in the Netherlands from high-incidence countries.
- Most of the TB patients were foreign born (75%), mainly from Eritrea and Ethiopia (n=149), followed by Somalia (n=94) and Morocco (n=68).
- The incidence rate was 5.2 per 100,000 population in 2016.
- 484 TB patients (54%) had pulmonary TB and 405 (46%) had extrapulmonary TB.
- Nineteen percent of all TB patients were detected by active case-finding (20% in 2015 and 17% in 2014).
- In 2016, 15 patients with rifampicin resistant TB were registered. This number includes 13 patients with Multidrug-resistant (MDR) TB. Eleven (of 15) were foreign born.
- 62% of TB patients were tested in 2016 (preliminary data). The HIV test was positive for 21 TB patients: 2.4% of all TB patients and 3.8% of TB patients tested for HIV. In 2015 the proportion of TB patients tested increased from 61% to 74% due to a study into non-reporting and non-testing of TB patients for HIV.
- In 2015, 88% of all TB patients with rifampicin susceptible TB completed treatment successfully, which is the same as the treatment outcome for the years 2009-2014.
- Seven of 8 patients (88%) diagnosed in 2014 with rifampicin resistant TB completed treatment successfully.

Figure 1 Tuberculosis incidence (per 100,000 population) in 2016 by two digital postcode area

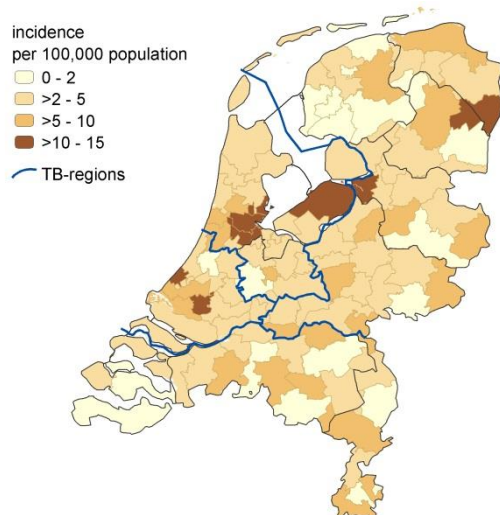


Table 1 Summary tuberculosis data the Netherlands, 2014, 2015 and 2016

	2014	2015	2016
	N (%)	N(%)	N(%)
Number TB patients notified	815	861	889
Incidence per 100,000 population	4.9	5.1	5.2
Mean age (years)	41	40	40
Age <15 years	48 (5.9)	42 (4.8)	49 (5.5)
Age ≥65 years	125 (15)	127 (15)	133 (15)
Male to female ratio	1.6	1.5	1.4
Foreign born	601 (74)	625 (72)	669 (75)
Residence in 1 of 4 largest cities	235 (29)	233 (27)	256 (29)
Previous episode of TB (treatment)	21 (2.6)	40 (4.6)	30 (3.4)
HIV status known	495 (61)	636 (74)	554 (62)
HIV positive	22 (2.7)	36 (4.2)	21 (2.4)
TNF-alpha inhibitors	11 (1.3)	16 (1.9)	10 (1.1)
Active case finding	137 (17)	170 (20)	172 (19)
Pulmonary tuberculosis (PTB & EPTB)	452 (56)	495 (58)	484 (54)
Sputum-positive PTB	201 (25)	216 (25)	172 (19)
Culture-confirmed TB	527 (65)	576 (67)	583 (66)
Rifampicin resistant TB (incl. MDR TB) ^a	8 (1.5)	11 (1.7)	15 (1.7)
Isoniazid resistance ^a	36 (6.8)	25 (4.3)	33 (5.7)
TB patients in risk groups	350 (43)	407 (47)	422 (48)
-TB contacts	65 (8)	87 (10)	110 (12)
-Immigrant <2.5 yr. in the Netherlands	89 (11)	93 (11)	75 (8)
-Asylum seeker <2.5 yr. in the Netherlands	97 (12)	149 (17)	162 (18)
Latent tuberculosis Infection	1,229	1,433	Not (yet) reported

^a percentage of culture-confirmed TB

PTB= pulmonary TB, EPTB= combination of pulmonary and extrapulmonary TB, MDR = Multidrug-resistant

Figure 2 Number of TB patients and incidence per 100.000 population, 1996-2016

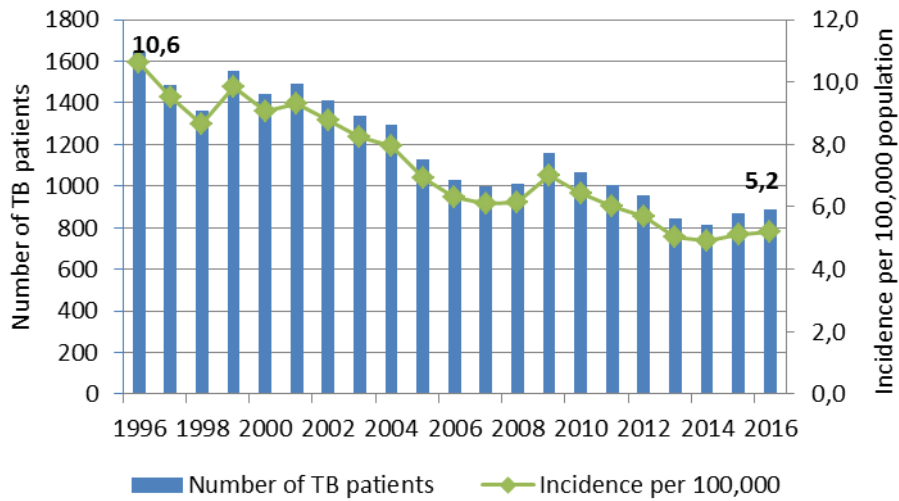


Figure 3 Trend number of TB patients by country of birth, 1996-2016.

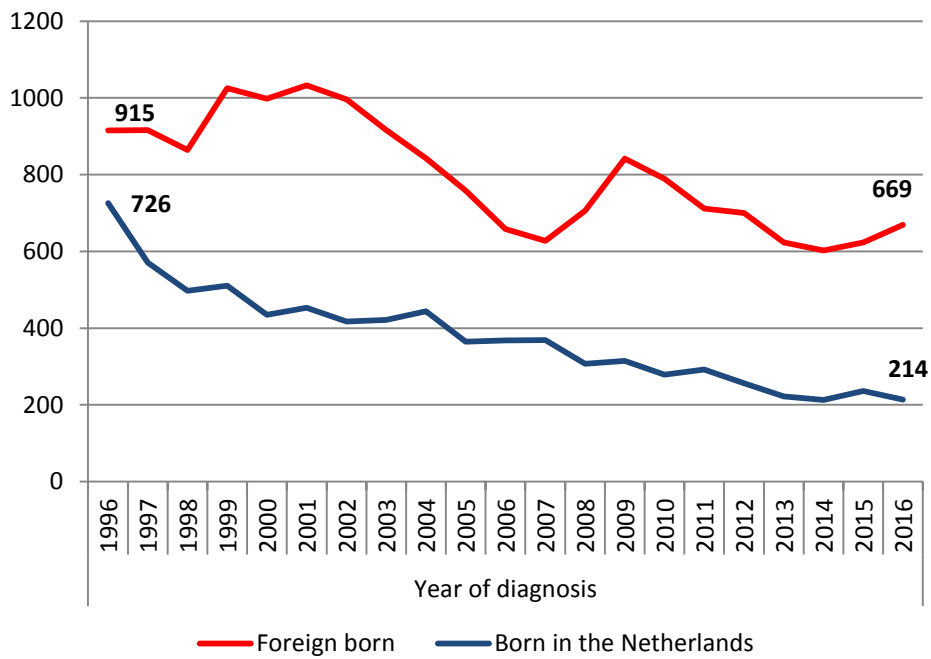


Figure 4 Number of TB patients by age group and by country of birth, 2016.

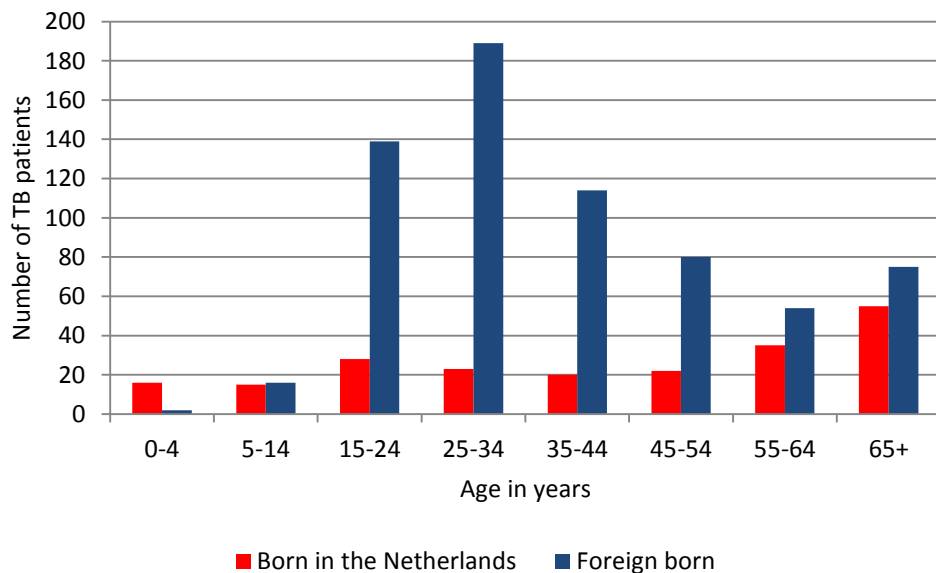


Figure 5 Top ten country of birth of foreign born patients, 2016

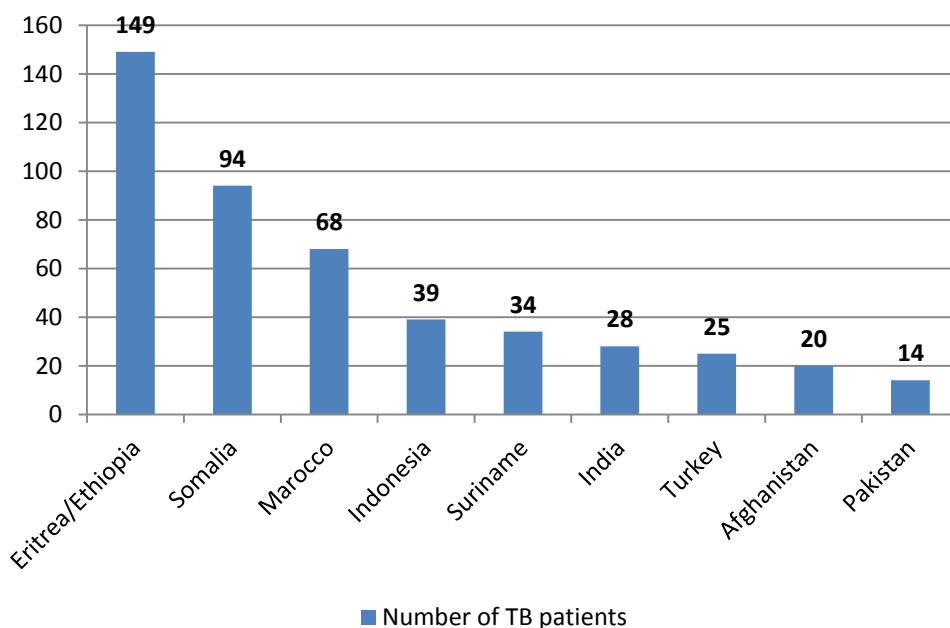


Figure 6 Treatment outcome of rifampicin susceptible TB, 1993-2015

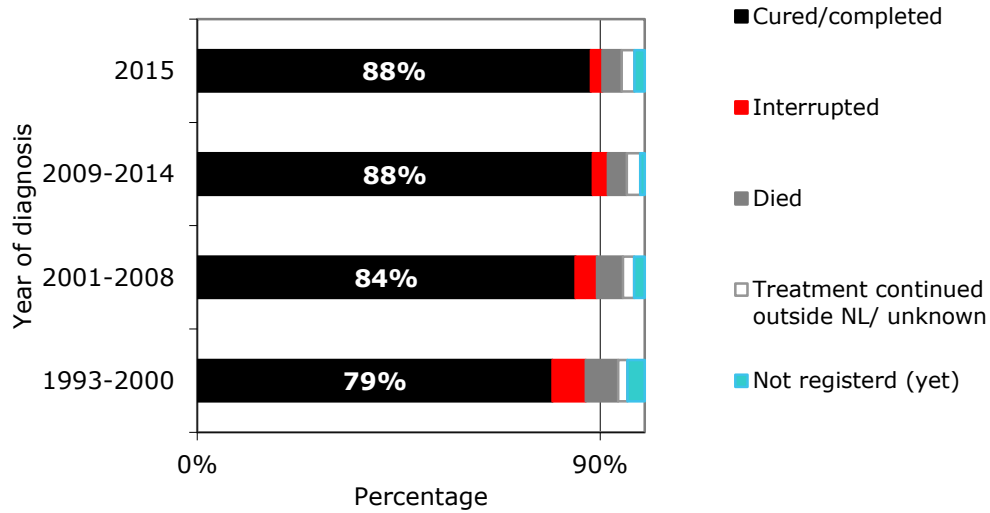


Figure 7 Treatment outcome of rifampicin resistant TB, 1993-2014

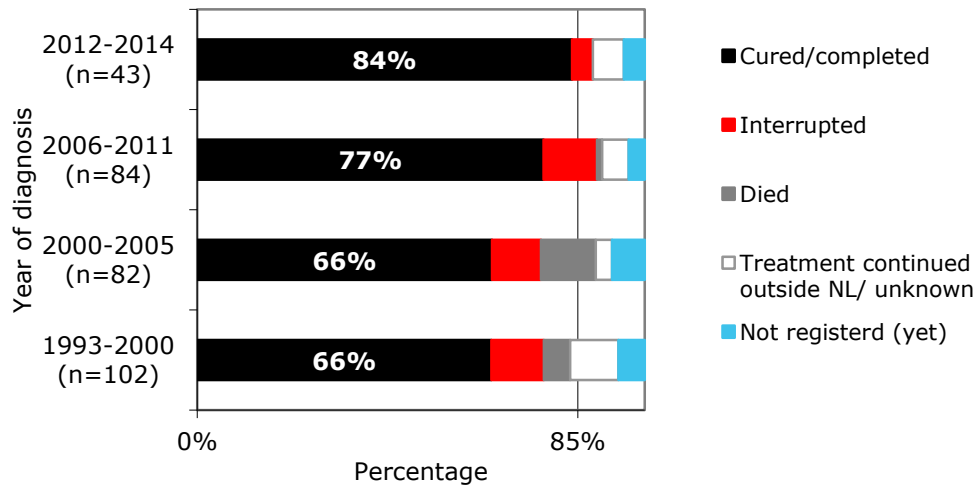
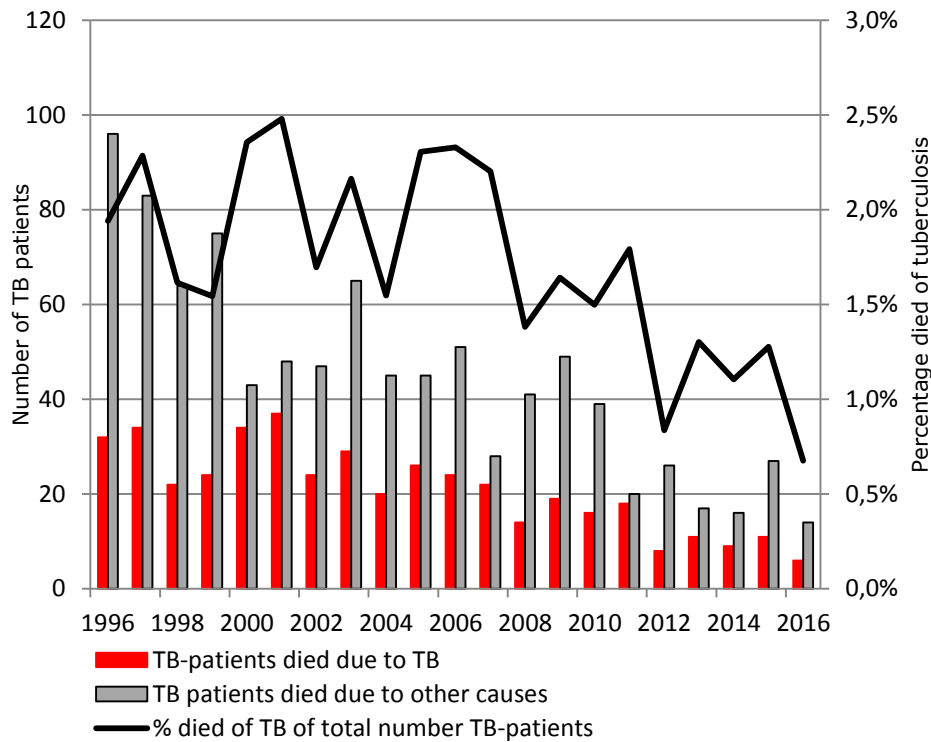


Figure 8 Mortality, 1996-2016



More detailed information about surveillance of tuberculosis in the Netherlands and the latest surveillance report 'Tuberculose in Nederland, 2015' is available through [the tuberculosis website of the RIVM](http://www.rivm.nl/Onderwerpen/T/Tuberculose) ([http://www.rivm.nl/Onderwerpen/T/Tuberculose], only available in Dutch). The next surveillance report 'Tuberculose in Nederland, 2016' will be published in December 2017.

The web-based application TBC-online (<http://www.tbc-online.nl>) provides information about tuberculosis in the Netherlands. TBC-online offers the opportunity to make tables and graphs of selected variables in the NTR.