



Basic Overview of Tuberculosis Epidemiology in the Czech Republic in 2024



Ústav zdravotnických informací a statistiky ČR
Institute of Health Information and Statistics of the Czech Republic

Basic Overview of Tuberculosis Epidemiology in the Czech Republic in 2024

Content

1. Introduction	3
2. Methodology	4
3. Summary of results	5

1. Introduction

The publication “Basic Overview of Tuberculosis Epidemiology in the Czech Republic” has been regularly published by the Institute of Health Information and Statistics of the Czech Republic (IHIS) since 2016 (containing data for 2015) and picks up the threads of the publication “Tuberculosis and Respiratory Diseases”, which included data from 1960 to 2014. It is a selection of the most important review tables describing the occurrence of reported cases of tuberculosis (TB) and other mycobacterial infections in the Czech Republic. The presented data were obtained from the Register of Tuberculosis (RTB), which is part of an information system maintained by public health protection authorities, and which is run as a web application based on a central database. Furthermore, the Information System of Bacillary Tuberculosis (ISBT) has become an inseparable part of RTB. In the Czech Republic, all detected cases of tuberculosis or other mycobacterial infections must be reported into RTB. Apart from RTB data, data from the Czech Statistical Office are used to calculate rates per population.

RTB is administered by the Ministry of Health of the Czech Republic (MZ CR). Data on the national level are processed by IHIS, which is also responsible for providing and publishing statistical outputs and, together with the National Tuberculosis Surveillance Unit, maintains contacts with international organizations.

The binding regulations in this domain involve: Act No. 258/2000 Coll. on Protection of Public Health and Amendment to Some Related Acts; Decree No. 306/2012 Coll. of MZ CR on Conditions of Prevention and Spread of Infectious Diseases and Hygiene Requirements for the Operation of Medical Facilities and Social Care Institutions; Decree No. 389/2023 Coll. of MZ CR on System of Epidemiological Vigilance for Selected Infections, as subsequently amended; and Standard of Follow-Up Care for Patients with Tuberculosis and Other Mycobacterial Infections and for Persons at a Higher Risk of These Diseases (Bulletin No. 7/2016 of MZ CR).

In the context of evaluation of TB epidemiology in the Czech Republic, a new online and publicly available data-mining tool has been developed during the year 2020, providing a better insight into this issue; the tool will be designed in an interactive way, offering many different (and adjustable) points of view (available at: <https://tbc.uzis.cz/>).

2. Methodology

The tabular outputs summarize TB epidemiology in the Czech Republic in 2024, based on data from RTB valid as of 7 July 2025. The reported cases of disease are assessed from many points of view, such as laboratory verification of the disease, age groups and sex, previous treatment, disease location, sensitivity to antitubercular agents, patient's death, or country of birth. Information on the evaluation of antituberculosis therapy at 12 months after its start is linked to cases reported into RTB in 2023. The last two tables, unlike all the preceding ones, provide information on reported cases of mycobacterial infections other than TB.

Data are available both as absolute numbers and as standardized indicators.

3. Summary of results

In 2024, a total of 455 TB cases (i.e. 4.18 cases per 100,000 population), involving all forms and locations, were reported into RTB (Table 1). Compared with the previous year, the number of reported cases has slightly decreased (4 fewer than in 2023). In international comparison, the Czech Republic continues to belong among countries with a low incidence of the disease. Among the reported patients, there were 21 persons who had been previously treated with antituberculoitics (Table 3). Out of the total number of reported TB cases in 2024, definitive diagnosis of TB was confirmed in 376 cases (82.6%), of which 315 cases were verified from sputum or from the laryngeal swab (LS). Sputum smear microscopy was positive in 199 patients (43.7%) (Table 1).

According to RTB data, pulmonary TB was reported in 411 cases (90.3%); these cases also involved patients who had both pulmonary and extrapulmonary TB. By contrast, extrapulmonary TB only was reported in 44 cases (Table 4).

The occurrence of TB was much more common in men than in women: men accounted for more than 74% of cases. TB was most frequently recorded in individuals aged 45–49 years. Relative to the population (based on 5-year age categories up to the 75+ category), the highest number of cases in men was observed in the 45–49 age group, and in women in the 75+ age group. The number of patients under 20 years old in 2024 was 21 (almost half compared to 2023), and the number of patients aged 20–29 decreased to 38 (compared to 49 in 2023) (Table 2).

Just like in previous years, the Capital of Prague was the residence of the most TB patients (104; 7.50 per 100,000 population) reported in 2024. Higher numbers of TB cases than the national mean of 4.18 per 100,000 population were also reported in the Central Bohemian Region (4.66 per 100,000), the Plzeň Region (4.91 per 100,000), the Ústí nad Labem Region (5.19 per 100,000), the Liberec Region (4.67 per 100,000) and the South Moravian Region (4.57 per 100,000). By contrast, the lowest relative number of TB cases was reported in the Moravian-Silesian Region (2.28 per 100,000) (Table 1).

TB cases of 220 persons born outside the Czech Republic were reported into RTB in 2024, accounting for 48.4% of the total number of reported TB cases. Most of these people originated from Ukraine (134 persons), Slovakia (16 persons), Vietnam (13 persons), Romania (9 persons), Bulgaria (8 persons), the Philippines (6 persons) and Poland (5 persons) (Table 6). Compared with the previous year, the number of TB cases among people born in Ukraine decreased (from 144 to 134; almost by 7%).

In 2024, sensitivity to antituberculoitics was tested in 370 patients. Resistance to isoniazid was found in 35 cases (9.5%), to streptomycin in 37 cases (10.0%), to rifampicin in 15 cases (4.1%), to pyrazinamide in 21 cases (5.7%), and to ethambutol in 13 cases (3.5%). Multidrug resistance was identified in 15 cases (4.1%). Further data on resistance to antituberculoitic drugs are provided in Table 5.

Out of the total number of not yet treated TB cases in 2023 that were verified from sputum or from the laryngeal swab (287 cases), evaluation of antituberculosis therapy at 12 months after its start (Treatment outcome monitoring) has shown that 192 persons (66.9%) were successfully treated and 25 persons died, out of which 12 died from TB (4.2%). After one year, treatment continued in 10 persons (3.5%). 6 persons (2.1%) moved elsewhere; treatment was interrupted or data on treatment were missing in 53 persons (18.5%) and 1 of the treatments failed (0.3%) (Table 7).

In 2024, a total of 28 TB deaths were reported into RTB (this number may include additionally reported deaths from previous periods); the highest numbers of deaths were reported in the Capital of Prague and in the Plzeň Region (5 persons each) (Table 8).

Apart from tuberculosis, cases of other mycobacterial infections are reported into RTB, too. In 2024, there were 112 reported cases of other mycobacterial infections (in 2023, there were 117 cases), i.e. 1.03 cases per 100,000 population. Within these cases, there were 90 cases with pulmonary location and 22 cases with extrapulmonary location. *M. avium* (55 cases), *M. intracellulare* (16 cases), *M. xenopi* (16 cases) and *M. kansasii* (11 cases) were the most frequently isolated strains (Table 9).

Mycobacterial infections are most frequently reported in the Moravian-Silesian Region (22 cases), the Capital of Prague (17 cases) and the South Moravian Region (14 cases). Relative to the population, the highest rates are observed in the Moravian-Silesian Region (1.86 cases per 100,000 inhabitants) and the Capital of Prague (1.23 cases per 100,000 inhabitants) (Table 10).

Tab. 1. Reported numbers of TB cases in regions of the Czech Republic

Territory, region ¹⁾	Reported TB cases in total		Culture positive TB cases		Culture positive TB cases, verification from sputum or LS		Sputum smear microscopy positive TB cases	
	absolute numbers	per 100,000 popul.	absolute numbers	per 100,000 popul.	absolute numbers	per 100,000 popul.	absolute numbers	per 100,000 popul.
Czech Republic	455	4.18	376	3.45	315	2.76	199	1.83
Capital of Prague Central	104	7.50	89	6.42	75	5.41	52	3.75
Bohemian	68	4.66	60	4.11	50	3.43	33	2.26
South Bohemian	16	2.45	14	2.14	12	1.84	5	0.77
Plzeň	30	4.91	26	4.25	21	3.43	12	1.96
Karlovy Vary	9	3.07	8	2.73	6	2.05	6	2.05
Ústí nad Labem	42	5.19	37	4.57	35	4.33	22	2.72
Liberec	21	4.67	18	4.01	16	3.56	8	1.78
Hradec Králové	19	3.42	16	2.88	10	1.80	6	1.08
Pardubice	18	3.40	13	2.46	10	1.89	7	1.32
Vysočina	12	2.32	11	2.13	9	1.74	6	1.16
South Moravian	56	4.57	39	3.18	31	2.53	16	1.31
Olomouc	17	2.69	11	1.74	9	1.43	5	0.79
Zlín	16	2.76	12	2.07	10	1.73	5	0.86
Moravian-Silesian	27	2.28	22	1.86	21	1.77	16	1.35

¹⁾ Regions of patients' residence are reported

Tab. 2. Reported numbers of TB cases by age groups and gender

Age group (years)	Reported Tb cases					
	absolute numbers			per 100,000 population		
	total	men	women	total	men	women
0–4 years	5	2	3	0.95	0.74	1.17
5–9 years	5	2	3	0.85	0.66	1.04
10–14 years	7	2	5	1.18	0.66	1.73
15–19 years	4	3	1	0.66	0.96	0.34
20–24 years	18	14	4	3.45	5.32	1.55
25–29 years	20	15	5	3.72	5.47	1.90
30–34 years	36	28	8	5.17	7.83	2.36
35–39 years	42	34	8	5.67	8.99	2.21
40–44 years	42	33	9	5.34	8.24	2.33
45–49 years	68	55	13	7.26	11.57	2.82
50–54 years	56	47	9	6.88	11.41	2.24
55–59 years	37	30	7	5.45	8.83	2.06
60–64 years	21	13	8	3.38	4.24	2.54
65–69 years	30	23	7	4.80	7.82	2.12
70–74 years	28	20	8	4.58	7.36	2.35
75–79 years	19	10	9	3.79	4.83	3.05
80–84 years	7	3	4	2.35	2.70	2.15
85–89 years	7	2	5	5.00	4.42	5.27
90–94 years	3	3	-	5.33	19.47	-
95+ years	-	-	-	-	-	-
Total	455	339	116	4.18	6.35	2.09

Tab. 3. Reported numbers of TB cases by previous treatment in regions of the Czech Republic

Territory, region ¹⁾	Reported Tb cases			
	absolute numbers		per 100,000 population	
	previously treated		previously treated	
	yes	no	yes	no
Czech Republic	21	434	0.19	3.99
Capital of Prague	6	98	0.43	7.06
Central Bohemian	3	65	0.21	4.45
South Bohemian	-	16	-	2.45
Plzeň	-	30	-	4.91
Karlovy Vary	1	8	0.34	2.73
Ústí nad Labem	3	39	0.37	4.82
Liberec	-	21	-	4.67
Hradec Králové	-	19	-	3.42
Pardubice	1	17	0.19	3.21
Vysočina	2	10	0.39	1.93
South Moravian	3	53	0.24	4.32
Olomouc	-	17	-	2.69
Zlín	-	16	-	2.76
Moravian-Silesian	2	25	0.17	2.11

¹⁾ Regions of patients' residence are reported

Tab. 4. Reported numbers of TB cases by disease location in regions of the Czech Republic

Territory, region ¹⁾	Pulmonary TB (pulmonary TB only and both pulmonary and extrapulmonary TB)		Extrapulmonary TB (only)	
	absolute numbers	per 100,000 population	absolute numbers	per 100,000 population
Czech Republic	411	3.78	44	0.40
Capital of Prague	95	6.85	9	0.65
Central Bohemian	61	4.18	7	0.48
South Bohemian	13	1.99	3	0.46
Plzeň	27	4.41	3	0.49
Karlovy Vary	8	2.73	1	0.34
Ústí nad Labem	41	5.07	1	0.12
Liberec	19	4.23	2	0.45
Hradec Králové	19	3.42	-	-
Pardubice	17	3.21	1	0.19
Vysočina	12	2.32	-	-
South Moravian	45	3.67	11	0.90
Olomouc	15	2.38	2	0.32
Zlín	14	2.42	2	0.35
Moravian-Silesian	25	2.11	2	0.17

¹⁾ Regions of patients' residence are reported

Tab. 5. Resistance to antitubercular drugs

Resistance	Reported TB cases					
	previously treated yes		previously treated no			total
	abs. numbers	%	abs. numbers	%	abs. numbers	%
Patients with TB drug susceptibility testing results:	11	100	359	100	370	100
Any resistance to:						
isoniazid (H)	2	18.18	33	9.19	35	9.46
rifampicin (R)	1	9.09	14	3.90	15	4.05
etambutol (E)	-	-	13	3.62	13	3.51
streptomycin (S)	2	18.18	35	9.75	37	10.00
pyrazinamid (Z)	1	9.09	20	5.57	21	5.68
Resistance only to:						
isoniazid (H)	-	-	10	2.79	10	2.70
rifampicin (R)	-	-	-	-	-	-
etambutol (E)	-	-	-	-	-	-
streptomycin (S)	-	-	13	3.62	13	3.51
pyrazinamid (Z)	-	-	8	2.23	8	2.16
Mono-resistance in total	-	-	31	8.64	31	8.38
H + R	-	-	-	-	-	-
H + R + E	-	-	-	-	-	-
H + R + S	-	-	1	0.28	1	0.27
H + R + Z	-	-	1	0.28	1	0.27
H + R + E + S	-	-	5	1.39	5	1.35
H + R + E + Z	-	-	1	0.28	1	0.27
H + R + S + Z	1	9.09	-	-	1	0.27
H + R + E + S + Z	-	-	6	1.67	6	1.62
Multidrug resistance (MDR) in total	1	9.09	14	3.90	15	4.05
H + E	-	-	-	-	-	-
H + S	1	9.09	7	1.95	8	2.16
H + Z	-	-	1	0.28	1	0.27
H + E + S	-	-	-	-	-	-
H + E + Z	-	-	-	-	-	-
H + S + Z	-	-	-	-	-	-
H + E + S + Z	-	-	1	0.28	1	0.27
R + E	-	-	-	-	-	-
R + S	-	-	-	-	-	-
R + Z	-	-	-	-	-	-
R + E + S	-	-	-	-	-	-
R + E + Z	-	-	-	-	-	-
R + S + Z	-	-	-	-	-	-
R + E + S + Z	-	-	-	-	-	-
E + S	-	-	-	-	-	-
E + Z	-	-	-	-	-	-
E + S + Z	-	-	-	-	-	-
S + Z	-	-	2	0.56	2	0.54
Poly-resistance in total (other than MDR)	1	9.09	11	3.06	12	3.24

Tab. 6. Reported numbers of TB cases in foreign nationals by country of birth

Year	Total	Reported TB cases out of which								% of the total number of reported TB cases
		Ukraine	Slovakia	Vietnam	Romania	Bulgaria	Philippines	Poland	Others	
2024	220	134	16	13	9	8	6	5	29	48.4

Tab. 7. Evaluation of antituberculosis therapy at 12 months after its start in TB cases reported into RTB in 2023

Treatment outcome	Reported TB cases in total		Previously untreated TB cases, verification from sputum or LS	
	abs. numbers	%	abs. numbers	%
Total numbers of reported TB cases in 2023	459	-	287	-
TB was excluded	4	-	-	-
Verified TB cases reported in 2023	455	100	287	100
Cured / treatment completed	318	69.9	192	66.9
Death				
from TB	23	5.1	12	4.2
from another cause	22	4.8	13	4.5
Treatment interrupted / missing data / missing follow-up report	66	14.5	53	18.5
Still on treatment	18	4.0	10	3.5
Patient transferred	6	1.3	6	2.1
Treatment failed	2	0.4	1	0.3

Tab. 8. Reported numbers of TB deaths in regions of the Czech Republic ²⁾

Territory, region ¹⁾	Number of deaths	
	absolute numbers	per 100,000 population
Czech Republic	28	0.3
Capital of Prague	5	0.4
Central Bohemian	1	0.1
South Bohemian	-	-
Plzeň	5	0.8
Karlovy Vary	1	0.3
Ústí nad Labem	4	0.5
Liberec	1	0.2
Hradec Králové	2	0.4
Pardubice	2	0.4
Vysočina	1	0.2
South Moravian	2	0.2
Olomouc	-	-
Zlín	3	0.5
Moravian-Silesian	1	0.1

¹⁾ Regions of patients' residence are reported

²⁾ Including additionally reported deaths from previous periods

Tab. 9. Reported numbers of cases of mycobacterial infections other than TB

Disease group	Patients with mycobacterial infections Diagnosis A31	
	absolute numbers	per 100,000 population
Pulmonary mycobacterial infection	90	0.83
Extrapulmonary mycobacterial infection	22	0.20
Reported infections in total	112	1.03
out of which, the following strains were isolated:		
M.AVIUM	55	0.51
M.INTRACELLULARE	16	0.15
M.XENOPI	16	0.15
M.KANSASII	11	0.10
M.GORDONAE	2	0.02
M.FORTUITUM	1	0.01
M. others/undetermined	11	0.10

Tab. 10. Reported numbers of cases of mycobacterial infections other than TB in regions of the Czech Republic

Territory, region ¹⁾	Reported cases of pulmonary mycobacterial infections		Reported cases of extrapulmonary mycobacterial infections	
	absolute numbers	per 100,000 population	absolute numbers	per 100,000 population
Czech Republic	90	0.83	22	0.20
Capital of Prague	16	1.15	1	0.07
Central Bohemian	9	0.62	4	0.27
South Bohemian	3	0.46	2	0.31
Plzeň	4	0.65	2	0.33
Karlovy Vary	2	0.68	0	-
Ústí nad Labem	7	0.87	1	0.12
Liberec	2	0.45	0	-
Hradec Králové	3	0.54	3	0.54
Pardubice	4	0.76	1	0.19
Vysočina	1	0.19	0	-
South Moravian	11	0.90	3	0.24
Olomouc	7	1.11	2	0.32
Zlín	1	0.17	1	0.17
Moravian-Silesian	20	1.69	2	0.17

¹⁾ Regions of patients' residence are reported