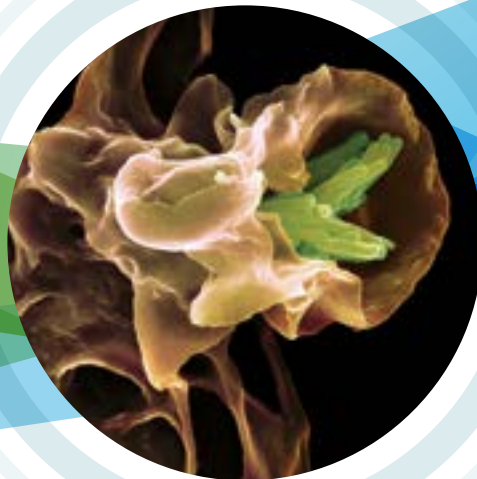




World Health  
Organization

REGIONAL OFFICE FOR Europe



# Tuberculosis surveillance and monitoring in Europe

# 2019

2017 data



# **Tuberculosis surveillance and monitoring in Europe**

# **2019**

**2017 data**

## Abstract

With just over 280 000 tuberculosis (TB) cases reported in 2017, TB remains a major public health problem in the WHO European Region, including the countries of the European Union/European Economic Area (EU/EEA). This report provides an overview of the latest TB epidemiological situation and is published jointly by the WHO Regional Office for Europe and the European Centre for Disease Prevention and Control (ECDC). It finds that epidemic patterns and trends vary widely, with the EU/EEA approaching the low incidence level of 10 per 100 000 population while the Region has nine out of 30 countries

with the highest multidrug-resistant TB burden in the world. Overall, TB mortality and incidence rates have fallen. Despite the notable progress achieved in the fight against TB, countries still face a variety of challenges in reaching the goal to end the TB epidemic in the Region.

## Keywords

TUBERCULOSIS – EPIDEMIOLOGY

TB – EPIDEMIOLOGY

TB SURVEILLANCE

---

## © World Health Organization 2019

All rights reserved. Upon request to the World Health Organization Regional Office for Europe, the right to translate or reproduce this publication, in part or in full, may be granted.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate borderlines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. The views expressed by authors, editors, or expert groups do not necessarily represent the decisions or the stated policy of the World Health Organization.

The WHO Regional Office for Europe is responsible for the accuracy of the translation of the Russian summary.

## © European Centre for Disease Prevention and Control, 2019

Reproduction is authorised, provided the source is acknowledged.

This publication follows WHO terminological practice. The names and designations of countries used in this publication should not be understood as an endorsement by ECDC of the terminology used in this publication. The designations used, and the presentation of the maps therein, do not represent

ECDC's official position on the legal status of any country, territory, city or area or of its authorities, or the delimitation of its frontiers and boundaries.

## Cover picture: © Science Photo Library

**Suggested citation for full report.** WHO Regional Office for Europe/European Centre for Disease Prevention and Control. Tuberculosis surveillance and monitoring in Europe 2019 – 2017 data. Copenhagen: WHO Regional Office for Europe; 2019.

**Suggested citation for tables and figures.** WHO Regional Office for Europe/European Centre for Disease Prevention and Control. Tuberculosis surveillance and monitoring in Europe 2019 – 2017 data.

## ECDC Paper

ISBN 978-92-9498-298-8; ISSN 1977-3986;  
doi: 10.2900/512553; TQ-AO-19-001-EN-C

## ECDC PDF

ISBN 978-92-9498-297-1; ISSN 2443-5538;  
doi: 10.2900/096924; TQ-AO-19-001-EN-N

## WHO ISBN

ISBN 978-92-8905-402-7

Address requests about publications of the WHO Regional Office for Europe to:

Publications

WHO Regional Office for Europe

UN City, Marmorvej 51

DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office website (<http://www.euro.who.int/pubrequest>).

# Contents

<b>Acknowledgements</b> .....	v
<b>Abbreviations</b> .....	vi
<b>Executive summary</b> .....	1
The WHO European Region.....	3
European Union and European Economic Area countries.....	3
<b>Резюме</b> .....	5
Европейский регион ВОЗ.....	5
Страны Европейского Союза и Европейской экономической зоны.....	6
<b>1. Main facts about tuberculosis</b> .....	7
References.....	9
<b>2. Technical note</b> .....	11
Data reporting and analysis.....	13
Definitions.....	15
Tables, figures, maps and country profiles.....	17
References.....	17
<b>3. Commentary</b> .....	19
The WHO European Region.....	21
European Union and European Economic Area countries.....	28
References.....	32
<b>4. Commentary – monitoring</b> .....	33
References.....	34
<b>5. Annexes</b> .....	34
Annex 1. Tuberculosis surveillance system overview, EU/EEA, 2017.....	36
Annex 2. List of variables for 2017 tuberculosis data collection.....	37
Annex 3. Completeness of reported data, EU/EEA, reporting year 2017.....	38
Annex 4. Reporting completeness into Global TB database, 2017.....	39
Annex 5. Laboratory network capacity, European Region, 2017.....	40
<b>6. Tables</b> .....	41
<b>7. Trend tables</b> .....	77
<b>8. Country profiles</b> .....	99

<b>6. Tables</b>	41
<b>Summary table.</b> TB surveillance data by region, European Region, 2017	43
<b>Table 1.</b> Estimates of the TB disease burden 2017, European Region	44
<b>Table 2.</b> Estimates for TB/HIV coinfection and MDR-TB, European Region, 2017	46
<b>Table 3.</b> TB cases, notification rates per 100 000 population and mean annual change in rates, European Region, 2013–2017	48
<b>Table 4.</b> New TB cases and relapses, notification rates per 100 000 population and mean annual change in rates, European Region, 2013–2017	49
<b>Table 5.</b> TB cases by history of previous TB treatment, European Region, 2017	50
<b>Table 6.</b> TB cases by site of disease, EU/EEA, 2017	51
<b>Table 7.</b> New and relapse pulmonary TB cases by diagnostic method, EU/EEA, 2017	52
<b>Table 7a.</b> New and relapse TB cases by diagnostic method, EU/EEA, 2017	53
<b>Table 7b.</b> TB cases by history of previous TB treatment, site of disease and diagnostic method according to the WHO definitions, European Region, 2017	54
<b>Table 8.</b> TB cases according to EU case definition, EU/EEA, 2017	55
<b>Table 9.</b> New TB cases and relapses, by age group and male-to-female ratio, European Region, 2017	57
<b>Table 10.</b> TB cases by origin, European Region, 2017	58
<b>Table 11.</b> Drug resistance surveillance of bacteriologically confirmed pulmonary TB cases, European Region, 2017	59
<b>Table 12.</b> Drug resistance surveillance of bacteriologically confirmed pulmonary TB cases by previous TB treatment history, European Region, 2017	60
<b>Table 13.</b> Drug resistance in all laboratory-confirmed TB cases, EU/EEA, 2017	62
<b>Table 14.</b> XDR-TB cases among all laboratory-confirmed MDR-TB cases, European Region, 2017	63
<b>Table 15.</b> RR/MDR- and XDR-TB cases enrolled to treatment, European Region, 2017	64
<b>Table 16.</b> New and relapse TB cases with HIV infection, European Region, 2017	65
<b>Table 16a.</b> All TB cases with HIV infection, EU/EEA, 2017	66
<b>Table 17.</b> TB in prisons, European Region, 2017	67
<b>Table 18.</b> Treatment outcome of all TB cases notified in 2016, European Region, 2017	68
<b>Table 19.</b> Treatment outcome of new TB cases and relapses notified in 2016, European Region, 2017	69
<b>Table 20.</b> Treatment outcome of new and relapse TB cases in children (0–14 years) notified in 2016, European Region, 2017	70
<b>Table 21.</b> Treatment outcome of HIV-positive new and relapse TB cases notified in 2016, European Region, 2017	71
<b>Table 22.</b> Treatment outcome after 24 months of RR/MDR-TB cases started on second-line treatment in 2015, European Region, 2017	72
<b>Table 23.</b> Treatment outcome after 24 months of laboratory-confirmed MDR-TB cases notified in 2015, EU/EEA, 2017	73
<b>Table 24.</b> Treatment outcome after 24 months of XDR-TB cases started on second-line treatment in 2015, European Region, 2017	74
<b>Table 25.</b> Treatment outcome after 36 months of XDR-TB notified in 2014, EU/EEA, 2017	75
<b>7. Trend tables</b>	77
<b>Table I.</b> Estimated TB mortality per 100 000 population, European Region, 2008–2017	78
<b>Table II.</b> Estimated TB incidence per 100 000 population, European Region, 2008–2017	80
<b>Table III.</b> TB cases in children under 15 years, European Region, 2013–2017	82
<b>Table IV.</b> TB cases by origin, European Region, 2013–2017	84
<b>Table V.</b> MDR-TB notification among new bacteriologically confirmed pulmonary TB cases with available DST results, European Region, 2013–2017	86
<b>Table VI.</b> MDR-TB notification among previously treated bacteriologically confirmed pulmonary TB cases with available DST results, European Region, 2013–2017	87
<b>Table VII.</b> MDR-TB notification among all bacteriologically confirmed TB cases with available DST results, European Region, 2013–2017	88
<b>Table VIII.</b> XDR-TB notification among pulmonary MDR-TB cases with second-line DST results, European Region, 2013–2017	89
<b>Table IX.</b> TB cases with HIV infection, European Region, 2013–2017	90
<b>Table X.</b> Treatment success after 12 months for new TB cases and relapses, European Region, 2012–2016	92
<b>Table XI.</b> Treatment success after 12 months of all TB cases, European Region, 2012–2016	93
<b>Table XII.</b> Treatment success after 24 months of RR/MDR-TB cases started on treatment, European Region, 2011–2015	94
<b>Table XIII.</b> Treatment success after 24 months of XDR-TB cases started on treatment, European Region, 2011–2015	95
<b>Table XIV.</b> Treatment success after 36 months of XDR-TB cases notified in EU/EEA, 2010–2014	96
<b>Table XV.</b> New and relapse TB cases tested using WRD such as Xpert MTB/RIF, European Region, 2015–2017	97

# Acknowledgements

This report has been published jointly by the WHO Regional Office for Europe and the European Centre for Disease Prevention and Control (ECDC). The Regional Office developed the overview of the European Region as a whole and validated the figures for the non-European Union/European Economic Area (EU/EEA) countries and areas and ECDC developed the overview of the EU/EEA countries and validated the EU/EEA figures.

Data collection, validation, analysis and overall preparation of the report was coordinated by Hanna Merk (ECDC) and Giorgi Kuchukhidze (consultant, WHO Regional Office for Europe).

Contributing authors: Andrei Dadu,<sup>1</sup> Masoud Dara,<sup>1</sup> Soudeh Ehsani,<sup>1</sup> Ogtay Gozalov,<sup>1</sup> Arax Hovanesyan,<sup>1</sup> Csaba Ködmön,<sup>2</sup> Brigita Molnarova,<sup>2</sup> Martin van den Boom<sup>1</sup> and Marieke J. van der Werf.<sup>2</sup>

<sup>1</sup> WHO Regional Office for Europe.

<sup>2</sup> European Centre for Disease Prevention and Control.

The report was sent for consultation and review to the operational contact points for epidemiology or national focal points for tuberculosis (TB) in the EU/EEA Member States and TB surveillance correspondents in the non-EU/EEA Member States and areas.

The entire report is available online at [www.ecdc.europa.eu/en/publications-data/tuberculosis-surveillance-and-monitoring-europe-2019](http://www.ecdc.europa.eu/en/publications-data/tuberculosis-surveillance-and-monitoring-europe-2019) and [www.euro.who.int/tb](http://www.euro.who.int/tb)

ECDC and the WHO Regional Office for Europe would like to thank the nominated operational contact points for TB surveillance from EU/EEA Member States and the TB surveillance focal points from the non-EU/EEA Member States and areas of the WHO European Region for providing data and valuable comments on this report:

Albania: Donika Mema; Andorra: Clara Palma Jordana; Armenia: Hayk Davtyan; Austria: Bernhard Benka; Azerbaijan: Sevinj Taghiyeva; Belarus: Dzmitry Klimuk; Belgium: Maryse Wanlin, Wouter Arrozala de Oñate; Bosnia and Herzegovina: Snježana Brčkalović; Bulgaria: Tonka Varleva; Croatia: Goranka Petrović; Cyprus: Kleomenis Benidis, Maria Koliou; Czech Republic: Jiří Wallenfels, Pavel Slezák; Denmark: Peter Henrik Andersen; Estonia: Piret Viiklepp; Finland: Hanna Soini, Outi Lyytikäinen; France: Jean-Paul Guthmann; Georgia: Mamuka Chincharauli, Nino Lomtadze; Germany: Nita Perumal, Walter Haas; Greece: Ourania Kalkouni; Hungary: Gabor Kovács; Iceland: Guðrún Sigmundsdóttir, Thorsteinn Blondal; Ireland: Sarah Jackson, Joan O'Donnell; Israel: Yana Levin; Italy: Stefania D'Amato; Kazakhstan: Elena Arbuzova; Kyrgyzstan: Jekaterina Maljukova; Latvia: Dace Mihalovska; Liechtenstein: Marina Jamnicki Abegg; Lithuania: Edita Davidavičienė, Kęstutis Miškinis; Luxembourg: Pierre Weicherding; Malta: Analita Pace Asciani, Tanya Melillo; Monaco: Jean Lorenzi; Montenegro: Stevan Lučić; Netherlands: Erika Slump, Gerard de Vries; North Macedonia: Maja Zakoska; Norway: Karin Rønning, Trude Margrete Arnesen; Poland: Stefan Wesolowski, Maria Korzeniewska-Koseła; Portugal: Paulo Nogueira, Raquel Duarte; Republic of Moldova: Andrei Corloteanu; Romania: Domnica Ioana Chiotan, Nicoleta Valentina Cioran; Russian Federation: Sergey Sterlikov; Serbia: Maja Stosic; Slovakia: Ivan Solovič; Slovenia: Petra Svetina; Spain: Maria Araceli Arce Arnáez, Rosa Cano Portero; Sweden: Maria Axelsson, Jerker Jonsson; Switzerland: Ekkehardt Altpeter; Tajikistan: Firuza Sharipova; Turkey: Aysegul Yildirim; Turkmenistan: Aisoltan Charyeva; Ukraine: Larissa Korinchuk; United Kingdom: Arlene Reynolds, Cathriona Kearns, Colin Campbell, Eisin McDonald, Grace Smith, Jennifer Davidson, Jim McMenamin, Lucy Thomas, Maeve Lalor; Uzbekistan: Salihdjan Alimov. Also Kosovo:<sup>1</sup> Xhevat Kurhasani.

<sup>1</sup> For the purposes of this publication, all references to "Kosovo", including in the bibliography, should be understood/read as "Kosovo (in accordance with Security Council resolution 1244 (1999))".

# Abbreviations

<b>AFB</b>	acid-fast bacilli
<b>ART</b>	antiretroviral therapy
<b>CISID</b>	Centralized Information System for Infectious Diseases
<b>DRS</b>	drug-resistance surveillance
<b>DST</b>	drug-susceptibility testing
<b>ECDC</b>	European Centre for Disease Prevention and Control
<b>EEA</b>	European Economic Area
<b>EQA</b>	external quality assessment
<b>EU</b>	European Union
<b>EU/EEA</b>	European Union/European Economic Area
<b>HIV</b>	human immunodeficiency virus
<b>HPCs</b>	high-priority countries (Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, the Republic of Moldova, Romania, the Russian Federation, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan)
<b>MDR</b>	multidrug resistance
<b>MDR-TB</b>	multidrug-resistant tuberculosis
<b>RR-TB</b>	rifampicin-resistant tuberculosis
<b>RR/MDR-TB</b>	rifampicin-resistant and multidrug-resistant tuberculosis
<b>TB</b>	tuberculosis
<b>TESSy</b>	The European Surveillance System
<b>TME</b>	WHO Tuberculosis Monitoring and Evaluation platform
<b>TOM</b>	treatment outcome monitoring
<b>WRD</b>	WHO-recommended rapid diagnostics
<b>XDR</b>	extensive drug resistance
<b>XDR-TB</b>	extensively drug-resistant tuberculosis





## **Executive summary**



# Executive summary

## The WHO European Region

Despite the notable progress achieved in the fight against tuberculosis (TB) in the WHO European Region and the subsequent consistent decline in incidence, TB still poses a public health threat in most countries and areas within the Region and should not be underestimated.

### TB burden

The year 2017 saw another decrease in TB epidemics, with 275 000 incident TB cases (238 000–314 000) estimated in the WHO European Region, corresponding to 30 cases (26–34) per 100 000 population. The average annual decline in the TB incidence rate was 4.7% during the period 2008–2017 and between 2013 and 2017, which is the fastest decline among all WHO regions, but still not enough to achieve the End TB Strategy milestones.

There were an estimated 24 000 TB deaths in 2017 among human immunodeficiency virus (HIV)-negative people in the European Region, an almost 60% decrease since 2008 and equivalent to 2.6 deaths per 100 000 population (range 2.5–2.7). With a decline of 10.2% on average per year during the last five years, this rate is notably higher than the global average (3% between 2013–2017).

In 2017, there were an estimated 77 000 cases of rifampicin-resistant and multidrug-resistant TB (RR/MDR-TB) among notified pulmonary cases in the Region. This represents about 23% of the 330 000 global RR/MDR-TB burden in the same cohort. The proportion of RR/MDR-TB among new and previously treated TB cases in the Region also exceeds the global average significantly, with 17% in new and 53% in previously treated cases compared to 3.5% and 18% respectively.

HIV prevalence in incident TB cases was estimated to be 12% in 2017, marking the first year of halted growth after an unprecedented increase from 3% to 12% during 2007–2016. There were 34 000 HIV-positive TB cases estimated in the Region, with the Russian Federation (55%) and Ukraine (24%) contributing to the highest burden of coinfection.

### TB disease notification and treatment outcomes

Overall, a 21% decrease was observed in the notification rates of new TB cases and relapses during 2013–2017 (incident TB cases), from 32.9 to 25.9 cases per 100 000 population. In 2017, 238 819 incident TB cases were notified, amounting to 88% of the estimated new and relapse cases in the Region.

The percentage of newly notified TB patients tested using WHO-recommended rapid diagnostic tests increased from 21.6% in 2015 to 50.9% in 2017, overachieving the target

of 30% in the *Tuberculosis action plan for the WHO European Region 2016–2020*.

A total of 199 129 (83%) pulmonary cases were notified among incident TB cases, of which 65% were laboratory confirmed, marking another year of increase in laboratory confirmation of TB diagnosis, starting with 57.1% in 2013.

Among bacteriologically confirmed pulmonary TB cases, 81% were tested for first-line drug susceptibility (DST), a decreased ratio compared to the previous year (85.6% in 2016).

Overall, 27.9% of pulmonary TB cases tested for drug susceptibility had MDR-TB. Prevalence of MDR-TB among new and previously treated bacteriologically confirmed pulmonary TB cases was 18.1% and 47.9% respectively, in line with the trend observed during the last five years.

Extensively drug-resistant TB (XDR-TB) shows an increasing trend, with 91.3% second-line DST coverage; 18.6% of pulmonary MDR-TB cases had XDR-TB in 2017. In absolute numbers, XDR-TB cases among pulmonary TB cases increased from 575 in 2013 to 5591 in 2017.

Of the new and relapse TB patients notified from countries and areas reporting HIV testing data, 91.4% were screened for HIV. A total of 25 153 TB cases were detected with HIV-positive status, which is 12.8% of those tested, a slight decrease compared to last year (13.4% in 2016) and in line with the tendency observed in coinfection estimations.

A total of 16 754 (66.6%) of HIV-positive cases are reported to have received antiretroviral therapy (ART). ART coverage showed an increasing trend over the last five years but is still far below the WHO target of universal ART coverage for TB/HIV coinfecting patients.

Despite universal treatment coverage for TB and RR/MDR-TB patients, the treatment success rate in the Region remains below the 85% and 75% regional targets respectively. Comparing data collected in 2016 to 2018, however, a slow but sustainable increase is documented in both incident TB and RR/MDR-TB cohorts, from 75.8% to 77.2% and 48.7% to 57.2% respectively.

## European Union and European Economic Area countries

### Epidemiology

In 2017, 55 337 cases of TB were reported in the 31 European Union and European Economic Area (EU/EEA) countries, resulting in a notification rate of 10.7 per 100 000 population in the EU/EEA. The overall notification rate and the rate in most countries has been decreasing over the last five years.

Of all notified TB cases, 39 903 (72.1%) were newly diagnosed and 37 700 (68.1%) were confirmed by culture, or smear and nucleic acid amplification test. Overall, adult age groups had a higher new and relapse TB notification rate than children under 15 years. Children under 15 years accounted for 4.4% of all new and relapse TB cases, corresponding to a notification rate of 2.9 per 100 000 population. The highest rates among 0–4-year-olds were noted in Bulgaria and Romania. For every female new and relapsed case of TB in the EU/EEA, almost two male new and relapsed cases were reported. Thirty-three per cent of all TB cases reported in the EU/EEA were of foreign origin, but 20% or less of TB cases from countries with TB notification rates higher than 10 per 100 000 population were reported as being of foreign origin.

MDR-TB was reported for 1041 (3.8%) of 27 339 cases with the relevant DST results and continues to be highest (more than 10%) in the three Baltic States. XDR-TB was reported for 24.3% of 770 MDR-TB cases tested for second-line drug susceptibility. After remaining at 0.3 per 100 000 population from 2013 to 2016, the rate of notified MDR-TB cases decreased to 0.2 in 2017. During the same period, the

proportion of resistance to second-line anti-TB drugs increased among pulmonary MDR-TB cases. It should be noted, however, that in excess of 45% of these pulmonary XDR-TB cases were reported from Lithuania and Romania in those years.

Although the number of countries reporting data on HIV coinfection increased from 2016 to 2017, the data remain incomplete. Of all TB cases with reported HIV status, 3.9% were coinfecting with the virus.

TB in prisons remains poorly reported. For the 15 EU/EEA countries reporting data, the notification rate amounted to 155 new and relapse TB cases per 100 000 inmates, that is, a relative risk of 11.4 compared to the general population in the same countries.

### Treatment monitoring

Of all 54 612 TB cases notified in 2016 with a treatment outcome reported in 2017, 70.7% were treated successfully and 7.3% died. Of 1217 MDR-TB cases notified in 2015 with a treatment outcome reported in 2017, 44.8% were treated successfully and 16.2% died.

# Резюме

## Европейский регион ВОЗ

Несмотря на заметные успехи, достигнутые в борьбе с туберкулезом (ТБ) в Европейском регионе ВОЗ, и последовавшую за этим стабильную тенденцию к снижению заболеваемости, туберкулез по-прежнему представляет угрозу для общественного здоровья в большинстве стран Региона и эту угрозу не следует недооценивать.

### Бремя туберкулеза

В 2017 г. произошло дальнейшее сокращение эпидемии туберкулеза, когда расчетное число новых случаев и рецидивов туберкулеза в Европейском регионе ВОЗ составило 275 000 (238 000 - 314 000), что соответствует 30 случаям (26-34) на 100 000 населения. Среднегодовое снижение заболеваемости туберкулезом составило 4,7% за период с 2008 по 2017 гг. и с 2013 по 2017 гг., - это самые быстрые темпы снижения среди всех регионов ВОЗ, однако они еще недостаточны для достижения основных целевых ориентиров стратегии по ликвидации туберкулеза.

По оценкам, в 2017 г. в Европейском регионе произошло 24 000 случаев смерти от туберкулеза среди людей, не инфицированных вирусом иммунодефицита человека (ВИЧ), что почти на 60% меньше по сравнению с 2008 г. и эквивалентно показателю 2,6 случаев смерти на 100 000 населения (диапазон 2,5 - 2,7). При снижении в среднем на 10,2% в год за последнее пятилетие этот показатель заметно превышает среднемировой (3% за период с 2013 по 2017 гг.).

Согласно расчетным данным, в 2017 г. среди больных туберкулезом легких в Регионе было зарегистрировано 77 000 случаев туберкулеза с устойчивостью к рифампицину и с множественной лекарственной устойчивостью (РР/МЛУ-ТБ) возбудителя, что составляет около 23% от 330 000 глобального бремени РР/МЛУ-ТБ в той же когорте. Доля случаев РР/МЛУ-ТБ среди новых и ранее леченных случаев туберкулеза в Регионе также значительно превышает среднемировой показатель - 17% среди новых и 53% среди ранее леченных случаев по сравнению с 3,5% и 18%, соответственно.

В 2017 г. расчетная распространенность ВИЧ-инфекции среди новых случаев и рецидивов туберкулеза составила 12%, ознаменовав первый год приостановления роста показателя после беспрецедентного увеличения с 3% до 12% в 2007-2016 гг. По оценкам, число ВИЧ-положительных случаев туберкулеза в Регионе составило 34 000, причем наибольшее бремя сочетанной инфекции приходилось на Российскую Федерацию (55%) и Украину (24%).

## Регистрация случаев туберкулеза и результаты лечения

В целом, в 2013-2017 гг. показатели регистрации новых случаев и рецидивов туберкулеза сократились на 21% - с 32,9 до 25,9 случаев на 100 000 населения. В 2017 г. было зарегистрировано 238 819 новых случаев и рецидивов туберкулеза, что составляет 88% от расчетного числа этих случаев в Регионе.

Доля впервые зарегистрированных случаев туберкулеза, прошедших тестирование с использованием рекомендованных ВОЗ быстрых диагностических тестов, увеличилась с 21,6% в 2015 г. до 50,9% в 2017 г., превысив целевой ориентир в 30%.

В общей сложности, среди новых случаев и рецидивов туберкулеза было зарегистрировано 199 129 (83%) случаев туберкулеза легких, из которых 65% имели лабораторное подтверждение диагноза. Такая тенденция увеличения доли лабораторно подтвержденных случаев туберкулеза берет начало в 2013 г. с уровня 57,1%.

Среди случаев туберкулеза легких с бактериологическим подтверждением диагноза тестирование лекарственной чувствительности (ТЛЧ) было проведено у 81% пациентов, что указывает на снижение этого показателя по сравнению с предыдущим годом (85,6% в 2016 г.).

В целом, 27,9% случаев туберкулеза легких, которые прошли тестирование лекарственной чувствительности, имели МЛУ-ТБ. Распространенность МЛУ-ТБ среди новых и ранее леченных случаев туберкулеза легких с бактериологическим подтверждением диагноза составила соответственно 18,1% и 47,9%, что согласуется с тенденцией, наблюдавшейся в течение последних пяти лет.

Отмечается тенденция к росту числа случаев туберкулеза с широкой лекарственной устойчивостью (ШЛУ-ТБ) при охвате тестированием лекарственной чувствительности к препаратам второго ряда в 91,3%; в 2017 г. 17,5% случаев туберкулеза легких с множественной лекарственной устойчивостью возбудителя имели ШЛУ-ТБ. В абсолютных цифрах число случаев ШЛУ-ТБ среди больных туберкулезом легких увеличилось с 575 в 2013 г. до 5591 в 2017 г.

Среди новых случаев и рецидивов туберкулеза, зарегистрированных в странах, предоставляющих данные отчетности о тестировании на ВИЧ, 91,4% прошли скрининг на ВИЧ-инфекцию. В общей сложности было выявлено 25 153 случая туберкулеза с ВИЧ-положительным статусом, что составляет 12,8% от числа протестированных - это несколько меньше, чем в прошлом году (13,4% в 2016 г.) и соответствует тенденции, наблюдаемой в расчетных показателях сочетанной инфекции.

Согласно данным отчетов, антиретровирусную терапию (АРТ) получали в общей сложности 16 754 (66,6%) ВИЧ-инфицированных пациентов. Охват АРТ за последние пять лет демонстрирует тенденцию к росту, однако он все еще намного ниже целевого ориентира ВОЗ по всеобщему охвату АРТ пациентов с сочетанной инфекцией ТБ-ВИЧ.

Несмотря на всеобщий охват лечением больных туберкулезом и РР/МЛУ-ТБ, показатель успешного лечения в Регионе остается ниже 85% и 75% региональных целевых ориентиров, соответственно. Однако при сравнении данных, собранных в 2016-2018 гг., медленный, но стабильный рост зафиксирован как в когортах новых случаев и рецидивов туберкулеза, так и в когортах РР/МЛУ-ТБ - с 75,8% до 77,2% и 48,7% до 57,2%, соответственно.

## Страны Европейского Союза и Европейской экономической зоны

### Эпидемиологическая ситуация

В 2017 г. в 31 стране Европейского Союза и Европейской экономической зоны (ЕС/ЕЭЗ) было зарегистрировано 55 337 случаев заболевания туберкулезом, а показатель регистрации составил 10,7 на 100 000 населения. За последние пять лет общий показатель регистрации и частота случаев в большинстве стран снижались.

Из всех зарегистрированных случаев заболевания туберкулезом у 39 903 (72,1%) пациентов диагноз был установлен впервые, а у 37 700 (68,1%) диагноз был подтвержден при помощи культурального анализа или мазка и теста амплификации нуклеиновых кислот. В целом, у взрослых показатель регистрации новых случаев и рецидивов туберкулеза был выше, чем у детей младше 15 лет. На долю детей в возрасте до 15 лет приходилось 4,4% всех новых случаев и рецидивов туберкулеза, что соответствует показателю в 2,9 на 100 000 населения. Самые высокие показатели среди детей в возрасте 0-4 лет были отмечены в Болгарии и Румынии. В ЕС/ЕЭЗ на каждый новый случай и рецидив

туберкулеза у женщин приходилось почти два новых случая и рецидива туберкулеза у мужчин. Тридцать три процента всех случаев туберкулеза в странах ЕС/ЕЭЗ были иностранного происхождения, однако в странах с показателями регистрации туберкулеза выше 10 на 100 000 населения не более 20% случаев туберкулеза регистрировалось как случаи иностранного происхождения.

МЛУ-ТБ был зарегистрирован у 1041 (3,8%) из 27 339 случаев с соответствующими результатами ТЛЧ и его показатели продолжают оставаться самым высоким (более 10%) в трех странах Балтии. ШЛУ-ТБ был зарегистрирован у 24,3% из 770 случаев МЛУ-ТБ с результатами ТЛЧ к препаратам второго ряда. После стабильного значения на уровне 0,3 на 100 000 населения за период с 2013 по 2016 год показатель зарегистрированных случаев МЛУ-ТБ снизился до 0,2 в 2017 г. За тот же период увеличилась доля случаев ШЛУ среди больных легочным туберкулезом с множественной лекарственной устойчивостью. Следует отметить, что свыше 45% случаев легочного ШЛУ-ТБ было зарегистрировано в те годы в Литве и Румынии.

Несмотря на то, что с 2016 по 2017 гг. число стран, предоставивших данные о сочетанной инфекции ТБ-ВИЧ, увеличилось, эти данные остаются неполными. Из всех случаев туберкулеза с зарегистрированным ВИЧ-статусом 3,9% имели сочетанную инфекцию ТБ-ВИЧ.

В пенитенциарных учреждениях регистрация случаев туберкулеза по-прежнему остается неудовлетворительной. Для 15 стран ЕС/ЕЭЗ, предоставивших данные отчетности, показатель регистрации соответствовал 155 новым случаям и рецидивам туберкулеза на 100 000 заключенных, а относительный риск заболевания по сравнению с населением в целом в тех же странах составил 11,4.

### Мониторинг лечения

Из всех зарегистрированных в 2016 г. 54 612 случаев туберкулеза с результатами лечения, полученными в 2017 г., 70,7% были успешно пролечены, а 7,3% умерли. Из зарегистрированных в 2015 г. 1 217 случаев МЛУ-ТБ с результатами лечения, полученными в 2017 г., 44,8% были успешно пролечены, а 16,2% умерли.



# **1. Main facts about tuberculosis**





# 1. Main facts about tuberculosis

Tuberculosis (TB) is an infectious disease caused by a group of *Mycobacterium* species called the *Mycobacterium tuberculosis* complex (1). Although TB typically affects the lungs (pulmonary TB), it can cause disease in any organ (extrapulmonary TB). TB is transmitted from person to person, for example, when people with pulmonary TB expel bacteria by coughing.

Only a small proportion of people ( $\approx 10\%$ ) infected with *M. tuberculosis* will develop TB disease during their lifetime, but the risk is much higher among immunocompromised individuals (such as people infected with the human immunodeficiency virus (HIV)).

Sputum-smear microscopy has been the most common initial TB diagnostic method worldwide, but culture remains the gold standard, while the use of rapid molecular testing is increasing.

Standard treatment of non-resistant TB consists of a six-month regimen of four first-line drugs (isoniazid, rifampicin, ethambutol and pyrazinamide), with success rates usually above 80% (2). Multidrug-resistant (MDR) and extensively drug-resistant (XDR) TB require longer treatments with more drugs and are associated with lower success rates.

WHO estimated that 10 million people fell ill with TB in 2017. Most cases were estimated to occur in the WHO South-East Asia Region (44%), the WHO African Region

(25%) and the WHO Western Pacific Region (18%). Smaller proportions of cases were estimated for the WHO Eastern Mediterranean Region (7.7%) and the WHO Region of the Americas (2.8%). The WHO European Region accounted for 2.7% of all cases (2).

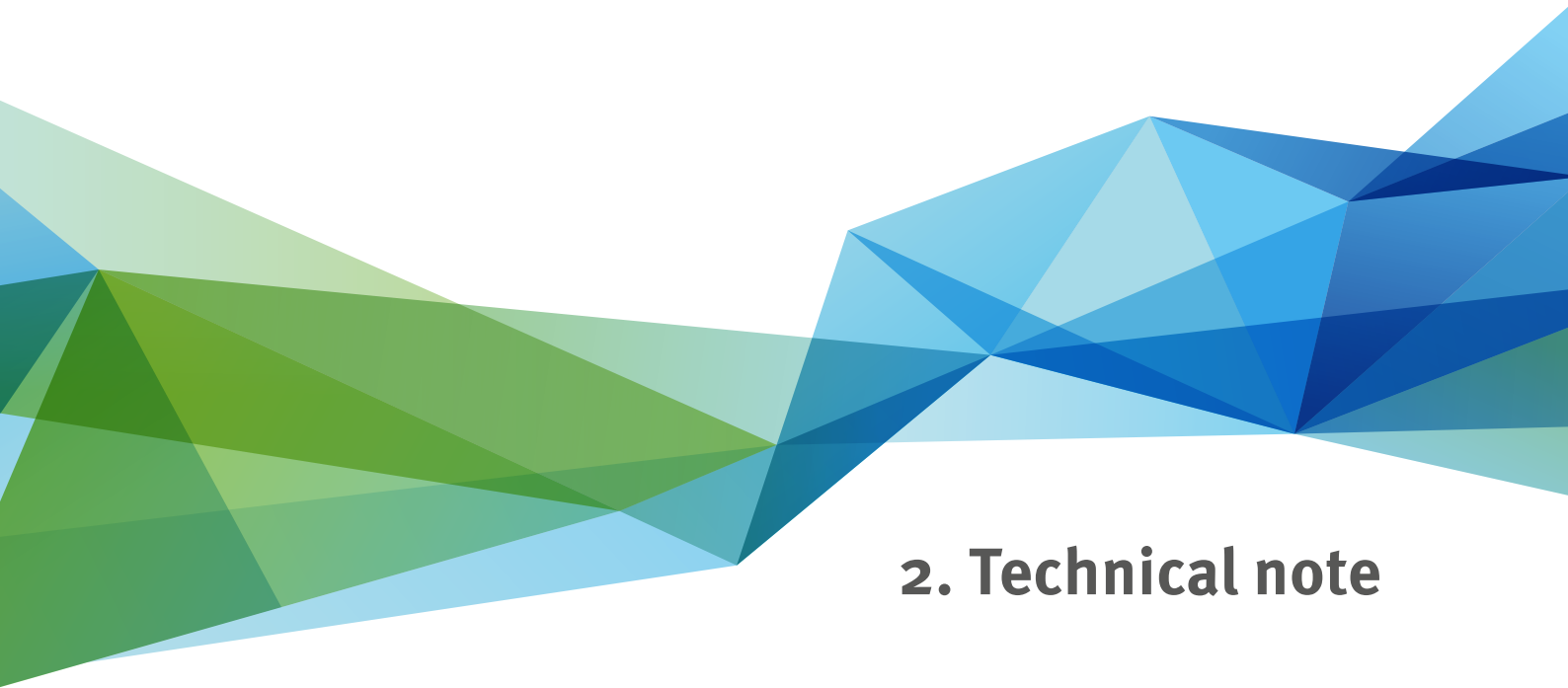
Overall, this report shows that in the European Union and European Economic Area (EU/EEA), TB remains a public health issue. Most EU/EEA countries, however, are low-incidence countries (a notification rate below 10 per 100 000) in which TB predominantly affects vulnerable populations, such as migrants, prison inmates or people coinfecting with HIV.

The overall aim of TB surveillance is to help inform public health action. The annual TB surveillance and monitoring report presents key figures and trends and provides an overview of the TB situation in the EU/EEA and the WHO European Region.

## References

1. Lawn SD, Zumla AI. Tuberculosis. *Lancet* 2011;378(9785): 57–72.
2. Global tuberculosis report 2018. Geneva: World Health Organization; 2018 (<http://apps.who.int/iris/bitstream/handle/10665/274453/9789241565646-eng.pdf?ua=1>).





## **2. Technical note**



# Technical note

Between 1996 and 2007, TB surveillance data from the European Region were collected and analyzed annually under the EuroTB project.

Since 1 January 2008, the European Centre for Disease Prevention and Control (ECDC) and the WHO Regional Office for Europe have jointly coordinated the collection and analysis of TB surveillance data in Europe, aiming to ensure data standardization and high quality across the WHO European Region. The underlying standards and definitions have been agreed by leading European experts. The definitions used in this report are in line with the latest WHO revised definitions (1). In the EU/EEA the reporting follows the EU case definitions (2).

The report covers the 53 countries of the WHO European Region and Liechtenstein. These are collectively referred to as the European Region.

Data published in the report may differ from figures in national reports due to variations in reporting periods and the deadlines for data collection. The deadline for updating the data used in this report was 5 October 2018.

## Data reporting and analysis

Designated experts within national surveillance institutes submitted their TB surveillance and control programme management data for 2017 electronically to the ECDC–WHO Regional Office for Europe Joint TB Information System via a common portal.<sup>1</sup> TB surveillance data from the EU/EEA countries and Switzerland, starting 2017, were redirected to The European Surveillance System (TESSy) platform hosted by ECDC (Annex 1). Surveillance data from non-EU/EEA countries and areas and programme management data from the entire European Region were processed through WHO's Tuberculosis Monitoring and Evaluation (TME) platform in aggregated format. All 31 EU/EEA Member States reported case-based data. All countries in the European Region were also asked to provide updates for 2014, 2015 and 2016 to allow for the exclusion of duplicate cases, or those found later not to have TB, and for the reporting of treatment outcomes in previously notified cases.

The TESSy variable list for collection of the 2017 data (Annex 2) has undergone some changes compared to the previous year. The following variables have been removed: Classification, Laboratory result, SIR\_CIP (susceptibility to ciprofloxacin), and RflpCode (restriction fragment length polymorphism code). The following variables have been added: SIR\_PZA (susceptibility to pyrazinamide) and DateOfEntryToCountry. In addition, the value MCAPIAE

(*Mycobacterium caprae*) has been added to the variable Pathogen.

Reporting completeness (Annexes 3 and 4) varied among countries and areas due to differences in legislation, specifics of national surveillance systems and TB case ascertainment. Although the quality and comparability of reported data have improved in recent years, readers should be cautious when making comparisons across countries. Reporting completeness in the EU/EEA is generally high, with a few exceptions, such as HIV status and drug-susceptibility testing (DST) data, nonetheless readers should be cautious when making comparisons across countries.

Estimates of TB disease burden presented in Tables 1, 2, I and II are provided by WHO using a methodology developed by the Global Task Force on TB Impact Measurement. Estimates are updated annually using the latest available data and analytical methods (3). Population denominators were obtained from United Nations Population Division statistics (4) for the calculation of rates in these tables.

For the calculation of notification rates, country total population denominators by age group and gender were obtained from Eurostat (5) (20 April 2018) for the EU/EEA countries and from United Nations Population Division statistics for all other countries and areas.

Reported data were analysed using the main epidemiological (time, place, gender, age, patient origin) and case management (history of previous anti-TB treatment, localization of disease, laboratory results, HIV status and treatment outcome) variables. Associations between variables were, if indicated, quantified as risk ratios and their 95% confidence intervals, and results were considered significant if the confidence interval did not include 1.

## TB/HIV coinfection

Case-based HIV status for 2017 was reported by Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Greece, Hungary, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain and the United Kingdom. The proportion of HIV/TB coinfection was expressed as a percentage of reported TB cases with known HIV status. HIV status had to be available for more than 50% of all TB cases to be considered complete in the country profiles. For the reported new and relapse TB cases with known HIV status in 2017, start or continuation on antiretroviral therapy (ART) was reported by 10 EU/EEA Member States.

<sup>1</sup> ECDC/WHO Europe Joint Surveillance can be accessed at: <http://www.ecdcwhosurveillance.org/>

## Laboratory network performance and drug resistance

Results of DST from initial isolates of *M. tuberculosis* have been collected for isoniazid and rifampicin since the reporting year 1998. EU/EEA countries have also reported susceptibility to ethambutol and streptomycin, with almost 70% of EU/EEA countries reporting the latter for the last five years (2013–2017). Data on second-line drug resistance to amikacin, capreomycin, kanamycin, ciprofloxacin and ofloxacin have been reported via TESSy since 2008 and via the Centralized Information System for Infectious Diseases (CISID)/TME since 2009. Data on ciprofloxacin are no longer collected in TESSy (since 2017), as ciprofloxacin is no longer recommended for treatment of drug-susceptible or drug-resistant TB. Data on resistance to gatifloxacin, levofloxacin and moxifloxacin were added in 2013, bedaquiline and delamanid in 2016, and pyrazinamide in 2017. Case-based information on DST is collected in countries/areas where DST results are linked to TB case notifications (29 countries in 2017). Where individual DST data are not available, data have been obtained from TME in aggregated format, when possible and deemed adequate. Information on the organization and laboratory practices for anti-TB DST in the country/area is collected using the TME module of the joint TB surveillance system. Drug-resistance surveillance (DRS) methods vary across countries and areas. Initial DST results may be collected routinely for all culture-positive TB cases notified, or only for cases included in specific surveys or diagnosed in/referred to selected laboratories. DRS data were considered complete if:

- they were collected nationwide;
- or
- culture results were available for 90% or more of all cases; and
  - more than 50% of all cases were culture-positive; and
  - more than 75% of all culture-positive cases had DST results available for isoniazid and rifampicin; and
  - at least 95% of the external quality assessment (EQA) results were confirmed by a supranational reference laboratory.

DRS data are considered incomplete for Albania, Andorra, Azerbaijan, France, Italy, Kazakhstan, Kyrgyzstan, the Republic of Moldova, San Marino, Turkmenistan and Uzbekistan.

EQA systems are essential for ensuring accurate diagnosis of TB and drug-resistant TB. Implementing EQA by organizing regular EQA rounds and identifying training needs is one of the key activities of the European TB Reference Laboratory Network (ERLTB-Net) (6). The EQA test results for 2017 are published in Annex 5.

Percentages of laboratory-confirmed drug-resistant cases were calculated using cases with known DST results (for at least isoniazid and rifampicin) as the denominator. The results of DST for second-line drugs were analysed for multidrug-resistant TB (MDR-TB) cases only.

## Treatment outcome monitoring

Treatment outcome data have been provided by EU/EEA countries since the reporting year 2002 through the submission of an updated dataset for cases notified one year prior to the year of reporting. The same applies to MDR-TB treatment outcome for cases reported two years earlier and extensively drug-resistant TB (XDR-TB) treatment outcome for cases reported three years earlier. As part of the 2018 data call, for 2017 data, outcome data were collected for TB cases reported in 2016, MDR-TB cases in 2015 and XDR-TB cases in 2014. Non-EU/EEA countries and areas have reported aggregated treatment outcome data following the same principle since 2013.

If enrolment to treatment is taken into account for treatment outcome monitoring (TOM) analysis, two types of TB cases are included: cases enrolled to treatment, and cases with no indication of enrolment to treatment. For countries and areas reporting case-based data, the most recently updated information was used. This may result in denominators differing from the number of notified cases reported in the previous year's report. For countries and areas reporting aggregate outcome data, completeness of cohorts is assessed by comparing the total number of cases included in TOM cohorts with those initially notified as pulmonary and culture- or smear-positive, depending on the type of cohort.

## Geographical areas

The following 31 EU/EEA countries are presented separately in tables and in Chapter 3: Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

The 23 remaining (non-EU/EEA) countries in the WHO European Region are: Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Israel, Kazakhstan, Kyrgyzstan, the Republic of Moldova, Monaco, Montenegro, North Macedonia, the Russian Federation, San Marino, Serbia, Switzerland, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan.

Data from Serbia include TB cases reported from Kosovo,<sup>2</sup> and these are also stratified in tables to reflect United Nations Security Council Resolution 1244 (1999).

Data from the 18 high-priority countries (HPCs) identified in the *Plan to stop TB in 18 high-priority countries in the WHO European Region, 2007–2015* (7) are presented in italics and as subtotals alongside the subtotals for the EU/EEA countries and non-EU/EEA countries and areas. The 18 HPCs in the WHO European Region are: Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, the Republic of Moldova, Romania, the Russian Federation, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan.

<sup>2</sup> For the purposes of this publication, all references to "Kosovo", including in the bibliography, should be understood/read as "Kosovo (in accordance with Security Council resolution 1244 (1999))".

TB notifications from France include overseas territories. TB notifications from Greenland are not included in the report.

## Definitions

### TB case definition for surveillance

Information from EU/EEA countries was collected to enable the classification of cases according to the case definition approved by EU Member States and published by the European Commission (2). This classifies cases as “possible”, “probable” or “confirmed”. Possible cases meet clinical criteria only. Probable cases are defined by the additional detection of acid-fast bacilli (AFB), *M. tuberculosis* complex nucleic acid or granulomata. Confirmed cases require a positive culture, or detection of both AFB by microscopy and *M. tuberculosis* complex by nucleic acid amplification testing.

Data from all countries and areas in the European Region also follow the WHO-recommended definitions, 2013 revision (1). They define a “case of tuberculosis” as a patient in whom TB has been confirmed by bacteriology or diagnosed by a clinician. A “bacteriologically confirmed TB case” is one from whom a biological specimen is positive by smear microscopy, culture or WHO-recommended rapid diagnostics (WRD) such as Xpert MTB/RIF. A “clinically diagnosed TB case” is one that does not fulfil the criteria for bacteriological confirmation, but has been diagnosed with active TB by a clinician or other medical practitioner who has decided to give the patient a full course of TB treatment.

Cases discovered postmortem as having gross pathological findings consistent with active TB that would have indicated anti-TB treatment, had the patient been diagnosed before dying, also fit the clinical criteria and are included.

### Previous anti-TB treatment status

**New cases** have never been treated for TB or have taken anti-TB drugs for less than one month. For EU/EEA countries, cases reported as having been diagnosed before 1951 are analysed as new cases.

**Previously treated patients** have received one month or more of anti-TB drugs in the past. They are further classified by the outcome of their most recent course of treatment as follows:

- **relapse:** patients have previously been treated for TB, were declared cured or to have completed their treatment at the end of their most recent course of treatment, and are now diagnosed with a recurrent episode of TB (either a true relapse or a new episode of TB caused by reinfection);
- **treatment after failure:** patients who have previously been treated for TB and whose treatment failed at the end of their most recent course of treatment;
- **treatment after loss to follow-up:** patients have previously been treated for TB and were declared lost to follow-up at the end of their most recent course of treatment

(these were previously classified as “treatment after default”); and

- **other previous treatment:** patients who have previously been treated for TB but whose outcome after their most recent course of treatment is unknown or undocumented.

Patients with unknown previous TB treatment history do not fit any of the categories listed above.

New cases and relapses of TB are **incident TB cases**.

### Site of disease

**Pulmonary TB** refers to any bacteriologically confirmed or clinically diagnosed case of TB involving the lung parenchyma or the tracheobronchial tree (laryngeal TB is classified as pulmonary). A patient with both pulmonary and extrapulmonary TB should be classified as a case of pulmonary TB.

**Extrapulmonary TB** refers to any bacteriologically confirmed or clinically diagnosed case of TB involving organs or anatomical sites other than the lungs (such as pleura, lymph nodes, abdomen, genitourinary tract, skin, joints and bones, or meninges).

### Notes on the definition

The above TB case definition, and the definition of previous anti-TB treatment status and site of disease, are in accordance with the European Commission’s approved definitions for TB surveillance.

All possible, probable and confirmed cases are reported to the joint European surveillance database. For countries and areas with laboratory-based reporting where no clinical information is available, laboratory-confirmed cases should be reported.

Cases should be notified only once in a given 12-month period, but a case should be reported again if the diagnosis of confirmed TB is made following completion of anti-TB treatment (relapse), even if this occurs within 12 months of reporting the initial disease episode.

Cases that have never been treated are commonly referred to as new cases, although this term should not be considered to indicate incidence in the strict epidemiological sense.

Among re-treated cases, relapses are included in notifications from all countries, whereas cases re-treated after failure or loss to follow-up and chronic cases are not included or further defined by Belgium, Cyprus, Denmark, France, Luxembourg, Malta, Norway, Spain and the United Kingdom.

DST data were analysed for laboratory-confirmed cases.

### Origin of cases

The geographic origin of a TB case is classified according to the place of birth of a person with TB disease (born in the country/born outside of the country) for Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia,

Finland, France, Germany, Iceland, Ireland, Israel, Italy, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, North Macedonia, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Turkey, the United Kingdom and Uzbekistan. For Albania, Andorra, Armenia, Austria, Belarus, Belgium, Bosnia and Herzegovina, Georgia, Greece, Hungary, Kazakhstan, the Republic of Moldova, Montenegro, Poland, the Russian Federation, Serbia, Turkmenistan and Ukraine, origin is classified according to citizenship (citizen/non-citizen). Azerbaijan, Georgia, Kyrgyzstan, Monaco and Turkmenistan did not report information on origin. In Denmark, the birthplace of the parents is also used to classify origin (similarly in the Netherlands, where for cases born in the Netherlands the birthplace of parents is notified for case management purposes). The country of origin is included in case-based data.

The term “native” as used in this report refers to cases born in, or having the citizenship (nationality) of, the reporting country. “Foreign origin” refers to cases born in (or citizens of) a country different to the reporting country.

## Drug resistance

**Resistance among cases never treated (new TB cases)** indicates primary drug resistance due to infection with resistant bacilli.

**Resistance among cases previously treated** usually indicates acquired drug resistance emerging during treatment following selection of drug-resistant mutant bacilli. It can also result from exogenous re-infection with resistant bacilli.

**Multidrug resistance (MDR)** refers to resistance to at least isoniazid and rifampicin.

**Extensive drug resistance (XDR)** refers to resistance to: (i) isoniazid and rifampicin (that is, MDR); (ii) a fluoroquinolone; and (iii) one or more of the following injectable drugs: amikacin, capreomycin or kanamycin (1).

**Rifampicin resistance** refers to resistance to rifampicin detected using phenotypic or genotypic methods, with or without resistance to other anti-TB drugs. This includes any resistance to rifampicin, whether monoresistance, multidrug resistance, polydrug resistance or extensive drug resistance.

## Treatment outcome

### Cohorts

A cohort is defined as all TB cases notified in the calendar year of interest, after exclusion of cases with a final diagnosis other than TB, or cases found to have been reported more than once.

In accordance with the WHO treatment outcome definitions (1), this report distinguishes between two types of cases:

- patients treated for drug-susceptible TB; and

- patients treated for rifampicin-resistant TB (RR-TB), that is, those placed on second-line treatment (defined as combination chemotherapy for drug-resistant TB).

The two groups are mutually exclusive. Any patient reported as having RR-TB is assumed to be on second-line treatment and is excluded from the drug-susceptible TB outcome cohort.

### Period of observation

All cases are observed until the first outcome assessment up to a maximum of 12 months after the start of treatment. For MDR-TB cases in EU/EEA countries, treatment outcome after 24 months should be reported if treatment lasts longer than 12 months and the reported 12-month outcome is coded as “still on treatment”.<sup>3</sup> For XDR-TB cases in EU/EEA countries, treatment outcome after 36 months should be reported if treatment lasts longer than 24 months and the reported 12-month and 24-month outcomes are coded as “still on treatment”.<sup>4</sup> Non-EU/EEA countries and areas evaluate treatment outcomes according to the WHO definition.

### Treatment outcome categories

All outcome categories but one apply to the entire Region and follow the WHO recommendations in *Definitions and reporting framework for tuberculosis – 2013 revision (1)*. The additional category “still on treatment” only applies to the EU/EEA Member States. The categories are as follows.

**Cured** is a pulmonary TB patient with bacteriologically confirmed TB at the beginning of treatment who was smear- or culture-negative in the last month of treatment and on at least one previous occasion.

**Cured of MDR-TB** is treatment completed as recommended under national policy without evidence of failure AND three or more consecutive cultures taken at least 30 days apart are negative after the intensive phase.

**Treatment completed** is treatment completed but does not meet the criteria to be classified as cure or treatment failure.

**Treatment failed** is a TB patient whose sputum smear or culture is positive at month 5 or later during treatment.

**Treatment failed for MDR-TB case** is treatment terminated or the need for permanent regimen change of at least two anti-TB drugs because of:

- lack of conversion by the end of the intensive phase; or
- bacteriological reversion in the continuation phase after conversion to negative; or
- evidence of additional acquired resistance to fluoroquinolones or second-line injectable drugs; or
- adverse drug reactions.

<sup>3</sup> The degree of adherence to the 12-month limit is unknown, and a number of countries are known to exceed it.

<sup>4</sup> The degree of adherence to the 24-month limit is unknown.



**Died** is a TB patient who dies for any reason before starting, or during the course of, treatment.

**Lost to follow-up** is a TB patient who did not start treatment or whose treatment was interrupted for two consecutive months or more (defined in previous reports as “defaulted”).

**Still on treatment** is:<sup>5</sup>

- a patient reported as still on treatment at 12 months without any other outcome during treatment; or
- a patient reported as still on treatment at 12 months and still on treatment at 24 months without any other outcome.

**Not evaluated** is a TB patient for whom no treatment outcome is assigned; this includes cases “transferred out” to another treatment unit and cases for whom the treatment outcome is unknown to the reporting unit.

**In this report, success** is the sum of “cured” and “treatment completed”.

## Tables, figures, maps and country profiles

The report presents two sets of tables towards the end of the document:

- trend tables (Tables I–XV)
- data tables (Summary Table, Tables 1–25).

Also included are a series of figures (Fig. 1–5) and maps.

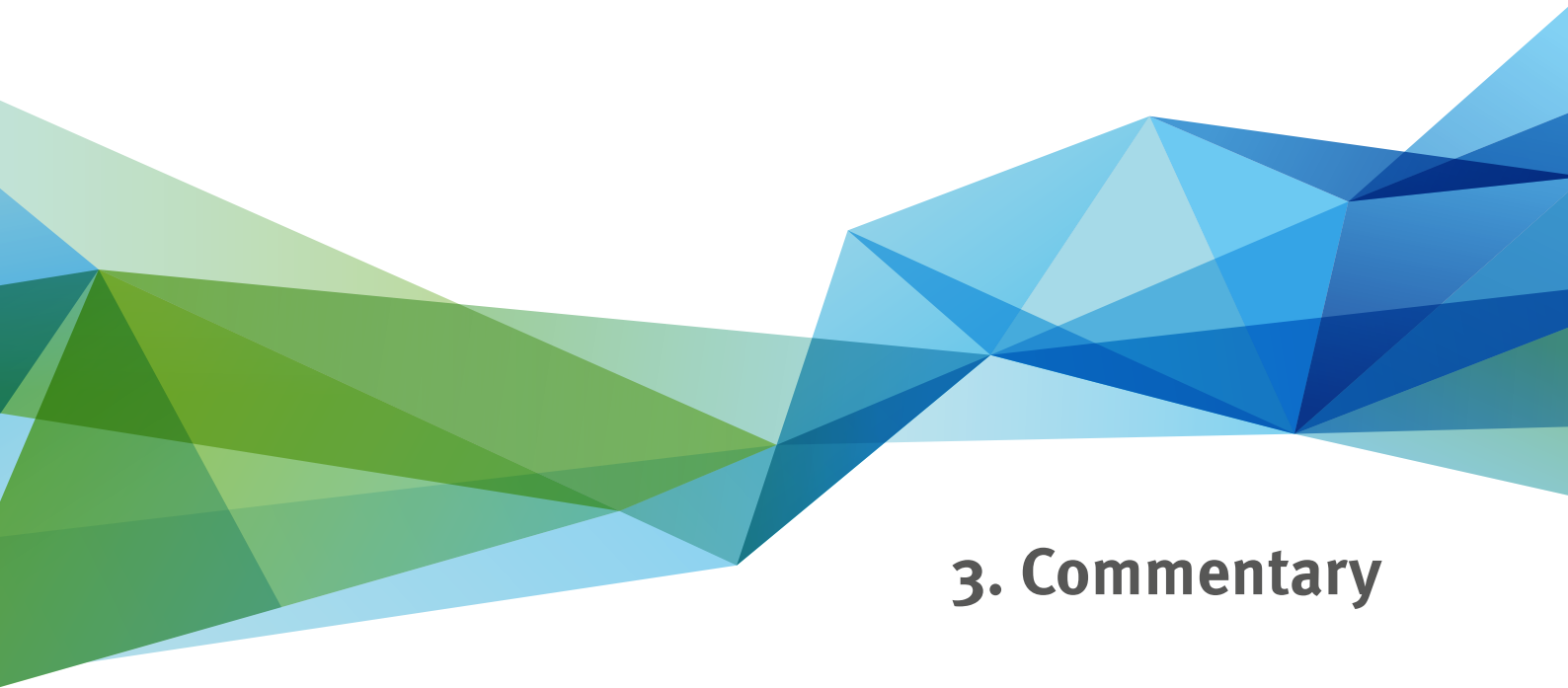
The report ends with a series of country profiles summarizing data at country level.

## References

1. Definitions and reporting framework for tuberculosis – 2013 revision, updated December 2014. Geneva: World Health Organization; 2015 (<http://www.who.int/tb/publications/definitions/en/>).
2. European Union Commission. 2018/945: Commission Decision of 22 June 2018 on the communicable diseases and related special health issues to be covered by epidemiological surveillance as well as relevant case definitions. OJ L 170, 6.7.2018, p. 47–48.
3. Global tuberculosis report 2018. Geneva: World Health Organization; 2018:28 ([http://www.who.int/tb/publications/global\\_report/en/](http://www.who.int/tb/publications/global_report/en/)).
4. World population prospects: the 2017 revision, medium variant. In: United Nations DESA/Population Division [website]. New York (NY): United Nations DESA/Population Division; 2017 (<https://population.un.org/wpp/>).
5. Eurostat [website]. Brussels: Eurostat; 2018 (<https://ec.europa.eu/eurostat/web/main/home>).
6. European Reference Laboratory Network for TB (ERLTB-Net). In: European Centre for Disease Prevention and Control [website]. Solna: ECDC; 2019 (<https://ecdc.europa.eu/en/about-us/partnerships-and-networks/disease-and-laboratory-networks/erltb-net>).
7. Plan to stop TB in 18 high-priority countries in the WHO European Region, 2007–2015. Copenhagen: WHO Regional Office for Europe; 2007 ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0005/68180/E91049.pdf](http://www.euro.who.int/__data/assets/pdf_file/0005/68180/E91049.pdf)).

<sup>5</sup> This definition is applicable to EU/EEA countries only.





### **3. Commentary**



## 3. Commentary

### The WHO European Region

#### TB burden estimates

An estimated 275 000 new and relapse TB cases (range 238 000–314 000) occurred in countries and areas of the WHO European Region in 2017, equivalent to an average incidence of 30 cases (26–34) per 100 000 population. This represents about 2.8% of the total burden of TB in the world.

The absolute number of incident TB cases in the WHO European Region fell by 15 000 in 2017 compared to the previous year. About 83% of the estimated TB cases in the Region occur in the 18 HPCs, where estimated TB incidence was 56.3 cases per 100 000 population, which is about four times higher than the EU/EEA average. The six countries with the absolute number of incident TB cases over 10 000 were the Russian Federation (86 000), Ukraine (37 000), Uzbekistan (23 000), Romania (14 000), Turkey (14 000) and Kazakhstan (12 000). The number relative to population (incidence rate) was highest in Kyrgyzstan (144 per 100 000 population), followed by the Republic of Moldova (95), Georgia (86), Tajikistan (85) and Ukraine (84).

The estimated number of TB cases in the Region has been decreasing consistently since 2000. The average annual decline in the TB incidence rate was 4.7% during the period 2008–2017, with 5.2% between 2016 and 2017, which is notably higher than the global rate of decline for TB incidence (1.8%). Yet despite this being the fastest decline in the world compared to other regions (1), it still needs to accelerate to achieve the milestone of reducing TB incidence as part of the End TB Strategy. It should nevertheless be emphasized that all the HPCs in the Region have also experienced a decline in the TB incidence rate. Those countries with the highest annual rate of decline during the period 2008–2017 were Kazakhstan (–9.1%), Estonia (–8.7%) and Turkmenistan (–8.4%).

There were an estimated 24 000 TB deaths among people who were HIV-negative in the European Region in 2017, equivalent to 2.6 deaths per 100 000 population (range 2.5–2.7). Considerable variation was seen across the Region, ranging from less than one TB death per 100 000 population in western European countries to more than nine per 100 000 in HPCs. The TB mortality rate was highest in Turkmenistan (9.9 deaths per 100 000), followed by Ukraine (8.7) and Azerbaijan (8.7). Together, the 18 HPCs accounted for over 83% of TB deaths in the Region.

The TB mortality rate at regional level fell by 59%, from 6.3 to 2.6 deaths per 100 000 population, between 2008 and 2017 (Table I), which on average is a decline of 9.3% per year. This decline has been over 10% annually in the last five years, which is notably higher than the global

rate of decline for TB mortality (3.2% between 2016 and 2017).

An estimated 12.0% (range 9.1%–16.0%) of incident TB cases in 2017 were coinfecting with HIV (Table 2). The proportion of TB cases coinfecting with HIV was highest in Ukraine (21.6%), followed by the Russian Federation (20.9%), France (14.1%) and Portugal (12.5%). The top five countries with the highest absolute number of TB/HIV coinfection cases were the Russian Federation (18 000) and Ukraine (8000), amounting to 79% of the total number of cases, followed by Uzbekistan (1200), France (830), Kazakhstan (530), Italy (470) and the United Kingdom (410).

Nine out of the 30 countries with the highest MDR-TB burden in the world are in the WHO European Region.<sup>6</sup> There were an estimated 109 000 (range 86 000–136 000) incident cases of rifampicin-resistant and multidrug-resistant TB (RR/MDR-TB) in the WHO European Region in 2017, with MDR-TB accounting for 84%.

An estimated 17% (95% CI: 16–18%) of new cases and 53% (95% CI: 46–61%) of previously treated cases had RR/MDR-TB. If all notified pulmonary TB patients were tested for drug resistance to rifampicin and isoniazid, it is estimated that around 77 000 (range 76 000–77 000) would be detected.

#### TB notification and trends

In 2017, 283 346 TB cases were reported from 52 countries<sup>7</sup> in the WHO European Region, 238 819 of which were new, relapses or had an unknown previous treatment history (Table 4). This represents 84% of all TB cases notified in 2017.

The notification rate of new and relapse cases varies widely among countries and areas, from zero (San Marino) to 110.6 (Kyrgyzstan) per 100 000 population (Map 1 and Table 4).

Thirty-eight countries, all located in the western and central part of the Region and mostly high-income countries, had low notification of new and relapse cases (less than 20 cases per 100 000) in 2017. Six reported new or relapse case rates of between 20 and 50 per 100 000 population and nine reported between 50 and 100 cases per 100 000 population (the Republic of Moldova (82.9), Kazakhstan (68.4), Georgia (66.4), Tajikistan (66.1), Romania (62.7), Ukraine (61.6), the Russian Federation (58.7), Azerbaijan (53.2) and Uzbekistan (52.8)). The 18 HPCs with new and relapse case notifications account for about 83% of the regional burden. The largest proportion of new and relapse

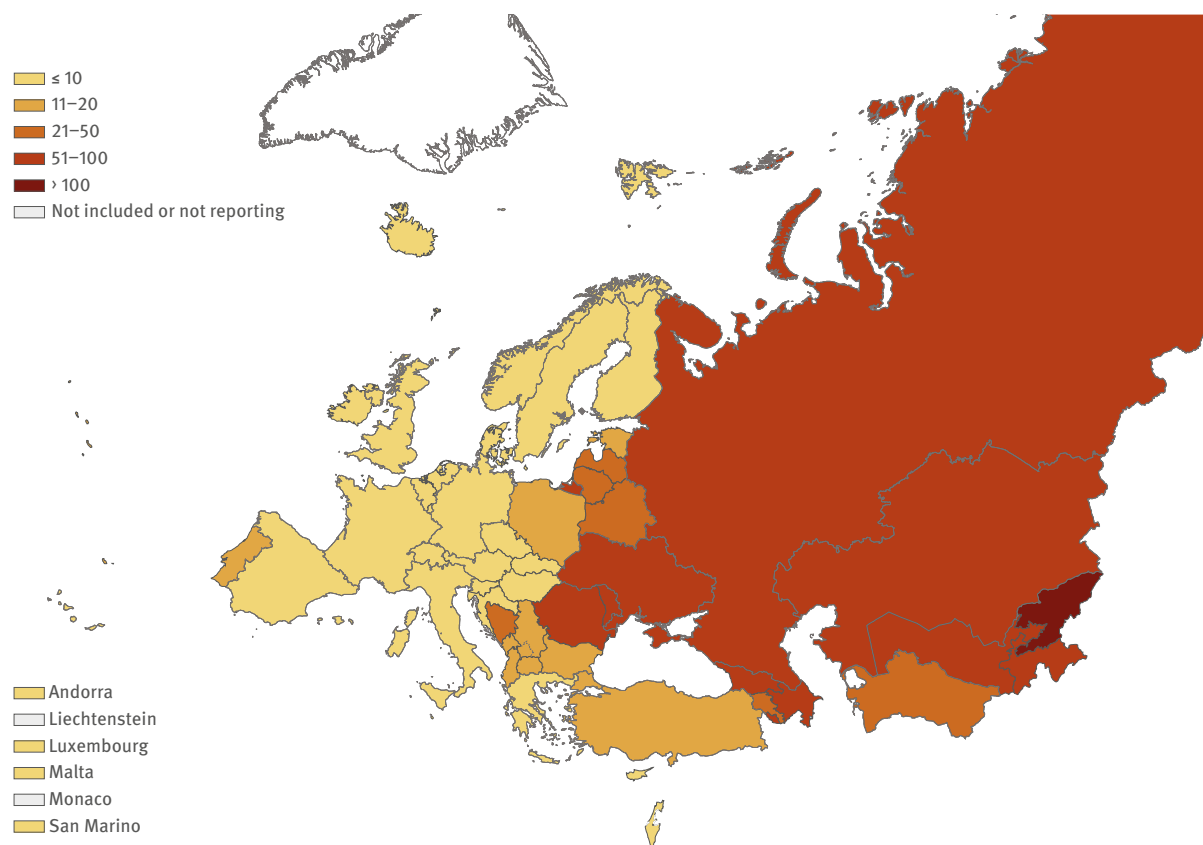
6 The 10 countries with the highest global MDR-TB burden (in alphabetical order) are: Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Somalia, Tajikistan, Ukraine and Uzbekistan.

7 Monaco did not report and San Marino reported zero cases in 2018.

cases (84 510, or 35.4%) comes from the Russian Federation, even though the Russian Federation accounts for only 16% of the Region's population. Most HPCs rates continue to

show a decreasing trend compared to the previous year, the exceptions being Azerbaijan, Kazakhstan and Uzbekistan.

**Map 1.** TB notification rates of new TB cases and relapses per 100 000 population, European Region, 2017



During the period 2013–2017, an overall downward trend of 21.3% was observed in the notification of incident TB cases, from 32.9 to 25.9 cases per 100 000 population (Table 4). This trend reflects a genuine reduction in the spread of the disease, significantly influenced by the decrease in notification rates throughout the Region's 18 HPCs from 63.6 to 49.1 per 100 000 population. The notification rate of new and relapse cases in the 18 HPCs is almost twice as high as for the Region overall (49.1 cases per 100 000, compared to 25.9 for the Region) and about five times higher than the rate in the EU/EEA (10.2 cases per 100 000 population) (Fig. 1).

### Previous treatment history

Previously treated cases represented 10.0% and 31.7% in the EU/EEA and non-EU/EEA respectively in 2017. The average in the 18 HPCs was 31.2%, impacting the pan-European average of 27.4%. Previously treated cases accounted for 15% or more of all TB cases in 16 countries: Azerbaijan (45.7%), the Russian Federation (37.9%), Ukraine (30.7%), the Republic of Moldova (30.3%), Kazakhstan (27.2%), Kyrgyzstan (26.8%), Georgia (26.1%), Armenia (25.4%), Belarus (25.0%), Uzbekistan (24.7%), Romania (20.2%), Lithuania (19.5%), Tajikistan (16.7%), Estonia

(16.6%), Slovakia (16.5%) and Turkmenistan (15.8%). Reasons for the high percentage of previously treated cases include clinical failure or poor treatment adherence in previous treatment episodes, and possible re-infection and misclassification during the current treatment episode.

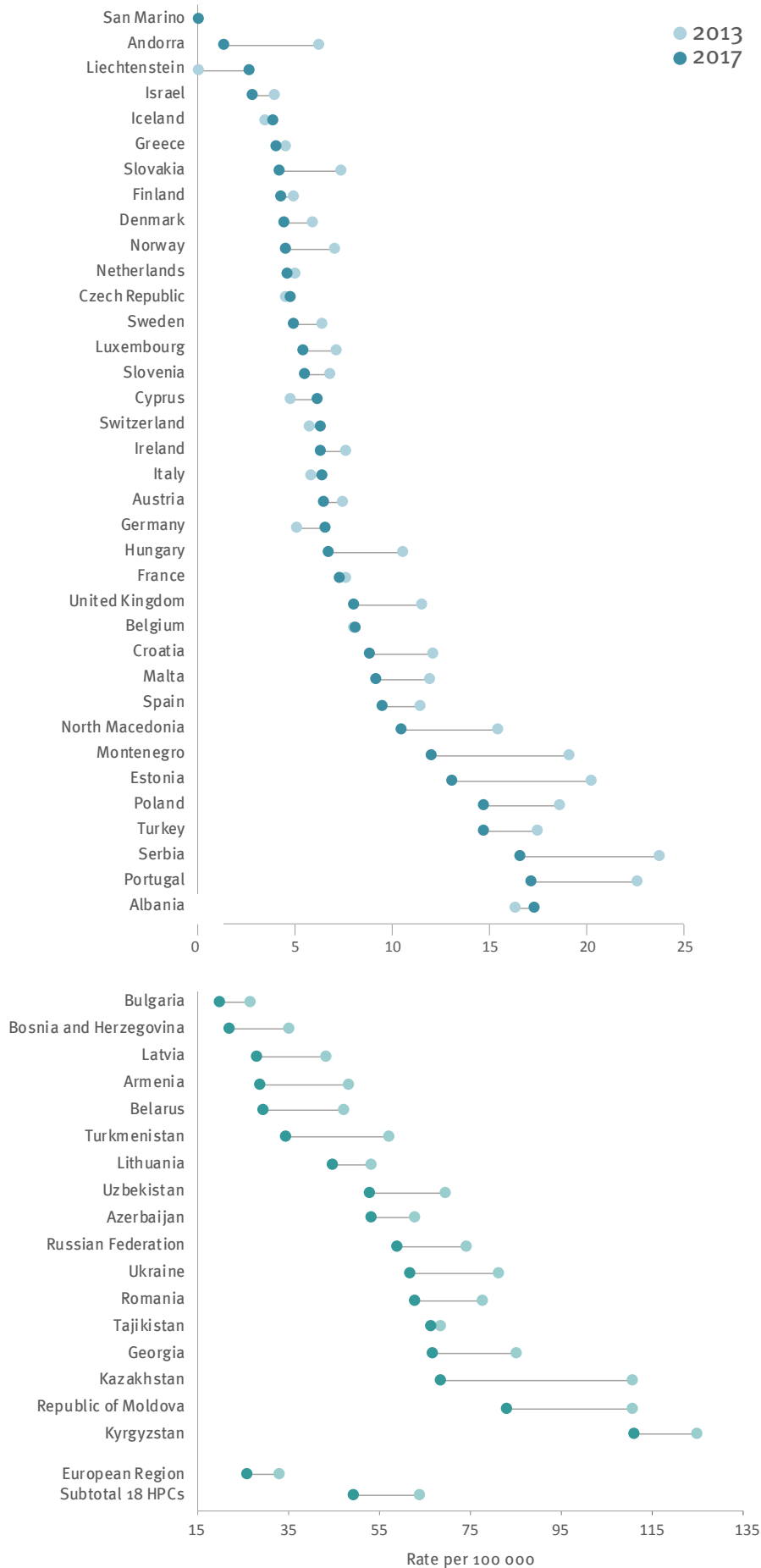
### Disease localization

Pulmonary localization was notified in about 83% of the incident TB cases in the Region in 2017 (Table 7b). The proportion of patients with pulmonary localization in the non-EU/EEA was slightly higher compared to EU/EEA countries. Extrapulmonary TB was notified on average for 17% of all incident TB cases in the Region. Eight countries reported more than 30% of their TB cases having extrapulmonary localization: Albania, the Netherlands, Norway, Sweden, Tajikistan, Turkey, the United Kingdom and Uzbekistan.

### Bacteriological confirmation

Bacteriological confirmation of TB diagnosis was reported for 129 065 (64.8%) of all 199 129 new and relapse pulmonary cases in the Region (Table 7b). Testing of cases using WRD (such as Xpert MTB/RIF) was much lower in EU/EEA countries (25.0%) than in the non-EU/EEA countries and

Fig. 1. Trend of TB notification rate per 100 000, WHO European Region, between 2013 and 2017



areas (58.3%). The three-year trend nevertheless shows a constant increase in usage of WRDs in the Region, from 21.6% in 2015 to 50.9% in 2017 (Table XV). Testing also varied considerably among countries and areas, from 0.4% to 93.2% in Bulgaria and the Republic of Moldova respectively. Bacteriological confirmation of new and relapse pulmonary cases was below 60% in five countries, underlining the need to strengthen diagnostics: Turkmenistan (46.6%), Uzbekistan (51.0%), the Russian Federation (51.9%), Hungary (53.4%) and Armenia (56.6%). In 34 countries, bacteriological confirmation of new and relapse pulmonary cases was 75% and above.

### Age and sex

There is wide variation in the distribution of age- and sex-specific notification rates across countries and areas (Table 9). Notification rates in eastern European countries are highest in young adults (25–44 years) and subsequently decrease, while in the countries of central Asia and in Turkey, the notification rates either increase with age or are relatively constant across adult age groups.

The rate of TB in children under 5 years in the group of 18 HPCs was lower than the notification rate among children aged 5–14, indicating that detection of TB remains especially challenging in young children.

In countries with at least 100 new and relapse TB cases, the proportion of TB cases notified in children (0–14 years) varied at country level from below 1% (Estonia, Belarus, Hungary and Turkmenistan) to 19.7% (Slovakia) of all new cases and relapses. The difference in proportions of childhood TB cases across the countries and areas may reflect differences in case-finding practice (such as contact tracing), population age structure and under-/overdiagnosis or reporting of childhood TB. The average percentage of new and relapse TB patients under 15 years in the Region is around 4.0%.

There were twice as many males as females reported among all incident TB cases, but large variation was observed for male predominance in the sex distribution of TB cases, ranging from almost even distribution to over three times greater in Armenia. In most countries and areas, gender differences in notification rates appear to be more significant among middle-aged and older adults. TB rates in males and females appear to be more similar in children and younger adults (0–14 and 15–24 years). This gender difference in TB case notification most likely reflects the overrepresentation of males in the various TB risk groups, notably homeless people, prisoners, seasonal migrant workers, people living with HIV, men who have sex with men and people who inject drugs.

### Drug resistance

Fifty countries in the Region reported on first-line DST results in 2017.

Overall, first-line DST coverage among bacteriologically confirmed pulmonary TB cases in the Region was 81.2%, with 35 countries achieving 85% or higher coverage. Coverage in five countries, however, was less than 50%:

Tajikistan (21.1%), Bosnia and Herzegovina (26.9%), Albania (37.7%), Kazakhstan (42.1%) and Serbia (45.6%). The percentage of confirmed MDR-TB cases among 80 329 new pulmonary TB cases tested for first-line DST in the Region was 18.1%, which is slightly higher than the rate observed in 2016 (17.6%) (Map 2, Fig. 2, Table 12 and Table V). While 16 countries reported no MDR-TB or less than 1% among new TB cases, the rate was over 20% in eight (Table 12). With the exception of four EU/EEA Member States, where MDR-TB among new cases varied from 7.7% in Latvia to 21.8% in Estonia, the prevalence was lower than 5% in all EU/EEA countries, with an average of 2.4% (Fig. 3).

Three non-EU/EEA countries had an MDR-TB prevalence ranging from 10–19% among new cases tested for first-line DST: Azerbaijan (12.8%), Armenia (12.5%) and Georgia (10.5%). Four had 20–29% MDR-TB among new cases: the Russian Federation (28.2%), the Republic of Moldova (26.6%), Kyrgyzstan (22.4%) and Ukraine (21.4%); and three had an MDR-TB prevalence over 35%: Tajikistan (83.3%), Belarus (37.2%) and Kazakhstan (32.9%). It should be noted, though, that less than 35% of new bacteriologically confirmed pulmonary TB cases had DST results available in Tajikistan and Kazakhstan, so the prevalence is overestimated in these countries.

The percentage of confirmed MDR-TB cases among 43 071 previously treated bacteriologically confirmed pulmonary TB cases whose isolates were tested for first-line DST was 47.9%, which is lower than the 2016 rate (51.9%) (Fig. 2, Table 12 and Table VI).

Ten countries had between 15% and 49% MDR-TB among previously treated TB cases tested for first-line DST. The rate was even higher in some HPCs: Tajikistan (86.4%), Belarus (65.6%), the Russian Federation (58.9%), the Republic of Moldova (54.4%), Lithuania (51.5%), Kyrgyzstan (50.2%) and Estonia (50.0%) (Fig. 4, Table 12). It should be noted, however, that only 10 cases in Estonia were reported in absolute numbers.

The rate of MDR-TB notification among new bacteriologically confirmed pulmonary TB cases with available DST results at regional level was 1.7 per 100 000 in 2017. This represents an average annual decrease of 2.3% between 2013 and 2017 (Table V).

Trends in the MDR percentage among new bacteriologically confirmed pulmonary TB cases and trends in the notification rate have differed significantly by country in recent years (Table V). The proportion of MDR among new pulmonary TB cases decreased slightly in the EU/EEA subregion over the last five years, from 2.6% to 2.4%, and the rate of notified MDR-TB cases remained stable at around 0.1 case per 100 000 population. The MDR percentage among new bacteriologically confirmed pulmonary TB cases in the non-EU/EEA countries and areas increased from 16.8% in 2013 to 18.1% in 2017 but remains stable, ranging within the 2% difference during the last five years.

Thirty-six countries reported on second-line DST data in 2017. The Russian Federation accounts for more than half of MDR-TB cases notified in the Region. The country has



been reporting second-line DST coverage since 2016, which substantially increases the total number of laboratory-confirmed MDR-TB cases and the number of cases tested for second-line drug susceptibility. Most countries have second-line DST coverage close to 100%.

Data on second-line DST were available for about 91.3% of all notified MDR-TB cases. Of the 33 530 MDR-TB cases subjected to second-line DST, 6759 (18.6%) were XDR-TB (Table 14).

XDR-TB cases among those with MDR-TB are rising in absolute numbers: 575 cases were notified among pulmonary MDR-TB cases in 2013 and 5591 in 2017 (Table VIII).

In EU/EEA countries, where 74% of MDR-TB cases were tested for second-line drugs, the prevalence of XDR among MDR cases was 24.3%.

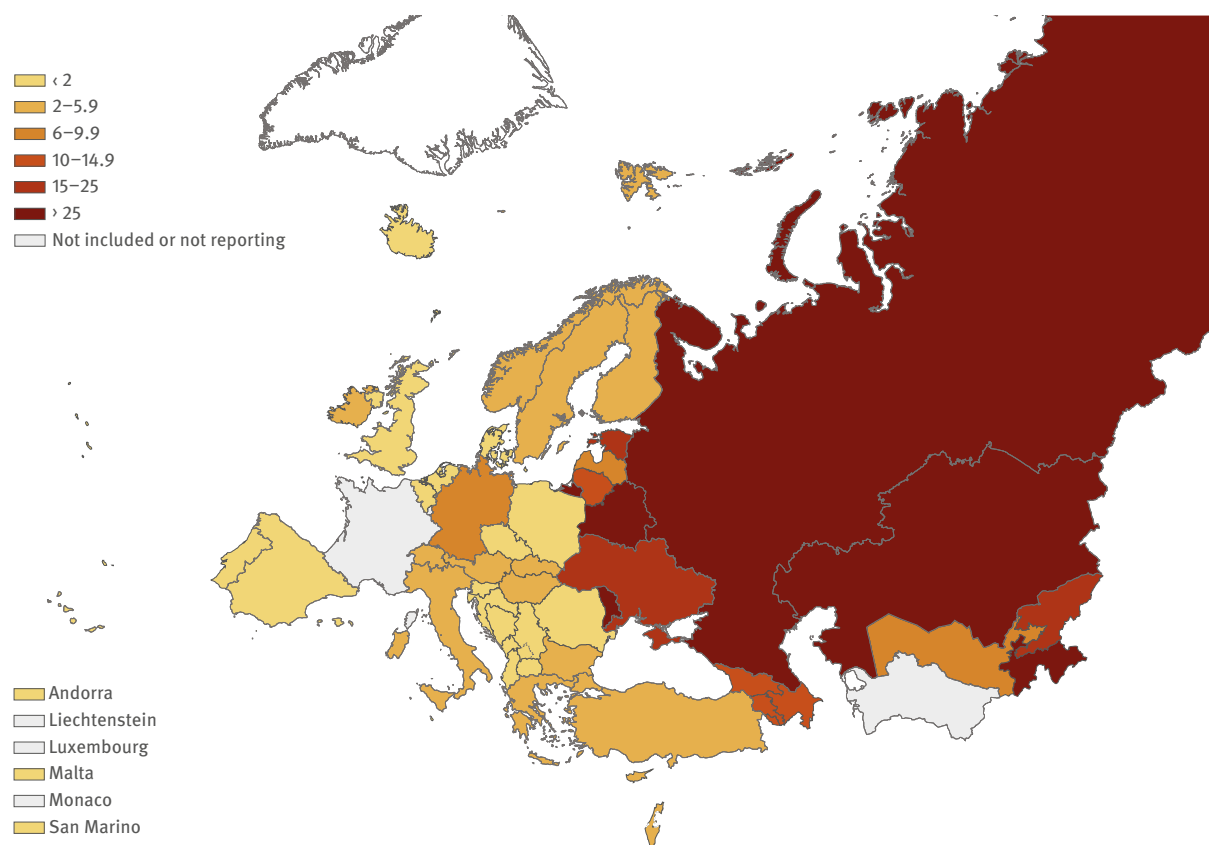
Among the countries reporting at least 30 MDR cases with second-line DST results, eight reported over 20% XDR prevalence among MDR-TB cases: Tajikistan (54.2%), Uzbekistan (52.8%), Belarus (48.3%), Latvia (39.1%), Lithuania (34.9%), Romania (30.8%), Estonia (26.5%) and Ukraine (21.7%) (Table 14). It should be noted, however, that Tajikistan and Uzbekistan reported low coverage of first-line DST, and the XDR-TB prevalence might be overestimated in these countries.

There is no clear trend of XDR-TB prevalence in countries with a long history of second-line drug DST surveillance among pulmonary MDR-TB cases (with data reported every year from 2013 to 2017). An alarming increase in XDR was observed in Belarus in 2016, reaching 45.9% of XDR prevalence, but this decreased to 31.5% in 2017 (Table VIII). An increasing trend in XDR-TB has been observed in Estonia, Latvia, Romania, Lithuania and Armenia, while XDR prevalence among MDR-TB cases remained stable in Georgia over the past five years at around 16–18% (Table 14).

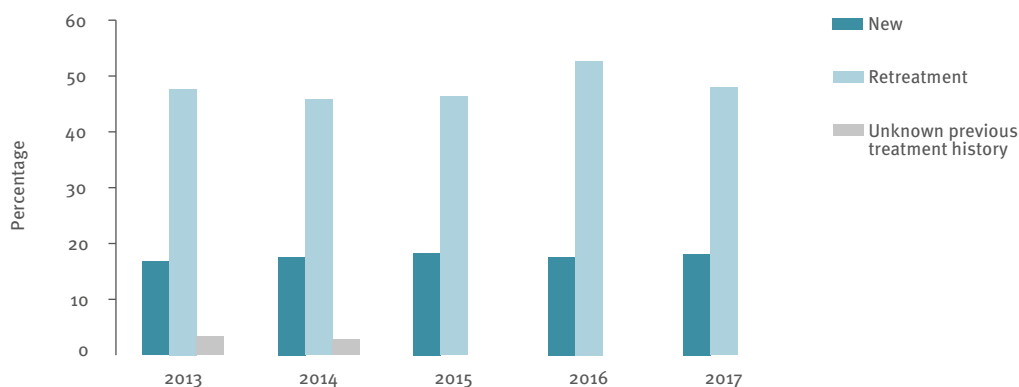
Of the 47 697 RR/MDR-TB patients notified, 43 852 (91.9%) were enrolled into MDR-TB treatment programmes. Six HPCs reported a gap of over 5% between the number of patients enrolled and the number diagnosed: Turkey (80.2%), the Russian Federation (83.2%), Kyrgyzstan (85.0%), Azerbaijan (85.2%), Georgia (93.2%) and Estonia (94.4%) (Table 15).

Access to XDR-TB treatment in 2016 at regional level was 88.5%, which is higher than the 76.6% treatment coverage reported in the previous year. This trend is influenced by the Russian Federation, as it includes more than half of XDR-TB patients detected in the Region.

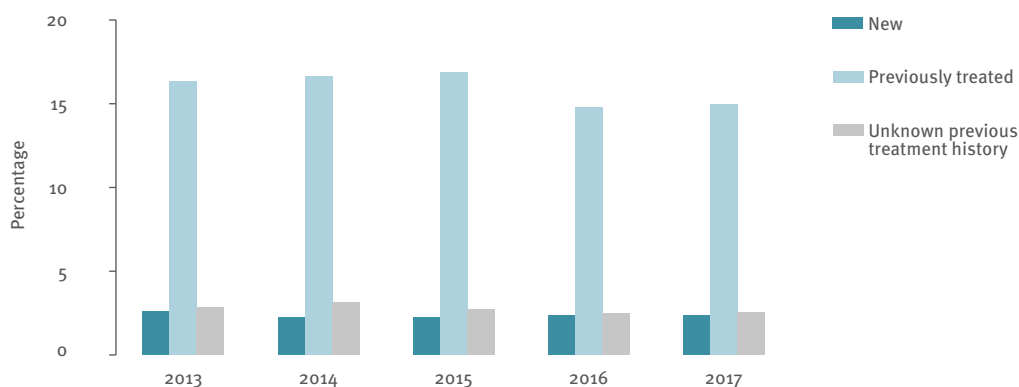
**Map 2. Percentage of notified TB cases with multidrug resistance among new laboratory confirmed pulmonary TB cases, European Region, 2017**



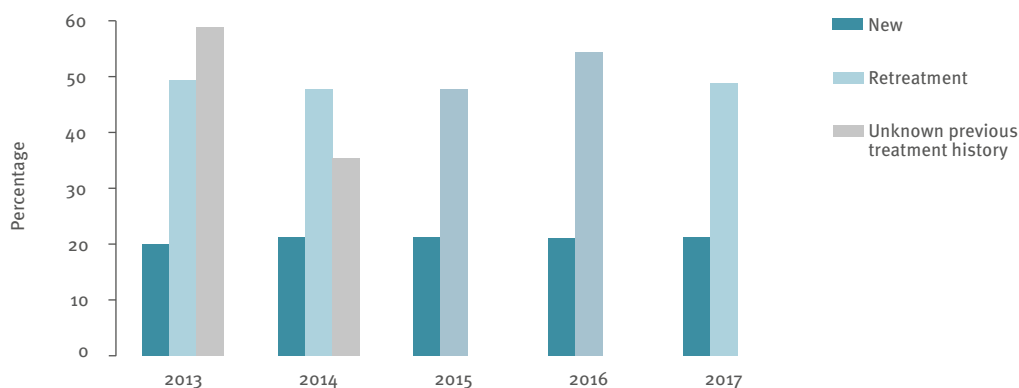
**Fig. 2.** Percentages of MDR among laboratory-confirmed pulmonary TB cases, European Region, 2013–2017



**Fig. 3.** Percentages of MDR among laboratory-confirmed pulmonary TB cases by previous treatment history, EU/EEA, 2013–2017



**Fig. 4.** Percentages of MDR among laboratory-confirmed pulmonary TB cases, 18 HPCs, 2013–2017



## TB/HIV coinfection

Forty-three countries provided surveillance data on TB/HIV coinfection (Table 16). Of the 215 482 new and relapse TB patients notified in the reporting countries, 196 912 were screened for HIV (91.4%). Ten HPCs achieved a testing level above 90%: Armenia, Azerbaijan, Belarus, Estonia, Georgia, the Republic of Moldova, the Russian Federation, Tajikistan, Ukraine and Uzbekistan. A total of 25 153 TB cases were detected with HIV-positive status, representing 12.8% of those tested versus 13.4% recorded in 2016.

Among countries reporting representative HIV testing (above 50% HIV testing coverage), four documented a significant overlap of the HIV and TB epidemics by exceeding 10% HIV prevalence among new and relapse TB cases (Table 16): Ukraine (22.4%), the Russian Federation (19.3%), Portugal (10.9%) and Latvia (10.8%). Eight countries with representative routine surveillance had 5–10% HIV prevalence among TB patients: the Republic of Moldova (8.3%), Estonia (8.2%), Belgium (8.0%), Armenia (7.9%), Spain (7.4%), Belarus (7.3%), Uzbekistan (5.6%) and Israel (5.1%).

Twenty-two countries in the Region provided information on ART enrolment among TB cases with HIV-positive status in 2017. Of 25 153 HIV-positive TB cases, 16 754 (66.6%) had received ART. This is somewhat higher than in 2015 (65.1%), but far below the WHO target of universal ART coverage. Eleven of the HPCs achieved coverage of over 75%: Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakhstan, Romania, Tajikistan, Turkey and Uzbekistan.

## Origin of cases

TB cases of foreign origin represent 7.9% of all TB cases notified Region-wide: 33.1% in EU/EEA countries, and only 1.9% in non-EU/EEA countries and areas (Table 10). TB cases of foreign origin represent a large majority in many countries: Malta (92.9%), Sweden (90.0%), Norway (88.5%), Israel (81.2%), Switzerland (79.8%), Luxembourg (78.1%), the Netherlands (74.5%) and Cyprus (71.7%).

## TB in prisons

Twenty-nine countries in the Region provided information on TB case detection and treatment in prisons during 2017 (Table 17). Overall, 10 843 (5.3%) of the new and relapse TB cases in the Region were reported from prisons, 10 446 (96.3%) of which were in the HPCs. The proportion of TB cases in prisons represented only 1.6% of the country total in EU/EEA countries; the proportion was 6.1% in non-EU/EEA countries and areas. The notification rate in prisons in the non-EU/EEA countries and areas was 956 new TB cases per 100 000 population, which is about six times higher than in the EU/EEA subregion (155 per 100 000). The overall notification rate for new TB cases in prisons in the WHO European Region was 752 per 100 000 population. The TB notification rate exceeded 1000 cases per 100 000 detainees in six countries: Azerbaijan, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation and Ukraine. The highest TB-related risks in prison (relative to incidence in the general population) are calculated

to be in Slovakia (52.3), Azerbaijan, Latvia and the Russian Federation (23 each).

## Treatment outcome

The treatment success rate among 198 384 new TB cases and relapses having started treatment in 2016 was 77.2% (Table 19). The average rate of patients cured and treated for the 18 HPCs was 78.5%. The treatment success rate was slightly lower in the EU/EEA countries than in non-EU/EEA countries and areas (75.6% versus 77.7%), both showing slight improvement compared to the previous year. Only 15 countries achieved an 85% treatment success rate in this treatment cohort. Another 13 were close to the target, with success rates of 80–85%. Five countries had treatment success rates below 60%, with a very high proportion of cases not evaluated.

A total of 15 978 (8.1%) cases were reported to have died in the same cohort, 4.6% to have been lost to follow-up and 3.9% to have had treatment that failed. These unfavourable outcomes were lower in the EU/EEA countries than in the rest of the Region, exemplified by the proportion of patients with failed treatment – 0.6% in the EU/EEA countries versus 4.8% in non-EU/EEA countries and areas (Table 19). Countries reporting fatal outcomes in excess of 10% were Croatia (15.5%), the Czech Republic (16.4%), Estonia (15.7%), Hungary (11.9%), Montenegro (12.6%), the Russian Federation (10.1%) and Slovenia (20.3%); the Russian Federation accounted for almost half of the deaths in the Region in absolute numbers.

The treatment success rate among the 7081 child TB cases in the 2016 cohort was 92.8% (Table 20). The treatment success rate in EU/EEA countries was somewhat lower compared to the non-EU/EEA countries and areas (88.2% versus 94.2%). Among child TB cases in the Region, 0.8% died, another 0.8% failed and 1.1% were lost to follow-up.

Of 7599 TB/HIV coinfecting patients who started treatment throughout the Region in 2016, only 4778 (62.9%) had a successful treatment outcome (Table 21). Treatment outcome data are available only for 29% of notified HIV/TB cases.

The treatment outcome was notified for the 2015 cohort of 46 193 laboratory-confirmed RR/MDR-TB cases reported by 47 countries (Table 22). The treatment success rate for the whole Region was 57.2%, which is higher than the 54.7% rate reported for the 2014 RR/MDR-TB treatment cohort and continues to show the annual trend of improvement. The treatment success rate for RR/MDR-TB patients was higher in non-EU/EEA countries and areas than in the EU/EEA countries (57.4% versus 47.3%). The countries that performed best were Belgium (100%), Austria and Sweden (both 92.3%). In the Region as a whole, 14.3% of RR/MDR-TB cases died, 12.0% failed and 10.2% were lost to follow-up.

## Conclusions for the WHO European Region

As in past years, the fastest annual decline in TB incidence in the world in 2017 was observed in the WHO European

Region (5.2%), but it is less than the projected acceleration of the decline needed to reach the End TB Strategy milestone by 2025.

There were an estimated 24 000 TB deaths among people who were HIV-negative in 2017, with considerable variation across the Region, and 83% of TB deaths were attributed to the 18 HPCs. Twelve per cent of incident TB cases were estimated to be coinfecting with HIV, marking the first year of halted growth after the unprecedented increase from 3% to 12% during 2007–2016. Two countries, the Russian Federation and Ukraine, account for almost 80% of the estimated TB/HIV coinfecting patients in the Region.

Eighty-eight per cent of the estimated new and relapse cases were notified in the Region in 2017, substantially higher than the global detection rate of 64%.

The Region faces the issue of the high burden of RR/MDR-TB. Nine of the 30 countries with the highest RR/MDR-TB burden in the world are in the WHO European Region (Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Tajikistan, Ukraine and Uzbekistan). Around 110 000 people in the Region are estimated to become ill with RR/MDR-TB each year, and it is of the utmost importance to have capacity at country level to rapidly detect resistant TB. Laboratory confirmation among new and relapse pulmonary TB cases increased from 57% in 2013 to 65% in 2017, mainly due to the growing uptake of the WRD. The three-year trend shows increased use of rapid diagnostics in the Region; 51% of incident TB cases were tested using this platform in 2017, compared to 22% in 2015.

Overall, most countries achieved 85% or higher coverage of first-line DST among bacteriologically confirmed pulmonary TB cases, but countries should aim to have universal coverage. Ninety-one per cent of all notified MDR-TB cases in the Region had second-line DST available, with most countries reporting coverage close to 100%.

TB is a major cause of death among people living with HIV, so rapid detection and appropriate treatment are vital. In 2017, 76% of an estimated 34 000 HIV patients coinfecting with TB were detected, and 65% of them were offered ART. Only about 29% of coinfecting patients notified in 2016 had TB treatment outcomes available in 2017. This underlines the need to strengthen collaboration between TB and HIV programmes and surveillance of coinfection in the Region.

Most of the countries have universal access to TB and MDR-TB treatment. Ninety-two per cent of RR/MDR-TB cases and 89% of XDR-TB cases notified in 2017 were enrolled into the respective treatment programmes. The regional average is heavily influenced by the Russian Federation, as it includes more than half of all MDR-TB and XDR-TB patients detected in the Region.

Comparing TB treatment outcomes collected in 2016 to 2018, a slow but sustainable increase is documented in both incident TB and RR/MDR-TB cohorts, from 75.8% to 77.2% and 48.7% to 57.2% respectively.

## European Union and European Economic Area countries

### Data completeness

TB notification data for 2017 were reported by all 31 countries. The reporting of non-mandatory variables in 2017 was complete or near-complete for age, gender, TB site and variables defining the origin of a case (Annex 3). Previous treatment history was available for 82.1% of cases, which was higher than in the 2018 report (76.8%) but lower than that reported in the reports published in 2015–2017 (89.6%, 87.7% and 84.3% respectively). The over 80% completeness for this variable also masked substantial differences across countries: for example, previous treatment history was not available from Luxembourg and only available for 6.3% of cases from Germany.

The reporting completeness for culture results (82.5%) was similar to that reported for 2016 data (82.2%), with only five countries remaining below 75.0% (France, Greece, Ireland, Portugal and the United Kingdom). Reporting completeness for microscopy (82.9%) was higher than that reported for 2016 data (72.5%) in contrast to the decline reported in the previous three years. For 2017, drug-susceptibility reporting completeness was 72.5% for the first-line TB drugs isoniazid and rifampicin. Notably, no adequate data on DST were available from France and Italy. Second-line DST reporting completeness was 100% for countries that reported at least one MDR-TB case. Four countries (Croatia, Iceland, Liechtenstein and Malta) reported no MDR-TB cases (Table 13).

The number of countries reporting HIV status increased from 20 in 2016 to 23. HIV status was available for 46.2% of all cases reported in 2017, which is the highest proportion reported in the last five years. As in the previous annual report, Austria, Finland, France, Germany, Italy, Liechtenstein, Poland and Sweden did not report HIV status. Furthermore, HIV status reporting completeness was less than 10% for Croatia, Hungary and Luxembourg.

In 2017, treatment outcome at 12 months, 24 months and 36 months was available for 82.5% of all reported cases, 98.1% of MDR-TB and 100% of XDR-TB cases respectively. Treatment outcome was not reported by Greece, Italy, Luxembourg or Malta, and was not reported for MDR-TB cases by Spain.

### Time and place

In 2017, 55 337 cases of TB were reported in the 31 EU/EEA countries (Table 3). As in the previous five years, three countries (Poland, Romania and the United Kingdom) accounted for nearly 45% of all reported cases, with Romania alone accounting for 23.5% of all TB cases reported in 2017.

The EU/EEA notification rate in 2017 was 10.7 per 100 000 population, continuing the downward trend observed since the launch of European enhanced TB surveillance in 1996

(Fig. 5). During the period 2013–2017, the average annual decline in the notification rate was 4.5%.

As reported for previous years, country-specific notification rates differed considerably in 2017, ranging from 2.6 in Liechtenstein to 66.2 per 100 000 in Romania. Rates were below 10 per 100 000 in 24 countries and below 20 per 100 000 in 27 countries. The highest notification rates in the EU/EEA were reported from Bulgaria, Estonia, Latvia, Lithuania, Poland, Portugal and Romania (Table 3).

Notification rates in the majority of countries have fallen since 2013 (Table 3). The downward trend was particularly pronounced in Estonia, Latvia, Norway and Slovakia, where the average annual rate of decrease exceeded 10%. Two of these countries (Estonia and Latvia) are WHO HPCs and EU/EEA Member States.

### Previous treatment, laboratory confirmation and TB site

The distribution of cases by previous treatment history was similar in 2017 to that reported in previous years: 39 903 (72.1%) of 55 337 TB cases reported in 2017 were newly diagnosed, 5556 (10.0%) had been previously treated for TB and 9878 (17.9%) had an unknown previous treatment status (Table 5). The Member States with the lowest proportions of new cases had the highest proportions of cases with unknown previous treatment status. The proportion of previously treated cases was above 20% in one country (Romania) and more than 10% in another nine: Bulgaria, Estonia, Greece, Hungary, Iceland, Latvia, Lithuania, Poland and Slovakia.

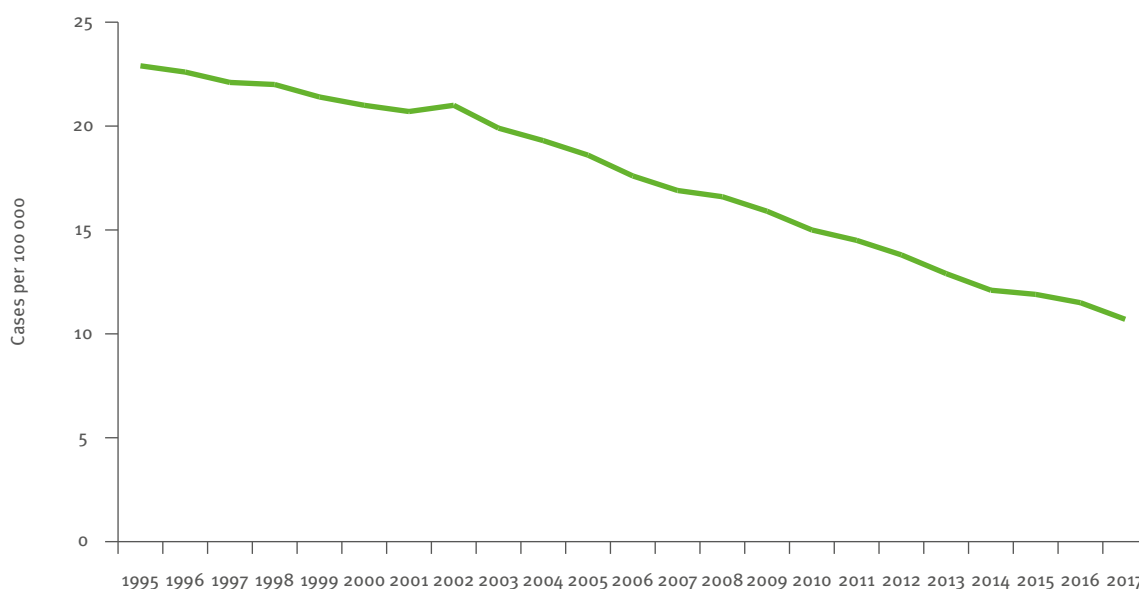
Laboratory confirmation was reported for 37 700 (68.1%) of the 55 337 TB cases reported in 2017 (Table 8). Country-specific proportions of laboratory-confirmed cases ranged from 47.6% in Bulgaria to 97.3% in Slovenia and 100% in Liechtenstein. Of the five HPCs, the three Baltic States (Estonia, Latvia and Lithuania) had proportions of confirmed cases above 80%. The increasing proportion of laboratory-confirmed TB cases reported in the previous five years (61.9% in 2012 to 71.0% in 2016) did not continue in 2017.

Of all 55 337 TB cases reported in 2017, 38 088 (68.8%) were diagnosed with pulmonary TB, 12 483 (22.6%) with extrapulmonary TB, 4323 (7.8%) with a combination of both and 443 (0.8%) had no TB site reported (Table 6). The proportion of extrapulmonary TB was highest in the Netherlands (41.7%), Norway (39.5%) and the United Kingdom (45.0%), and lowest in Hungary (3.9%) and Liechtenstein (0%).

Of 40 704 new and relapse pulmonary TB cases reported in 2017, 32 725 (80.4%) were confirmed by culture, smear and/or nucleic acid amplification test (Table 7). Hungary reported the highest proportion of new and relapse pulmonary TB cases diagnosed only clinically (46.6%), followed by Bulgaria (34.0%).

According to the EU case definition, 37 700 (68.1%) of 55 337 TB cases reported in 2017 would be classified as confirmed, 4466 (8.1%) as probable and 13 171 (23.8%) as possible (Table 8). Five countries reported less than one tenth of their TB cases as possible cases (that is, only clinically diagnosed). When analysing all reported TB cases for the percentage of clinically diagnosed cases, Hungary

Fig. 5. TB notifications per 100 000 population by year of reporting, EU/EEA, 1995–2017



Source: ECDC.

remained the country with the highest proportion (47.2%), followed by Bulgaria (43.9%). It is unclear if the high proportion of only clinically diagnosed cases reflects a potential risk that TB is being overdiagnosed in these countries, or if it is related to underreporting of laboratory results to the national surveillance systems.

### Age and sex

Of 52 836 new TB cases and relapses reported in 2017, 33 664 (63.7%) were aged between 25 and 64 years (Table 9). The highest notification rate was observed in the age group 25–44 years (12.9 per 100 000). Overall, adults over 64 years accounted for less than 20% of all cases, but more than one third of all cases reported by Croatia, Finland and Slovenia were in this age group.

Children under 15 years accounted for 2340 (4.4%) of 52 836 new TB cases and relapses reported in 2017 and had a lower notification rate than the adult age groups (Table 9). The notification rate for all TB cases in children under 15 years of age was 2.9 per 100 000 (Table III). Three countries (Bulgaria, Lithuania and Romania) reported notification rates of more than 10 per 100 000 children under 15 years. More specifically, the highest rates of new and relapse TB cases among 0–4-year-olds were noted in Bulgaria and Romania, and the highest rates for 5–14-year-olds were reported from Bulgaria, Lithuania and Romania.

In 2017, the male-to-female ratio in new TB cases and relapses was 1.9, higher than the ratio reported in 2016 (Table 9). More male than female new and relapse TB cases were reported by all EU/EEA Member States but one (Cyprus). For children under 15 years, the male-to-female ratio among new and relapsed cases was 1.1.

### Origin of cases

Of the 55 337 TB cases notified in 2017, 35 446 (64.1%) were born in, or were citizens of, the reporting country (referred to as “native”), 18 299 (33.1%) were of foreign origin and 1592 (2.9%) were of unknown origin (Table 10). From countries with TB notification rates higher than 10 per 100 000 population, 20% or less were reported as being of foreign origin. The annual number and proportion of native TB cases has declined since 2013 (from 45 162 to 35 446, and from 68.7% to 64.1% respectively) (Table IV). The proportion of TB cases of foreign origin increased over the same period from 27.1% in 2013 to 33.1% in 2016 and 2017, while the proportion of cases of unknown origin decreased. Of the 18 299 cases of foreign origin in 2017, 10 636 (58.1%) were reported by France, Germany and the United Kingdom. Country-specific proportions of foreign-origin TB cases ranged from below 1% in Bulgaria, Croatia, Liechtenstein and Romania to above 80% in Malta, Norway and Sweden.

### Drug resistance

Annex 5 displays participation and performance in an EQA scheme for DST by Member State.

Of 32 266 laboratory-confirmed TB cases notified in 2017, 27 339 (84.7%) had isoniazid and rifampicin susceptibility

testing results reported (Table 13). Resistance to at least one anti-TB drug was reported for 2985 (10.9%) of the cases with results for at least isoniazid and rifampicin susceptibility, and for 20.4–39.4% of cases with results in Estonia, Greece, Latvia and Lithuania. Overall, MDR-TB was reported for 1041 (3.8%) of 27 339 cases with the relevant DST results, with the highest proportion reported in Estonia, Latvia and Lithuania (10.6–25.4%). After remaining at 0.3 per 100 000 population from 2013 to 2016, the rate of notified MDR-TB cases decreased to 0.2 in 2017 (Table VII).

Overall, XDR-TB was reported for 187 (24.3%) of 770 MDR-TB cases with results for second-line DST (Table 14). Latvia, Lithuania and Romania reported 80.2% of all reported XDR-TB cases. The proportion of XDR-TB cases among pulmonary MDR-TB cases with results for second-line DST increased from 18.6% in 2013 to 24.6% in 2017 (Table VIII). During that period, Lithuania and Romania reported more than 45% of the pulmonary XDR-TB cases annually.

Of 19 476 new confirmed pulmonary TB cases with DST results, 459 (2.4%) were resistant to isoniazid and rifampicin (Table 12). In contrast, 501 (15.0%) of 3350 previously treated confirmed pulmonary TB cases with DST results were resistant to isoniazid and rifampicin. Compared with new pulmonary cases, previously treated pulmonary TB cases had a six times higher risk of being reported as resistant to isoniazid and rifampicin.

### HIV coinfection

HIV status was reported for 25 583 (76.0%) of 33 661 TB cases reported from the 23 countries that reported HIV status of TB cases (Table 16a). Of the 25 583 cases with known HIV status, 1006 (3.9%) were reported as HIV positive. The proportion of coinfecting cases among countries with at least 50% reporting completeness for HIV status was highest in Estonia, Latvia and Portugal, at 8.6%, 11.0% and 11.4% respectively. Data reported over the last five years show a decreasing proportion of HIV coinfecting TB cases (Table IX).

### TB in prisons

For 2017, 15 EU/EEA countries reported 570 new and relapse TB cases in prisons, resulting in a notification rate of 155 per 100 000 inmates and a relative risk of 11.4 compared to the general population in the same countries (Table 17). TB cases in prisons accounted for 1.6% of all new and relapse cases notified in the 15 reporting EU/EEA countries, but this proportion was above 4% in the Czech Republic, Lithuania and Slovakia.

### Treatment outcome

Of all 54 612 TB cases notified in 2016 with a treatment outcome reported in 2017, 38 614 (70.7%) were treated successfully, 3997 (7.3%) died, 457 (0.8%) experienced treatment failure, 2518 (4.6%) were lost to follow-up, 1965 (3.6%) were still on treatment in 2017 and 7061 (12.9%) were not evaluated (Table 18). Greece, Italy, Luxembourg and Malta did not report treatment outcome. Among the 41 486 TB cases notified in 2016 and classified as new

and relapse cases, including those with unknown previous treatment history and excluding those that were started on second-line treatment, 31 350 (75.6%) were treated successfully (Table 19). In countries where at least 75% of these new confirmed TB cases and relapses had a known outcome, treatment success ranged from 58.4% in Croatia to 100.0% in Liechtenstein. The overall proportion of successfully treated cases among these new TB cases and relapses decreased from 77.2% in cases notified in 2012 to 75.6% in 2016 (Table X). In four countries (Croatia, the Czech Republic, Estonia and Slovenia), over 15.0% of the new and relapse cases notified in 2016 died, including those with unknown previous treatment history and excluding those started on second-line treatment. In contrast, the proportion was less than 10.0% in 20 of the 25 countries that reported treatment outcome for this cohort.

Of 1217 MDR-TB cases notified in 2015 with a treatment outcome reported in 2017, 545 (44.8%) were treated successfully, 197 (16.2%) died, 188 (15.4%) experienced treatment failure, 149 (12.2%) were lost to follow-up, 55 (4.5%) were still on treatment in 2017 and 83 (6.8%) were not evaluated (Table 23). Apart from the countries that did not report treatment outcome data or data on DST, notably Cyprus, Iceland, Liechtenstein, Luxembourg and Slovenia did not report any MDR-TB cases for 2015. Overall, the 24-month treatment success rate for RR/MDR-TB remains low, although it has improved (from 40.7% for cases reported in 2011 to 47.3% for cases reported in 2015) (Table XII).

Thirteen countries reported 170 XDR-TB cases for 2014 and a treatment outcome for these cases in 2017: 47 (27.6%) were treated successfully, 44 (25.9%) died, 43 (25.3%) experienced treatment failure, 18 (10.6%) were lost to follow-up, and 18 (10.6%) were not evaluated (Table 25). Overall, the 36-month XDR-TB treatment success rate remains low; variations over time should be interpreted with caution due to the small number of cases (Table XIV).

Of 717 HIV-positive TB cases notified in 2016 who were not started on second-line treatment and had a treatment outcome reported in 2017, 452 (63.0%) were reported as successfully treated, 98 (13.7%) died, four (0.6%) experienced treatment failure, 53 (7.4%) were lost to follow-up, 83 (11.6%) were still on treatment in 2017 and 27 (3.8%) were not evaluated (Table 21).

### WHO disease burden estimates

According to WHO, the estimated TB incidence in the EU/EEA overall (excluding Liechtenstein) was 11.9 per 100 000 population in 2017. The incidence in 20 of the 30 countries with estimates was less than 10.0 per 100 000 population and was estimated to be less than 20.0 per 100 000 population in 25 countries (Table II). The overall number of estimated TB deaths, excluding HIV deaths in people who were HIV positive, was 4000 for the EU/EEA in 2017, a decrease compared to the 4200 estimated for 2016 and the 6700 estimated for 2008 (Table I).

### Conclusions for the European Union/European Economic Area

In 2017, all EU/EEA countries reported TB notification data. The overall TB notification rate continued the decline observed since 2002 and reached 10.7 per 100 000 population. As in previous years, a few countries reported large numbers of cases, including Romania, which accounted for 23.5% of all reported cases in 2017.

Overall, the decreasing notification rates observed in most countries are reassuring, but when the situation is evaluated based on the aim to reach an 80% reduction in the TB incidence rate in 2030 compared to 2015 (a United Nations Sustainable Development Goal 3 target), the challenge ahead becomes evident. The target at EU/EEA level is a notification rate of 2.4 per 100 000 (80% reduction of 2015 TB notification rate of 11.9 per 100 000). Though the EU/EEA TB notification rate has declined since 2015, so far it has only reached 10.7 per 100 000. Furthermore, if the mean annual change in rate (2013–2017) in low-incidence EU/EEA countries continues at the current pace, WHO calculations (2) suggest the WHO target of TB elimination by 2050 in European low-incidence countries will not be met by approximately four fifths of the countries currently in this group.

In many low-incidence countries, a large proportion of TB cases is of foreign origin. Notably, more than half of all TB cases reported in two thirds of the low-incidence EU/EEA countries were of foreign origin. In the EU/EEA overall, the proportion of cases of foreign origin remained around one third of all TB cases. A recently published ECDC public health guidance document concluded that screening for active TB or latent TB infection among newly arrived migrants from high-incidence countries is likely to be both effective and cost-effective for TB disease prevention (3). Nonetheless, the fact that overall the majority of cases notified in the EU/EEA were native cases should not be overlooked.

Data on HIV coinfection remained incomplete in the EU/EEA. Although the number of countries reporting HIV status was higher than in 2016, HIV status was reported for less than half of all reported TB cases, limiting the conclusions that can be drawn. Since 2013, the proportion of HIV coinfecting TB cases has been decreasing, and was 3.9% in 2017 for the EU/EEA overall.

Data on TB in prisons remain even scarcer for the EU/EEA than data on HIV status. Only 15 countries provided such data for 2017. Although the proportion of inmates among all new and relapse TB cases in these countries was low, the data indicate that inmates face an 11.4 times higher risk than the general population of being reported as a TB case. ECDC and European Monitoring Centre for Drugs and Drug Addiction public health guidance concluded in 2018 that despite limited evidence, but given current TB knowledge and the characteristics of prison settings, it is advisable to offer universal testing for active TB at prison entry so that treatment can be initiated and transmission prevented (4).

A decline in the overall MDR-TB notification rate among cases with relevant DST results was seen in the EU/EEA in 2017, and the number of XDR-TB cases was low compared to the total number of reported TB cases. Given the high number of drug-resistant TB cases in the European Region HPCs bordering the EU/EEA, however, countries need to remain vigilant and prepared to diagnose and treat drug-resistant TB.

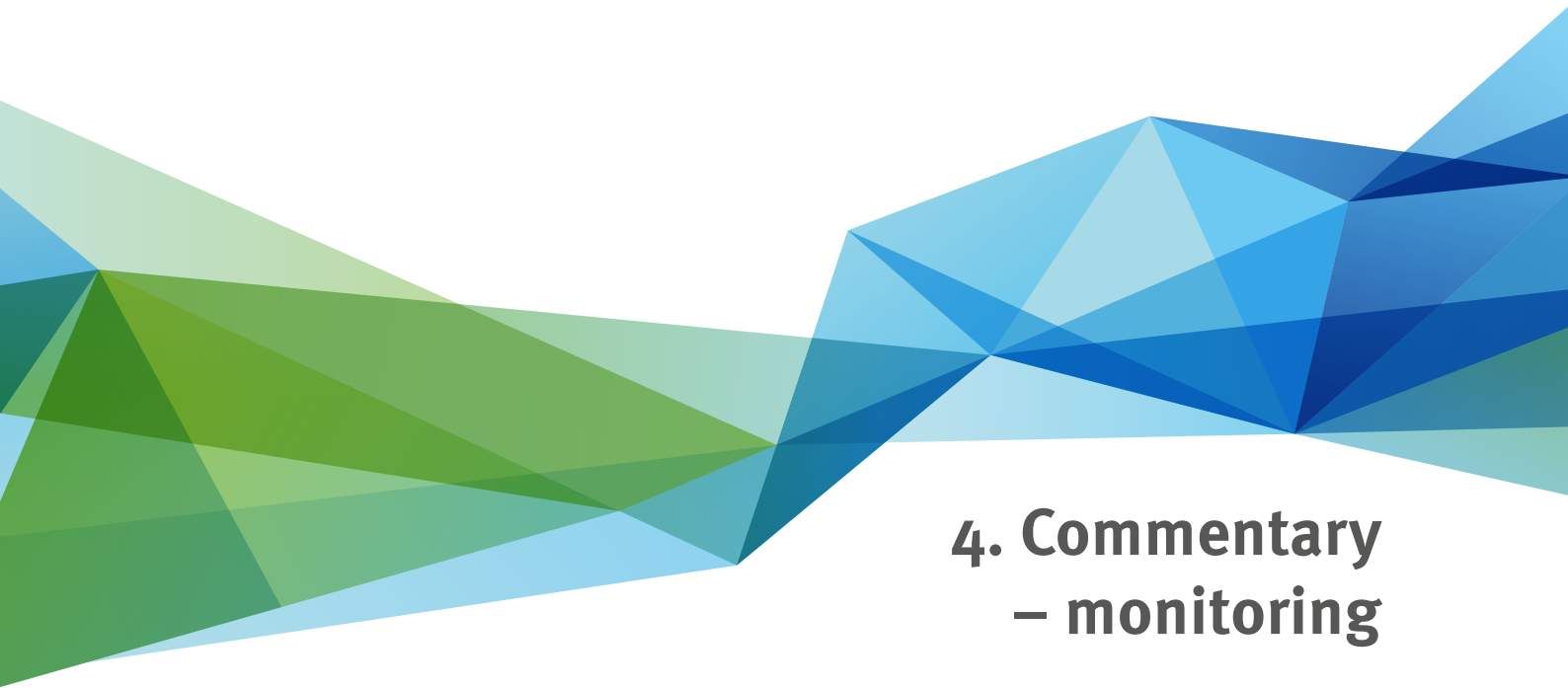
The surveillance data indicate that treatment success rates after 12 months are considerably below the WHO target of 85% (5). Moreover, although the success rate for MDR-TB has improved, the treatment success rate after 24 months is low, as is the treatment success rate after 36 months for XDR-TB.

Lastly, ECDC notes that at a United Nations high-level meeting on 26 September 2018, the EU/EEA countries reaffirmed their commitment to ending the epidemic in all countries (6). The TB situation reflected in this report indicates that the countries face several challenges in reaching this goal and need to intensify their public health measures against TB. As previously, ECDC remains committed to supporting the EU/EEA countries in these efforts.

## References

1. Global tuberculosis report 2018. Geneva: World Health Organization; 2017:37 ([http://www.who.int/tb/publications/global\\_report/en/](http://www.who.int/tb/publications/global_report/en/)).
2. Towards TB elimination: an action framework for low-incidence countries. Geneva: World Health Organization 2014 ([http://apps.who.int/iris/bitstream/handle/10665/132231/9789241507707\\_eng.pdf?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/132231/9789241507707_eng.pdf?sequence=1)).
3. Public health guidance on screening and vaccination for infectious diseases in newly arrived migrants within the EU/EEA. Stockholm: ECDC; 2018 (<https://www.ecdc.europa.eu/en/news-events/ecdc-issues-migrant-screening-and-vaccination-guidance>).
4. Public health guidance on active case finding of communicable diseases in prison settings. Stockholm and Lisbon: ECDC and EMCDDA; 2018 (<https://ecdc.europa.eu/en/publications-data/public-health-guidance-active-case-finding-communicable-diseases-prison-settings>).
5. Roadmap to implement the tuberculosis action plan for the WHO European Region 2016–2020. Towards ending tuberculosis and multidrug-resistant tuberculosis. Copenhagen: WHO Regional Office for Europe; 2016 (<http://www.euro.who.int/en/publications/abstracts/roadmap-to-implement-the-tuberculosis-action-plan-for-the-who-european-region-2016-2020.-towards-ending-tuberculosis-and-multidrug-resistant-tuberculosis-2016>).
6. Resolution adopted by the General Assembly on 10 October 2018. Political declaration of the high-level meeting of the General Assembly on the fight against tuberculosis. New York (NY): United Nations; 2018 (A/RES/73/3; [http://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/RES/73/3](http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/73/3)).





## **4. Commentary – monitoring**

## 4. Commentary – monitoring

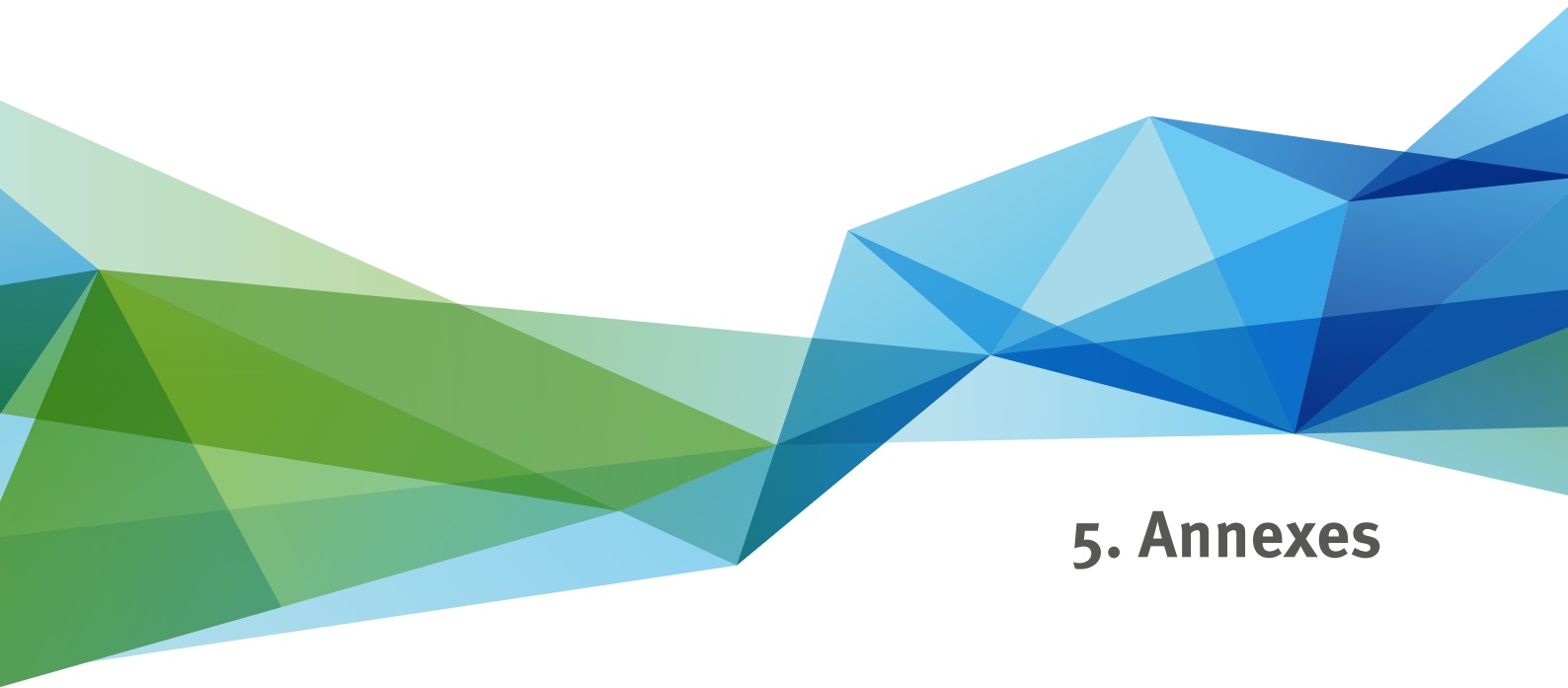
To address the challenges to TB and M/XDR-TB prevention and care, the WHO Regional Office for Europe, working in close consultation with representatives from the countries and areas, experts and communities, has developed the *Tuberculosis action plan for the WHO European Region 2016–2020* (1). This action plan is based on lessons learned from implementing the seven areas of intervention in the *Consolidated action plan to prevent and combat multidrug- and extensively drug-resistant tuberculosis in the WHO European Region 2011–2015* (2) and is in line with the global End TB Strategy and other health policy guidance, such as the European policy for health and well-being, Health 2020 (3).

The *Tuberculosis action plan for the WHO European Region 2016–2020* is supported by a monitoring and evaluation framework to monitor progress towards defined targets. The framework consists of 26 indicators that enable performance monitoring in the action plan's areas of intervention and follow on from the Berlin Declaration on Tuberculosis of 2007 (4). Nine are core indicators for monitoring and reporting to the WHO Regional Committee for Europe. In addition, the selection of indicators was harmonized with the End TB Strategy's recommended top-10 global indicators. The status of the core indicators, which is analysed on an annual basis, is included in the surveillance report every second year. The next update will be presented in the TB surveillance and monitoring in Europe 2020 report.

At the time of publication of this report, the World Health Organization was developing a multisectoral accountability framework to document progress on implementing the United Nations political declaration on TB (5) as agreed in World Health Assembly resolution WHA73.3 of 10 October 2018. WHO European Region Member States will be supported later on to adapt it to their settings.

### References

1. Tuberculosis action plan for the WHO European Region 2016–2020. Copenhagen: WHO Regional Office for Europe; 2016 (EUR/RC65/17 Rev.1; <http://www.euro.who.int/en/about-us/governance/regional-committee-for-europe/past-sessions/65th-session/documentation/working-documents/eurrc6517-rev.1-tuberculosis-action-plan-for-the-who-european-region-20162020>).
2. Consolidated action plan to prevent and combat multi-drug- and extensively drug-resistant tuberculosis in the WHO European Region 2011–2015. Copenhagen: WHO Regional Office for Europe; 2011 (EUR/RC61/15 + EUR/RC61/Conf.Doc./8; <http://www.euro.who.int/en/about-us/governance/regional-committee-for-europe/past-sessions/65th-session/documentation/working-documents/eurrc6517-rev.1-tuberculosis-action-plan-for-the-who-european-region-20162020>).
3. Health 2020: a European policy framework supporting action across government and society for health and well-being. Copenhagen: WHO Regional Office for Europe; 2012 (<http://www.euro.who.int/en/publications/abstracts/health-2020-a-european-policy-framework-supporting-action-across-government-and-society-for-health-and-well-being>).
4. The Berlin Declaration on Tuberculosis. Copenhagen: WHO Regional Office for Europe; 2007 (EUR/07/5061622/5; <http://www.euro.who.int/en/publications/policy-documents/berlin-declaration-on-tuberculosis>).
5. Resolution adopted by the General Assembly on 10 October 2018. 73/3. Political declaration of the high-level meeting of the General Assembly on the fight against tuberculosis. New York (NY): United Nations; 2018 (A/RES/73/3; <https://undocs.org/en/A/RES/73/3>).



## **5. Annexes**

## Annex 1. Tuberculosis surveillance system overview, EU/EEA, 2017

Country	Data source	Legal character	Comprehensiveness	Type	National coverage	Data available	
						EuroTB aggregated data	TESSy <sup>a</sup> case-based data <sup>b</sup>
Austria	AT-TUBERKULOSEGESETZ	Cp	Co	C	Y	–	1995–2017
Belgium	BE-TUBERCULOSIS	Cp	Co	C	Y	–	1995–2017
Bulgaria	BG-MOH	Cp	Co	C	Y	1995–2006	2007–2017
Croatia <sup>c</sup>	HR-CNIPH	Cp	Co	C	Y	1995–2007	2012–2017
Cyprus	CY-NOTIFIED_DISEASES	Cp	Co	C	Y	1995–2001	2002–2017
Czech Republic	CZ-TUBERCULOSIS	Cp	Co	C	Y	–	1995–2017
Denmark	DK-MIS	Cp	Co	C	Y	–	1995–2017
Estonia	EE-TBC	Cp	Co	C	Y	–	1995–2017
Finland	FI-NIDR	Cp	Co	C	Y	–	1995–2017
France	FR-MANDATORY_INFECTIOUS_DISEASES	Cp	Co	C	Y	–	1995–2017
Germany	DE-SURVNET@RKI-7.1/6	Cp	Co	C	Y	1995–2000	2001–2017
Greece	EL-NOTIFIABLE_DISEASES	Cp	Co	C	Y	1995–2001	2002–2017
Hungary	HU-TUBERCULOSIS	Cp	Co	C	Y	1995–1998	1999–2017
Iceland	IS-TUBERCULOSIS	Cp	Co	C	Y	–	1995–2017
Ireland	IE-CIDR	Cp	Co	C	Y	1995–1997	1998–2017
Italy	IT-NRS	Cp	Co	C	Y	–	1995–2017
Latvia	LV-TB	Cp	Co	C	Y	1995–2000	2001–2017
Liechtenstein	CH-SFOPH-LI	Cp	Co	C	Y	–	1995–2017
Lithuania	LT-TB_REGISTER	Cp	Co	C	Y	1995–2002	2003–2017
Luxembourg	LU-SYSTEM1	Cp	Co	C	Y	–	1995–2017
Malta	MT-DISEASE_SURVEILLANCE	Cp	Co	C	Y	–	1995–2017
Netherlands	NL-NTR	Cp	Co	C	Y	–	1995–2017
Norway	NO-MSIS_A	Cp	Co	C	Y	–	1995–2017
Poland	PL_CR	Cp	Co	C	Y	1995–1999	2000–2017
Portugal	PT-TUBERCULOSIS	Cp	Co	C	Y	1995–1999	2000–2017
Romania	RO-NTBSy	Cp	Co	C	Y	–	1995–2017
Slovakia	SK-NRT	Cp	Co	C	Y	1995	1996–2017
Slovenia	SI-TUBERCULOSIS	Cp	Co	C	Y	–	1995–2017
Spain	ES-STATUTORY_DISEASES	Cp	Co	C	Y	1995–2006	2007–2017
Sweden	SE-SweTbReg	Cp	Co	C	Y	–	1995–2017
United Kingdom	UK-TUBERCULOSIS	Cp	Co	C	Y	1995–1997	1998–2017

Cp = compulsory reporting.

Co = comprehensive.

C = case-based.

Y = yes.

<sup>a</sup> TESSy = the European Surveillance System.

<sup>b</sup> For some years data from France, Spain and Italy related to drug-susceptibility testing have been collected in aggregated format from the WHO TB Monitoring and Evaluation database (TME).

<sup>c</sup> Data reported since 2012 to TESSy, historical data extracted from WHO TB Monitoring and Evaluation database (TME).

Annex 2. List of variables for 2017 tuberculosis data collection<sup>a</sup>

List	Description
<b>Common set of variables</b>	
1 RecordId	Unique identifier for each record generated by the national surveillance system
2 RecordType	Structure and format of the data
3 RecordTypeVersion	Indicates which version the sender uses when generating the data for upload
4 Subject	Disease to report
5 Status	Status of reporting NEW/UPDATE or DELETE (inactivate)
6 DataSource	The data source (surveillance system) that the record originates from
7 ReportingCountry	The country reporting the record
8 PlaceOfNotification	Place of the first notification of the case to a regional authority
9 PlaceOfResidence	Place of residence of patient at the time of disease onset
10 Age	Age of patient in years as reported in the national system
11 Gender	Gender of the reported case
12 DateOfDiagnosis	First date of clinical or lab diagnosis
13 DateOfNotification	Date when the case is first reported to public health authorities
14 DateUsedForStatistics	The reference date used for standard reports (usually one of the above)
<b>Disease-specific variables</b>	
15 BornReportingCountry	The patient was born in the country of report
16 CountryOfBirth	Country of birth of patient
17 CountryOfNationality	Country of nationality of patient
18 DateOfEntryToCountry	Date of entry to country – for TB cases not born in the reporting country
19 NationalityReportingCountry	Origin of the patient (based on citizenship)
20 MajorSiteOfTB	Major site of the disease
21 MinorSiteOfTB	Minor site of the disease
22 PrevDiagnosis	Previous diagnosis of tuberculosis
23 PrevDiagnosisYear	Year of previous diagnosis
24 PrevTreatment	Previous anti-TB drug treatment (at least one month of drug combination)
25 PrevTreatmentCompletion	Completion of the previous anti-TB drug treatment
26 DiagnosedAnteMortem	Vital status of the patient at the time of diagnosis
27 EnrolledToTreatment	Patient started appropriate TB treatment according to international recommendations
28 Outcome12Months	Patient first outcome at 12 months from the start of the treatment
29 Outcome24Months	The first outcome observed 13 to 24 months from the start of treatment
30 Outcome36Months	The first outcome observed 25 to 36 months from the start of treatment
31 ResultCulture	The result of the culture test for <i>Mycobacterium tuberculosis</i> complex
32 ResultMicroscopy	The result of the microscopy test performed
33 ResultOtherTest	Additional lab test results
34 Pathogen	Species and gene ( <i>M. tuberculosis</i> complex) of the pathogen which is the cause of the reported disease
35 HIVStatus	Result of the last HIV test
36 SIR_AMK	Susceptibility to amikacin
37 SIR_BDQ	Susceptibility to bedaquiline
38 SIR_CAP	Susceptibility to capreomycin
39 SIR_DLM	Susceptibility to delamanid
40 SIR_ETH	Susceptibility to ethambutol
41 SIR_GAT	Susceptibility to gatifloxacin
42 SIR_INH	Susceptibility to isoniazid
43 SIR_KAN	Susceptibility to kanamycin
44 SIR_LVX	Susceptibility to levofloxacin
45 SIR_MFX	Susceptibility to moxifloxacin
46 SIR_OFX	Susceptibility to ofloxacin
47 SIR_PZA	Susceptibility to pyrazinamide
48 SIR_RIF	Susceptibility to rifampicin
49 SIR_STR	Susceptibility to streptomycin
50 IsolateID	Unique identifier for each isolate within the data source/lab system related to the case
51 ECDCIsolateID	Identifier for each isolate record that is guaranteed to be unique across countries/labs/pathogens and not contain additional encoded information
52 SpoligoCode <sup>b</sup>	Spoligo pattern code
53 MiruCode <sup>b</sup>	MIRU pattern code
54 BeijingGenotype <sup>b</sup>	Beijing genotype identification

<sup>a</sup> Notification of TB cases for 2017, treatment outcome data updated for cohort 2016 and MDR-TB treatment outcome data updated for cohort 2015 and XDR-TB treatment outcome data updated for cohort 2014.

<sup>b</sup> Optional variable. No need to be reported if the "IsolateID" or "ECDCIsolateID" is provided.

Annex 3. Completeness of reported data, EU/EEA, reporting year 2017

Country	Age (%)	Gender (%)	Origin <sup>a</sup> (%)	Country of origin (%)	Site (%)	Previous treatment history <sup>b</sup> (%)	Diagnosed antemortem (%)	Result culture (%)	Result microscopy (%)	Result other test (%)	DST FLD <sup>c</sup> (%)	DST SLD <sup>d</sup> (%)	HIV Status (%)	Enrolled in treatment (%)	Outcome 12 months <sup>e</sup> (%)	Outcome 24 months <sup>f</sup> (%)	Outcome 36 months <sup>g</sup> (%)
Austria	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(79.3)	(100.0)	(92.5)	(82.1)	(86.0)	(95.5)	(100.0)	(0.0)	(0.0)	(92.1)	(100.0)	(100.0)
Belgium	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(79.3)	(100.0)	(94.7)	(39.0)	(64.1)	(96.2)	(100.0)	(53.2)	(92.8)	(96.8)	(100.0)	(100.0)
Bulgaria	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(89.8)	(90.2)	(6.6)	(87.2)	(100.0)	(82.3)	(100.0)	(100.0)	(100.0)	(100.0)
Croatia	(100.0)	(100.0)	(100.0)	(100.0)	(98.4)	(86.0)	(89.5)	(96.0)	(93.5)	(0.0)	(68.0)	-	(1.1)	(96.2)	(85.6)	-	-
Cyprus	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(98.1)	(100.0)	(96.2)	(94.3)	(32.1)	(100.0)	(100.0)	(92.5)	(100.0)	(68.3)	-	-
Czech Republic	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(98.4)	(90.5)	(77.4)	(92.3)	(100.0)	(39.0)	(100.0)	(100.0)	(80.0)	-
Denmark	(100.0)	(100.0)	(99.6)	(98.2)	(100.0)	(100.0)	(100.0)	(96.7)	(97.1)	(78.9)	(98.2)	(100.0)	(76.7)	(97.5)	(47.9)	-	-
Estonia	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(95.4)	(96.0)	(83.4)	(97.9)	(100.0)	(93.1)	(100.0)	(100.0)	(100.0)	(100.0)
Finland	(100.0)	(100.0)	(95.8)	(94.9)	(100.0)	(97.9)	(100.0)	(81.9)	(67.5)	(46.8)	(98.5)	(100.0)	(0.0)	(87.3)	(35.6)	(80.0)	-
France	(100.0)	(98.4)	(94.2)	(93.6)	(96.8)	(56.7)	(0.0)	(54.5)	(82.8)	(0.0)	(0.0)	-	(0.0)	(0.0)	(69.1)	-	-
Germany	(99.8)	(99.7)	(95.9)	(97.0)	(96.0)	(6.3)	(95.6)	(82.0)	(86.6)	(76.6)	(89.4)	(100.0)	(0.0)	(98.4)	(84.5)	(96.8)	-
Greece	(98.9)	(99.4)	(100.0)	(97.9)	(96.6)	(92.5)	(0.0)	(60.2)	(74.7)	(47.5)	(72.1)	(100.0)	(83.3)	(93.1)	(0.0)	-	-
Hungary	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(88.5)	(87.9)	(0.0)	(90.3)	(100.0)	(2.6)	(100.0)	(98.0)	(100.0)	-
Iceland	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(92.9)	(85.7)	(100.0)	(100.0)	-	(92.9)	(92.9)	(100.0)	-	-
Ireland	(99.4)	(100.0)	(93.7)	(93.7)	(96.2)	(60.4)	(100.0)	(74.5)	(41.8)	(43.1)	(91.6)	(100.0)	(32.1)	(100.0)	(46.7)	(100.0)	-
Italy	(100.0)	(99.9)	(100.0)	(92.0)	(99.8)	(75.6)	(0.0)	(77.7)	(60.6)	(0.0)	(0.0)	-	(0.0)	(100.0)	(0.0)	-	-
Latvia	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(93.7)	(66.7)	(38.6)	(95.8)	(100.0)	(85.3)	(100.0)	(100.0)	(100.0)	-
Liechtenstein	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(0.0)	(100.0)	(100.0)	(100.0)	(100.0)	-	(0.0)	(100.0)	(100.0)	-	-
Lithuania	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(1.0)	(100.0)	(100.0)	(81.1)	(100.0)	(100.0)	(100.0)	(100.0)
Luxembourg	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(0.0)	(100.0)	(90.6)	(87.5)	(0.0)	(100.0)	(100.0)	(9.4)	(100.0)	(0.0)	-	-
Malta	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(83.3)	(59.5)	(31.0)	(93.9)	-	(88.1)	(100.0)	(0.0)	-	-
Netherlands	(100.0)	(100.0)	(99.6)	(99.5)	(99.7)	(99.5)	(100.0)	(83.4)	(72.8)	(13.5)	(100.0)	(100.0)	(66.8)	(100.0)	(96.5)	(100.0)	-
Norway	(100.0)	(100.0)	(100.0)	(99.6)	(100.0)	(95.4)	(100.0)	(92.7)	(83.1)	(89.7)	(98.6)	(100.0)	(87.4)	(99.6)	(99.3)	(100.0)	-
Poland	(100.0)	(100.0)	(100.0)	(99.8)	(100.0)	(100.0)	(100.0)	(88.7)	(87.8)	(18.7)	(91.1)	(100.0)	(0.0)	(0.0)	(79.1)	(100.0)	-
Portugal	(100.0)	(100.0)	(99.9)	(84.6)	(99.8)	(100.0)	(100.0)	(67.2)	(75.9)	(33.4)	(66.7)	(100.0)	(65.7)	(100.0)	(100.0)	(100.0)	-
Romania	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(94.6)	(96.0)	(30.3)	(89.0)	(100.0)	(82.7)	(100.0)	(99.9)	(100.0)	-
Slovakia	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(99.6)	(100.0)	(88.4)	(91.2)	(29.3)	(100.0)	(100.0)	(91.2)	(100.0)	(97.3)	(100.0)	-
Slovenia	(100.0)	(100.0)	(100.0)	(99.1)	(100.0)	(100.0)	(100.0)	(99.1)	(85.7)	(95.5)	(100.0)	(100.0)	(68.8)	(100.0)	(100.0)	-	-
Spain	(100.0)	(100.0)	(80.3)	(74.0)	(100.0)	(84.3)	(0.0)	(88.0)	(89.5)	(33.2)	(30.1)	(100.0)	(74.6)	(0.0)	(78.7)	(0.0)	-
Sweden	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(95.0)	(100.0)	(100.0)	(51.3)	(88.3)	(99.5)	(100.0)	(0.0)	(100.0)	(98.7)	(100.0)	-
United Kingdom <sup>h</sup>	(100.0)	(100.0)	(97.6)	(96.1)	(99.7)	(96.0)	(100.0)	(62.2)	(64.5)	(15.0)	(97.8)	(100.0)	(83.9)	(98.4)	(97.0)	(94.3)	(100.0)
<b>Total EU/EEA</b>	<b>(100.0)</b>	<b>(99.8)</b>	<b>(97.1)</b>	<b>(95.4)</b>	<b>(99.2)</b>	<b>(82.1)</b>	<b>(74.0)</b>	<b>(82.5)</b>	<b>(82.9)</b>	<b>(28.7)</b>	<b>(72.5)</b>	<b>(100.0)</b>	<b>(46.2)</b>	<b>(70.4)</b>	<b>(82.5)</b>	<b>(98.1)</b>	<b>(100.0)</b>

Note: WHO European Region TB high-priority countries presented in *italics*.

<sup>a</sup> For determining the origin, two variables merged: BornReportingCountry and NationalityReportingCountry, depending on Member State's preference.

<sup>b</sup> History of previous treatment defined by previous diagnosis of TB for cases reported by Belgium, Denmark, Ireland, Norway and the United Kingdom.

<sup>c</sup> DST FLD = drug-susceptibility testing for the first-line anti-TB drugs isoniazid and rifampicin, calculated for confirmed TB cases.

<sup>d</sup> DST SLD = drug-susceptibility testing for second-line anti-TB drugs, calculated only for MDR-TB cases.

<sup>e</sup> Data for the 2016 cohort.

<sup>f</sup> Data for the MDR-TB 2015 cohort cases that are previously reported as still on treatment.

<sup>g</sup> Data for the XDR-TB 2014 cohort cases that are previously reported as still on treatment.

<sup>h</sup> DST results are only reported for culture-confirmed cases.

## Annex 4. Reporting completeness into Global TB database, 2017

Country/area	Identification (%) (15 fields)	Notification (%) (54 fields)	Anti-tuberculosis drug resistance surveillance (%) (40 fields)	Treatment outcome of TB cases by risk categories (%) (57 fields)	Implementing End TB Strategy (%) (98 fields)	Budget and expenditure (%) (81 fields)
<b>EU/EEA</b>						
Austria	(66.7)	(63.0)	(85.0)	(54.4)	(11.2)	(0.0)
Belgium	(93.3)	(83.3)	(100.0)	(100.0)	(45.9)	(3.7)
<i>Bulgaria</i>	<i>(93.3)</i>	<i>(92.6)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(73.5)</i>	<i>(95.1)</i>
Croatia	(0.0)	(59.3)	(82.5)	(43.9)	(4.1)	(0.0)
Cyprus	(66.7)	(85.2)	(100.0)	(54.4)	(44.9)	(4.9)
Czech Republic	(73.3)	(88.9)	(100.0)	(100.0)	(56.1)	(8.6)
Denmark	(0.0)	(53.7)	(100.0)	(64.9)	(4.1)	(0.0)
<i>Estonia</i>	<i>(100.0)</i>	<i>(92.6)</i>	<i>(100.0)</i>	<i>(78.9)</i>	<i>(81.6)</i>	<i>(92.6)</i>
Finland	(73.3)	(87.0)	(85.0)	(56.1)	(48.0)	(8.6)
France	(93.3)	(83.3)	(80.0)	(35.1)	(44.9)	(7.4)
Germany	(93.3)	(63.0)	(85.0)	(56.1)	(43.9)	(1.2)
Greece	(0.0)	(59.3)	(100.0)	(0.0)	(4.1)	(0.0)
Hungary	(0.0)	(59.3)	(100.0)	(64.9)	(4.1)	(0.0)
Iceland	(0.0)	(59.3)	(82.5)	(43.9)	(4.1)	(0.0)
Ireland	(93.3)	(87.0)	(100.0)	(100.0)	(60.2)	(4.9)
Italy	(33.3)	(75.9)	(100.0)	(0.0)	(39.8)	(0.0)
<i>Latvia</i>	<i>(100.0)</i>	<i>(92.6)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(73.5)</i>	<i>(45.7)</i>
Liechtenstein	-	-	-	-	-	-
<i>Lithuania</i>	<i>(53.3)</i>	<i>(88.9)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(77.6)</i>	<i>(25.9)</i>
Luxembourg	(100.0)	(79.6)	(82.5)	(8.8)	(54.1)	(2.5)
Malta	(40.0)	(92.6)	(82.5)	(35.1)	(39.8)	(2.5)
Netherlands	(100.0)	(92.6)	(100.0)	(100.0)	(54.1)	(7.4)
Norway	(66.7)	(53.7)	(100.0)	(64.9)	(4.1)	(0.0)
Poland	(93.3)	(83.3)	(85.0)	(78.9)	(44.9)	(0.0)
Portugal	(60.0)	(87.0)	(100.0)	(100.0)	(42.9)	(8.6)
<i>Romania</i>	<i>(100.0)</i>	<i>(90.7)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(88.8)</i>	<i>(100.0)</i>
Slovakia	(73.3)	(92.6)	(100.0)	(100.0)	(72.4)	(11.1)
Slovenia	(0.0)	(59.3)	(100.0)	(43.9)	(4.1)	(0.0)
Spain	(0.0)	(72.2)	(80.0)	(64.9)	(4.1)	(0.0)
Sweden	(73.3)	(85.2)	(85.0)	(56.1)	(51.0)	(7.4)
United Kingdom	(100.0)	(85.2)	(100.0)	(100.0)	(49.0)	(1.2)
<b>Subtotal EU/EEA</b>	<b>(59.4)</b>	<b>(75.7)</b>	<b>(90.8)</b>	<b>(61.5)</b>	<b>(39.7)</b>	<b>(14.2)</b>
<b>Non-EU/EEA</b>						
Albania	(100.0)	(88.9)	(100.0)	(82.5)	(68.4)	(6.2)
Andorra	(60.0)	(92.6)	(100.0)	(100.0)	(56.1)	(8.6)
Armenia	(100.0)	(100.0)	(100.0)	(100.0)	(69.4)	(92.6)
<i>Azerbaijan</i>	<i>(93.3)</i>	<i>(94.4)</i>	<i>(47.5)</i>	<i>(68.4)</i>	<i>(62.2)</i>	<i>(17.3)</i>
<i>Belarus</i>	<i>(100.0)</i>	<i>(98.1)</i>	<i>(95.0)</i>	<i>(100.0)</i>	<i>(75.5)</i>	<i>(77.8)</i>
Bosnia and Herzegovina	(100.0)	(85.2)	(82.5)	(49.1)	(59.2)	(86.4)
<i>Georgia</i>	<i>(100.0)</i>	<i>(98.1)</i>	<i>(85.0)</i>	<i>(100.0)</i>	<i>(86.7)</i>	<i>(96.3)</i>
Israel	(100.0)	(88.9)	(100.0)	(66.7)	(39.8)	(1.2)
<i>Kazakhstan</i>	<i>(100.0)</i>	<i>(96.3)</i>	<i>(80.0)</i>	<i>(66.7)</i>	<i>(61.2)</i>	<i>(95.1)</i>
<i>Kyrgyzstan</i>	<i>(100.0)</i>	<i>(96.3)</i>	<i>(55.0)</i>	<i>(100.0)</i>	<i>(77.6)</i>	<i>(100.0)</i>
Monaco	(0.0)	(0.0)	(0.0)	(0.0)	(4.1)	(0.0)
Montenegro	(86.7)	(98.1)	(100.0)	(56.1)	(60.2)	(8.6)
North Macedonia	(100.0)	(96.3)	(100.0)	(100.0)	(89.8)	(29.6)
<i>Republic of Moldova</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(91.8)</i>	<i>(100.0)</i>
<i>Russian Federation</i>	<i>(53.3)</i>	<i>(94.4)</i>	<i>(52.5)</i>	<i>(89.5)</i>	<i>(62.2)</i>	<i>(100.0)</i>
San Marino	(93.3)	(90.7)	(100.0)	(66.7)	(67.3)	(11.1)
Serbia	(100.0)	(94.4)	(67.5)	(99.1)	(77.6)	(100.0)
Serbia excluding Kosovo <sup>a</sup>	(100.0)	(96.3)	(82.5)	(98.2)	(82.7)	(100.0)
Kosovo <sup>a</sup>	(100.0)	(92.6)	(52.5)	(100.0)	(72.4)	(100.0)
Switzerland	(93.3)	(63.0)	(67.5)	(56.1)	(44.9)	(11.1)
<i>Tajikistan</i>	<i>(100.0)</i>	<i>(98.1)</i>	<i>(100.0)</i>	<i>(89.5)</i>	<i>(73.5)</i>	<i>(100.0)</i>
Turkey	(100.0)	(88.9)	(100.0)	(100.0)	(84.7)	(25.9)
<i>Turkmenistan</i>	<i>(86.7)</i>	<i>(66.7)</i>	<i>(7.5)</i>	<i>(35.1)</i>	<i>(68.4)</i>	<i>(24.7)</i>
<i>Ukraine</i>	<i>(100.0)</i>	<i>(90.7)</i>	<i>(55.0)</i>	<i>(100.0)</i>	<i>(82.7)</i>	<i>(97.5)</i>
<i>Uzbekistan</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(72.5)</i>	<i>(31.6)</i>	<i>(89.8)</i>	<i>(81.5)</i>
<b>Subtotal non-EU/EEA</b>	<b>(94.2)</b>	<b>(91.9)</b>	<b>(79.1)</b>	<b>(80.7)</b>	<b>(70.7)</b>	<b>(59.6)</b>
<b>Total European Region</b>	<b>(74.2)</b>	<b>(82.6)</b>	<b>(85.8)</b>	<b>(71.5)</b>	<b>(52.9)</b>	<b>(33.5)</b>
<b>Subtotal 18 HPCs</b>	<b>(89.3)</b>	<b>(87.0)</b>	<b>(79.6)</b>	<b>(78.0)</b>	<b>(70.4)</b>	<b>(51.5)</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs presented in italics. HPCs = high-priority countries.

<sup>a</sup> For the purposes of this publication, all references to "Kosovo" in the tables and annexes, should be understood/read as "Kosovo (in accordance with Security Council resolution 1244 (1999))".

Annex 5. Laboratory network capacity, European Region, 2017<sup>a</sup>

Country/area	Country laboratory network										
	Microscopy		Culture	DST <sup>b</sup> for isoniazid and rifampicin		Line probe assay	Xpert MTB/Rif (N)	International proficiency testing of national reference laboratory			
	Number of laboratories performing	EOA passed <sup>c</sup>		Number of laboratories performing	Number of laboratories performing			EOA passed <sup>c</sup>	Year	Percentage agreement of results for:	
			isoniazid			rifampicin					
<b>EU/EEA</b>											
Austria	–	–	–	–	–	–	–	–	–	–	–
Belgium	101	0	101	14	14	1	24	2017	100	100	Y
<i>Bulgaria</i>	33	33	30	33	33	4	4	2016	100	100	Y
Croatia	–	–	–	–	–	–	–	–	–	–	–
Cyprus	1	1	1	0	0	0	1	2017	100	100	–
Czech Republic	38	38	38	17	17	3	12	2017	100	100	Y
Denmark	–	–	–	–	–	–	–	–	–	–	–
<i>Estonia</i>	6	6	2	0	0	2	5	2017	95	95	N
Finland	9	9	9	0	0	2	5	2017	100	100	Y
France	150	150	150	58	0	37	61	2017	100	100	Y
Germany	150	150	140	50	50	0	37	2016	100	100	Y
Greece	–	–	–	–	–	–	–	–	–	–	–
Hungary	–	–	–	–	–	–	–	–	–	–	–
Iceland	–	–	–	–	–	–	–	–	–	–	–
Ireland	10	10	10	3	2	1	6	2017	100	100	Y
Italy	42	0	42	42	35	24	32	2017	100	100	Y
<i>Latvia</i>	12	12	5	0	0	1	2	2016	100	100	Y
Liechtenstein	–	–	–	–	–	–	–	–	–	–	–
<i>Lithuania</i>	10	10	5	1	1	2	4	2017	100	100	Y
Luxembourg	1	1	1	1	1	0	0	2017	100	100	Y
Malta	1	1	1	0	0	0	1	–	–	–	–
Netherlands	0	0	30	7	0	0	0	2017	100	100	Y
Norway	–	–	–	–	–	–	–	–	–	–	–
Poland	56	56	56	38	38	1	17	2017	100	100	Y
Portugal	35	0	47	24	0	3	10	–	–	–	–
<i>Romania</i>	94	76	88	–	4	–	27	2017	100	100	Y
Slovakia	3	3	3	3	3	1	1	2017	100	100	Y
Slovenia	–	–	–	–	–	–	–	–	–	–	–
Spain	–	–	–	–	–	–	–	–	–	–	–
Sweden	5	5	5	5	5	5	2	2017	92	100	N
United Kingdom	77	77	68	1	1	2	0	–	–	–	–
<b>Subtotal EU/EEA</b>	<b>834</b>	<b>638</b>	<b>832</b>	<b>297</b>	<b>204</b>	<b>89</b>	<b>251</b>	<b>2016–2017</b>	<b>99</b>	<b>100</b>	<b>Y</b>
<b>Non-EU/EEA</b>											
Albania	12	1	1	1	1	0	0	2017	100	100	Y
Andorra	8	0	8	3	0	4	3	–	–	–	–
<i>Armenia</i>	26	26	1	0	0	1	13	2017	100	100	Y
<i>Azerbaijan</i>	67	33	7	3	3	2	10	2017	100	100	Y
<i>Belarus</i>	149	99	27	0	0	8	28	2017	100	100	Y
Bosnia and Herzegovina	9	2	12	7	5	3	0	2016	100	100	Y
Georgia	11	11	2	0	0	2	28	2017	100	100	Y
<i>Israel</i>	17	0	17	2	2	1	0	2017	100	100	Y
<i>Kazakhstan</i>	295	292	20	20	19	12	52	–	–	–	–
<i>Kyrgyzstan</i>	126	126	5	0	0	2	24	2017	100	100	Y
Monaco	0	0	0	0	0	0	0	–	–	–	–
Montenegro	1	1	1	1	1	0	1	2017	100	100	Y
North Macedonia	7	7	3	1	0	0	1	2015	100	100	Y
<i>Republic of Moldova</i>	57	57	4	4	4	4	57	2017	100	100	Y
<i>Russian Federation</i>	5 996	671	378	47	0	8	204	–	–	–	–
<i>San Marino</i>	1	0	1	1	0	1	1	–	–	–	–
Serbia	41	11	32	6	6	1	4	2017	100	97.5	Y
Serbia excluding Kosovo <sup>e</sup>	31	1	29	4	4	1	2	2017	100	100	Y
Kosovo <sup>e</sup>	10	10	3	2	2	0	2	–	100	95	N
Switzerland	33	33	21	10	10	5	49	–	–	–	–
Tajikistan	84	80	6	1	1	6	15	2017	100	100	Y
<i>Turkey</i>	311	125	124	61	60	8	21	2016	100	100	Y
<i>Turkmenistan</i>	65	65	5	4	4	4	6	2016	80	80	N
<i>Ukraine</i>	751	724	91	34	33	3	53	–	–	–	–
<i>Uzbekistan</i>	277	2	7	2	2	6	22	2017	100	100	Y
<b>Subtotal non-EU/EEA</b>	<b>8 344</b>	<b>2 366</b>	<b>773</b>	<b>208</b>	<b>151</b>	<b>81</b>	<b>592</b>	<b>2015–2017</b>	<b>98.9</b>	<b>98.5</b>	<b>Y</b>
<b>Total European Region</b>	<b>9 178</b>	<b>3 004</b>	<b>1 605</b>	<b>505</b>	<b>355</b>	<b>170</b>	<b>843</b>	<b>2015–2017</b>	<b>97.1</b>	<b>97.1</b>	<b>Y</b>
<b>Subtotal 18 HPCs</b>	<b>8 370</b>	<b>2 448</b>	<b>807</b>	<b>210</b>	<b>164</b>	<b>75</b>	<b>575</b>	<b>2015–2017</b>	<b>91.9</b>	<b>91.9</b>	<b>N</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs presented in italics.

HPCs = high-priority countries.

<sup>a</sup> Data obtained from WHO Tuberculosis Monitoring and Evaluation database (TME).

<sup>b</sup> DST = drug-susceptibility testing.

<sup>c</sup> EOA = external quality assessment.

<sup>d</sup> Acceptable performance defined as reference laboratory achieving 95% performance (smear and DST).

<sup>e</sup> (In accordance with Security Council Resolution 1244 (1999)).





## 6. Tables



**Summary table. TB surveillance data by region, European Region, 2017**

	Table showing data by country	Region							
		EU/EEA		Non-EU/EEA		Total		18 high-priority countries (HPCs) <sup>a</sup>	
		Number of reporting countries <sup>b</sup>		Number of reporting countries <sup>b</sup>		Number of reporting countries <sup>b</sup>		Number of reporting countries <sup>b</sup>	
<b>Total population (millions)</b>	-	<b>31</b>	<b>517.2</b>	<b>23</b>	<b>404.9</b>	<b>54</b>	<b>919.5</b>	<b>18</b>	<b>402.9</b>
<b>Estimates of TB disease burden, 2017<sup>c</sup></b>									
Estimated TB mortality rate (excluding HIV-related deaths) per 100 000 population	1	30	0.8	20	4.7	50	2.6	18	5.0
Estimated TB incidence rate per 100 000 population	1	30	11.9	21	52.9	51	29.9	18	56.3
Estimated RR-TB among all notified pulmonary TB cases	2	30	1 800	18	75 000	48	77 000	18	75 900
Estimated percentage of HIV infection among incident TB cases (new and relapses)	2	27	5.9	18	13.8	45	12.0	18	13.1
<b>Notifications of TB cases, 2017</b>									
Total number of TB cases	3	31	55 337	21	228 009	52	283 346	18	240 767
All TB cases per 100 000 population	3	31	10.7	21	56.3	52	30.7	18	59.8
Mean annual percentage change of notification rate (2013–2017)	3	30	-4.5	22	-6.9	52	-6.3	18	-6.8
Number of new TB cases and relapses	4	31	52 836	21	185 983	52	238 819	18	197 909
New TB cases and relapses per 100 000 population	4	31	10.2	21	45.9	52	25.9	18	49.1
Mean annual percentage change of notification rate of new TB cases and relapses (2013–2017)	4	31	-4.3	21	-6.3	52	-5.8	18	-6.3
Percentage of new cases among all TB cases	5	31	72.1	21	68.3	52	69.1	18	68.8
Percentage of retreatment cases among all TB cases	5	31	10.0	21	31.7	52	27.4	18	31.2
Percentage of pulmonary TB among all TB cases	6	31	76.6	-	-	-	-	-	-
Percentage of laboratory-confirmed TB cases among all TB cases	8	31	68.1	-	-	-	-	-	-
Male-to-female ratio of new TB cases and relapse	9	31	1.9	21	1.9	52	1.9	18	2.0
Percentage of foreign TB cases among all TB cases	10	31	33.1	21	1.9	52	7.9	18	1.6
<b>TB case laboratory confirmation, multidrug resistance (MDR) and extensive drug resistance (XDR), 2017</b>									
Percentage of laboratory-confirmed cases among new pulmonary TB cases <sup>d</sup>	12	29	78.9	21	60.0	50	63.5	18	61.5
Percentage of DST results reported among new bacteriologically confirmed pulmonary TB cases	12	29	85.5	21	78.4	50	80.0	18	80.2
Percentage of MDR-TB among new pulmonary TB cases	12	29	2.4	21	23.1	50	18.1	18	21.2
Percentage of MDR-TB among previously treated pulmonary TB cases	12	29	15.0	21	50.6	50	47.9	18	48.9
Percentage of DST results reported among all confirmed TB cases	13	29	84.7	-	-	-	-	-	-
Percentage of MDR-TB among all TB cases	13	29	3.8	-	-	-	-	-	-
Percentage of XDR-TB among all MDR-TB cases with DST <sup>e</sup> for SLD <sup>f</sup>	14	29	24.3	19	17.4	48	17.5	14	17.6
<b>TB/HIV coinfection, 2017</b>									
Percentage of new TB cases and relapses with known HIV status	16	23	75.7	20	94.1	39	91.4	17	94.2
Percentage of HIV-positive cases among new TB cases and relapses with known HIV status	16	23	3.8	20	14.0	39	12.8	17	13.3
Percentage of HIV-positive cases started on ART	16	10	80.6	18	67.7	25	66.6	14	67.7
Percentage of all TB cases with known HIV status	16a	23	76.0	-	-	-	-	-	-
Percentage of HIV-positive cases among all TB cases with known HIV status	16a	23	3.9	-	-	-	-	-	-
<b>Treatment outcome</b>									
Treatment success of all TB cases reported in 2016	18	27	70.7	20	75.7	45	74.5	17	76.1
Treatment success of new TB cases and relapses notified in 2016	19	25	75.6	20	77.7	45	77.2	17	78.5
Treatment success of childhood TB cases notified in 2016	20	26	88.2	19	94.2	41	92.8	16	94.8
Treatment success of HIV/TB cases notified in 2016	21	19	63.0	14	62.9	29	62.9	12	63.1
Treatment success of RR/MDR-TB cases enrolled in SLD treatment in 2015	22	27	47.3	20	57.5	38	57.2	17	57.2
Treatment success of all MDR-TB cases notified in 2015	23	27	44.8	-	-	-	-	-	-
Treatment success of all XDR-TB cases notified in 2015	24	28	28.4	16	35.3	37	35.1	14	35.1

Note: European Region comprises the 53 countries of the WHO European Region and Liechtenstein.

<sup>a</sup> HPCs: the 18 high-priority countries to STOP TB in the WHO European Region are: Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Republic of Moldova, Romania, Russian Federation, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan.

<sup>b</sup> Number of countries with available data included in the statistics.

<sup>c</sup> WHO estimates, as published in *Global tuberculosis report 2018*.

<sup>d</sup> Laboratory-confirmed cases – cases with positive identification for *M. tuberculosis* complex confirmed by culture and/or line probe assay for non-EU/EEA countries and areas. For EU/EEA countries: culture-positive OR microscopy-positive and nucleic acid amplification test-positive cases.

<sup>e</sup> DST = drug-susceptibility testing.

<sup>f</sup> SLD = second-line anti-TB drugs.

**Table 1. Estimates of the TB disease burden 2017, European Region**

Country/area	Population <sup>a</sup>	Estimated number of deaths from TB (all forms, excluding HIV)						Estimated number of incident cases (all forms)						
		Number			Per 100 000			Number			Per 100 000			
		Best	Low	High	Best	Low	High	Best	Low	High	Best	Low	High	
<b>EU/EEA</b>														
Austria	8 735 453	38	38	39	0.4	0.4	0.4	650	550	750	7.4	6.3	8.5	
Belgium	11 429 336	61	59	63	0.5	0.5	0.6	1 100	900	1 200	9.2	7.9	11	
<i>Bulgaria</i>	<i>7 084 571</i>	<i>91</i>	<i>89</i>	<i>93</i>	<i>1.3</i>	<i>1.3</i>	<i>1.3</i>	<i>1 800</i>	<i>1 300</i>	<i>2 200</i>	<i>25</i>	<i>19</i>	<i>31</i>	
Croatia	4 189 353	41	40	41	1.0	1.0	1.0	420	360	480	10	8.5	12	
Cyprus	1 179 551	3	2	4	0.3	0.2	0.3	60	51	69	5.1	4.3	5.9	
Czech Republic	10 618 303	43	42	43	0.4	0.4	0.4	570	490	660	5.4	4.6	6.2	
Denmark	5 733 551	18	17	18	0.3	0.3	0.3	290	250	340	5.1	4.3	5.9	
Estonia	1 309 632	12	12	12	0.9	0.9	1.0	200	170	230	15	13	17	
Finland	5 523 231	26	26	26	0.5	0.5	0.5	270	230	310	4.9	4.2	5.6	
France	64 979 548	350	330	380	0.6	0.5	0.6	5 900	5 100	6 600	9	7.9	10	
Germany	82 114 224	320	320	330	0.4	0.4	0.4	6 200	5 300	7 100	7.5	6.4	8.7	
Greece	11 159 773	45	43	46	0.4	0.4	0.4	500	430	580	4.5	3.8	5.2	
Hungary	9 721 559	54	54	54	0.6	0.6	0.6	750	640	860	7.7	6.6	8.9	
Iceland	335 025	0	0	0	0.0	0.0	0.0	15	13	17	4.5	3.8	5.2	
Ireland	4 761 657	24	24	25	0.5	0.5	0.5	350	300	400	7.3	6.2	8.4	
Italy	59 359 900	340	330	340	0.6	0.6	0.6	4 400	3 800	5 100	7.4	6.3	8.6	
<i>Latvia</i>	<i>1 949 670</i>	<i>62</i>	<i>61</i>	<i>62</i>	<i>3.2</i>	<i>3.1</i>	<i>3.2</i>	<i>620</i>	<i>530</i>	<i>720</i>	<i>32</i>	<i>27</i>	<i>37</i>	
Liechtenstein	–	–	–	–	–	–	–	–	–	–	–	–	–	
<i>Lithuania</i>	<i>2 890 297</i>	<i>170</i>	<i>170</i>	<i>170</i>	<i>5.8</i>	<i>5.8</i>	<i>5.9</i>	<i>1 500</i>	<i>1 200</i>	<i>1 700</i>	<i>50</i>	<i>43</i>	<i>58</i>	
Luxembourg	583 455	1	1	1	0.2	0.2	0.2	37	31	43	6.3	5.4	7.3	
Malta	430 835	2	2	2	0.5	0.5	0.5	48	41	56	11	9.6	13	
Netherlands	17 035 938	30	30	31	0.2	0.2	0.2	890	760	1 000	5.2	4.5	6.1	
Norway	5 305 383	12	12	12	0.2	0.2	0.2	270	230	310	5.1	4.4	5.9	
Poland	38 170 712	450	430	470	1.2	1.1	1.2	6 400	5 400	7 400	17	14	19	
Portugal	10 329 506	210	200	220	2.0	2.0	2.1	2 000	1 700	2 300	20	17	23	
<i>Romania</i>	<i>19 679 306</i>	<i>920</i>	<i>910</i>	<i>920</i>	<i>4.7</i>	<i>4.6</i>	<i>4.7</i>	<i>14 000</i>	<i>12 000</i>	<i>16 000</i>	<i>72</i>	<i>62</i>	<i>83</i>	
Slovakia	5 447 662	35	34	35	0.6	0.6	0.7	260	220	300	4.8	4.1	5.6	
Slovenia	2 079 976	12	12	12	0.6	0.6	0.6	130	110	150	6.2	5.3	7.2	
Spain	46 354 321	250	250	250	0.5	0.5	0.5	5 000	4 300	5 800	11	9.3	13	
Sweden	9 910 701	26	26	27	0.3	0.3	0.3	560	480	650	5.7	4.8	6.5	
United Kingdom	66 181 585	350	350	350	0.5	0.5	0.5	5 900	5 300	6 500	8.9	8.1	9.8	
<b>Subtotal EU/EEA</b>	<b>514 584 014</b>	<b>4 000</b>	<b>3 970</b>	<b>4 030</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>61 000</b>	<b>61 000</b>	<b>61 000</b>	<b>11.9</b>	<b>11.9</b>	<b>11.9</b>	
<b>Non-EU/EEA</b>														
Albania	2 930 187	9	4	14	0.3	0.2	0.5	580	490	670	20	17	23	
Andorra	76 965	0	0	0	0.0	0.0	0.0	1	1	1	1.5	1.3	1.7	
Armenia	2 930 450	36	35	36	1.2	1.2	1.2	1 100	800	1 300	36	27	45	
<i>Azerbaijan</i>	<i>9 827 589</i>	<i>860</i>	<i>810</i>	<i>900</i>	<i>8.7</i>	<i>8.2</i>	<i>9.2</i>	<i>6 500</i>	<i>5 000</i>	<i>8 300</i>	<i>67</i>	<i>51</i>	<i>84</i>	
<i>Belarus</i>	<i>9 468 338</i>	<i>76</i>	<i>44</i>	<i>120</i>	<i>0.8</i>	<i>0.5</i>	<i>1.2</i>	<i>3 500</i>	<i>2 700</i>	<i>4 400</i>	<i>37</i>	<i>28</i>	<i>46</i>	
Bosnia and Herzegovina	3 507 017	130	120	140	3.7	3.4	4.0	960	730	1 200	27	21	35	
Georgia	3 912 061	210	160	270	5.3	4.1	6.8	3 400	2 800	3 900	86	72	101	
Israel	8 321 570	15	15	16	0.2	0.2	0.2	270	230	310	3.2	2.8	3.7	
<i>Kazakhstan</i>	<i>18 204 499</i>	<i>160</i>	<i>91</i>	<i>250</i>	<i>0.9</i>	<i>0.5</i>	<i>1.4</i>	<i>12 000</i>	<i>7 800</i>	<i>17 000</i>	<i>66</i>	<i>43</i>	<i>94</i>	
<i>Kyrgyzstan</i>	<i>6 045 117</i>	<i>400</i>	<i>390</i>	<i>420</i>	<i>6.7</i>	<i>6.4</i>	<i>6.9</i>	<i>8 700</i>	<i>7 200</i>	<i>10 000</i>	<i>144</i>	<i>120</i>	<i>170</i>	
Monaco	38 695	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	
Montenegro	628 960	1	1	1	0.2	0.2	0.2	86	74	100	14	12	16	
North Macedonia	2 083 160	20	20	21	1.0	0.9	1.0	270	210	340	13	9.9	16	
<i>Republic of Moldova</i>	<i>4 051 212</i>	<i>250</i>	<i>220</i>	<i>280</i>	<i>6.1</i>	<i>5.4</i>	<i>7.0</i>	<i>3 900</i>	<i>3 300</i>	<i>4 500</i>	<i>95</i>	<i>82</i>	<i>110</i>	
<i>Russian Federation</i>	<i>143 989 754</i>	<i>10 000</i>	<i>9 400</i>	<i>12 000</i>	<i>7.3</i>	<i>6.6</i>	<i>8.0</i>	<i>86 000</i>	<i>56 000</i>	<i>123 000</i>	<i>60</i>	<i>39</i>	<i>85</i>	
San Marino	33 400	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	
Serbia	8 790 574	66	62	71	0.8	0.7	0.8	1 700	1 400	1 900	19	16	22	
Switzerland	8 476 005	17	17	17	0.2	0.2	0.2	610	520	700	7.2	6.1	8.3	
<i>Tajikistan</i>	<i>8 921 343</i>	<i>460</i>	<i>350</i>	<i>600</i>	<i>5.2</i>	<i>3.9</i>	<i>6.7</i>	<i>7 500</i>	<i>5 800</i>	<i>9 500</i>	<i>85</i>	<i>65</i>	<i>106</i>	
<i>Turkey</i>	<i>80 745 020</i>	<i>410</i>	<i>370</i>	<i>460</i>	<i>0.5</i>	<i>0.5</i>	<i>0.6</i>	<i>14 000</i>	<i>12 000</i>	<i>16 000</i>	<i>17</i>	<i>14</i>	<i>19</i>	
<i>Turkmenistan</i>	<i>5 758 075</i>	<i>570</i>	<i>500</i>	<i>650</i>	<i>9.9</i>	<i>8.6</i>	<i>11.0</i>	<i>2 500</i>	<i>1 900</i>	<i>3 100</i>	<i>43</i>	<i>33</i>	<i>54</i>	
<i>Ukraine</i>	<i>44 222 947</i>	<i>3 800</i>	<i>3 600</i>	<i>4 100</i>	<i>8.7</i>	<i>8.1</i>	<i>9.3</i>	<i>37 000</i>	<i>24 000</i>	<i>53 000</i>	<i>84</i>	<i>54</i>	<i>119</i>	
<i>Uzbekistan</i>	<i>31 910 641</i>	<i>1 700</i>	<i>1 600</i>	<i>1 900</i>	<i>5.4</i>	<i>4.9</i>	<i>5.9</i>	<i>23 000</i>	<i>16 000</i>	<i>32 000</i>	<i>73</i>	<i>51</i>	<i>99</i>	
<b>Subtotal non-EU/EEA</b>	<b>404 873 579</b>	<b>19 000</b>	<b>18 000</b>	<b>20 000</b>	<b>4.7</b>	<b>4.4</b>	<b>4.9</b>	<b>214 000</b>	<b>177 000</b>	<b>251 000</b>	<b>53</b>	<b>44</b>	<b>62</b>	
<b>Total European Region</b>	<b>919 457 593</b>	<b>24 000</b>	<b>23 000</b>	<b>25 000</b>	<b>2.6</b>	<b>2.5</b>	<b>2.7</b>	<b>275 000</b>	<b>238 000</b>	<b>314 000</b>	<b>30</b>	<b>26</b>	<b>34</b>	
<b>Subtotal 18 HPCs</b>	<b>402 900 522</b>	<b>20 000</b>	<b>19 000</b>	<b>21 000</b>	<b>5.0</b>	<b>4.7</b>	<b>5.2</b>	<b>227 000</b>	<b>190 000</b>	<b>264 000</b>	<b>56</b>	<b>47</b>	<b>66</b>	

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. HIV = human immunodeficiency virus.

HPCs = high-priority countries.

<sup>a</sup> Population estimate 2018 by UN Statistical database for all countries.

	Estimated incidence of child TB cases						Estimated incidence of TB among females						Country	
	Number			Per 100 000			Number			Per 100 000				
	Best	Low	High	Best	Low	High	Best	Low	High	Best	Low	High		
														<b>EU/EEA</b>
	50	42	58	4.1	3.4	4.7	230	180	270	5.2	4.0	6.1		Austria
	81	68	94	4.1	3.5	4.8	370	300	450	6.4	5.2	7.8		Belgium
	180	130	230	17.8	12.9	22.8	600	400	800	16.5	11.0	22.0		Bulgaria
	32	27	37	5.2	4.4	6.0	150	120	180	6.9	5.5	8.3		Croatia
	5	4	5	2.5	2.0	2.5	21	17	25	3.6	2.9	4.2		Cyprus
	44	37	51	2.7	2.3	3.1	200	160	240	3.7	3.0	4.4		Czech Republic
	22	19	26	2.3	2.0	2.8	100	81	120	3.5	2.8	4.2		Denmark
	15	13	18	7.0	6.1	8.4	69	55	83	9.9	7.9	11.9		Estonia
	21	17	24	2.3	1.9	2.6	95	75	110	3.4	2.7	3.9		Finland
	540	470	620	4.6	4.0	5.3	2 100	1 700	2 500	6.4	5.1	7.6		France
	480	400	560	4.5	3.7	5.2	2 000	1 600	2 500	4.8	3.8	6.0		Germany
	38	32	45	2.4	2.0	2.8	180	140	210	3.2	2.5	3.7		Greece
	58	48	67	4.2	3.4	4.8	260	210	320	5.1	4.1	6.3		Hungary
	1	1	1	1.5	1.5	1.5	5	4	6	3.0	2.4	3.6		Iceland
	27	22	31	2.6	2.1	3.0	120	97	150	5.0	4.0	6.2		Ireland
	360	300	420	4.5	3.7	5.2	1 400	1 100	1 700	4.6	3.6	5.6		Italy
	48	40	56	16.0	13.3	18.6	220	170	260	20.9	16.1	24.7		Latvia
	-	-	-	-	-	-	-	-	-	-	-	-		Liechtenstein
	160	130	190	37.3	30.3	44.3	450	360	530	28.9	23.1	34.0		Lithuania
	3	2	3	3.1	2.1	3.1	13	10	16	4.5	3.4	5.5		Luxembourg
	4	3	4	6.4	4.8	6.4	17	14	20	7.9	6.5	9.3		Malta
	69	58	80	2.5	2.1	2.9	310	250	380	3.6	2.9	4.4		Netherlands
	21	18	24	2.2	1.9	2.5	96	76	120	3.7	2.9	4.6		Norway
	620	520	720	11.0	9.2	12.7	2 000	1 600	2 400	10.1	8.1	12.2		Poland
	200	170	230	14.2	12.1	16.3	740	590	890	13.6	10.8	16.4		Portugal
	1 600	1 300	1 900	53.3	43.3	63.3	4 600	3 700	5 500	45.3	36.5	54.2		Romania
	20	17	23	2.4	2.0	2.7	92	73	110	3.3	2.6	3.9		Slovakia
	10	8	12	3.2	2.6	3.9	45	36	54	4.3	3.4	5.2		Slovenia
	440	370	510	6.5	5.4	7.5	1 900	1 500	2 300	8.0	6.3	9.7		Spain
	43	36	50	2.5	2.1	2.9	200	160	240	4.0	3.2	4.8		Sweden
	570	510	640	4.9	4.4	5.5	2 500	2 200	2 900	7.5	6.6	8.6		United Kingdom
	<b>5 760</b>	<b>5 760</b>	<b>5 760</b>	<b>7.3</b>	<b>7.3</b>	<b>7.3</b>	<b>21 000</b>	<b>21 000</b>	<b>21 000</b>	<b>8.0</b>	<b>8.0</b>	<b>8.0</b>		<b>Subtotal EU/EEA</b>
														<b>Non-EU/EEA</b>
	45	37	52	8.8	7.3	10.2	200	160	240	13.8	11.0	16.5		Albania
	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0		Andorra
	81	59	100	13.8	10.1	17.1	370	240	490	23.8	15.5	31.6		Armenia
	770	550	980	33.7	24.0	42.8	2 300	1 500	3 100	46.6	30.4	62.9		Azerbaijan
	410	290	520	25.9	18.3	32.8	1 000	700	1 400	19.8	13.8	27.7		Belarus
	74	54	94	14.9	10.9	19.0	340	220	450	19.0	12.3	25.2		Bosnia and Herzegovina
	400	320	470	53.3	42.6	62.6	1 200	920	1 500	58.7	45.0	73.4		Georgia
	21	17	24	0.9	0.7	1.0	95	75	110	2.3	1.8	2.6		Israel
	1 200	690	1 700	23.6	13.6	33.4	4 800	2 200	7 400	51.1	23.4	78.8		Kazakhstan
	920	750	1 100	47.8	39.0	57.1	3 700	2 800	4 700	121.4	91.9	154.2		Kyrgyzstan
	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0		Monaco
	7	6	8	6.1	5.3	7.0	30	24	36	9.4	7.5	11.3		Montenegro
	21	15	26	6.0	4.3	7.5	95	63	130	9.1	6.0	12.5		North Macedonia
	380	320	440	59.6	50.2	69.0	1 100	880	1 300	52.2	41.8	61.7		Republic of Moldova
	2 600	1 500	3 600	10.3	5.9	14.2	26 000	13 000	40 000	33.7	16.9	51.9		Russian Federation
	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0		San Marino
	150	130	170	10.4	9.0	11.8	720	570	880	16.0	12.7	19.6		Serbia
	47	39	54	3.7	3.1	4.3	210	170	260	4.9	4.0	6.1		Switzerland
	830	610	1 100	26.4	19.4	35.0	3 400	2 300	4 600	76.6	51.8	103.6		Tajikistan
	1 400	1 200	1 700	6.9	6.0	8.4	5 800	4 600	7 100	14.2	11.2	17.3		Turkey
	280	200	360	15.7	11.2	20.2	1 000	670	1 400	34.2	22.9	47.9		Turkmenistan
	3 200	1 800	4 500	46.7	26.3	65.7	12 000	5 800	19 000	50.5	24.4	79.9		Ukraine
	2 600	1 600	3 500	29.1	17.9	39.2	10 000	5 500	15 000	62.5	34.4	93.7		Uzbekistan
	<b>15 000</b>	<b>14 000</b>	<b>16 000</b>	<b>17.5</b>	<b>16.4</b>	<b>18.7</b>	<b>74 000</b>	<b>67 000</b>	<b>81 000</b>	<b>35.1</b>	<b>31.8</b>	<b>38.4</b>		<b>Subtotal non-EU/EEA</b>
	<b>21 000</b>	<b>18 000</b>	<b>24 000</b>	<b>12.7</b>	<b>10.9</b>	<b>14.5</b>	<b>97 000</b>	<b>78 000</b>	<b>115 000</b>	<b>20.5</b>	<b>16.5</b>	<b>24.3</b>		<b>Total European Region</b>
	<b>17 000</b>	<b>16 000</b>	<b>18 000</b>	<b>18.5</b>	<b>17.4</b>	<b>19.6</b>	<b>79 000</b>	<b>72 000</b>	<b>86 000</b>	<b>32.9</b>	<b>30.0</b>	<b>35.9</b>		<b>Subtotal 18 HPCs</b>

**Table 2. Estimates for TB/HIV coinfection and MDR-TB, European Region, 2017**

Country/area	Estimated HIV infection among incident TB cases (new and relapses)						Estimated percentage of RR-TB cases among new TB patients		
	Number			%			%		
	Best	Low	High	Best	Low	High	Best	Low	High
<b>EU/EEA</b>									
Austria	29	16	45	4.5	2.9	6.0	2.3	0.8	4.9
Belgium	88	73	100	8.0	8.1	8.3	1.6	0.7	3.3
<i>Bulgaria</i>	4	3	5	0.2	0.2	0.2	1.2	0.5	2.5
Croatia	8	4	13	1.9	1.1	2.7	0.0	0.0	1.4
Cyprus	2	1	4	3.3	2.0	5.8	0.0	0.0	10.0
Czech Republic	8	5	12	1.4	1.0	1.8	2.2	0.9	4.6
Denmark	9	7	11	3.1	2.8	3.2	0.7	0.0	3.5
<i>Estonia</i>	17	15	20	8.5	8.8	8.7	21.0	14.0	29.0
Finland	8	4	13	3.0	1.7	4.2	3.0	0.8	7.4
France	830	490	1300	14.1	9.6	19.7	1.0	0.7	1.5
Germany	350	200	550	5.6	3.8	7.7	2.2	0.8	4.8
Greece	33	18	51	6.6	4.2	8.8	1.5	0.0	8.0
Hungary	11	6	18	1.5	0.9	2.1	2.9	1.6	4.8
Iceland	0	0	0	–	–	–	0.0	0.0	41.0
Ireland	26	17	37	7.4	5.7	9.3	1.1	0.0	5.8
Italy	470	270	720	10.7	7.1	14.1	2.8	1.8	4.3
<i>Latvia</i>	63	53	73	10.2	10.0	10.1	8.0	5.4	11.0
Liechtenstein									
<i>Lithuania</i>	50	42	58	3.3	3.5	3.4	14.0	12.0	16.0
Luxembourg	3	2	5	8.1	6.5	11.6	2.7	1.5	4.4
Malta	0	0	0	–	–	–	0.0	0.0	15.0
Netherlands	36	30	42	4.0	3.9	4.2	1.8	0.7	3.9
Norway	13	7	21	4.8	3.0	6.8	4.5	1.7	9.6
Poland	160	90	250	2.5	1.7	3.4	1.1	0.8	1.5
Portugal	250	210	290	12.5	12.4	12.6	1.0	0.5	1.7
<i>Romania</i>	300	250	350	2.1	2.1	2.2	2.5	2.1	2.9
Slovakia	0	0	0	–	–	–	4.1	1.1	10.0
Slovenia	1	1	1	0.8	0.9	0.7	0.0	0.0	3.9
Spain	370	310	430	7.4	7.2	7.4	4.2	2.9	5.8
Sweden	24	14	38	4.3	2.9	5.8	3.2	1.4	6.2
United Kingdom	410	230	620	6.9	4.3	9.5	1.4	0.9	2.0
<b>Subtotal EU/EEA</b>	<b>3 600</b>	<b>3 060</b>	<b>4 140</b>	<b>5.9</b>	<b>5.0</b>	<b>6.8</b>	<b>2.6</b>	<b>1.8</b>	<b>3.8</b>
<b>Non-EU/EEA</b>									
Albania	5	3	7	0.9	0.6	1.0	2.3	0.6	5.8
Andorra	0	0	0	–	–	–	0.0	0.0	98.0
<i>Armenia</i>	75	49	110	6.8	6.1	8.5	16.0	12.0	20.0
<i>Azerbaijan</i>	110	71	160	1.7	1.4	1.9	12.0	11.0	14.0
<i>Belarus</i>	270	210	340	7.7	7.8	7.7	38.0	36.0	41.0
Bosnia and Herzegovina	1	1	2	0.1	0.1	0.2	0.0	0.0	1.0
<i>Georgia</i>	59	49	70	1.7	1.8	1.8	11.0	9.7	13.0
Israel	14	9	20	5.2	3.9	6.5	5.4	2.2	11.0
<i>Kazakhstan</i>	530	340	750	4.4	4.4	4.4	26.0	25.0	28.0
<i>Kyrgyzstan</i>	310	250	370	3.6	3.5	3.7	26.0	24.0	27.0
Monaco	0	0	0	–	–	–	2.7	1.5	4.4
Montenegro	0	0	0	–	–	–	0.0	0.0	7.3
North Macedonia	0	0	0	–	–	–	0.0	0.0	2.7
<i>Republic of Moldova</i>	330	280	390	8.5	8.5	8.7	28.0	25.0	30.0
<i>Russian Federation</i>	18 000	12 000	26 000	20.9	21.4	21.1	32.0	31.0	33.0
San Marino	0	0	0	–	–	–	2.7	1.5	4.4
Serbia	10	6	14	0.6	0.4	0.7	1.1	0.5	2.2
Switzerland	55	32	85	9.0	6.2	12.1	3.2	1.3	6.4
<i>Tajikistan</i>	280	180	400	3.7	3.1	4.2	20.0	19.0	22.0
<i>Turkey</i>	100	88	120	0.7	0.7	0.8	3.3	2.8	3.8
<i>Turkmenistan</i>	130	60	230	5.2	3.2	7.4	14.0	11.0	18.0
<i>Ukraine</i>	8 000	5 200	11 000	21.6	21.7	20.8	28.0	27.0	29.0
<i>Uzbekistan</i>	1 200	750	1 700	5.2	4.7	5.3	15.0	14.0	16.0
<b>Subtotal non-EU/EEA</b>	<b>29 500</b>	<b>22 000</b>	<b>37 000</b>	<b>13.8</b>	<b>12.4</b>	<b>14.7</b>	<b>20</b>	<b>19</b>	<b>21</b>
<b>Total European Region</b>	<b>34 000</b>	<b>26 000</b>	<b>42 000</b>	<b>12.0</b>	<b>9.1</b>	<b>16.0</b>	<b>17</b>	<b>16</b>	<b>18</b>
<b>Subtotal 18 HPCs</b>	<b>29 800</b>	<b>22 000</b>	<b>37 000</b>	<b>13.1</b>	<b>11.6</b>	<b>14.0</b>	<b>20</b>	<b>19</b>	<b>21</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics.  
HIV = human immunodeficiency virus.  
HPCs = high-priority countries.  
RR-TB = rifampicin-resistant tuberculosis.

	Estimated percentage of RR-TB cases among retreated TB patients			Estimated RR-TB cases among notified pulmonary TB patients			Country/area
	%			Number			
	Best	Low	High	Best	Low	High	
<b>EU/EEA</b>							
	18.0	3.8	43.0	13	5	21	Austria
	8.8	1.9	24.0	16	6	25	Belgium
	19.0	11.0	29.0	44	27	61	Bulgaria
	0.0	0.0	16.0	0	0	3	Croatia
	12.0	8.0	17.0	0	0	2	Cyprus
	12.0	2.4	30.0	13	5	21	Czech Republic
	0.0	0.0	21.0	1	0	5	Denmark
	52.0	30.0	74.0	45	33	56	Estonia
	67.0	9.4	99.0	9	3	14	Finland
	10.0	7.1	15.0	65	48	82	France
	23.0	16.0	30.0	140	65	210	Germany
	9.1	0.2	41.0	10	0	24	Greece
	8.1	3.3	16.0	23	13	32	Hungary
	0.0	0.0	98.0	0	0	2	Iceland
	0.0	0.0	31.0	2	0	7	Ireland
	13.0	7.7	21.0	91	59	120	Italy
	31.0	19.0	44.0	57	42	72	Latvia
							Liechtenstein
	54.0	48.0	60.0	290	260	310	Lithuania
	12.0	8.0	17.0	1	0	1	Luxembourg
	12.0	8.0	17.0	0	0	4	Malta
	7.1	0.2	34.0	9	3	16	Netherlands
	0.0	0.0	34.0	7	0	13	Norway
	3.9	2.2	6.3	80	59	100	Poland
	6.9	2.8	14.0	19	10	27	Portugal
	15.0	14.0	17.0	590	540	650	Romania
	7.7	1.0	25.0	10	2	18	Slovakia
	0.0	0.0	71.0	0	0	2	Slovenia
	18.0	9.4	30.0	170	120	210	Spain
	9.5	1.2	30.0	13	5	20	Sweden
	4.7	1.7	9.9	55	36	74	United Kingdom
	<b>12.1</b>	<b>8.7</b>	<b>20.2</b>	<b>1 800</b>	<b>1 680</b>	<b>1 900</b>	<b>Subtotal EU/EEA</b>
<b>Non-EU/EEA</b>							
	6.7	0.2	32.0	9	1	17	Albania
	12.0	8.0	17.0	0	0	1	Andorra
	44.0	35.0	54.0	180	150	210	Armenia
	28.0	27.0	30.0	1 300	1 200	1 300	Azerbaijan
	67.0	63.0	70.0	1 300	1 300	1 400	Belarus
	0.0	0.0	8.2	0	0	4	Bosnia and Herzegovina
	30.0	26.0	34.0	400	360	440	Georgia
	50.0	1.3	99.0	12	4	20	Israel
	44.0	42.0	46.0	3 600	3 500	3 700	Kazakhstan
	61.0	58.0	64.0	2 300	2 200	2 400	Kyrgyzstan
	12.0	8.0	17.0	0	0	0	Monaco
	11.0	0.3	48.0	2	0	5	Montenegro
	0.0	0.0	18.0	0	0	3	North Macedonia
	55.0	51.0	59.0	1 300	1 200	1 400	Republic of Moldova
	67.0	66.0	67.0	49 000	49 000	50 000	Russian Federation
	12.0	8.0	17.0	0	0	0	San Marino
	4.7	1.3	11.0	16	7	26	Serbia
	26.0	9.1	51.0	19	9	29	Switzerland
	23.0	20.0	27.0	940	870	1 000	Tajikistan
	14.0	11.0	17.0	350	310	390	Turkey
	38.0	31.0	46.0	340	290	390	Turkmenistan
	48.0	47.0	49.0	10 000	9 800	10 000	Ukraine
	57.0	55.0	60.0	3 900	3 800	4 100	Uzbekistan
	<b>53</b>	<b>46</b>	<b>61</b>	<b>75 000</b>	<b>74 000</b>	<b>76 000</b>	<b>Subtotal non-EU/EEA</b>
	<b>53</b>	<b>46</b>	<b>61</b>	<b>77 000</b>	<b>76 000</b>	<b>77 000</b>	<b>Total European Region</b>
	<b>53</b>	<b>46</b>	<b>61</b>	<b>75 900</b>	<b>76 000</b>	<b>76 000</b>	<b>Subtotal 18 HPCs</b>

**Table 3. TB cases, notification rates per 100 000 population and mean annual change in rates, European Region, 2013–2017**

Country/area	2013		2014		2015		2016		2017		Mean annual % change in rate, 2013–2017
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	
<b>EU/EEA</b>											
Austria	653	7.7	586	6.9	583	6.8	634	7.3	570	6.5	-4.2%
Belgium	963	8.6	949	8.5	977	8.7	1 042	9.2	972	8.6	-0.2%
<i>Bulgaria</i>	1 932	26.5	1 872	25.8	1 660	23.0	1 603	22.4	1 463	20.6	-6.1%
Croatia	517	12.1	499	11.7	488	11.5	464	11.1	371	8.9	-7.4%
Cyprus	41	4.7	41	4.8	63	7.4	60	7.1	53	6.2	7.0%
Czech Republic	497	4.7	511	4.9	517	4.9	516	4.9	505	4.8	0.3%
Denmark	356	6.4	320	5.7	357	6.3	330	5.8	275	4.8	-6.9%
<i>Estonia</i>	290	22.0	248	18.8	217	16.5	193	14.7	175	13.3	-11.8%
Finland	273	5.0	263	4.8	270	4.9	233	4.2	237	4.3	-3.8%
France	4 947	7.5	4 888	7.4	4 744	7.1	4 907	7.4	5 131	7.7	0.4%
Germany	4 340	5.4	4 524	5.6	5 834	7.2	5 949	7.2	5 486	6.6	5.4%
Greece	540	4.9	519	4.7	482	4.4	440	4.1	467	4.3	-3.0%
Hungary	1 045	10.5	851	8.6	906	9.2	786	8.0	685	7.0	-9.8%
Iceland	11	3.4	9	2.8	7	2.1	6	1.8	14	4.1	4.9%
Ireland	374	8.1	311	6.7	283	6.1	315	6.7	318	6.6	-4.9%
Italy	3 973	6.7	3 916	6.4	3 769	6.2	4 032	6.6	3 944	6.5	-0.6%
<i>Latvia</i>	904	44.7	761	38.0	721	36.3	660	33.5	552	28.3	-10.8%
Liechtenstein	0	0.0	1	2.7	2	5.4	2	5.3	1	2.6	-
<i>Lithuania</i>	1 705	57.4	1 607	54.6	1 507	51.6	1 442	49.9	1 387	48.7	-4.0%
Luxembourg	38	7.1	24	4.4	30	5.3	29	5.0	32	5.4	-6.5%
Malta	50	11.8	46	10.7	32	7.3	50	11.1	42	9.1	-6.3%
Netherlands	845	5.0	814	4.8	862	5.1	887	5.2	787	4.6	-2.2%
Norway	392	7.8	323	6.3	313	6.1	295	5.7	261	5.0	-10.6%
Poland	7 250	19.0	6 698	17.6	6 430	16.9	6 444	17.0	5 787	15.2	-5.4%
Portugal	2 410	23.0	2 278	21.8	2 196	21.2	1 936	18.7	1 800	17.5	-6.6%
<i>Romania</i>	16 689	83.4	15 879	79.6	15 183	76.4	13 601	68.8	13 004	66.2	-5.6%
Slovakia	401	7.4	336	6.2	317	5.8	296	5.5	249	4.6	-11.3%
Slovenia	140	6.8	144	7.0	130	6.3	118	5.7	112	5.4	-5.5%
Spain	5 632	12.1	4 913	10.6	5 021	10.8	5 063	10.9	4 570	9.8	-5.0%
Sweden	639	6.7	659	6.8	815	8.4	714	7.2	520	5.2	-6.1%
United Kingdom	7 870	12.3	7 029	10.9	6 224	9.6	6 116	9.4	5 567	8.5	-9.0%
<b>Subtotal EU/EEA</b>	<b>65 717</b>	<b>12.9</b>	<b>61 819</b>	<b>12.1</b>	<b>60 940</b>	<b>11.9</b>	<b>59 163</b>	<b>11.5</b>	<b>55 337</b>	<b>10.7</b>	<b>-4.5%</b>
<b>Non-EU/EEA</b>											
Albania	474	16.2	408	14.0	415	14.2	415	14.2	503	17.2	1.4%
Andorra	5	6.2	6	7.6	4	5.1	4	5.2	1	1.3	-32.3%
<i>Armenia</i>	1 417	49.0	1 342	46.2	1 185	40.6	1 080	36.9	926	31.6	-10.4%
<i>Azerbaijan</i>	8 597	91.6	7 539	79.3	7 501	78.0	6 707	69.0	7 129	72.5	-5.7%
Belarus	4 859	51.3	4 274	45.1	4 177	44.0	3 598	38.0	3 052	32.2	-11.0%
Bosnia and Herzegovina	1 261	35.0	1 196	33.5	1 095	31.0	907	25.8	768	21.9	-11.0%
<i>Georgia</i>	4 319	106.7	3 850	96.4	3 611	91.4	3 330	84.8	2 927	74.8	-8.5%
Israel	308	3.9	361	4.5	280	3.5	250	3.1	234	2.8	-8.1%
<i>Kazakhstan</i>	19 857	115.4	15 718	89.9	14 631	82.4	12 658	70.4	12 942	71.1	-11.4%
<i>Kyrgyzstan</i>	7 209	126.8	7 423	128.5	7 833	133.5	7 995	134.2	7 695	127.3	0.1%
Monaco	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0%
Montenegro	120	19.1	113	18.0	80	12.7	87	13.8	77	12.2	0.0%
North Macedonia	323	15.6	285	13.7	284	13.7	267	12.8	219	10.5	-9.3%
<i>Republic of Moldova</i>	5 051	124.0	4 636	113.9	4 211	103.6	4 134	101.8	3 858	95.2	-6.4%
<i>Russian Federation</i>	142 533	99.3	136 168	94.7	130 904	91.0	121 046	84.1	114 187	79.3	-5.5%
San Marino	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0%
Serbia	2 127	23.8	1 832	20.6	1 658	18.7	1 488	16.9	1 466	16.7	-8.6%
Serbia excluding Kosovo <sup>a</sup>	1 205	17.0	998	14.1	888	12.5	767	10.9	745	10.7	-11.0%
Kosovo <sup>a</sup>	922	50.6	834	46.2	770	43.5	721	40.4	721	40.1	-5.7%
Switzerland	526	6.5	473	5.7	564	6.8	609	7.2	555	6.5	0.3%
<i>Tajikistan</i>	6 495	79.4	6 260	74.9	6 232	72.9	6 241	71.4	6 279	70.4	-3.0%
Turkey	13 409	17.7	13 378	17.4	12 772	16.3	12 417	15.6	12 046	14.9	-4.2%
<i>Turkmenistan</i>	3 676	68.5	2 854	52.2	2 472	44.4	2 340	41.3	2 232	38.8	-13.3%
<i>Ukraine</i>	48 134	106.7	40 302	89.8	35 304	79.1	34 088	76.7	31 584	71.4	-9.5%
<i>Uzbekistan</i>	25 168	83.8	22 804	74.8	19 055	61.5	18 441	58.6	19 329	60.6	-7.8%
<b>Subtotal non-EU/EEA</b>	<b>295 868</b>	<b>74.9</b>	<b>271 222</b>	<b>68.2</b>	<b>254 268</b>	<b>63.5</b>	<b>238 102</b>	<b>59.2</b>	<b>228 009</b>	<b>56.3</b>	<b>-6.9%</b>
<b>Total European Region</b>	<b>361 585</b>	<b>39.9</b>	<b>333 041</b>	<b>36.6</b>	<b>315 208</b>	<b>34.5</b>	<b>297 265</b>	<b>32.4</b>	<b>283 346</b>	<b>30.7</b>	<b>-6.3%</b>
<b>Subtotal 18 HPCs</b>	<b>312 244</b>	<b>79</b>	<b>286 915</b>	<b>72</b>	<b>269 176</b>	<b>67</b>	<b>251 574</b>	<b>63</b>	<b>240 767</b>	<b>59.8</b>	<b>-6.8%</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. For TB cases and notification rates by country and year for the period 1995–2016, see: ECDC (2017). Surveillance atlas of infectious diseases. In: European Centre for Disease Prevention and Control [website]. Stockholm: ECDC (<http://www.ecdc.europa.eu/en/data-tools/atlas/Pages/atlas.aspx>). The data published in this report might differ from figures in national reports due to different times of reporting. The deadline for correcting and updating the data used in this report in the joint database was 5 October 2018.

HPCs = high-priority countries.  
<sup>a</sup> For the purposes of this publication, all references to "Kosovo" in the tables and annexes, should be understood/read as "Kosovo (in accordance with Security Council resolution 1244 (1999))".







**Table 6. TB cases by site of disease, EU/EEA, 2017**

Country	Pulmonary						Extrapulmonary		No site reported		Total N
	Pulmonary only		Pulmonary and extrapulmonary		Total pulmonary		N	(%)	N	(%)	
	N	(%)	N	(%)	N	(%)					
<b>EU/EEA</b>											
Austria	366	(64.2)	65	(11.4)	431	(75.6)	139	(24.4)	0	(0.0)	570
Belgium	580	(59.7)	117	(12.0)	697	(71.7)	275	(28.3)	0	(0.0)	972
<i>Bulgaria</i>	1 049	(71.7)	52	(3.6)	1 101	(75.3)	362	(24.7)	0	(0.0)	1 463
Croatia	310	(83.6)	17	(4.6)	327	(88.1)	38	(10.2)	6	(1.6)	371
Cyprus	41	(77.4)	3	(5.7)	44	(83.0)	9	(17.0)	0	(0.0)	53
Czech Republic	423	(83.8)	16	(3.2)	439	(86.9)	66	(13.1)	0	(0.0)	505
Denmark	208	(75.6)	10	(3.6)	218	(79.3)	57	(20.7)	0	(0.0)	275
<i>Estonia</i>	141	(80.6)	27	(15.4)	168	(96.0)	7	(4.0)	0	(0.0)	175
Finland	169	(71.3)	0	(0.0)	169	(71.3)	68	(28.7)	0	(0.0)	237
France	2 640	(51.5)	914	(17.8)	3 554	(69.3)	1 415	(27.6)	162	(3.2)	5 131
Germany	3 260	(59.4)	632	(11.5)	3 892	(70.9)	1 375	(25.1)	219	(4.0)	5 486
Greece	334	(71.5)	57	(12.2)	391	(83.7)	60	(12.8)	16	(3.4)	467
Hungary	647	(94.5)	11	(1.6)	658	(96.1)	27	(3.9)	0	(0.0)	685
Iceland	8	(57.1)	3	(21.4)	11	(78.6)	3	(21.4)	0	(0.0)	14
Ireland	189	(59.4)	21	(6.6)	210	(66.0)	96	(30.2)	12	(3.8)	318
Italy	2 713	(68.8)	59	(1.5)	2 772	(70.3)	1 164	(29.5)	8	(0.2)	3 944
<i>Latvia</i>	486	(88.0)	36	(6.5)	522	(94.6)	30	(5.4)	0	(0.0)	552
Liechtenstein	1	(100.0)	0	(0.0)	1	(100.0)	0	(0.0)	0	(0.0)	1
<i>Lithuania</i>	1 269	(91.5)	16	(1.2)	1 285	(92.6)	102	(7.4)	0	(0.0)	1 387
Luxembourg	24	(75.0)	0	(0.0)	24	(75.0)	8	(25.0)	0	(0.0)	32
Malta	17	(40.5)	13	(31.0)	30	(71.4)	12	(28.6)	0	(0.0)	42
Netherlands	376	(47.8)	81	(10.3)	457	(58.1)	328	(41.7)	2	(0.3)	787
Norway	101	(38.7)	57	(21.8)	158	(60.5)	103	(39.5)	0	(0.0)	261
Poland	5 510	(95.2)	21	(0.4)	5 531	(95.6)	256	(4.4)	0	(0.0)	5 787
Portugal	1 147	(63.7)	143	(7.9)	1 290	(71.7)	507	(28.2)	3	(0.2)	1 800
<i>Romania</i>	10 266	(78.9)	781	(6.0)	11 047	(85.0)	1 957	(15.0)	0	(0.0)	13 004
Slovakia	157	(63.1)	49	(19.7)	206	(82.7)	43	(17.3)	0	(0.0)	249
Slovenia	76	(67.9)	15	(13.4)	91	(81.3)	21	(18.8)	0	(0.0)	112
Spain	2 961	(64.8)	354	(7.7)	3 315	(72.5)	1 255	(27.5)	0	(0.0)	4 570
Sweden	250	(48.1)	74	(14.2)	324	(62.3)	196	(37.7)	0	(0.0)	520
United Kingdom	2 369	(42.6)	679	(12.2)	3 048	(54.8)	2 504	(45.0)	15	(0.3)	5 567
<b>Total EU/EEA</b>	<b>38 088</b>	<b>(68.8)</b>	<b>4 323</b>	<b>(7.8)</b>	<b>42 411</b>	<b>(76.6)</b>	<b>12 483</b>	<b>(22.6)</b>	<b>443</b>	<b>(0.8)</b>	<b>55 337</b>

Note: WHO European Region TB HPCs are presented in italics.  
HPCs = high-priority countries.

**Table 7. New and relapse<sup>a</sup> pulmonary<sup>b</sup> TB cases by diagnostic method, EU/EEA, 2017**

Country	New and relapse pulmonary TB cases										All pulmonary TB cases	
	N	(%) <sup>d</sup>	Confirmed by culture, smear and/or nucleic acid amplification test <sup>c</sup>				Clinically diagnosed cases		N	(%) <sup>h</sup>		
			N	(%) <sup>e</sup>	Confirmed cases by WHO-recommended rapid tests such as Xpert MTB/RIF <sup>f</sup>		Confirmed by other bacteriological test only					
					N	(%) <sup>g</sup>	N	(%) <sup>g</sup>				
<b>EU/EEA</b>												
Austria	424	(98.4)	379	(89.4)	254	(67.0)	125	(33.0)	45	(10.6)	431	(75.6)
Belgium <sup>i</sup>	651	(93.4)	563	(86.5)	379	(67.3)	184	(32.7)	88	(13.5)	697	(71.7)
<i>Bulgaria</i>	1 052	(95.5)	694	(66.0)	2	(0.3)	692	(99.7)	358	(34.0)	1 101	(75.3)
Croatia	326	(97.9)	287	(88.0)	0	(0.0)	287	(100.0)	39	(12.0)	333	(89.8)
Cyprus	43	(97.7)	39	(90.7)	11	(28.2)	28	(71.8)	4	(9.3)	44	(83.0)
Czech Republic	433	(98.6)	366	(84.5)	245	(66.9)	121	(33.1)	67	(15.5)	439	(86.9)
Denmark <sup>i</sup>	197	(90.4)	159	(80.7)	89	(56.0)	70	(44.0)	38	(19.3)	218	(79.3)
<i>Estonia</i>	164	(97.6)	141	(86.0)	131	(92.9)	10	(7.1)	23	(14.0)	168	(96.0)
Finland	166	(98.2)	146	(88.0)	69	(47.3)	77	(52.7)	20	(12.0)	169	(71.3)
France	3 489	(93.9)	2 494	(71.5)	0	(0.0)	2 494	(100.0)	995	(28.5)	3 716	(72.4)
Germany	3 994	(97.2)	3 262	(81.7)	2 397	(73.5)	865	(26.5)	732	(18.3)	4 111	(74.9)
Greece	379	(93.1)	313	(82.6)	178	(56.9)	135	(43.1)	66	(17.4)	407	(87.2)
Hungary	624	(94.8)	333	(53.4)	0	(0.0)	333	(100.0)	291	(46.6)	658	(96.1)
Iceland	11	(100.0)	8	(72.7)	8	(100.0)	0	(0.0)	3	(27.3)	11	(78.6)
Ireland <sup>i</sup>	212	(95.5)	165	(77.8)	84	(50.9)	81	(49.1)	47	(22.2)	222	(69.8)
Italy	2 685	(96.6)	2 160	(80.4)	0	(0.0)	2 160	(100.0)	525	(19.6)	2 780	(70.5)
<i>Latvia</i>	513	(98.3)	443	(86.4)	175	(39.5)	268	(60.5)	70	(13.6)	522	(94.6)
Liechtenstein	1	(100.0)	1	(100.0)	1	(100.0)	0	(0.0)	0	(0.0)	1	(100.0)
<i>Lithuania</i>	1 166	(90.7)	1 004	(86.1)	0	(0.0)	1 004	(100.0)	162	(13.9)	1 285	(92.6)
Luxembourg	24	(100.0)	21	(87.5)	0	(0.0)	21	(100.0)	3	(12.5)	24	(75.0)
Malta	30	(100.0)	25	(83.3)	12	(48.0)	13	(52.0)	5	(16.7)	30	(71.4)
Netherlands	452	(98.5)	367	(81.2)	0	(0.0)	367	(100.0)	85	(18.8)	459	(58.3)
Norway <sup>i</sup>	149	(94.3)	137	(91.9)	83	(60.6)	54	(39.4)	12	(8.1)	158	(60.5)
Poland	5 285	(95.6)	3 944	(74.6)	996	(25.3)	2 948	(74.7)	1 341	(25.4)	5 531	(95.6)
Portugal	1 259	(97.4)	1 112	(88.3)	259	(23.3)	853	(76.7)	147	(11.7)	1 293	(71.8)
<i>Romania</i>	10 362	(93.8)	8 686	(83.8)	2 483	(28.6)	6 203	(71.4)	1 676	(16.2)	11 047	(85.0)
Slovakia	187	(90.8)	134	(71.7)	44	(32.8)	90	(67.2)	53	(28.3)	206	(82.7)
Slovenia	91	(100.0)	89	(97.8)	56	(62.9)	33	(37.1)	2	(2.2)	91	(81.3)
Spain	3 159	(95.3)	2 735	(86.6)	896	(32.8)	1 839	(67.2)	424	(13.4)	3 315	(72.5)
Sweden	301	(92.9)	273	(90.7)	213	(78.0)	60	(22.0)	28	(9.3)	324	(62.3)
United Kingdom <sup>i</sup>	2 875	(93.9)	2 245	(78.1)	222	(9.9)	2 023	(90.1)	630	(21.9)	3 063	(55.0)
<b>Total EU/EEA</b>	<b>40 704</b>	<b>(95.0)</b>	<b>32 725</b>	<b>(80.4)</b>	<b>9 287</b>	<b>(28.4)</b>	<b>23 438</b>	<b>(71.6)</b>	<b>7 979</b>	<b>(19.6)</b>	<b>42 854</b>	<b>(77.4)</b>

Note: WHO European Region TB HPCs are presented in italics.

HPCs = high-priority countries.

<sup>a</sup> Cases with unknown previous TB history are included among new TB cases.

<sup>b</sup> For the EU/EEA countries, cases with no disease site reported are included among pulmonary TB cases.

<sup>c</sup> Microscopy results from any specimen are included for EU/EEA countries.

<sup>d</sup> Percentage among all pulmonary TB cases.

<sup>e</sup> Percentage among all new and relapse pulmonary TB cases.

<sup>f</sup> All nucleic acid amplification tests are counted as "confirmed by WHO-recommended rapid diagnostics" for EU/EEA countries.

<sup>g</sup> Percentage among all new and relapse pulmonary TB cases confirmed by culture, smear and/or nucleic acid amplification test.

<sup>h</sup> Percentage among all TB cases.

<sup>i</sup> Previous TB history is defined by previous diagnosis.

**Table 7a. New and relapse<sup>a</sup> TB cases by diagnostic method, EU/EEA, 2017**

Country	New and relapse TB cases										All TB cases
	N	(%) <sup>c</sup>	Confirmed by culture, smear and/or nucleic acid amplification test <sup>b</sup>				Clinically diagnosed cases		N		
			N	(%) <sup>d</sup>	Confirmed cases by WHO-recommended rapid diagnostics such as Xpert MTB/RIF <sup>e</sup>		Confirmed by other bacteriological test				
					N	(%) <sup>f</sup>	N	(%) <sup>g</sup>		N	
<b>EU/EEA</b>											
Austria	562	(98.6)	491	(87.4)	323	(65.8)	168	(34.2)	71	(12.6)	570
Belgium <sup>a</sup>	916	(94.2)	756	(82.5)	484	(64.0)	272	(36.0)	160	(17.5)	972
<i>Bulgaria</i>	1 408	(96.2)	718	(51.0)	5	(0.7)	713	(99.3)	690	(49.0)	1 463
Croatia	364	(98.1)	315	(86.5)	0	(0.0)	315	(100.0)	49	(13.5)	371
Cyprus	52	(98.1)	45	(86.5)	14	(31.1)	31	(68.9)	7	(13.5)	53
Czech Republic	499	(98.8)	414	(83.0)	276	(66.7)	138	(33.3)	85	(17.0)	505
Denmark <sup>a</sup>	253	(92.0)	204	(80.6)	104	(51.0)	100	(49.0)	49	(19.4)	275
<i>Estonia</i>	171	(97.7)	145	(84.8)	134	(92.4)	11	(7.6)	26	(15.2)	175
Finland	234	(98.7)	204	(87.2)	89	(43.6)	115	(56.4)	30	(12.8)	237
France	4 839	(94.3)	3 054	(63.1)	0	(0.0)	3 054	(100.0)	1 785	(36.9)	5 131
Germany	5 353	(97.6)	4 318	(80.7)	3 049	(70.6)	1 269	(29.4)	1 035	(19.3)	5 486
Greece	434	(92.9)	339	(78.1)	200	(59.0)	139	(41.0)	95	(21.9)	467
Hungary	650	(94.9)	341	(52.5)	0	(0.0)	341	(100.0)	309	(47.5)	685
Iceland	13	(92.9)	10	(76.9)	10	(100.0)	0	(0.0)	3	(23.1)	14
Ireland <sup>a</sup>	301	(94.7)	214	(71.1)	112	(52.3)	102	(47.7)	87	(28.9)	318
Italy	3 828	(97.1)	3 022	(78.9)	0	(0.0)	3 022	(100.0)	806	(21.1)	3 944
<i>Latvia</i>	543	(98.4)	455	(83.8)	178	(39.1)	277	(60.9)	88	(16.2)	552
Liechtenstein	1	(100.0)	1	(100.0)	1	(100.0)	0	(0.0)	0	(0.0)	1
<i>Lithuania</i>	1 268	(91.4)	1 029	(81.2)	0	(0.0)	1 029	(100.0)	239	(18.8)	1 387
Luxembourg	32	(100.0)	23	(71.9)	0	(0.0)	23	(100.0)	9	(28.1)	32
Malta	42	(100.0)	34	(81.0)	13	(38.2)	21	(61.8)	8	(19.0)	42
Netherlands	776	(98.6)	537	(69.2)	0	(0.0)	537	(100.0)	239	(30.8)	787
Norway <sup>a</sup>	237	(90.8)	207	(87.3)	118	(57.0)	89	(43.0)	30	(12.7)	261
Poland	5 355	(95.6)	4 073	(73.6)	1 037	(25.5)	3 036	(74.5)	1 462	(26.4)	5 787
Portugal	1 760	(97.8)	1 309	(74.4)	320	(24.4)	989	(75.6)	451	(25.6)	1 800
<i>Romania</i>	12 310	(94.7)	9 054	(73.5)	2 579	(28.5)	6 475	(71.5)	3 256	(26.5)	13 004
Slovakia	228	(91.6)	149	(65.4)	56	(37.6)	93	(62.4)	79	(34.6)	249
Slovenia	112	(100.0)	109	(97.3)	61	(56.0)	48	(44.0)	3	(2.7)	112
Spain	4 379	(95.8)	3 420	(78.1)	1 137	(33.2)	2 283	(66.8)	959	(21.9)	4 570
Sweden	488	(93.8)	420	(86.1)	323	(76.9)	97	(23.1)	68	(13.9)	520
United Kingdom <sup>a</sup>	5 248	(94.3)	3 441	(65.6)	321	(9.3)	3 120	(90.7)	1 807	(34.4)	5 567
<b>Total EU/EEA</b>	<b>52 836</b>	<b>(95.5)</b>	<b>38 851</b>	<b>(73.5)</b>	<b>10 944</b>	<b>(28.2)</b>	<b>27 907</b>	<b>(71.8)</b>	<b>13 985</b>	<b>(26.5)</b>	<b>55 337</b>

Note: WHO European Region TB HPCs are presented in italics.

HPCs = high-priority countries.

<sup>a</sup> Cases with unknown previous TB history are included among new TB cases.

<sup>b</sup> Microscopy results from any specimen are included for EU/EEA countries.

<sup>c</sup> Percentage among all TB cases.

<sup>d</sup> Percentage among all new and relapse TB cases.

<sup>e</sup> All nucleic acid amplification tests are counted as "confirmed by WHO-recommended rapid diagnostics" for EU/EEA countries.

<sup>f</sup> Percentage among all new and relapse TB cases confirmed by culture, smear and/or nucleic acid amplification test.

<sup>g</sup> Previous TB history is defined by previous diagnosis.



**Table 8. TB cases according to EU case definition, EU/EEA, 2017**

Country	All laboratory-confirmed cases <sup>a</sup>						Confirmed cases <sup>b</sup>		Probable cases		Possible cases		All TB cases (N)
	Meeting only the smear-positive and nucleic acid test-positive criterion		Meeting only the culture-positive criterion		Meeting both criteria								
	N	(%) <sup>c</sup>	N	(%) <sup>c</sup>	N	(%) <sup>c</sup>	N	(%) <sup>d</sup>	N	(%) <sup>d</sup>	N	(%) <sup>d</sup>	
Austria	14	(3.1)	304	(68.3)	127	(28.5)	445	(78.1)	73	(12.8)	52	(9.1)	570
Belgium	10	(1.3)	481	(63.5)	267	(35.2)	758	(78.0)	98	(10.1)	116	(11.9)	972
<i>Bulgaria</i>	0	(0.0)	695	(99.9)	1	(0.1)	696	(47.6)	125	(8.5)	642	(43.9)	1 463
Croatia	0	(0.0)	316	(100.0)	0	(0.0)	316	(85.2)	5	(1.3)	50	(13.5)	371
Cyprus	0	(0.0)	34	(87.2)	5	(12.8)	39	(73.6)	9	(17.0)	5	(9.4)	53
Czech Republic	1	(0.3)	230	(60.7)	148	(39.1)	379	(75.0)	65	(12.9)	61	(12.1)	505
Denmark	1	(0.5)	129	(59.2)	88	(40.4)	218	(79.3)	3	(1.1)	54	(19.6)	275
<i>Estonia</i>	3	(2.1)	73	(50.3)	69	(47.6)	145	(82.9)	14	(8.0)	16	(9.1)	175
Finland	1	(0.5)	159	(81.5)	35	(17.9)	195	(82.3)	17	(7.2)	25	(10.5)	237
France	0	(0.0)	2 603	(100.0)	0	(0.0)	2 603	(50.7)	650	(12.7)	1 878	(36.6)	5 131
Germany	145	(3.6)	2 263	(56.9)	1 570	(39.5)	3 978	(72.5)	439	(8.0)	1 069	(19.5)	5 486
Greece	10	(3.8)	159	(60.0)	96	(36.2)	265	(56.7)	106	(22.7)	96	(20.6)	467
Hungary	0	(0.0)	352	(100.0)	0	(0.0)	352	(51.4)	10	(1.5)	323	(47.2)	685
Iceland	1	(10.0)	5	(50.0)	4	(40.0)	10	(71.4)	2	(14.3)	2	(14.3)	14
Ireland	0	(0.0)	168	(78.5)	46	(21.5)	214	(67.3)	20	(6.3)	84	(26.4)	318
Italy	0	(0.0)	2 831	(100.0)	0	(0.0)	2 831	(71.8)	278	(7.0)	835	(21.2)	3 944
<i>Latvia</i>	2	(0.4)	408	(90.1)	43	(9.5)	453	(82.1)	32	(5.8)	67	(12.1)	552
Liechtenstein	0	(0.0)	0	(0.0)	1	(100.0)	1	(100.0)	0	(0.0)	0	(0.0)	1
<i>Lithuania</i>	0	(0.0)	1 148	(100.0)	0	(0.0)	1 148	(82.8)	7	(0.5)	232	(16.7)	1 387
Luxembourg	0	(0.0)	23	(100.0)	0	(0.0)	23	(71.9)	0	(0.0)	9	(28.1)	32
Malta	0	(0.0)	26	(78.8)	7	(21.2)	33	(78.6)	1	(2.4)	8	(19.0)	42
Netherlands	0	(0.0)	542	(100.0)	0	(0.0)	542	(68.9)	32	(4.1)	213	(27.1)	787
Norway	2	(0.9)	166	(76.9)	48	(22.2)	216	(82.8)	10	(3.8)	35	(13.4)	261
Poland	0	(0.0)	3 454	(82.7)	725	(17.3)	4 179	(72.2)	88	(1.5)	1 520	(26.3)	5 787
Portugal	29	(2.6)	964	(87.2)	113	(10.2)	1 106	(61.4)	387	(21.5)	307	(17.1)	1 800
<i>Romania</i>	85	(0.9)	7 080	(77.0)	2 029	(22.1)	9 194	(70.7)	983	(7.6)	2 827	(21.7)	13 004
Slovakia	0	(0.0)	125	(93.3)	9	(6.7)	134	(53.8)	39	(15.7)	76	(30.5)	249
Slovenia	0	(0.0)	74	(67.9)	35	(32.1)	109	(97.3)	2	(1.8)	1	(0.9)	112
Spain	45	(1.4)	2 618	(81.4)	553	(17.2)	3 216	(70.4)	521	(11.4)	833	(18.2)	4 570
Sweden	2	(0.5)	320	(75.5)	102	(24.1)	424	(81.5)	35	(6.7)	61	(11.7)	520
United Kingdom	14	(0.4)	3 309	(95.1)	155	(4.5)	3 478	(62.5)	415	(7.5)	1 674	(30.1)	5 567
<b>Total EU/EEA</b>	<b>365</b>	<b>(1.0)</b>	<b>31 059</b>	<b>(82.4)</b>	<b>6 276</b>	<b>(16.6)</b>	<b>37 700</b>	<b>(68.1)</b>	<b>4 466</b>	<b>(8.1)</b>	<b>13 171</b>	<b>(23.8)</b>	<b>55 337</b>

Note: WHO European Region TB HPCs are presented in italics.

HPCs = high-priority countries.

<sup>a</sup> Laboratory-confirmed TB cases according to the EU case definition.

<sup>b</sup> Culture-positive OR microscopy-positive and nucleic acid amplification test-positive.

<sup>c</sup> Percentage among all laboratory-confirmed TB cases.

<sup>d</sup> Percentage among all TB cases.





	45-64				> 64				Unknown			Total		Country/area
	N	(%)	Rate per 100 000	M/F ratio	N	(%)	Rate per 100 000	M/F ratio	N	(%)	Rate per 100 000	N	M/F ratio	
														EU/EEA
	128	(22.8)	5.1	2.9	112	(19.9)	6.9	1.5	0	(0.0)	–	562	1.8	Austria
	217	(23.7)	7.1	1.8	105	(11.5)	5.0	2.1	0	(0.0)	–	916	1.9	Belgium <sup>b</sup>
	521	(37.0)	26.5	2.9	294	(20.9)	20.0	1.9	0	(0.0)	–	1 408	2.0	Bulgaria
	139	(38.2)	11.8	2.7	139	(38.2)	17.1	0.9	0	(0.0)	–	364	1.5	Croatia
	10	(19.2)	4.8	0.4	3	(5.8)	2.3	0.5	0	(0.0)	–	52	0.8	Cyprus
	194	(38.9)	7.1	3.6	111	(22.2)	5.6	1.8	0	(0.0)	–	499	2.6	Czech Republic
	93	(36.8)	6.1	2.2	27	(10.7)	2.5	0.9	0	(0.0)	–	253	1.6	Denmark <sup>b</sup>
	80	(46.8)	23.2	4.0	41	(24.0)	16.1	1.1	0	(0.0)	–	171	2.6	Estonia
	39	(16.7)	2.7	2.9	102	(43.6)	8.9	1.8	0	(0.0)	–	234	1.7	Finland
	1 005	(20.8)	5.8	2.0	876	(18.1)	6.8	1.7	2	(0.0)	N/F	4 839	1.8	France
	1 025	(19.1)	4.1	2.2	956	(17.9)	5.5	1.3	10	(0.2)	0.8	5 353	2.1	Germany
	125	(28.8)	4.2	2.8	137	(31.6)	5.9	2.0	4	(0.9)	N/F	434	2.7	Greece
	313	(48.2)	11.8	2.7	162	(24.9)	8.9	1.1	0	(0.0)	–	650	1.8	Hungary
	4	(30.8)	4.9	N/F	2	(15.4)	4.2	N/F	0	(0.0)	–	13	3.3	Iceland
	74	(24.6)	6.5	2.4	63	(20.9)	9.7	1.0	2	(0.7)	1.0	301	1.3	Ireland <sup>b</sup>
	752	(19.6)	4.3	1.8	584	(15.3)	4.3	1.5	0	(0.0)	–	3 828	2.1	Italy
	220	(40.5)	40.9	3.9	72	(13.3)	18.6	1.7	0	(0.0)	–	543	2.3	Latvia
	0	(0.0)	0.0	–	0	(0.0)	0.0	–	0	(0.0)	–	1	N/F	Liechtenstein
	521	(41.1)	64.1	4.1	196	(15.5)	35.6	1.7	0	(0.0)	–	1 268	2.4	Lithuania
	10	(31.3)	6.2	4.0	4	(12.5)	4.8	3.0	0	(0.0)	–	32	2.6	Luxembourg
	4	(9.5)	3.4	1.0	1	(2.4)	1.2	N/F	0	(0.0)	–	42	4.3	Malta
	173	(22.3)	3.6	1.7	97	(12.5)	3.1	1.6	0	(0.0)	–	776	1.6	Netherlands
	41	(17.3)	3.0	2.7	16	(6.8)	1.8	1.7	0	(0.0)	–	237	1.8	Norway <sup>b</sup>
	2 464	(44.5)	24.4	3.7	1 404	(25.4)	22.3	1.5	0	(0.0)	–	5 535	2.4	Poland
	586	(33.3)	20.3	2.6	454	(25.8)	20.9	1.8	0	(0.0)	–	1 760	1.8	Portugal
	4 482	(36.4)	83.5	4.2	1 955	(15.9)	55.9	1.5	0	(0.0)	–	12 310	2.2	Romania
	69	(30.3)	4.7	2.0	57	(25.0)	7.0	1.2	0	(0.0)	–	228	1.4	Slovakia
	38	(33.9)	6.4	1.5	54	(48.2)	13.8	1.0	0	(0.0)	–	112	1.4	Slovenia
	1 243	(28.4)	9.5	2.5	974	(22.2)	11.0	1.7	0	(0.0)	–	4 379	1.7	Spain
	81	(16.6)	3.3	0.9	62	(12.7)	3.1	1.0	0	(0.0)	–	488	1.2	Sweden
	1 325	(25.2)	7.8	1.6	829	(15.8)	7.0	1.3	0	(0.0)	–	5 248	1.4	United Kingdom <sup>b</sup>
	<b>15 976</b>	<b>(30.2)</b>	<b>11.2</b>	<b>2.8</b>	<b>9 889</b>	<b>(18.7)</b>	<b>9.9</b>	<b>1.5</b>	<b>18</b>	<b>(0.0)</b>	<b>1.8</b>	<b>52 836</b>	<b>1.9</b>	<b>Subtotal EU/EEA</b>
														Non-EU/EEA
	138	(27.4)	17.9	2.2	116	(23.1)	30.0	1.2	0	(0.0)	–	503	–	Albania
	0	(0.0)	0.0	–	0	(0.0)	0.0	–	0	(0.0)	–	1	0.0	Andorra
	309	(36.7)	42.4	4.8	91	(10.8)	27.6	2.6	0	(0.0)	–	841	3.5	Armenia
	1 092	(20.9)	47.9	2.3	232	(4.4)	39.2	1.4	1 360	(26.0)	–	5 231	1.9	Azerbaijan
	1 152	(41.4)	43.4	4.7	382	(13.7)	27.3	0.8	0	(0.0)	–	2 781	2.6	Belarus
	261	(34.1)	26.0	2.4	278	(36.3)	47.8	1.2	0	(0.0)	–	766	1.6	Bosnia and Herzegovina
	825	(31.8)	80.8	3.8	291	(11.2)	50.0	1.4	0	(0.0)	–	2 597	2.1	Georgia
	42	(17.9)	2.7	2.5	37	(15.8)	3.8	1.5	0	(0.0)	–	234	1.5	Israel
	3 534	(28.4)	92.3	2.3	1 248	(10.0)	98.1	0.9	0	(0.0)	–	12 449	1.5	Kazakhstan
	1 621	(24.2)	153.6	1.9	710	(10.6)	261.7	1.1	0	(0.0)	–	6 687	1.4	Kyrgyzstan
	0	(0.0)	0.0	–	0	(0.0)	0.0	–	0	(0.0)	–	0	–	Monaco
	25	(33.3)	15.2	5.3	18	(24.0)	19.4	1.6	0	(0.0)	–	75	–	Montenegro
	70	(32.4)	12.6	1.9	37	(17.1)	13.4	1.3	0	(0.0)	–	216	1.9	North Macedonia
	1 248	(37.2)	116.3	4.2	254	(7.6)	57.7	2.0	0	(0.0)	–	3 358	–	Republic of Moldova
	24 186	(28.6)	61.7	3.2	5 770	(6.8)	28.3	1.2	483	(0.6)	–	84 510	2.3	Russian Federation
	0	(0.0)	0.0	–	0	(0.0)	0.0	–	0	(0.0)	–	0	–	San Marino
	466	(32.1)	20.1	2.0	431	(29.7)	28.2	1.2	14	(1.0)	–	1 450	1.3	Serbia
	274	(37.1)	–	2.5	243	(32.9)	–	1.3	14	(1.9)	–	738	–	Serbia excluding Kosovo <sup>c</sup>
	192	(27.0)	–	1.5	188	(26.4)	–	1.0	0	(0.0)	–	712	–	Kosovo <sup>c</sup>
	94	(17.8)	3.9	2.1	75	(14.2)	4.8	1.2	0	(0.0)	–	529	1.7	Switzerland
	1 264	(21.4)	100.2	1.1	486	(8.2)	157.2	0.9	0	(0.0)	–	5 895	1.2	Tajikistan
	3 577	(30.3)	22.0	1.6	2 277	(19.3)	34.6	1.3	0	(0.0)	–	11 821	–	Turkey
	561	(28.5)	57.1	1.8	100	(5.1)	40.6	0.5	39	(2.0)	–	1 968	1.4	Turkmenistan
	8 781	(32.2)	72.7	3.4	2 322	(8.5)	31.9	1.1	0	(0.0)	–	27 229	2.3	Ukraine
	4 933	(29.3)	87.5	1.5	2 199	(13.1)	154.2	1.1	0	(0.0)	–	16 842	1.3	Uzbekistan
	<b>54 179</b>	<b>(29.1)</b>	<b>56.0</b>	<b>2.6</b>	<b>17 354</b>	<b>(9.3)</b>	<b>37.3</b>	<b>1.1</b>	<b>1 896</b>	<b>(1.0)</b>	<b>–</b>	<b>185 983</b>	<b>1.9</b>	<b>Subtotal non-EU/EEA</b>
	<b>70 155</b>	<b>(29.4)</b>	<b>29.3</b>	<b>2.7</b>	<b>27 243</b>	<b>(11.4)</b>	<b>18.5</b>	<b>1.3</b>	<b>1 914</b>	<b>(0.8)</b>	<b>–</b>	<b>238 819</b>	<b>1.9</b>	<b>Total European Region</b>
	<b>58 907</b>	<b>(29.8)</b>	<b>55.0</b>	<b>2.7</b>	<b>18 920</b>	<b>(9.6)</b>	<b>34.3</b>	<b>1.2</b>	<b>1 882</b>	<b>(1.0)</b>	<b>–</b>	<b>197 909</b>	<b>2.0</b>	<b>Subtotal 18 HPCs</b>

Table 10. TB cases by origin, European Region, 2017

Country/area	Origin criterion	Native		Foreign		Unknown origin		All TB cases
		N	(%)	N	(%)	N	(%)	N
<b>EU/EEA</b>								
Austria	Citizenship	197	(34.6)	373	(65.4)	0	(0.0)	570
Belgium	Citizenship	466	(47.9)	506	(52.1)	0	(0.0)	972
<i>Bulgaria</i>	<i>Birthplace</i>	<i>1 457</i>	<i>(99.6)</i>	<i>6</i>	<i>(0.4)</i>	<i>0</i>	<i>(0.0)</i>	<i>1 463</i>
Croatia	Birthplace	371	(100.0)	0	(0.0)	0	(0.0)	371
Cyprus	Birthplace	15	(28.3)	38	(71.7)	0	(0.0)	53
Czech Republic	Birthplace	346	(68.5)	159	(31.5)	0	(0.0)	505
Denmark	Birthplace	90	(32.7)	184	(66.9)	1	(0.4)	275
<i>Estonia</i>	<i>Birthplace</i>	<i>152</i>	<i>(86.9)</i>	<i>23</i>	<i>(13.1)</i>	<i>0</i>	<i>(0.0)</i>	<i>175</i>
Finland	Birthplace	132	(55.7)	95	(40.1)	10	(4.2)	237
France	Birthplace	1 815	(35.4)	3 019	(58.8)	297	(5.8)	5 131
Germany	Birthplace	1 441	(26.3)	3 820	(69.6)	225	(4.1)	5 486
Greece	Citizenship	270	(57.8)	197	(42.2)	0	(0.0)	467
Hungary	Citizenship	660	(96.4)	25	(3.6)	0	(0.0)	685
Iceland	Birthplace	6	(42.9)	8	(57.1)	0	(0.0)	14
Ireland	Birthplace	154	(48.4)	144	(45.3)	20	(6.3)	318
Italy	Birthplace	1 333	(33.8)	2 611	(66.2)	0	(0.0)	3 944
<i>Latvia</i>	<i>Birthplace</i>	<i>511</i>	<i>(92.6)</i>	<i>41</i>	<i>(7.4)</i>	<i>0</i>	<i>(0.0)</i>	<i>552</i>
Liechtenstein	Birthplace	1	(100.0)	0	(0.0)	0	(0.0)	1
<i>Lithuania</i>	<i>Birthplace</i>	<i>1 372</i>	<i>(98.9)</i>	<i>15</i>	<i>(1.1)</i>	<i>0</i>	<i>(0.0)</i>	<i>1 387</i>
Luxembourg	Birthplace	7	(21.9)	25	(78.1)	0	(0.0)	32
Malta	Birthplace	3	(7.1)	39	(92.9)	0	(0.0)	42
Netherlands	Birthplace	198	(25.2)	586	(74.5)	3	(0.4)	787
Norway	Birthplace	30	(11.5)	231	(88.5)	0	(0.0)	261
Poland	Citizenship	5 679	(98.1)	108	(1.9)	0	(0.0)	5 787
Portugal	Birthplace	1 448	(80.4)	351	(19.5)	1	(0.1)	1 800
<i>Romania</i>	<i>Birthplace</i>	<i>12 977</i>	<i>(99.8)</i>	<i>27</i>	<i>(0.2)</i>	<i>0</i>	<i>(0.0)</i>	<i>13 004</i>
Slovakia	Birthplace	244	(98.0)	5	(2.0)	0	(0.0)	249
Slovenia	Birthplace	66	(58.9)	46	(41.1)	0	(0.0)	112
Spain	Birthplace	2 319	(50.7)	1 352	(29.6)	899	(19.7)	4 570
Sweden	Birthplace	52	(10.0)	468	(90.0)	0	(0.0)	520
United Kingdom	Birthplace	1 634	(29.4)	3 797	(68.2)	136	(2.4)	5 567
<b>Subtotal EU/EEA</b>		<b>35 446</b>	<b>(64.1)</b>	<b>18 299</b>	<b>(33.1)</b>	<b>1 592</b>	<b>(2.9)</b>	<b>55 337</b>
<b>Non-EU/EEA</b>								
Albania	Citizenship	503	(100.0)	0	(0.0)	–	–	503
Andorra	Citizenship	1	(100.0)	0	(0.0)	–	–	1
Armenia	Citizenship	919	(99.2)	7	(0.8)	–	–	926
<i>Azerbaijan</i>	<i>Citizenship</i>	<i>7 129</i>	<i>(100.0)</i>	<i>0</i>	<i>(0.0)</i>	<i>–</i>	<i>–</i>	<i>7 129</i>
Belarus	Citizenship	3 052	(100.0)	0	(0.0)	–	–	3 052
Bosnia and Herzegovina	Birthplace	768	(100.0)	0	(0.0)	–	–	768
Georgia	Citizenship	2 927	(100.0)	0	(0.0)	–	–	2 927
Israel	Birthplace	44	(18.8)	190	(81.2)	–	–	234
<i>Kazakhstan</i>	<i>Citizenship</i>	<i>12 942</i>	<i>(100.0)</i>	<i>0</i>	<i>(0.0)</i>	<i>–</i>	<i>–</i>	<i>12 942</i>
<i>Kyrgyzstan</i>	<i>Birthplace</i>	<i>7 695</i>	<i>(100.0)</i>	<i>0</i>	<i>(0.0)</i>	<i>–</i>	<i>–</i>	<i>7 695</i>
Monaco	Birthplace	0	–	0	–	–	–	0
Montenegro	Citizenship	74	(96.1)	3	(3.9)	–	–	77
North Macedonia	Birthplace	216	(98.6)	3	(1.4)	–	–	219
<i>Republic of Moldova</i>	<i>Citizenship</i>	<i>3 834</i>	<i>(99.4)</i>	<i>24</i>	<i>(0.6)</i>	<i>–</i>	<i>–</i>	<i>3 858</i>
<i>Russian Federation</i>	<i>Citizenship</i>	<i>111 689</i>	<i>(97.8)</i>	<i>2 498</i>	<i>(2.2)</i>	<i>–</i>	<i>–</i>	<i>114 187</i>
San Marino	–	0	–	0	–	–	–	0
Serbia	–	1 466	(100.0)	0	(0.0)	–	–	1 466
Serbia excluding Kosovo <sup>a</sup>	Citizenship	745	(100.0)	0	(0.0)	–	–	745
Kosovo <sup>a</sup>	Birthplace	721	(100.0)	0	(0.0)	–	–	721
Switzerland	Birthplace	189	(34.1)	366	(65.9)	–	–	555
<i>Tajikistan</i>	<i>Birthplace</i>	<i>6 279</i>	<i>(100.0)</i>	<i>0</i>	<i>(0.0)</i>	<i>–</i>	<i>–</i>	<i>6 279</i>
Turkey	Birthplace	10 939	(90.8)	1 107	(9.2)	–	–	12 046
<i>Turkmenistan</i>	<i>Citizenship</i>	<i>2 232</i>	<i>(100.0)</i>	<i>0</i>	<i>(0.0)</i>	<i>–</i>	<i>–</i>	<i>2 232</i>
Ukraine	Citizenship	31 558	(99.9)	26	(0.1)	–	–	31 584
<i>Uzbekistan</i>	<i>Birthplace</i>	<i>19 329</i>	<i>(100.0)</i>	<i>0</i>	<i>(0.0)</i>	<i>–</i>	<i>–</i>	<i>19 329</i>
<b>Subtotal non-EU/EEA</b>		<b>223 785</b>	<b>(98.1)</b>	<b>4 224</b>	<b>(1.9)</b>	<b>–</b>	<b>–</b>	<b>228 009</b>
<b>Total European Region</b>		<b>259 231</b>	<b>(91.5)</b>	<b>22 523</b>	<b>(7.9)</b>	<b>1 592</b>	<b>(0.6)</b>	<b>283 346</b>
<b>Subtotal 18 HPCs</b>		<b>236 993</b>	<b>(98.4)</b>	<b>3 774</b>	<b>(1.6)</b>	<b>0</b>	<b>(0.0)</b>	<b>240 767</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. HPCs = high-priority countries.

<sup>a</sup> (In accordance with Security Council Resolution 1244 (1999)).

**Table 11. Drug resistance surveillance of bacteriologically confirmed<sup>a</sup> pulmonary TB cases, European Region, 2017**

Country/area	Source of data	Coverage	Bacteriologically-confirmed cases <sup>a</sup>		Cases with DST <sup>b</sup> results at least for RIF <sup>c</sup> and INH <sup>d</sup>		Cases resistant to any anti-TB drug <sup>e</sup>		Multidrug-resistant TB cases		Reporting completeness <sup>f</sup>
			N	(%)	N	(%)	N	(%)	N	(%)	
<b>EU/EEA</b>											
Austria	TESSy <sup>g</sup>	National	380	(88.2)	345	(90.8)	42	(12.2)	16	(4.6)	Y
Belgium	TESSy	National	597	(85.7)	551	(92.3)	37	(6.7)	3	(0.5)	Y
Bulgaria	TESSy	National	676	(61.4)	597	(88.3)	49	(8.2)	24	(4.0)	Y
Croatia	TESSy	National	285	(87.2)	194	(68.1)	11	(5.7)	0	(0.0)	Y
Cyprus	TESSy	National	34	(77.3)	33	(97.1)	6	(18.2)	1	(3.0)	Y
Czech Republic	TESSy	National	358	(81.5)	312	(87.2)	21	(6.7)	6	(1.9)	Y
Denmark	TESSy	National	175	(80.3)	171	(97.7)	3	(1.8)	1	(0.6)	Y
Estonia	TESSy	National	144	(85.7)	139	(96.5)	56	(40.3)	36	(25.9)	Y
Finland	TESSy	National	147	(87.0)	141	(95.9)	17	(12.1)	5	(3.5)	Y
France	–	–	–	–	–	–	–	–	–	–	–
Germany	TESSy	National	3 262	(83.8)	2 784	(85.3)	322	(11.6)	87	(3.1)	Y
Greece	TESSy	National	237	(60.6)	168	(70.9)	34	(20.2)	6	(3.6)	Y
Hungary	TESSy	National	344	(52.3)	312	(90.7)	44	(14.1)	11	(3.5)	Y
Iceland	TESSy	National	8	(72.7)	8	(100.0)	0	(0.0)	0	(0.0)	Y
Ireland	TESSy	National	162	(77.1)	146	(90.1)	14	(9.6)	5	(3.4)	Y
Italy <sup>h</sup>	NRL-TME <sup>i</sup>	Partial	2 231	(80.5)	1 980	(88.7)	–	–	56	(2.8)	N
Latvia	TESSy	National	442	(84.7)	423	(95.7)	122	(28.8)	45	(10.6)	Y
Liechtenstein	TESSy	National	1	(100.0)	1	(100.0)	0	(0.0)	0	(0.0)	Y
Lithuania	TESSy	National	1 123	(87.4)	1 123	(100.0)	416	(37.0)	248	(22.1)	Y
Luxembourg	TESSy	National	21	(87.5)	21	(100.0)	1	(4.8)	1	(4.8)	Y
Malta	TESSy	National	25	(83.3)	23	(92.0)	2	(8.7)	0	(0.0)	Y
Netherlands	TESSy	National	369	(80.7)	369	(100.0)	36	(9.8)	6	(1.6)	Y
Norway	TESSy	National	146	(92.4)	141	(96.6)	19	(13.5)	6	(4.3)	Y
Poland	TESSy	National	4 109	(74.3)	3 706	(90.2)	253	(6.8)	44	(1.2)	Y
Portugal	TESSy	National	988	(76.6)	652	(66.0)	92	(14.1)	10	(1.5)	Y
Romania	TESSy	National	9 039	(81.8)	7 958	(88.0)	693	(8.7)	356	(4.5)	Y
Slovakia	TESSy	National	145	(70.4)	125	(86.2)	12	(9.6)	5	(4.0)	Y
Slovenia	TESSy	National	89	(97.8)	89	(100.0)	2	(2.2)	1	(1.1)	Y
Spain	TESSy	National	2 723	(82.1)	798	(29.3)	93	(11.7)	16	(2.0)	Y
Sweden	TESSy	National	295	(91.0)	285	(96.6)	32	(11.2)	9	(3.2)	Y
United Kingdom	TESSy	National	2 307	(75.7)	2 235	(96.9)	193	(8.6)	32	(1.4)	Y
<b>Subtotal EU/EEA</b>			<b>30 862</b>	<b>(79.4)</b>	<b>25 830</b>	<b>(83.7)</b>	<b>2 622</b>	<b>(11.0)</b>	<b>1 036</b>	<b>(4.0)</b>	
<b>Non-EU/EEA</b>											
Albania	NRL-TME	National	210	–	79	(37.6)	–	–	0	(0.0)	N
Andorra	NRL-TME	National	1	–	1	(100.0)	–	–	0	(0.0)	Y
Armenia	NRL-TME	National	454	–	428	(94.3)	–	–	81	(18.9)	Y
Azerbaijan	NRL-TME	National	4 923	–	3 035	(61.6)	–	–	665	(21.9)	N
Belarus	NRL-TME	National	2 390	–	2 390	(100.0)	–	–	1 088	(45.5)	Y
Bosnia and Herzegovina	NRL-TME	National	479	–	129	(26.9)	–	–	0	(0.0)	N
Georgia	NRL-TME	National	2 061	–	1 606	(77.9)	–	–	262	(16.3)	Y
Israel	NRL-TME	National	131	–	131	(100.0)	–	–	8	(6.1)	Y
Kazakhstan	NRL-TME	National	9 982	–	4 202	(42.1)	–	–	1 663	(39.6)	N
Kyrgyzstan	NRL-TME	National	3 849	–	2 616	(68.0)	–	–	827	(31.6)	N
Monaco	NRL-TME	National	0	–	0	–	–	–	0	–	Y
Montenegro	–	–	58	–	53	(91.4)	–	–	1	(1.9)	–
North Macedonia	NRL-TME	National	155	–	155	(100.0)	–	–	1	(0.6)	Y
Republic of Moldova	NRL-TME	National	2 267	–	1 486	(65.5)	–	–	486	(32.7)	N
Russian Federation	NRL-TME	National	59 036	–	53 873	(91.3)	–	–	22 817	(42.4)	Y
San Marino	–	–	0	–	0	–	–	–	0	–	Y
Serbia	–	National	783	–	357	(45.6)	–	–	5	(1.4)	N
Serbia excluding Kosovo <sup>j</sup>	NRL-TME	National	513	–	357	(69.6)	–	–	5	(1.4)	N
Kosovo <sup>j</sup>	–	National	270	–	0	(0.0)	–	–	0	(0.0)	N
Switzerland	NRL-TME	National	364	–	276	(75.8)	–	–	8	(2.9)	Y
Tajikistan	NRL-TME	Subnational	3 084	–	650	(21.1)	–	–	546	(84.0)	N
Turkey	NRL-TME	National	6 338	–	5 438	(85.8)	–	–	182	(3.3)	N
Turkmenistan	NRL-TME	–	–	–	0	–	–	–	–	–	Y
Ukraine	NRL-TME	National	20 052	–	18 624	(92.9)	–	–	5 008	(26.9)	Y
Uzbekistan	NRL-TME	Subnational	8 192	–	5 045	(61.6)	–	–	540	(10.7)	N
<b>Subtotal non-EU/EEA</b>			<b>124 809</b>	–	<b>100 574</b>	<b>(80.6)</b>	–	–	<b>34 188</b>	<b>(34.0)</b>	
<b>Total European Region</b>			<b>155 671</b>	–	<b>126 404</b>	<b>(81.2)</b>	<b>2 622</b>	<b>(11.0)</b>	<b>35 224</b>	<b>(27.9)</b>	
<b>Subtotal 18 HPCs</b>			<b>134 052</b>	–	<b>109 633</b>	<b>(81.8)</b>	<b>1 336</b>	<b>(1.2)</b>	<b>34 874</b>	<b>(31.8)</b>	

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. HPCs = high-priority countries.

<sup>a</sup> Bacteriologically confirmed cases – cases with positive identification for *M. tuberculosis* complex confirmed by culture and/or line probe assay for non-EU/EEA countries and areas. For EU/EEA countries: cases with positive identification for *M. tuberculosis* complex confirmed by culture and/or line probe assay.

<sup>b</sup> DST = drug-susceptibility testing.

<sup>c</sup> RIF = rifampicin.

<sup>d</sup> INH = isoniazid.

<sup>e</sup> For non-EU/EEA countries and areas any resistance to isoniazid, rifampicin, ethambutol or streptomycin expressed as a percentage of cases with DST results available for at least isoniazid and rifampicin. No routine testing for ethambutol and streptomycin in all countries. For EU/EEA countries, cases with DST results for at least RIF and INH that have any resistance to isoniazid,

rifampicin, ethambutol, streptomycin, ciprofloxacin, gatifloxacin, levofloxacin, moxifloxacin, ofloxacin, amikacin, capreomycin, kanamycin or pyrazinamide expressed as a percentage of cases with DST results available for at least isoniazid and rifampicin.

<sup>f</sup> Data considered complete when collected nationwide OR culture results available for ≥ 90% of all cases, and > 50% of all cases culture-positive, and > 75% of them with DST results for isoniazid and rifampicin, and ≥ 95% of the external quality assessment results confirmed by a supranational reference laboratory.

<sup>g</sup> TESSy = the European Surveillance System.

<sup>h</sup> Data from Italy are reported by the National Reference Laboratory (NRL) and may differ from data shown elsewhere in this report.

<sup>i</sup> TME = the WHO global TB data collection system.

<sup>j</sup> (In accordance with Security Council Resolution 1244 (1999)).



	Total ... <sup>b</sup>								Country/area
	Cases with DST results		MDR-TB cases		All bacteriologically confirmed pulmonary TB cases		All pulmonary TB cases		
	N	(%) <sup>e</sup>	N	(%) <sup>f</sup>	N	(%) <sup>g</sup>	N	(%) <sup>h</sup>	
									<b>EU/EEA</b>
	277	(95.5)	13	(4.7)	290	(83.3)	348	(61.1)	Austria
	465	(96.3)	3	(0.6)	483	(82.4)	586	(60.3)	Belgium <sup>k</sup>
	597	(88.4)	24	(4.0)	675	(61.3)	1 101	(75.3)	Bulgaria
	168	(68.0)	0	(0.0)	247	(87.6)	282	(76.0)	Croatia
	33	(100.0)	1	(3.0)	33	(76.7)	43	(81.1)	Cyprus
	312	(92.3)	6	(1.9)	338	(77.0)	439	(86.9)	Czech Republic
	171	(98.8)	1	(0.6)	173	(79.4)	218	(79.3)	Denmark <sup>k</sup>
	139	(97.9)	36	(25.9)	142	(84.5)	168	(96.0)	Estonia
	137	(98.6)	5	(3.6)	139	(84.2)	165	(69.6)	Finland
	-	-	-	-	-	-	-	-	France
	160	(85.1)	22	(13.8)	188	(67.6)	278	(5.1)	Germany
	161	(72.5)	6	(3.7)	222	(60.3)	368	(78.8)	Greece
	312	(90.7)	11	(3.5)	344	(52.3)	658	(96.1)	Hungary
	8	(100.0)	0	(0.0)	8	(72.7)	11	(78.6)	Iceland
	102	(94.4)	2	(2.0)	108	(83.1)	130	(40.9)	Ireland <sup>k</sup>
	1 980	(88.7)	56	(2.8)	2 231	(100.0)	2 231	(56.6)	Italy
	423	(95.9)	45	(10.6)	441	(84.5)	522	(94.6)	Latvia
	1	(100.0)	0	(0.0)	1	(100.0)	1	(100.0)	Liechtenstein
	1 123	(100.0)	248	(22.1)	1 123	(87.4)	1 285	(92.6)	Lithuania
	-	-	-	-	-	-	-	-	Luxembourg
	23	(95.8)	0	(0.0)	24	(80.0)	30	(71.4)	Malta
	369	(100.0)	6	(1.6)	369	(80.7)	457	(58.1)	Netherlands
	138	(97.9)	6	(4.3)	141	(91.6)	154	(59.0)	Norway <sup>k</sup>
	3 706	(91.3)	44	(1.2)	4 057	(73.4)	5 531	(95.6)	Poland
	652	(69.0)	10	(1.5)	945	(73.3)	1 290	(71.7)	Portugal
	7 956	(89.6)	356	(4.5)	8 878	(80.4)	11 047	(85.0)	Romania
	124	(100.0)	5	(4.0)	124	(60.5)	205	(82.3)	Slovakia
	89	(100.0)	1	(1.1)	89	(97.8)	91	(81.3)	Slovenia
	794	(34.7)	16	(2.0)	2 286	(82.2)	2 780	(60.8)	Spain
	273	(99.3)	9	(3.3)	275	(89.0)	309	(59.4)	Sweden
	2 133	(97.7)	28	(1.3)	2 183	(74.9)	2 916	(52.4)	United Kingdom <sup>h</sup>
	<b>22 826</b>	<b>(86.0)</b>	<b>960</b>	<b>(4.2)</b>	<b>26 557</b>	<b>(78.9)</b>	<b>33 644</b>	<b>(67.0)</b>	<b>Subtotal EU/EEA</b>
									<b>Non-EU/EEA</b>
	79	(37.6)	0	(0.0)	210	-	-	-	Albania
	1	(100.0)	0	(0.0)	1	-	-	-	Andorra
	428	(94.3)	81	(18.9)	454	-	-	-	Armenia
	3 035	(61.6)	665	(21.9)	4 923	-	-	-	Azerbaijan
	2 390	(100.0)	1 088	(45.5)	2 390	-	-	-	Belarus
	129	(26.9)	0	(0.0)	479	-	-	-	Bosnia and Herzegovina
	1 606	(77.9)	262	(16.3)	2 061	-	-	-	Georgia
	131	(100.0)	8	(6.1)	131	-	-	-	Israel
	4 202	(42.1)	1 663	(39.6)	9 982	-	-	-	Kazakhstan
	2 616	(68.0)	827	(31.6)	3 849	-	-	-	Kyrgyzstan
	0	-	0	-	0	-	-	-	Monaco
	53	(91.4)	1	(1.9)	58	-	-	-	Montenegro
	155	(100.0)	1	(0.6)	155	-	-	-	North Macedonia
	1 486	(65.5)	486	(32.7)	2 267	-	-	-	Republic of Moldova
	53 873	(91.3)	22 817	(42.4)	59 036	-	-	-	Russian Federation
	0	(0.0)	0	(0.0)	0	-	-	-	San Marino
	357	(45.7)	5	(1.4)	781	-	-	-	Serbia
	357	(69.9)	5	(1.4)	511	-	-	-	Serbia excluding Kosovo <sup>l</sup>
	0	(0.0)	0	(0.0)	270	-	-	-	Kosovo <sup>l</sup>
	276	(89.0)	8	(2.9)	310	-	-	-	Switzerland
	650	(21.1)	546	(84.0)	3 084	-	-	-	Tajikistan
	5 438	(85.8)	182	(3.3)	6 338	-	-	-	Turkey
	0	-	0	-	-	-	-	-	Turkmenistan
	18 624	(92.9)	5 008	(26.9)	20 052	-	-	-	Ukraine
	5 045	(61.6)	540	(10.7)	8 192	-	-	-	Uzbekistan
	<b>100 574</b>	<b>(80.6)</b>	<b>34 188</b>	<b>(34.0)</b>	<b>124 753</b>	-	-	-	<b>Subtotal non-EU/EEA</b>
	<b>123 400</b>	<b>(81.6)</b>	<b>35 148</b>	<b>(28.5)</b>	<b>151 310</b>	-	-	-	<b>Total European Region</b>
	<b>109 631</b>	<b>(81.9)</b>	<b>34 874</b>	<b>(31.8)</b>	<b>133 887</b>	-	-	-	<b>Subtotal 18 HPCs</b>

<sup>e</sup> Percentage among all bacteriologically confirmed pulmonary cases with DST results. For EU/EEA, excluding the cases with unknown previous treatment history.

<sup>f</sup> Percentage among all pulmonary TB cases with DST results. For EU/EEA excluding the cases with unknown previous treatment history.

<sup>g</sup> Percentage among all pulmonary TB cases. For EU/EEA excluding the cases with unknown previous treatment history.

<sup>h</sup> Percentage among all TB cases.

<sup>k</sup> Previous TB history is defined by previous diagnosis.

<sup>l</sup> (In accordance with Security Council Resolution 1244 (1999)).

**Table 13. Drug resistance in all laboratory-confirmed<sup>a</sup> TB cases, EU/EEA, 2017**

Country	Source of data	Coverage	Laboratory-confirmed TB cases <sup>a</sup>		Cases with DST results (at least INH and RIF)		Cases resistant to any anti-TB drug <sup>b</sup>		Multidrug-resistant TB cases		Reporting completeness <sup>c</sup>
			N	(%)	N	(%)	N	(%)	N	(%)	
<b>EU/EEA</b>											
Austria	TESSy	National	445	(78.1)	425	(95.5)	53	(12.5)	18	(4.2)	Y
Belgium	TESSy	National	758	(78.0)	729	(96.2)	58	(8.0)	5	(0.7)	Y
<i>Bulgaria</i>	TESSy	<i>National</i>	696	(47.6)	607	(87.2)	49	(8.1)	24	(4.0)	Y
Croatia	TESSy	National	316	(85.2)	215	(68.0)	11	(5.1)	0	(0.0)	Y
Cyprus	TESSy	National	39	(73.6)	39	(100.0)	7	(17.9)	1	(2.6)	Y
Czech Republic	TESSy	National	379	(75.0)	350	(92.3)	24	(6.9)	8	(2.3)	Y
Denmark	TESSy	National	218	(79.3)	214	(98.2)	5	(2.3)	2	(0.9)	Y
<i>Estonia</i>	TESSy	<i>National</i>	145	(82.9)	142	(97.9)	56	(39.4)	36	(25.4)	Y
Finland	TESSy	National	195	(82.3)	192	(98.5)	22	(11.5)	5	(2.6)	Y
France	–	–	–	–	–	–	–	–	–	–	–
Germany	TESSy	National	3 978	(72.5)	3 555	(89.4)	423	(11.9)	105	(3.0)	Y
Greece	TESSy	National	265	(56.7)	191	(72.1)	39	(20.4)	7	(3.7)	Y
Hungary	TESSy	National	352	(51.4)	318	(90.3)	44	(13.8)	11	(3.5)	Y
Iceland	TESSy	National	10	(71.4)	10	(100.0)	0	(0.0)	0	(0.0)	Y
Ireland	TESSy	National	214	(67.3)	196	(91.6)	18	(9.2)	5	(2.6)	Y
Italy	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	TESSy	<i>National</i>	453	(82.1)	434	(95.8)	125	(28.8)	46	(10.6)	Y
Liechtenstein	TESSy	National	1	(100.0)	1	(100.0)	0	(0.0)	0	(0.0)	Y
<i>Lithuania</i>	TESSy	<i>National</i>	1 148	(82.8)	1 148	(100.0)	422	(36.8)	249	(21.7)	Y
Luxembourg	TESSy	National	23	(71.9)	23	(100.0)	1	(4.3)	1	(4.3)	Y
Malta	TESSy	National	33	(78.6)	31	(93.9)	2	(6.5)	0	(0.0)	Y
Netherlands	TESSy	National	542	(68.9)	542	(100.0)	59	(10.9)	10	(1.8)	Y
Norway	TESSy	National	216	(82.8)	213	(98.6)	29	(13.6)	9	(4.2)	Y
Poland	TESSy	National	4 179	(72.2)	3 809	(91.1)	260	(6.8)	44	(1.2)	Y
Portugal	TESSy	National	1 106	(61.4)	738	(66.7)	101	(13.7)	10	(1.4)	Y
<i>Romania</i>	TESSy	<i>National</i>	9 194	(70.7)	8 183	(89.0)	710	(8.7)	361	(4.4)	Y
Slovakia	TESSy	National	134	(53.8)	134	(100.0)	13	(9.7)	6	(4.5)	Y
Slovenia	TESSy	National	109	(97.3)	109	(100.0)	2	(1.8)	1	(0.9)	Y
Spain	TESSy	National	3 216	(70.4)	969	(30.1)	109	(11.2)	19	(2.0)	Y
Sweden	TESSy	National	424	(81.5)	422	(99.5)	50	(11.8)	11	(2.6)	Y
United Kingdom	TESSy	National	3 478	(62.5)	3 400	(97.8)	293	(8.6)	47	(1.4)	Y
<b>Total EU/EEA</b>			<b>32 266</b>	<b>(69.7)</b>	<b>27 339</b>	<b>(84.7)</b>	<b>2 985</b>	<b>(10.9)</b>	<b>1 041</b>	<b>(3.8)</b>	

Note: WHO European Region TB HPCs are presented in italics.

HPCs = high-priority countries.

TESSy = The European Surveillance System.

DST = drug-susceptibility testing.

INH = isoniazid.

RIF = rifampicin.

<sup>a</sup> Laboratory-confirmed cases – culture-positive OR microscopy-positive and nucleic acid amplification test-positive cases.

<sup>b</sup> Cases with DST results for at least RIF and INH that have any resistance to isoniazid, rifampicin, ethambutol, streptomycin, ciprofloxacin, gatifloxacin, levofloxacin, moxifloxacin, ofloxacin, amikacin, capreomycin, kanamycin or pyrazinamide expressed as a percentage of cases with DST results available for at least isoniazid and rifampicin.

<sup>c</sup> Data considered complete when collected nationwide or culture results available for ≥ 90% of all cases, and > 50% of all cases culture-positive, and > 75% of them with DST results for isoniazid and rifampicin, and ≥ 95% of the external quality assurance results confirmed by a supranational reference laboratory.

**Table 14. XDR-TB cases among all laboratory-confirmed<sup>a</sup> MDR-TB cases, European Region, 2017**

Country/area	TB cases with first-line DST <sup>b</sup>		MDR-TB among all TB cases with first-line DST <sup>b</sup>		MDR-TB with second-line DST <sup>c</sup>		XDR-TB	
	N	N	(%)	N	(%)	N	(%)	
<b>EU/EEA</b>								
Austria	425	18	(4.2)	18	(100.0)	3	(16.7)	
Belgium	729	5	(0.7)	5	(100.0)	0	(0.0)	
Bulgaria	607	24	(4.0)	23	(95.8)	1	(4.3)	
Croatia	215	0	(0.0)	0	–	0	–	
Cyprus	39	1	(2.6)	1	(100.0)	0	(0.0)	
Czech Republic	350	8	(2.3)	8	(100.0)	2	(25.0)	
Denmark	214	2	(0.9)	2	(100.0)	0	(0.0)	
Estonia	142	36	(25.4)	34	(94.4)	9	(26.5)	
Finland	192	5	(2.6)	5	(100.0)	1	(20.0)	
France	–	–	–	–	–	–	–	
Germany	3 555	105	(3.0)	82	(78.1)	4	(4.9)	
Greece	191	7	(3.7)	7	(100.0)	2	(28.6)	
Hungary	318	11	(3.5)	10	(90.9)	4	(40.0)	
Iceland	10	0	(0.0)	0	–	0	–	
Ireland	196	5	(2.6)	5	(100.0)	1	(20.0)	
Italy	–	–	–	–	–	–	–	
Latvia	434	46	(10.6)	46	(100.0)	18	(39.1)	
Liechtenstein	1	0	(0.0)	0	–	0	–	
Lithuania	1 148	249	(21.7)	249	(100.0)	87	(34.9)	
Luxembourg	23	1	(4.3)	0	(0.0)	0	–	
Malta	31	0	(0.0)	0	–	0	–	
Netherlands	542	10	(1.8)	9	(90.0)	0	(0.0)	
Norway	213	9	(4.2)	9	(100.0)	0	(0.0)	
Poland	3 809	44	(1.2)	35	(79.5)	5	(14.3)	
Portugal	738	10	(1.4)	7	(70.0)	0	(0.0)	
Romania	8 183	361	(4.4)	146	(40.4)	45	(30.8)	
Slovakia	134	6	(4.5)	6	(100.0)	2	(33.3)	
Slovenia	109	1	(0.9)	1	(100.0)	0	(0.0)	
Spain	969	19	(2.0)	7	(36.8)	0	(0.0)	
Sweden	422	11	(2.6)	11	(100.0)	0	(0.0)	
United Kingdom	3 400	47	(1.4)	44	(93.6)	3	(6.8)	
<b>Subtotal EU/EEA</b>	<b>27 339</b>	<b>1 041</b>	<b>(3.8)</b>	<b>770</b>	<b>(74.0)</b>	<b>187</b>	<b>(24.3)</b>	
<b>Non-EU/EEA</b>								
Albania	79	0	(0.0)	0	(0.0)	0	(0.0)	
Andorra	1	0	(0.0)	0	(0.0)	0	(0.0)	
Armenia	631	101	(16.0)	101	(100.0)	15	(14.9)	
Azerbaijan	4 908	665	(13.5)	614	(92.3)	118	(0.0)	
Belarus	2 452	1 088	(44.4)	1 088	(100.0)	525	(48.3)	
Bosnia and Herzegovina	431	0	(0.0)	0	(0.0)	0	(0.0)	
Georgia	2 111	273	(12.9)	273	(100.0)	49	(17.9)	
Israel	171	8	(4.7)	8	(100.0)	1	(12.5)	
Kazakhstan	10 946	1 663	(15.2)	0	(0.0)	340	(0.0)	
Kyrgyzstan	3 757	926	(24.6)	705	(76.1)	134	(19.0)	
Monaco	0	0	–	0	–	0	(0.0)	
Montenegro	59	1	(1.7)	1	(100.0)	1	(100.0)	
North Macedonia	155	1	(0.6)	0	(0.0)	0	(0.0)	
Republic of Moldova	2 216	699	(31.5)	635	(90.8)	59	(9.3)	
Russian Federation	55 344	23 472	(42.4)	23 098	(98.4)	3 661	(15.8)	
San Marino	0	0	–	0	–	0	(0.0)	
Serbia	653	6	(0.9)	0	(0.0)	0	(0.0)	
Serbia excluding Kosovo <sup>d</sup>	378	5	(1.3)	0	(0.0)	0	(0.0)	
Kosovo <sup>d</sup>	275	1	(0.4)	0	(0.0)	0	(0.0)	
Switzerland	0.0	–	–	–	–	–	–	
Tajikistan	3 084	643	(20.8)	515	(80.1)	279	(54.2)	
Turkey	5 916	191	(3.2)	124	(64.9)	2	(1.6)	
Turkmenistan	1 085	343	–	0	–	6	(0.0)	
Ukraine	19 937	5 058	(25.4)	5 058	(100.0)	1 097	(21.7)	
Uzbekistan	13 855	540	(3.9)	540	(100.0)	285	(52.8)	
<b>Subtotal non-EU/EEA</b>	<b>127 791</b>	<b>35 678</b>	<b>(27.9)</b>	<b>32 760</b>	<b>(91.8)</b>	<b>6 572</b>	<b>(18.5)</b>	
<b>Total European Region</b>	<b>155 130</b>	<b>36 719</b>	<b>(23.7)</b>	<b>33 530</b>	<b>(91.3)</b>	<b>6 759</b>	<b>(18.6)</b>	
<b>Subtotal 18 HPCs</b>	<b>136 756</b>	<b>36 378</b>	<b>(26.6)</b>	<b>33 249</b>	<b>(91.4)</b>	<b>6 730</b>	<b>(17.6)</b>	

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. DST = drug susceptibility testing.

HPCs = high-priority countries.

MDR-TB = multidrug-resistant tuberculosis.

XDR-TB = extensively drug-resistant tuberculosis.

<sup>a</sup> Bacteriologically-confirmed cases – cases with positive identification for *M. tuberculosis* complex confirmed by culture and/or line probe assay for non-EU countries and areas, culture-positive OR microscopy-positive and nucleic acid amplification test-positive cases for EU/EEA countries.

<sup>b</sup> First-line DST – drug susceptibility tested for at least two main first-line anti-TB drugs: isoniazid and rifampicin.

<sup>c</sup> Second-line DST – drug susceptibility testing for second-line anti-TB drugs (at least one fluoroquinolone (ciprofloxacin, gatifloxacin, levofloxacin, moxifloxacin and ofloxacin) and one injectable drug (amikacin, capreomycin and kanamycin)).

<sup>d</sup> (In accordance with Security Council Resolution 1244 (1999)).

**Table 15. RR/MDR- and XDR-TB cases enrolled to treatment, European Region, 2017**

Country/area	Total number of RR/MDR-TB cases detected	RR/MDR-TB cases enrolled on treatment <sup>a,b</sup>		Total number of XDR-TB cases detected	XDR-TB cases enrolled on treatment <sup>a,b</sup>	
	N	N	(%)	N	N	(%)
<b>EU/EEA</b>						
Austria	19	19	(100.0)	3	3	(100.0)
Belgium	8	8	(100.0)	0	0	–
<i>Bulgaria</i>	29	29	(100.0)	1	1	(100.0)
Croatia	0	0	–	0	0	–
Cyprus	1	1	(100.0)	0	0	–
Czech Republic	8	8	(100.0)	2	2	(100.0)
Denmark	2	2	(100.0)	0	0	–
<i>Estonia</i>	37	35	(94.6)	9	9	(100.0)
Finland	6	5	(83.3)	1	0	(0.0)
France	–	–	–	–	–	–
Germany	119	115	(96.6)	4	4	(100.0)
Greece	9	9	(100.0)	2	2	(100.0)
Hungary	13	13	(100.0)	4	4	(100.0)
Iceland	0	0	–	0	0	–
Ireland	6	6	(100.0)	1	1	(100.0)
Italy	88	–	–	–	–	–
<i>Latvia</i>	48	48	(100.0)	18	18	(100.0)
Liechtenstein	0	0	–	0	0	–
<i>Lithuania</i>	264	264	(100.0)	87	87	(100.0)
Luxembourg	1	1	(100.0)	0	0	–
Malta	0	0	–	0	0	–
Netherlands	11	11	(100.0)	0	0	–
Norway	9	9	(100.0)	0	0	–
Poland	52	52	(100.0)	5	5	(100.0)
Portugal	10	10	(100.0)	0	0	–
<i>Romania</i>	456	448	(98.2)	45	42	(93.3)
Slovakia	7	7	(100.0)	2	2	(100.0)
Slovenia	1	1	(100.0)	0	0	–
Spain	23	23	(100.0)	0	0	–
Sweden	12	12	(100.0)	0	0	–
United Kingdom	55	51	(92.7)	3	3	(100.0)
<b>Subtotal EU/EEA</b>	<b>1 294</b>	<b>1 187</b>	<b>(91.7)</b>	<b>187</b>	<b>183</b>	<b>(97.9)</b>
<b>Non-EU/EEA</b>						
Albania	4	0	(0.0)	0	0	–
Andorra	0	0	–	0	0	–
<i>Armenia</i>	104	104	(100.0)	15	15	(100.0)
<i>Azerbaijan</i>	1 007	858	(85.2)	118	182	(154.2)
Belarus	1 117	1 071	(95.9)	525	405	(77.1)
Bosnia and Herzegovina	0	0	–	0	0	–
<i>Georgia</i>	339	316	(93.2)	49	47	(95.9)
Israel	8	8	(100.0)	1	1	(100.0)
<i>Kazakhstan</i>	4 626	4 626	(100.0)	340	300	(88.2)
<i>Kyrgyzstan</i>	1 372	1 166	(85.0)	134	157	(117.2)
Monaco	0	0	–	0	0	–
Montenegro	1	0	(0.0)	1	1	(100.0)
North Macedonia	1	1	(100.0)	0	0	–
<i>Republic of Moldova</i>	853	962	(112.8)	59	62	(105.1)
<i>Russian Federation</i>	26 602	22 120	(83.2)	3 661	2 770	(75.7)
San Marino	0	0	–	0	0	–
Serbia	9	10	(111.1)	0	0	–
Serbia excluding Kosovo <sup>c</sup>	5	6	(120.0)	0	0	–
Kosovo <sup>c</sup>	4	4	(100.0)	0	0	–
Switzerland	0	0	–	0	0	–
<i>Tajikistan</i>	936	546	(58.3)	279	250	(89.6)
<i>Turkey</i>	252	202	(80.2)	2	2	(100.0)
<i>Turkmenistan</i>	343	343	(100.0)	6	6	(100.0)
<i>Ukraine</i>	6 564	8 067	(122.9)	1 097	1 346	(122.7)
<i>Uzbekistan</i>	2 265	2 265	(100.0)	285	258	(90.5)
<b>Subtotal non-EU/EEA</b>	<b>46 403</b>	<b>42 665</b>	<b>(91.9)</b>	<b>6 572</b>	<b>5 802</b>	<b>(88.3)</b>
<b>Total European Region</b>	<b>47 697</b>	<b>43 852</b>	<b>(91.9)</b>	<b>6 759</b>	<b>5 985</b>	<b>(88.5)</b>
<b>Subtotal 18 HPCs</b>	<b>47 214</b>	<b>43 470</b>	<b>(92.1)</b>	<b>6 730</b>	<b>5 957</b>	<b>(88.5)</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics.

HPCs = high-priority countries.

RR/MDR-TB = rifampicin-resistant and multidrug-resistant tuberculosis.

XDR-TB = extensively drug-resistant tuberculosis.

<sup>a</sup> For countries/areas that do not provide information on treatment start, all reported cases are used as proxy.

<sup>b</sup> For some non-EU/EEA countries and areas, patients who were diagnosed before 2017 but started on treatment in 2017 are included, resulting in over 100% coverage.

<sup>c</sup> (In accordance with Security Council Resolution 1244 (1999)).



**Table 16. New and relapse<sup>a</sup> TB cases with HIV infection, European Region, 2017**

Country/area	New and relapse cases <sup>a</sup>		TB cases with known HIV-status		HIV-positive TB cases		HIV-positive cases started ART <sup>e</sup>	
	N		N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>								
Austria	–	–	–	–	–	–	–	–
Belgium <sup>d</sup>	916	485	(52.9)	39	(8.0)	–	–	
Bulgaria	1 408	1 158	(82.2)	3	(0.3)	3	(100.0)	
Croatia	364	4	(1.1)	1	(25.0)	–	–	
Cyprus	52	48	(92.3)	0	(0.0)	0	–	
Czech Republic	499	194	(38.9)	8	(4.1)	–	–	
Denmark <sup>d</sup>	253	194	(76.7)	3	(1.5)	–	–	
Estonia	171	159	(93.0)	13	(8.2)	12	(92.3)	
Finland	–	–	–	–	–	–	–	
France	–	–	–	–	–	–	–	
Germany	–	–	–	–	–	–	–	
Greece	434	362	(83.4)	12	(3.3)	–	–	
Hungary	650	18	(2.8)	1	(5.6)	–	–	
Iceland	13	12	(92.3)	0	(0.0)	–	–	
Ireland <sup>d</sup>	301	97	(32.2)	14	(14.4)	7	(50.0)	
Italy	–	–	–	–	–	–	–	
Latvia	543	463	(85.3)	50	(10.8)	35	(70.0)	
Liechtenstein	–	–	–	–	–	–	–	
Lithuania	1 268	1 008	(79.5)	35	(3.5)	–	–	
Luxembourg	32	3	(9.4)	1	(33.3)	–	–	
Malta	42	37	(88.1)	0	(0.0)	0	–	
Netherlands	776	519	(66.9)	22	(4.2)	13	(59.1)	
Norway <sup>d</sup>	237	206	(86.9)	6	(2.9)	–	–	
Poland	–	–	–	–	–	–	–	
Portugal	1 760	1 152	(65.5)	126	(10.9)	–	–	
Romania	12 310	10 156	(82.5)	214	(2.1)	173	(80.8)	
Slovakia	228	208	(91.2)	0	(0.0)	0	–	
Slovenia	112	77	(68.8)	0	(0.0)	–	–	
Spain	4 379	3 259	(74.4)	242	(7.4)	–	–	
Sweden	–	–	–	–	–	–	–	
United Kingdom <sup>d</sup>	5 248	4 410	(84.0)	128	(2.9)	115	(89.8)	
<b>Subtotal EU/EEA</b>	<b>31 996</b>	<b>24 229</b>	<b>(75.7)</b>	<b>918</b>	<b>(3.8)</b>	<b>358</b>	<b>(80.6)</b>	
<b>Non-EU/EEA</b>								
Albania	503	235	(46.7)	4	(1.7)	4	(100.0)	
Andorra	1	0	(0.0)	–	–	0	–	
Armenia	841	838	(99.6)	66	(7.9)	53	(80.3)	
Azerbaijan	5 231	5 889	(112.6)	95	(1.6)	79	(83.2)	
Belarus	2 781	2 781	(100.0)	202	(7.3)	155	(76.7)	
Bosnia and Herzegovina	766	18	(2.3)	0	(0.0)	0	–	
Georgia	2 597	2 442	(94.0)	43	(1.8)	43	(100.0)	
Israel	234	234	(100.0)	12	(5.1)	10	(83.3)	
Kazakhstan	12 449	11 056	(88.8)	443	(4.0)	417	(94.1)	
Kyrgyzstan	6 687	5 966	(89.2)	216	(3.6)	160	(74.1)	
Monaco	–	–	–	–	–	–	–	
Montenegro	75	63	(84.0)	0	(0.0)	0	–	
North Macedonia	216	178	(82.4)	0	(0.0)	0	–	
Republic of Moldova	3 358	3 352	(99.8)	277	(8.3)	190	(68.6)	
Russian Federation <sup>e</sup>	84 510	81 443	(96.4)	15 695	(19.3)	9 748	(62.1)	
San Marino	0	0	–	0	–	0	–	
Serbia	1 450	372	(25.7)	8	(2.2)	8	(100.0)	
Serbia excluding Kosovo <sup>f</sup>	738	71	(9.6)	8	(11.3)	8	(100.0)	
Kosovo <sup>f</sup>	712	301	(42.3)	0	(0.0)	0	–	
Switzerland	–	–	–	–	–	–	–	
Tajikistan	5 895	5 937	(100.7)	219	(3.7)	117	(53.4)	
Turkey	11 821	8 423	(71.3)	65	(0.8)	51	(78.5)	
Turkmenistan	–	–	–	–	–	–	–	
Ukraine	27 229	26 623	(97.8)	5 955	(22.4)	4 426	(74.3)	
Uzbekistan <sup>g</sup>	16 842	16 842	(100.0)	935	(5.6)	935	(100.0)	
<b>Subtotal non-EU/EEA</b>	<b>183 486</b>	<b>172 692</b>	<b>(94.1)</b>	<b>24 235</b>	<b>(14.0)</b>	<b>16 396</b>	<b>(67.7)</b>	
<b>Total European Region</b>	<b>215 482</b>	<b>196 921</b>	<b>(91.4)</b>	<b>25 153</b>	<b>(12.8)</b>	<b>16 754</b>	<b>(66.6)</b>	
<b>Subtotal 18 HPCs</b>	<b>195 941</b>	<b>184 536</b>	<b>(94.2)</b>	<b>24 526</b>	<b>(13.3)</b>	<b>16 597</b>	<b>(67.7)</b>	

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics.

ART = antiretroviral therapy.

HIV = human immunodeficiency virus.

HPCs = high-priority countries.

<sup>a</sup> Cases with unknown previous TB history are included among new TB cases.

<sup>b</sup> Countries/areas are only included in this analysis if the total number of cases tested for HIV and test results are provided. For EU/EEA countries, countries are only included in this analysis if the total number of cases tested for HIV is more than zero.

<sup>c</sup> Data from WHO global TB database. Percentages calculated for countries that reported data on ART.

<sup>d</sup> Previous TB history is defined by previous diagnosis.

<sup>e</sup> The Russian Federation reported data on new TB cases in the civilian population only.

<sup>f</sup> (In accordance with Security Council Resolution 1244 (1999)).

<sup>g</sup> Uzbekistan reported data among all TB cases.

**Table 16a. All TB cases with HIV infection, EU/EEA, 2017**

Country	All TB cases <sup>a</sup>		TB cases with known HIV status		HIV-positive TB cases	
	N	N	(%)	N	(%)	
<b>EU/EEA</b>						
Austria	-	-	-	-	-	-
Belgium	972	517	(53.2)	43	(8.3)	
<i>Bulgaria</i>	<i>1 463</i>	<i>1 204</i>	<i>(82.3)</i>	3	(0.2)	
Croatia	371	4	(1.1)	1	(25.0)	
Cyprus	53	49	(92.5)	0	(0.0)	
Czech Republic	505	197	(39.0)	8	(4.1)	
Denmark	275	211	(76.7)	3	(1.4)	
<i>Estonia</i>	<i>175</i>	<i>163</i>	<i>(93.1)</i>	14	(8.6)	
Finland	-	-	-	-	-	
France	-	-	-	-	-	
Germany	-	-	-	-	-	
Greece	467	389	(83.3)	13	(3.3)	
Hungary	685	18	(2.6)	1	(5.6)	
Iceland	14	13	(92.9)	0	(0.0)	
Ireland	318	102	(32.1)	14	(13.7)	
Italy	-	-	-	-	-	
<i>Latvia</i>	<i>552</i>	<i>471</i>	<i>(85.3)</i>	52	(11.0)	
Liechtenstein	-	-	-	-	-	
<i>Lithuania</i>	<i>1 387</i>	<i>1 125</i>	<i>(81.1)</i>	42	(3.7)	
Luxembourg	32	3	(9.4)	1	(33.3)	
Malta	42	37	(88.1)	0	(0.0)	
Netherlands	787	526	(66.8)	22	(4.2)	
Norway	261	228	(87.4)	7	(3.1)	
Poland	-	-	-	-	-	
Portugal	1 800	1 183	(65.7)	135	(11.4)	
<i>Romania</i>	<i>13 004</i>	<i>10 760</i>	<i>(82.7)</i>	232	(2.2)	
Slovakia	249	227	(91.2)	0	(0.0)	
Slovenia	112	77	(68.8)	0	(0.0)	
Spain	4 570	3 408	(74.6)	277	(8.1)	
Sweden	-	-	-	-	-	
United Kingdom	5 567	4 671	(83.9)	138	(3.0)	
<b>Total EU/EEA</b>	<b>33 661</b>	<b>25 583</b>	<b>(76.0)</b>	<b>1 006</b>	<b>(3.9)</b>	

Note: WHO European Region TB HPCs are presented in italics.

HIV = human immunodeficiency virus.

HPCs = high-priority countries.

<sup>a</sup> Countries are only included in this analysis if the total number of cases tested for HIV is more than zero.

Table 17. TB in prisons, European Region, 2017<sup>a</sup>

Country/area	Prison population	New and relapsed TB cases (all forms) notified in prisons		Proportion of new and relapsed TB cases in prisons out of the country total (%)	TB relative risk in prisons <sup>b</sup>
	N	N	Rate per 100 000 prisoners		
<b>EU/EEA</b>					
Austria	–	–	–	–	–
Belgium	10 619	20	188	(2.2)	23.3
<i>Bulgaria</i>	7 262	16	220	(1.1)	11.1
Croatia	–	–	–	–	–
Cyprus	–	–	–	–	–
Czech Republic	22 159	25	113	(5.0)	23.9
Denmark	–	–	–	–	–
<i>Estonia</i>	2 800	3	107	(1.8)	8.2
Finland	–	–	–	–	–
France	68 311	65	95	(1.3)	13.2
Germany	–	–	–	–	–
Greece	–	–	–	–	–
Hungary	–	–	–	–	–
Iceland	–	–	–	–	–
Ireland	7 484	0	0	(0.0)	0.0
Italy	–	–	–	–	–
<i>Latvia</i>	3 765	21	558	(3.9)	20.0
Liechtenstein	–	–	–	–	–
<i>Lithuania</i>	6 599	54	818	(4.3)	18.4
Luxembourg	700	0	0	(0.0)	0.0
Malta	–	–	–	–	–
Netherlands	27 951	19	68	(2.4)	15.0
Norway	–	–	–	–	–
Poland	73 807	170	230	(3.1)	15.8
Portugal	13 465	32	238	(1.8)	13.9
<i>Romania</i>	22 532	105	466	(0.9)	7.4
Slovakia	8 211	18	219	(7.9)	52.3
Slovenia	–	–	–	–	–
Spain	–	–	–	–	–
Sweden	–	–	–	–	–
United Kingdom	92 500	22	24	(0.4)	3.0
<b>Subtotal EU/EEA</b>	<b>368 165</b>	<b>570</b>	<b>155</b>	<b>(1.6)</b>	<b>11.4</b>
<b>Non-EU/EEA</b>					
Albania	6 000	8	133.3	(1.6)	7.8
Andorra	0	0	0.0	(0.0)	–
Armenia	3 536	16	452.5	(1.9)	15.8
<i>Azerbaijan</i>	20 213	256	1 266.5	(4.9)	23.8
<i>Belarus</i>	32 500	97	298.5	(3.5)	10.2
Bosnia and Herzegovina	0	0	0.0	(0.0)	–
<i>Georgia</i>	9 280	58	625.0	(2.2)	9.4
Israel	0	0	0.0	(0.0)	–
<i>Kazakhstan</i>	35 000	386	1 102.9	(3.1)	16.1
<i>Kyrgyzstan</i>	8 889	199	2 238.7	(3.0)	20.2
Monaco	0	0	0.0	(0.0)	–
Montenegro	0	0	0.0	–	–
North Macedonia	3 087	10	323.9	(4.6)	31.2
<i>Republic of Moldova</i>	7 762	99	1 275.4	(2.9)	15.4
<i>Russian Federation</i>	611 266	8 166	1 335.9	(9.7)	22.8
San Marino	0	0	0.0	(0.0)	–
Serbia	30 000	8	26.7	(0.6)	1.6
Serbia excluding Kosovo <sup>c</sup>	30 000	8	26.7	(0.6)	1.6
Kosovo <sup>c</sup>	0	0	0.0	(0.0)	–
Switzerland	0	0	0.0	–	–
<i>Tajikistan</i>	13 500	101	748.1	(1.7)	11.3
Turkey	232 182	125	53.8	(1.1)	3.7
<i>Turkmenistan</i>	0	0	0.0	(0.0)	–
<i>Ukraine</i>	60 876	744	1 222.2	(2.7)	19.8
<i>Uzbekistan</i>	0	0	–	–	–
<b>Subtotal non-EU/EEA</b>	<b>1 074 091</b>	<b>10 273</b>	<b>956</b>	<b>(6.1)</b>	<b>23.0</b>
<b>Total European Region</b>	<b>1 442 256</b>	<b>10 843</b>	<b>752</b>	<b>(5.3)</b>	<b>14.9</b>
<b>Subtotal 18 HPCs</b>	<b>1 077 962</b>	<b>10 446</b>	<b>969</b>	<b>(5.8)</b>	<b>19.8</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics.

HPCs = high-priority countries.

<sup>a</sup> Data from the WHO Global TB database.

<sup>b</sup> In the calculation of summary results, only countries/areas reporting data on prison population and TB notification in prisons are included.

<sup>c</sup> (In accordance with Security Council Resolution 1244 (1999)).

**Table 18. Treatment outcome of all TB cases notified in 2016, European Region, 2017**

Country/area	TB cases notified in 2016	Success		Died		Failed		Lost to follow-up <sup>a</sup>		Still on treatment		Not evaluated <sup>b</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>													
Austria	634	461	(72.7)	44	(6.9)	0	(0.0)	11	(1.7)	68	(10.7)	50	(7.9)
Belgium	1 042	844	(81.0)	63	(6.0)	0	(0.0)	70	(6.7)	32	(3.1)	33	(3.2)
Bulgaria	1 603	1 345	(83.9)	136	(8.5)	20	(1.2)	90	(5.6)	12	(0.7)	0	(0.0)
Croatia	464	269	(58.0)	72	(15.5)	1	(0.2)	22	(4.7)	18	(3.9)	82	(17.7)
Cyprus	60	39	(65.0)	0	(0.0)	0	(0.0)	1	(1.7)	0	(0.0)	20	(33.3)
Czech Republic	516	348	(67.4)	86	(16.7)	1	(0.2)	56	(10.9)	10	(1.9)	15	(2.9)
Denmark	330	129	(39.1)	5	(1.5)	9	(2.7)	1	(0.3)	8	(2.4)	178	(53.9)
Estonia	193	135	(69.9)	30	(15.5)	5	(2.6)	2	(1.0)	18	(9.3)	3	(1.6)
Finland	233	73	(31.3)	0	(0.0)	0	(0.0)	5	(2.1)	5	(2.1)	150	(64.4)
France	4 907	2 629	(53.6)	187	(3.8)	0	(0.0)	338	(6.9)	89	(1.8)	1 664	(33.9)
Germany	5 949	4 067	(68.4)	342	(5.7)	2	(0.0)	153	(2.6)	243	(4.1)	1 142	(19.2)
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	786	544	(69.2)	88	(11.2)	19	(2.4)	70	(8.9)	42	(5.3)	23	(2.9)
Iceland	6	5	(83.3)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(16.7)
Ireland	315	110	(34.9)	18	(5.7)	0	(0.0)	4	(1.3)	11	(3.5)	172	(54.6)
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	660	512	(77.6)	64	(9.7)	1	(0.2)	34	(5.2)	45	(6.8)	4	(0.6)
Liechtenstein	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Lithuania	1 442	992	(68.8)	163	(11.3)	14	(1.0)	97	(6.7)	170	(11.8)	6	(0.4)
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	887	753	(84.9)	32	(3.6)	0	(0.0)	38	(4.3)	17	(1.9)	47	(5.3)
Norway	295	249	(84.4)	4	(1.4)	3	(1.0)	13	(4.4)	11	(3.7)	15	(5.1)
Poland	6 444	3 432	(53.3)	618	(9.6)	4	(0.1)	394	(6.1)	25	(0.4)	1 971	(30.6)
Portugal	1 936	1 347	(69.6)	134	(6.9)	0	(0.0)	66	(3.4)	325	(16.8)	64	(3.3)
Romania	13 601	11 056	(81.3)	1 169	(8.6)	375	(2.8)	724	(5.3)	256	(1.9)	21	(0.2)
Slovakia	296	252	(85.1)	31	(10.5)	0	(0.0)	3	(1.0)	1	(0.3)	9	(3.0)
Slovenia	118	84	(71.2)	24	(20.3)	0	(0.0)	1	(0.8)	7	(5.9)	2	(1.7)
Spain	5 063	3 445	(68.0)	322	(6.4)	1	(0.0)	26	(0.5)	99	(2.0)	1 170	(23.1)
Sweden	714	635	(88.9)	15	(2.1)	2	(0.3)	11	(1.5)	15	(2.1)	36	(5.0)
United Kingdom	6 116	4 857	(79.4)	350	(5.7)	0	(0.0)	288	(4.7)	438	(7.2)	183	(3.0)
<b>Subtotal EU/EEA</b>	<b>54 612</b>	<b>38 614</b>	<b>(70.7)</b>	<b>3 997</b>	<b>(7.3)</b>	<b>457</b>	<b>(0.8)</b>	<b>2 518</b>	<b>(4.6)</b>	<b>1 965</b>	<b>(3.6)</b>	<b>7 061</b>	<b>(12.9)</b>
<b>Non-EU/EEA</b>													
Albania	409	357	(87.3)	10	(2.4)	3	(0.7)	20	(4.9)	-	-	19	(4.6)
Andorra	4	3	(75.0)	1	(25.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Armenia	893	720	(80.6)	48	(5.4)	18	(2.0)	106	(11.9)	-	-	1	(0.1)
Azerbaijan	3 684	2 866	(77.8)	121	(3.3)	245	(6.7)	374	(10.2)	-	-	78	(2.1)
Belarus	2 325	2 050	(88.2)	128	(5.5)	53	(2.3)	89	(3.8)	-	-	5	(0.2)
Bosnia and Herzegovina	907	505	(55.7)	64	(7.1)	13	(1.4)	3	(0.3)	-	-	322	(35.5)
Georgia	2 941	2 395	(81.4)	131	(4.5)	60	(2.0)	299	(10.2)	-	-	56	(1.9)
Israel	258	203	(78.7)	16	(6.2)	1	(0.4)	15	(5.8)	-	-	23	(8.9)
Kazakhstan	7 021	6 159	(87.7)	466	(6.6)	274	(3.9)	98	(1.4)	-	-	24	(0.3)
Kyrgyzstan	6 715	5 397	(80.4)	420	(6.3)	129	(1.9)	741	(11.0)	-	-	28	(0.4)
Monaco	-	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	87	70	(80.5)	11	(12.6)	0	(0.0)	5	(5.7)	-	-	1	(1.1)
North Macedonia	267	235	(88.0)	18	(6.7)	2	(0.7)	11	(4.1)	-	-	1	(0.4)
Republic of Moldova	3 390	2 667	(78.7)	388	(11.4)	97	(2.9)	178	(5.3)	-	-	60	(1.8)
Russian Federation	82 382	56 881	(69.0)	8 413	(10.2)	5 783	(7.0)	4 333	(5.3)	-	-	6 972	(8.5)
San Marino	0	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	1 464	1 203	(82.2)	100	(6.8)	9	(0.6)	93	(6.4)	-	-	59	(4.0)
Serbia excluding Kosovo <sup>c</sup>	751	600	(79.9)	65	(8.7)	6	(0.8)	33	(4.4)	-	-	47	(6.3)
Kosovo <sup>c</sup>	713	603	(84.6)	35	(4.9)	3	(0.4)	60	(8.4)	-	-	12	(1.7)
Switzerland	601	404	(67.2)	10	(1.7)	2	(0.3)	10	(1.7)	-	-	175	(29.1)
Tajikistan	5 536	4 923	(88.9)	249	(4.5)	107	(1.9)	214	(3.9)	-	-	43	(0.8)
Turkey	12 196	10 554	(86.5)	716	(5.9)	35	(0.3)	379	(3.1)	-	-	512	(4.2)
Turkmenistan	2 340	1 964	(83.9)	94	(4.0)	94	(4.0)	120	(5.1)	-	-	68	(2.9)
Ukraine	26 351	19 484	(73.9)	2 670	(10.1)	2 188	(8.3)	1 895	(7.2)	-	-	114	(0.4)
Uzbekistan	16 408	14 244	(86.8)	773	(4.7)	236	(1.4)	394	(2.4)	-	-	761	(4.6)
<b>Subtotal non-EU/EEA</b>	<b>176 179</b>	<b>133 284</b>	<b>(75.7)</b>	<b>14 847</b>	<b>(8.4)</b>	<b>9 349</b>	<b>(5.3)</b>	<b>9 377</b>	<b>(5.3)</b>	<b>0</b>	<b>(0.0)</b>	<b>9 322</b>	<b>(5.3)</b>
<b>Total European Region</b>	<b>230 791</b>	<b>171 898</b>	<b>(74.5)</b>	<b>18 844</b>	<b>(8.2)</b>	<b>9 806</b>	<b>(4.2)</b>	<b>11 895</b>	<b>(5.2)</b>	<b>1 965</b>	<b>(0.9)</b>	<b>16 383</b>	<b>(7.1)</b>
<b>Subtotal 18 HPCs</b>	<b>189 681</b>	<b>144 344</b>	<b>(76.1)</b>	<b>16 179</b>	<b>(8.5)</b>	<b>9 734</b>	<b>(5.1)</b>	<b>10 167</b>	<b>(4.4)</b>	<b>501</b>	<b>(0.2)</b>	<b>8 756</b>	<b>(3.8)</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. EU/EEA: country data are shown as missing (-) when data on treatment outcome are not reported.

HPCs = high-priority countries.

<sup>a</sup> In previous reports defined as "defaulted".

<sup>b</sup> In previous reports defined as "transferred out and unknown".

<sup>c</sup> (In accordance with Security Council Resolution 1244 (1999)).

**Table 19. Treatment outcome of new TB cases and relapses<sup>a</sup> notified in 2016, European Region, 2017**

Country/area	New and relapsed TB cases notified in 2016 <sup>b</sup>	Success		Died		Failed		Lost to follow-up <sup>c</sup>		Still on treatment		Not evaluated <sup>d</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>													
Austria	604	450	(74.5)	43	(7.1)	0	(0.0)	10	(1.7)	57	(9.4)	44	(7.3)
Belgium <sup>e</sup>	973	793	(81.5)	58	(6.0)	0	(0.0)	67	(6.9)	23	(2.4)	32	(3.3)
<i>Bulgaria</i>	<i>1 510</i>	<i>1 291</i>	<i>(85.5)</i>	<i>122</i>	<i>(8.1)</i>	<i>15</i>	<i>(1.0)</i>	<i>82</i>	<i>(5.4)</i>	<i>0</i>	<i>(0.0)</i>	<i>0</i>	<i>(0.0)</i>
Croatia	452	264	(58.4)	70	(15.5)	1	(0.2)	21	(4.6)	17	(3.8)	79	(17.5)
Cyprus	56	37	(66.1)	0	(0.0)	0	(0.0)	1	(1.8)	0	(0.0)	18	(32.1)
Czech Republic	505	346	(68.5)	83	(16.4)	1	(0.2)	54	(10.7)	8	(1.6)	13	(2.6)
Denmark <sup>e</sup>	288	108	(37.5)	5	(1.7)	7	(2.4)	1	(0.3)	5	(1.7)	162	(56.3)
<i>Estonia</i>	<i>166</i>	<i>133</i>	<i>(80.1)</i>	<i>26</i>	<i>(15.7)</i>	<i>3</i>	<i>(1.8)</i>	<i>2</i>	<i>(1.2)</i>	<i>0</i>	<i>(0.0)</i>	<i>2</i>	<i>(1.2)</i>
Finland	216	70	(32.4)	0	(0.0)	0	(0.0)	5	(2.3)	5	(2.3)	136	(63.0)
France	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	5 659	3 947	(69.7)	331	(5.8)	1	(0.0)	132	(2.3)	207	(3.7)	1 041	(18.4)
Greece	–	–	–	–	–	–	–	–	–	–	–	–	–
Hungary	722	511	(70.8)	86	(11.9)	19	(2.6)	58	(8.0)	31	(4.3)	17	(2.4)
Iceland	6	5	(83.3)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(16.7)
Ireland <sup>e</sup>	286	103	(36.0)	16	(5.6)	0	(0.0)	2	(0.7)	9	(3.1)	156	(54.5)
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	<i>592</i>	<i>505</i>	<i>(85.3)</i>	<i>53</i>	<i>(9.0)</i>	<i>1</i>	<i>(0.2)</i>	<i>29</i>	<i>(4.9)</i>	<i>1</i>	<i>(0.2)</i>	<i>3</i>	<i>(0.5)</i>
Liechtenstein	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
<i>Lithuania</i>	<i>1 152</i>	<i>967</i>	<i>(83.9)</i>	<i>111</i>	<i>(9.6)</i>	<i>12</i>	<i>(1.0)</i>	<i>57</i>	<i>(4.9)</i>	<i>3</i>	<i>(0.3)</i>	<i>2</i>	<i>(0.2)</i>
Luxembourg	–	–	–	–	–	–	–	–	–	–	–	–	–
Malta	–	–	–	–	–	–	–	–	–	–	–	–	–
Netherlands	864	747	(86.5)	30	(3.5)	0	(0.0)	37	(4.3)	14	(1.6)	36	(4.2)
Norway <sup>e</sup>	262	230	(87.8)	3	(1.1)	1	(0.4)	12	(4.6)	4	(1.5)	12	(4.6)
Poland	6 099	3 300	(54.1)	582	(9.5)	3	(0.0)	364	(6.0)	18	(0.3)	1 832	(30.0)
Portugal	1 872	1 316	(70.3)	132	(7.1)	0	(0.0)	60	(3.2)	305	(16.3)	59	(3.2)
<i>Romania</i>	<i>12 459</i>	<i>10 723</i>	<i>(86.1)</i>	<i>1 002</i>	<i>(8.0)</i>	<i>193</i>	<i>(1.5)</i>	<i>522</i>	<i>(4.2)</i>	<i>5</i>	<i>(0.0)</i>	<i>14</i>	<i>(0.1)</i>
Slovakia	279	241	(86.4)	27	(9.7)	0	(0.0)	2	(0.7)	0	(0.0)	9	(3.2)
Slovenia	118	84	(71.2)	24	(20.3)	0	(0.0)	1	(0.8)	7	(5.9)	2	(1.7)
Spain	–	–	–	–	–	–	–	–	–	–	–	–	–
Sweden	669	607	(90.7)	14	(2.1)	2	(0.3)	11	(1.6)	2	(0.3)	33	(4.9)
United Kingdom <sup>e</sup>	5 675	4 570	(80.5)	316	(5.6)	0	(0.0)	264	(4.7)	359	(6.3)	166	(2.9)
<b>Subtotal EU/EEA</b>	<b>41 486</b>	<b>31 350</b>	<b>(75.6)</b>	<b>3 134</b>	<b>(7.6)</b>	<b>259</b>	<b>(0.6)</b>	<b>1 794</b>	<b>(4.3)</b>	<b>1 080</b>	<b>(2.6)</b>	<b>3 869</b>	<b>(9.3)</b>
<b>Non-EU/EEA</b>													
<i>Albania</i>	<i>409</i>	<i>357</i>	<i>(87.3)</i>	<i>10</i>	<i>(2.4)</i>	<i>3</i>	<i>(0.7)</i>	<i>20</i>	<i>(4.9)</i>	–	–	<i>19</i>	<i>(4.6)</i>
Andorra	4	3	(75.0)	1	(25.0)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
<i>Armenia</i>	<i>869</i>	<i>703</i>	<i>(80.9)</i>	<i>48</i>	<i>(5.5)</i>	<i>18</i>	<i>(2.1)</i>	<i>99</i>	<i>(11.4)</i>	–	–	<i>1</i>	<i>(0.1)</i>
<i>Azerbaijan</i>	<i>1 464</i>	<i>1 225</i>	<i>(83.7)</i>	<i>26</i>	<i>(1.8)</i>	<i>73</i>	<i>(5.0)</i>	<i>118</i>	<i>(8.1)</i>	–	–	<i>22</i>	<i>(1.5)</i>
<i>Belarus</i>	<i>2 123</i>	<i>1 894</i>	<i>(89.2)</i>	<i>112</i>	<i>(5.3)</i>	<i>45</i>	<i>(2.1)</i>	<i>68</i>	<i>(3.2)</i>	–	–	<i>4</i>	<i>(0.2)</i>
Bosnia and Herzegovina	907	505	(55.7)	64	(7.1)	13	(1.4)	3	(0.3)	–	–	322	(35.5)
<i>Georgia</i>	<i>2 715</i>	<i>2 263</i>	<i>(83.4)</i>	<i>113</i>	<i>(4.2)</i>	<i>53</i>	<i>(2.0)</i>	<i>235</i>	<i>(8.7)</i>	–	–	<i>51</i>	<i>(1.9)</i>
Israel	250	198	(79.2)	16	(6.4)	1	(0.4)	12	(4.8)	–	–	23	(9.2)
<i>Kazakhstan</i>	<i>6 775</i>	<i>5 962</i>	<i>(88.0)</i>	<i>442</i>	<i>(6.5)</i>	<i>261</i>	<i>(3.9)</i>	<i>88</i>	<i>(1.3)</i>	–	–	<i>22</i>	<i>(0.3)</i>
<i>Kyrgyzstan</i>	<i>6 072</i>	<i>4 968</i>	<i>(81.8)</i>	<i>360</i>	<i>(5.9)</i>	<i>112</i>	<i>(1.8)</i>	<i>609</i>	<i>(10.0)</i>	–	–	<i>23</i>	<i>(0.4)</i>
Monaco	–	–	–	–	–	–	–	–	–	–	–	0	–
Montenegro	87	70	(80.5)	11	(12.6)	0	(0.0)	5	(5.7)	–	–	1	(1.1)
North Macedonia	263	232	(88.2)	18	(6.8)	1	(0.4)	11	(4.2)	–	–	1	(0.4)
<i>Republic of Moldova</i>	<i>3 048</i>	<i>2 515</i>	<i>(82.5)</i>	<i>294</i>	<i>(9.6)</i>	<i>77</i>	<i>(2.5)</i>	<i>123</i>	<i>(4.0)</i>	–	–	<i>39</i>	<i>(1.3)</i>
<i>Russian Federation</i>	<i>73 137</i>	<i>52 335</i>	<i>(71.6)</i>	<i>7 423</i>	<i>(10.1)</i>	<i>4 602</i>	<i>(6.3)</i>	<i>3 541</i>	<i>(4.8)</i>	–	–	<i>5 236</i>	<i>(7.2)</i>
San Marino	–	–	–	–	–	–	–	–	–	–	–	0	–
Serbia	1 443	1 191	(82.5)	100	(6.9)	9	(0.6)	88	(6.1)	–	–	55	(3.8)
Serbia excluding Kosovo <sup>f</sup>	733	590	(80.5)	65	(8.9)	6	(0.8)	29	(4.0)	–	–	43	(5.9)
Kosovo <sup>f</sup>	710	601	(84.6)	35	(4.9)	3	(0.4)	59	(8.3)	–	–	12	(1.7)
Switzerland	565	384	(68.0)	10	(1.8)	1	(0.2)	9	(1.6)	–	–	161	(28.5)
<i>Tajikistan</i>	<i>5 324</i>	<i>4 751</i>	<i>(89.2)</i>	<i>228</i>	<i>(4.3)</i>	<i>104</i>	<i>(2.0)</i>	<i>198</i>	<i>(3.7)</i>	–	–	<i>43</i>	<i>(0.8)</i>
Turkey	12 017	10 462	(87.1)	705	(5.9)	32	(0.3)	325	(2.7)	–	–	493	(4.1)
<i>Turkmenistan</i>	<i>2 068</i>	<i>1 738</i>	<i>(84.0)</i>	<i>84</i>	<i>(4.1)</i>	<i>85</i>	<i>(4.1)</i>	<i>102</i>	<i>(4.9)</i>	–	–	<i>59</i>	<i>(2.9)</i>
Ukraine	22 615	17 234	(76.2)	2 140	(9.5)	1 760	(7.8)	1 387	(6.1)	–	–	94	(0.4)
<i>Uzbekistan</i>	<i>14 743</i>	<i>12 906</i>	<i>(87.5)</i>	<i>639</i>	<i>(4.3)</i>	<i>219</i>	<i>(1.5)</i>	<i>311</i>	<i>(2.1)</i>	–	–	<i>668</i>	<i>(4.5)</i>
<b>Subtotal non-EU/EEA</b>	<b>156 898</b>	<b>121 896</b>	<b>(77.7)</b>	<b>12 844</b>	<b>(8.2)</b>	<b>7 469</b>	<b>(4.8)</b>	<b>7 352</b>	<b>(4.7)</b>	–	–	<b>7 337</b>	<b>(4.7)</b>
<b>Total European Region</b>	<b>198 384</b>	<b>153 246</b>	<b>(77.2)</b>	<b>15 978</b>	<b>(8.1)</b>	<b>7 728</b>	<b>(3.9)</b>	<b>9 146</b>	<b>(4.6)</b>	<b>1 080</b>	<b>(0.5)</b>	<b>11 207</b>	<b>(5.6)</b>
<b>Subtotal 18 HPCs</b>	<b>168 849</b>	<b>132 575</b>	<b>(78.5)</b>	<b>13 928</b>	<b>(8.2)</b>	<b>7 665</b>	<b>(4.5)</b>	<b>7 896</b>	<b>(4.7)</b>	<b>9</b>	<b>(0.0)</b>	<b>6 776</b>	<b>(4.0)</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. EU/EEA: country data are shown as missing (–) when data on treatment outcome are not reported.

HPCs = high-priority countries.

<sup>a</sup> Cases with unknown previous TB history are included among new TB cases.

<sup>b</sup> For non-EU/EEA countries: Patients started on second-line treatment are excluded. For EU/EEA countries: Rifampicin-resistant TB cases are excluded.

<sup>c</sup> In previous reports classified as "defaulted".

<sup>d</sup> In previous reports defined as "transferred out and unknown".

<sup>e</sup> Previous TB history is defined by previous diagnosis.

<sup>f</sup> (In accordance with Security Council Resolution 1244 (1999)).

**Table 20. Treatment outcome of new and relapse<sup>a</sup> TB cases in children (0–14 years) notified in 2016, European Region, 2017**

Country/area	New and relapse TB cases reported in 2016 <sup>b</sup>	Success		Died		Failed		Lost to follow-up <sup>c</sup>		Still on treatment		Not evaluated <sup>d</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>													
Austria	29	26	(89.7)	0	(0.0)	0	(0.0)	0	(0.0)	2	(6.9)	1	(3.4)
Belgium <sup>e</sup>	57	55	(96.5)	0	(0.0)	0	(0.0)	1	(1.8)	1	(1.8)	0	(0.0)
<i>Bulgaria</i>	124	117	(94.4)	0	(0.0)	0	(0.0)	7	(5.6)	0	(0.0)	0	(0.0)
Croatia	5	3	(60.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(40.0)
Cyprus	0	0	–	0	–	0	–	0	–	0	–	0	–
Czech Republic	10	8	(80.0)	0	(0.0)	0	(0.0)	2	(20.0)	0	(0.0)	0	(0.0)
Denmark <sup>e</sup>	18	3	(16.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	15	(83.3)
<i>Estonia</i>	4	4	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Finland	6	1	(16.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	5	(83.3)
France	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	223	168	(75.3)	1	(0.4)	0	(0.0)	2	(0.9)	4	(1.8)	48	(21.5)
Greece	–	–	–	–	–	–	–	–	–	–	–	–	–
Hungary	5	5	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Iceland	0	0	–	0	–	0	–	0	–	0	–	0	–
Ireland <sup>f</sup>	16	4	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(12.5)	10	(62.5)
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	23	23	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Liechtenstein	0	0	–	0	–	0	–	0	–	0	–	0	–
<i>Lithuania</i>	47	47	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Luxembourg	–	–	–	–	–	–	–	–	–	–	–	–	–
Malta	0	0	–	0	–	0	–	0	–	0	–	0	–
Netherlands	48	47	(97.9)	0	(0.0)	0	(0.0)	0	(0.0)	1	(2.1)	0	(0.0)
Norway <sup>e</sup>	14	14	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Poland	102	53	(52.0)	3	(2.9)	0	(0.0)	5	(4.9)	0	(0.0)	41	(40.2)
Portugal	36	27	(75.0)	0	(0.0)	0	(0.0)	0	(0.0)	9	(25.0)	0	(0.0)
<i>Romania</i>	595	578	(97.1)	5	(0.8)	2	(0.3)	9	(1.5)	1	(0.2)	0	(0.0)
Slovakia	60	57	(95.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(5.0)
Slovenia	3	3	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Spain	–	–	–	–	–	–	–	–	–	–	–	–	–
Sweden	54	52	(96.3)	0	(0.0)	2	(3.7)	0	(0.0)	0	(0.0)	0	(0.0)
United Kingdom <sup>e</sup>	220	203	(92.3)	1	(0.5)	0	(0.0)	2	(0.9)	9	(4.1)	5	(2.3)
<b>Subtotal EU/EEA</b>	<b>1 699</b>	<b>1 498</b>	<b>(88.2)</b>	<b>10</b>	<b>(0.6)</b>	<b>4</b>	<b>(0.2)</b>	<b>28</b>	<b>(1.6)</b>	<b>29</b>	<b>(1.7)</b>	<b>130</b>	<b>(7.7)</b>
<b>Non-EU/EEA</b>													
Albania	13	11	(84.6)	0	(0.0)	0	(0.0)	1	(7.7)			1	(7.7)
Andorra	–	–	–	–	–	0	–	0	–			–	–
<i>Armenia</i>	19	18	(94.7)	0	(0.0)	0	(0.0)	1	(5.3)			0	(0.0)
<i>Azerbaijan</i>	–	–	–	–	–	–	–	–	–			–	–
<i>Belarus</i>	11	8	(72.7)	0	(0.0)	0	(0.0)	0	(0.0)			3	(27.3)
Bosnia and Herzegovina	10	8	(80.0)	1	(10.0)	0	(0.0)	0	(0.0)			1	(10.0)
<i>Georgia</i>	115	106	(92.2)	0	(0.0)	1	(0.9)	5	(4.3)			3	(2.6)
Israel	12	11	(91.7)	0	(0.0)	0	(0.0)	0	(0.0)			1	(8.3)
<i>Kazakhstan</i>	560	557	(99.5)	0	(0.0)	1	(0.2)	1	(0.2)			1	(0.2)
<i>Kyrgyzstan</i>	383	359	(93.7)	7	(1.8)	4	(1.0)	13	(3.4)			0	(0.0)
Monaco	–	–	–	–	–	–	–	–	–			–	–
Montenegro	–	–	–	–	–	–	–	–	–			–	–
North Macedonia	25	25	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)			0	(0.0)
<i>Republic of Moldova</i>	88	84	(95.5)	2	(2.3)	1	(1.1)	1	(1.1)			0	(0.0)
<i>Russian Federation</i>	2 677	2 574	(96.2)	13	(0.5)	15	(0.6)	4	(0.1)			71	(2.7)
San Marino	–	–	–	–	–	–	–	–	–			–	–
Serbia	17	16	(94.1)	0	(0.0)	1	(5.9)	0	(0.0)			0	(0.0)
Serbia excluding Kosovo <sup>f</sup>	–	–	–	–	–	–	–	–	–			–	–
Kosovo <sup>g</sup>	17	16	(94.1)	0	(0.0)	1	(5.9)	0	(0.0)			0	(0.0)
Switzerland	31	21	(67.7)	0	(0.0)	0	(0.0)	0	(0.0)			10	(32.3)
<i>Tajikistan</i>	360	343	(95.3)	4	(1.1)	3	(0.8)	6	(1.7)			4	(1.1)
<i>Turkey</i>	626	536	(85.6)	15	(2.4)	0	(0.0)	12	(1.9)			63	(10.1)
<i>Turkmenistan</i>	–	–	–	–	–	–	–	–	–			–	–
<i>Ukraine</i>	435	395	(90.8)	5	(1.1)	28	(6.4)	6	(1.4)			1	(0.2)
<i>Uzbekistan</i>	–	–	–	–	–	–	–	–	–			–	–
<b>Subtotal non-EU/EEA</b>	<b>5 382</b>	<b>5 072</b>	<b>(94.2)</b>	<b>47</b>	<b>(0.9)</b>	<b>54</b>	<b>(1.0)</b>	<b>50</b>	<b>(0.9)</b>	<b>0</b>	<b>(0.0)</b>	<b>159</b>	<b>(3.0)</b>
<b>Total European Region</b>	<b>7 081</b>	<b>6 570</b>	<b>(92.8)</b>	<b>57</b>	<b>(0.8)</b>	<b>58</b>	<b>(0.8)</b>	<b>78</b>	<b>(1.1)</b>	<b>29</b>	<b>(0.4)</b>	<b>289</b>	<b>(4.1)</b>
<b>Subtotal 18 HPCs</b>	<b>6 067</b>	<b>5 749</b>	<b>(94.8)</b>	<b>51</b>	<b>(0.8)</b>	<b>55</b>	<b>(0.9)</b>	<b>65</b>	<b>(1.1)</b>	<b>1</b>	<b>(0.0)</b>	<b>146</b>	<b>(2.4)</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. EU/EEA: country data are shown as missing (–) when data on treatment outcome are not reported. For inclusion in the cohort, drug-susceptibility data are also required.

HPCs = high-priority countries.

<sup>a</sup> Cases with unknown previous TB history are included among new TB cases.

<sup>b</sup> For non-EU/EEA countries: Patients started on second-line treatment are excluded. For EU/EEA countries: Rifampicin-resistant TB cases are excluded.

<sup>c</sup> In previous reports defined as "defaulted".

<sup>d</sup> In previous reports defined as "transferred out and unknown".

<sup>e</sup> Previous TB history is defined by previous diagnosis.

<sup>f</sup> (In accordance with Security Council Resolution 1244 (1999)).

Table 21. Treatment outcome of HIV-positive new and relapse<sup>a</sup> TB cases notified in 2016, European Region, 2017

Country/area	HIV positive TB cases notified in 2016 <sup>b</sup>	Success		Died		Failed		Lost to follow-up <sup>c</sup>		Still on treatment		Not evaluated <sup>d</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>													
Austria	–	–	–	–	–	–	–	–	–	–	–	–	–
Belgium <sup>e</sup>	32	20	(62.5)	3	(9.4)	0	(0.0)	6	(18.8)	2	(6.3)	1	(3.1)
<i>Bulgaria</i>	0	0	–	0	–	0	–	0	–	0	–	0	–
Croatia	0	0	–	0	–	0	–	0	–	0	–	0	–
Cyprus	0	0	–	0	–	0	–	0	–	0	–	0	–
Czech Republic	5	1	(20.0)	1	(20.0)	0	(0.0)	3	(60.0)	0	(0.0)	0	(0.0)
Denmark <sup>e</sup>	9	2	(22.2)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	7	(77.8)
<i>Estonia</i>	18	17	(94.4)	1	(5.6)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Finland	–	–	–	–	–	–	–	–	–	–	–	–	–
France	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	–	–	–	–	–	–	–	–	–	–	–	–	–
Greece	–	–	–	–	–	–	–	–	–	–	–	–	–
Hungary	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Iceland	0	0	–	0	–	0	–	0	–	0	–	0	–
Ireland <sup>f</sup>	4	1	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(75.0)
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	47	28	(59.6)	15	(31.9)	0	(0.0)	3	(6.4)	0	(0.0)	1	(2.1)
Liechtenstein	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Lithuania</i>	23	13	(56.5)	8	(34.8)	1	(4.3)	1	(4.3)	0	(0.0)	0	(0.0)
Luxembourg	–	–	–	–	–	–	–	–	–	–	–	–	–
Malta	–	–	–	–	–	–	–	–	–	–	–	–	–
Netherlands	19	14	(73.7)	0	(0.0)	0	(0.0)	2	(10.5)	0	(0.0)	3	(15.8)
Norway <sup>e</sup>	4	4	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Poland	–	–	–	–	–	–	–	–	–	–	–	–	–
Portugal	173	90	(52.0)	15	(8.7)	0	(0.0)	9	(5.2)	49	(28.3)	10	(5.8)
<i>Romania</i>	243	171	(70.4)	43	(17.7)	3	(1.2)	25	(10.3)	1	(0.4)	0	(0.0)
Slovakia	0	0	–	0	–	0	–	0	–	0	–	0	–
Slovenia	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
Spain	–	–	–	–	–	–	–	–	–	–	–	–	–
Sweden	–	–	–	–	–	–	–	–	–	–	–	–	–
United Kingdom <sup>e</sup>	138	90	(65.2)	12	(8.7)	0	(0.0)	4	(2.9)	30	(21.7)	2	(1.4)
<b>Subtotal EU/EEA</b>	<b>717</b>	<b>452</b>	<b>(63.0)</b>	<b>98</b>	<b>(13.7)</b>	<b>4</b>	<b>(0.6)</b>	<b>53</b>	<b>(7.4)</b>	<b>83</b>	<b>(11.6)</b>	<b>27</b>	<b>(3.8)</b>
<b>Non-EU/EEA</b>													
Albania	6	4	(66.7)	2	(33.3)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
Andorra	–	–	–	–	–	–	–	–	–	–	–	–	–
Armenia	50	30	(60.0)	14	(28.0)	4	(8.0)	2	(4.0)	–	–	0	(0.0)
<i>Azerbaijan</i>	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Belarus</i>	132	110	(83.3)	15	(11.4)	2	(1.5)	4	(3.0)	–	–	1	(0.8)
Bosnia and Herzegovina	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	1	(100.0)
<i>Georgia</i>	44	25	(56.8)	5	(11.4)	2	(4.5)	11	(25.0)	–	–	1	(2.3)
Israel	18	12	(66.7)	0	(0.0)	0	(0.0)	2	(11.1)	–	–	4	(22.2)
<i>Kazakhstan</i>	230	142	(61.7)	62	(27.0)	15	(6.5)	11	(4.8)	–	–	0	(0.0)
<i>Kyrgyzstan</i>	159	91	(57.2)	40	(25.2)	4	(2.5)	23	(14.5)	–	–	1	(0.6)
Monaco	–	–	–	–	–	–	–	–	–	–	–	–	–
Montenegro	–	–	–	–	–	–	–	–	–	–	–	–	–
North Macedonia	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Republic of Moldova</i>	247	137	(55.5)	70	(28.3)	14	(5.7)	20	(8.1)	–	–	6	(2.4)
<i>Russian Federation</i>	1 328	702	(52.9)	415	(31.3)	55	(4.1)	79	(5.9)	–	–	77	(5.8)
San Marino	–	–	–	–	–	–	–	–	–	–	–	–	–
Serbia	4	4	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
Serbia excluding Kosovo <sup>f</sup>	4	4	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
Kosovo <sup>f</sup>	0	–	–	–	–	–	–	–	–	–	–	–	–
Switzerland	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Tajikistan</i>	147	102	(69.4)	34	(23.1)	2	(1.4)	9	(6.1)	–	–	0	(0.0)
<i>Turkey</i>	55	44	(80.0)	5	(9.1)	0	(0.0)	2	(3.6)	–	–	4	(7.3)
<i>Turkmenistan</i>	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Ukraine</i>	4 461	2 923	(65.5)	887	(19.9)	277	(6.2)	353	(7.9)	–	–	21	(0.5)
<i>Uzbekistan</i>	–	–	–	–	–	–	–	–	–	–	–	–	–
<b>Subtotal non-EU/EEA</b>	<b>6 882</b>	<b>4 326</b>	<b>(62.9)</b>	<b>1 549</b>	<b>(22.5)</b>	<b>375</b>	<b>(5.4)</b>	<b>516</b>	<b>(7.5)</b>	<b>0</b>	<b>(0.0)</b>	<b>116</b>	<b>(1.7)</b>
<b>Total European Region</b>	<b>7 599</b>	<b>4 778</b>	<b>(62.9)</b>	<b>1 647</b>	<b>(21.7)</b>	<b>379</b>	<b>(5.0)</b>	<b>569</b>	<b>(7.5)</b>	<b>83</b>	<b>(1.1)</b>	<b>143</b>	<b>(1.9)</b>
<b>Subtotal 18 HPCs</b>	<b>7 184</b>	<b>4 535</b>	<b>(63.1)</b>	<b>1 614</b>	<b>(22.5)</b>	<b>379</b>	<b>(5.3)</b>	<b>543</b>	<b>(7.6)</b>	<b>1</b>	<b>(0.0)</b>	<b>112</b>	<b>(1.6)</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. EU/EEA: country data are shown as missing (–) when data on treatment outcome or HIV status are not reported. For inclusion in the cohort, drug-susceptibility data are also required.

HIV = human immunodeficiency virus.

HPCs = high-priority countries.

<sup>a</sup> Cases with unknown previous TB history are included among new TB cases.

<sup>b</sup> For non-EU/EEA countries: Patients started on second-line treatment are excluded. For EU/EEA countries: Rifampicin-resistant TB cases are excluded.

<sup>c</sup> In previous reports defined as "defaulted".

<sup>d</sup> In previous reports defined as "transferred out and unknown".

<sup>e</sup> Previous TB history is defined by previous diagnosis.

<sup>f</sup> (In accordance with Security Council Resolution 1244 (1999)).

**Table 22. Treatment outcome after 24 months of RR/MDR-TB cases started on second-line treatment in 2015, European Region, 2017**

Country/area	RR/MDR-TB cases started on second-line treatment in 2015 <sup>a</sup>	Success		Died		Failed		Lost to follow-up <sup>b</sup>		Still on treatment		Not evaluated <sup>c</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>													
Austria	13	12	(92.3)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(7.7)
Belgium	16	16	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Bulgaria	28	17	(60.7)	5	(17.9)	2	(7.1)	4	(14.3)	0	(0.0)	0	(0.0)
Croatia	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Cyprus	0	0	-	0	-	0	-	0	-	0	-	0	-
Czech Republic	9	3	(33.3)	1	(11.1)	0	(0.0)	1	(11.1)	2	(22.2)	2	(22.2)
Denmark	7	0	(0.0)	0	(0.0)	1	(14.3)	0	(0.0)	0	(0.0)	6	(85.7)
Estonia	40	25	(62.5)	6	(15.0)	3	(7.5)	3	(7.5)	3	(7.5)	0	(0.0)
Finland	9	4	(44.4)	0	(0.0)	0	(0.0)	0	(0.0)	1	(11.1)	4	(44.4)
France	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	128	54	(42.2)	5	(3.9)	0	(0.0)	7	(5.5)	11	(8.6)	51	(39.8)
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	9	2	(22.2)	4	(44.4)	0	(0.0)	2	(22.2)	1	(11.1)	0	(0.0)
Iceland	0	0	-	0	-	0	-	0	-	0	-	0	-
Ireland	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	63	39	(61.9)	8	(12.7)	0	(0.0)	15	(23.8)	1	(1.6)	0	(0.0)
Liechtenstein	0	0	-	0	-	0	-	0	-	0	-	0	-
Lithuania	248	101	(40.7)	55	(22.2)	25	(10.1)	52	(21.0)	15	(6.0)	0	(0.0)
Luxembourg	0	0	-	0	-	0	-	0	-	0	-	0	-
Malta	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)
Netherlands	10	6	(60.0)	1	(10.0)	0	(0.0)	1	(10.0)	0	(0.0)	2	(20.0)
Norway	6	6	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Poland	45	16	(35.6)	7	(15.6)	0	(0.0)	1	(2.2)	1	(2.2)	20	(44.4)
Portugal	26	9	(34.6)	5	(19.2)	0	(0.0)	1	(3.8)	5	(19.2)	6	(23.1)
Romania	588	259	(44.0)	95	(16.2)	163	(27.7)	68	(11.6)	3	(0.5)	0	(0.0)
Slovakia	3	1	(33.3)	2	(66.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Slovenia	0	0	-	0	-	0	-	0	-	0	-	0	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	26	24	(92.3)	0	(0.0)	0	(0.0)	0	(0.0)	1	(3.8)	1	(3.8)
United Kingdom	53	34	(64.2)	2	(3.8)	0	(0.0)	4	(7.5)	10	(18.9)	3	(5.7)
<b>Subtotal EU/EEA</b>	<b>1 330</b>	<b>629</b>	<b>(47.3)</b>	<b>196</b>	<b>(14.7)</b>	<b>194</b>	<b>(14.6)</b>	<b>159</b>	<b>(12.0)</b>	<b>55</b>	<b>(4.1)</b>	<b>97</b>	<b>(7.3)</b>
<b>Non-EU/EEA</b>													
Albania	3	3	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Andorra	-	-	-	-	-	-	-	-	-	-	-	-	-
Armenia	95	40	(42.1)	7	(7.4)	16	(16.8)	31	(32.6)	-	-	1	(1.1)
Azerbaijan	800	473	(59.1)	123	(15.4)	143	(17.9)	61	(7.6)	-	-	0	(0.0)
Belarus	1 400	899	(64.2)	132	(9.4)	218	(15.6)	138	(9.9)	-	-	13	(0.9)
Bosnia and Herzegovina	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Georgia	412	231	(56.1)	26	(6.3)	42	(10.2)	101	(24.5)	-	-	12	(2.9)
Israel	10	8	(80.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	2	(20.0)
Kazakhstan	6 482	5 063	(78.1)	609	(9.4)	395	(6.1)	285	(4.4)	-	-	130	(2.0)
Kyrgyzstan	1 162	624	(53.7)	145	(12.5)	124	(10.7)	269	(23.1)	-	-	0	(0.0)
Monaco	-	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
North Macedonia	5	2	(40.0)	1	(20.0)	0	(0.0)	2	(40.0)	-	-	0	(0.0)
Republic of Moldova	996	487	(48.9)	120	(12.0)	177	(17.8)	202	(20.3)	-	-	10	(1.0)
Russian Federation	22 607	12 117	(53.6)	3 554	(15.7)	2 778	(12.3)	1 909	(8.4)	-	-	2 249	(9.9)
San Marino	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	10	9	(90.0)	0	(0.0)	1	(10.0)	0	(0.0)	-	-	0	(0.0)
Serbia excluding Kosovo <sup>d</sup>	5	4	-	0	-	1	-	0	-	-	-	0	-
Kosovo <sup>d</sup>	5	5	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Switzerland	16	7	(43.8)	0	(0.0)	0	(0.0)	1	(6.3)	-	-	8	(50.0)
Tajikistan	682	398	(58.4)	122	(17.9)	54	(7.9)	100	(14.7)	-	-	8	(1.2)
Turkey	230	156	(67.8)	15	(6.5)	18	(7.8)	26	(11.3)	-	-	15	(6.5)
Turkmenistan	210	142	(67.6)	23	(11.0)	31	(14.8)	14	(6.7)	-	-	0	(0.0)
Ukraine	7 592	3 855	(50.8)	1 193	(15.7)	1 220	(16.1)	1 257	(16.6)	-	-	67	(0.9)
Uzbekistan	2 149	1 259	(58.6)	357	(16.6)	153	(7.1)	167	(7.8)	-	-	213	(9.9)
<b>Subtotal non-EU/EEA</b>	<b>44 863</b>	<b>25 775</b>	<b>(57.5)</b>	<b>6 427</b>	<b>(14.3)</b>	<b>5 370</b>	<b>(12.0)</b>	<b>4 563</b>	<b>(10.2)</b>	<b>0</b>	<b>(0.0)</b>	<b>2 728</b>	<b>(6.1)</b>
<b>Total European Region</b>	<b>46 193</b>	<b>26 404</b>	<b>(57.2)</b>	<b>6 623</b>	<b>(14.3)</b>	<b>5 564</b>	<b>(12.0)</b>	<b>4 722</b>	<b>(10.2)</b>	<b>55</b>	<b>(0.1)</b>	<b>2 825</b>	<b>(6.1)</b>
<b>Subtotal 18 HPCs</b>	<b>45 784</b>	<b>26 185</b>	<b>(57.2)</b>	<b>6 595</b>	<b>(14.4)</b>	<b>5 562</b>	<b>(12.1)</b>	<b>4 702</b>	<b>(10.3)</b>	<b>22</b>	<b>(0.0)</b>	<b>2 718</b>	<b>(5.9)</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. EU/EEA: country data are shown as missing (-) when data on treatment outcome are not reported. For inclusion in the cohort, drug-susceptibility data are also required.

HPCs = high-priority countries.

RR/MDR-TB = rifampicin-resistant and multidrug-resistant tuberculosis.

<sup>a</sup> For EU/EEA countries, cases diagnosed postmortem are excluded, and cases with no treatment enrolment data reported are assumed to be enrolled to treatment.

<sup>b</sup> In previous reports defined as "defaulted".

<sup>c</sup> In previous reports defined as "transferred out and unknown".

<sup>d</sup> (In accordance with Security Council Resolution 1244 (1999)).



**Table 23. Treatment outcome after 24 months of laboratory-confirmed<sup>a</sup> MDR-TB cases notified in 2015, EU/EEA, 2017**

Country	All MDR-TB cases notified in 2015	Success		Died		Failed		Lost to follow-up <sup>b</sup>		Still on treatment		Not evaluated <sup>c</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>													
Austria	12	11	(91.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(8.3)
Belgium	15	15	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
<i>Bulgaria</i>	24	14	(58.3)	5	(20.8)	2	(8.3)	3	(12.5)	0	(0.0)	0	(0.0)
Croatia	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Cyprus	0	0	–	0	–	0	–	0	–	0	–	0	–
Czech Republic	9	3	(33.3)	1	(11.1)	0	(0.0)	1	(11.1)	2	(22.2)	2	(22.2)
Denmark	6	0	(0.0)	0	(0.0)	1	(16.7)	0	(0.0)	0	(0.0)	5	(83.3)
<i>Estonia</i>	38	20	(52.6)	8	(21.1)	3	(7.9)	4	(10.5)	3	(7.9)	0	(0.0)
Finland	8	3	(37.5)	0	(0.0)	0	(0.0)	0	(0.0)	1	(12.5)	4	(50.0)
France	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	110	44	(40.0)	5	(4.5)	0	(0.0)	7	(6.4)	11	(10.0)	43	(39.1)
Greece	–	–	–	–	–	–	–	–	–	–	–	–	–
Hungary	8	2	(25.0)	4	(50.0)	0	(0.0)	1	(12.5)	1	(12.5)	0	(0.0)
Iceland	0	0	–	0	–	0	–	0	–	0	–	0	–
Ireland	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	63	39	(61.9)	8	(12.7)	0	(0.0)	15	(23.8)	1	(1.6)	0	(0.0)
Liechtenstein	0	0	–	0	–	0	–	0	–	0	–	0	–
<i>Lithuania</i>	241	95	(39.4)	55	(22.8)	25	(10.4)	51	(21.2)	15	(6.2)	0	(0.0)
Luxembourg	0	0	–	0	–	0	–	0	–	0	–	0	–
Malta	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)
Netherlands	8	4	(50.0)	1	(12.5)	0	(0.0)	1	(12.5)	0	(0.0)	2	(25.0)
Norway	5	5	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Poland	35	11	(31.4)	6	(17.1)	0	(0.0)	1	(2.9)	1	(2.9)	16	(45.7)
Portugal	23	7	(30.4)	5	(21.7)	0	(0.0)	1	(4.3)	5	(21.7)	5	(21.7)
<i>Romania</i>	537	222	(41.3)	94	(17.5)	157	(29.2)	61	(11.4)	3	(0.6)	0	(0.0)
Slovakia	2	0	(0.0)	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Slovenia	0	0	–	0	–	0	–	0	–	0	–	0	–
Spain	–	–	–	–	–	–	–	–	–	–	–	–	–
Sweden	22	20	(90.9)	0	(0.0)	0	(0.0)	0	(0.0)	1	(4.5)	1	(4.5)
United Kingdom	48	29	(60.4)	3	(6.3)	0	(0.0)	3	(6.3)	10	(20.8)	3	(6.3)
<b>Total EU/EEA</b>	<b>1 217</b>	<b>545</b>	<b>(44.8)</b>	<b>197</b>	<b>(16.2)</b>	<b>188</b>	<b>(15.4)</b>	<b>149</b>	<b>(12.2)</b>	<b>55</b>	<b>(4.5)</b>	<b>83</b>	<b>(6.8)</b>

Notes: WHO European Region TB HPCs are presented in italics. Country data are shown as missing (–) when data on treatment outcome are not reported. For inclusion in the cohort, drug-susceptibility data are also required.

HPCs = high-priority countries.

MDR-TB = multidrug-resistant tuberculosis.

<sup>a</sup> Laboratory-confirmed cases – culture-positive OR microscopy-positive and nucleic acid amplification test-positive cases.

<sup>b</sup> In previous reports defined as "defaulted".

<sup>c</sup> In previous reports defined as "transferred out and unknown".

**Table 24. Treatment outcome after 24 months of XDR-TB cases started on second-line treatment in 2015, European Region, 2017**

Country/area	XDR-TB cases started on second-line treatment in 2015 <sup>a</sup>	Success		Died		Failed		Lost to follow-up <sup>b</sup>		Still on treatment		Not evaluated <sup>c</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>													
Austria	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Belgium	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
<i>Bulgaria</i>	4	2	(50.0)	0	(0.0)	0	(0.0)	2	(50.0)	0	(0.0)	0	(0.0)
Croatia	0	0	-	0	-	0	-	0	-	0	-	0	-
Cyprus	0	0	-	0	-	0	-	0	-	0	-	0	-
Czech Republic	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
Denmark	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)
<i>Estonia</i>	9	3	(33.3)	2	(22.2)	2	(22.2)	0	(0.0)	2	(22.2)	0	(0.0)
Finland	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)
France	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	9	3	(33.3)	0	(0.0)	0	(0.0)	0	(0.0)	1	(11.1)	5	(55.6)
Greece	0	0	-	0	-	0	-	0	-	0	-	0	-
Hungary	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
Iceland	0	0	-	0	-	0	-	0	-	0	-	0	-
Ireland	0	0	-	0	-	0	-	0	-	0	-	0	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Latvia</i>	16	8	(50.0)	3	(18.8)	0	(0.0)	5	(31.3)	0	(0.0)	0	(0.0)
Liechtenstein	0	0	-	0	-	0	-	0	-	0	-	0	-
<i>Lithuania</i>	59	2	(3.4)	22	(37.3)	10	(16.9)	10	(16.9)	15	(25.4)	0	(0.0)
Luxembourg	0	0	-	0	-	0	-	0	-	0	-	0	-
Malta	0	0	-	0	-	0	-	0	-	0	-	0	-
Netherlands	0	0	-	0	-	0	-	0	-	0	-	0	-
Norway	0	0	-	0	-	0	-	0	-	0	-	0	-
Poland	4	3	(75.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)
Portugal	6	1	(16.7)	1	(16.7)	0	(0.0)	1	(16.7)	2	(33.3)	1	(16.7)
<i>Romania</i>	71	28	(39.4)	10	(14.1)	28	(39.4)	5	(7.0)	0	(0.0)	0	(0.0)
Slovakia	0	0	-	0	-	0	-	0	-	0	-	0	-
Slovenia	0	0	-	0	-	0	-	0	-	0	-	0	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
United Kingdom	8	2	(25.0)	1	(12.5)	0	(0.0)	0	(0.0)	5	(62.5)	0	(0.0)
<b>Subtotal EU/EEA</b>	<b>194</b>	<b>55</b>	<b>(28.4)</b>	<b>39</b>	<b>(20.1)</b>	<b>40</b>	<b>(20.6)</b>	<b>23</b>	<b>(11.9)</b>	<b>28</b>	<b>(14.4)</b>	<b>9</b>	<b>(4.6)</b>
<b>Non-EU/EEA</b>													
Albania	-	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	-	-	-	-	-	-	-	-	-	-	-	-	-
Armenia	8	4	(50.0)	1	(12.5)	0	(0.0)	1	(12.5)	-	-	2	(25.0)
<i>Azerbaijan</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Belarus</i>	508	268	(52.8)	52	(10.2)	150	(29.5)	31	(6.1)	-	-	7	(1.4)
Bosnia and Herzegovina	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Georgia</i>	62	35	(56.5)	6	(9.7)	10	(16.1)	9	(14.5)	-	-	2	(3.2)
Israel	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
<i>Kazakhstan</i>	391	126	(32.2)	85	(21.7)	129	(33.0)	21	(5.4)	-	-	30	(7.7)
<i>Kyrgyzstan</i>	51	9	(17.6)	19	(37.3)	11	(21.6)	12	(23.5)	-	-	0	(0.0)
Monaco	-	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	-	-	-	-	-	-	-	-	-	-	-	-	-
North Macedonia	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Republic of Moldova</i>	32	5	(15.6)	8	(25.0)	16	(50.0)	3	(9.4)	-	-	0	(0.0)
<i>Russian Federation</i>	2 882	960	(33.3)	628	(21.8)	610	(21.2)	218	(7.6)	-	-	466	(16.2)
San Marino	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia excluding Kosovo <sup>d</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Kosovo <sup>d</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Tajikistan</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Turkey</i>	3	2	(66.7)	-	-	0	(0.0)	0	(0.0)	-	-	1	(33.3)
<i>Turkmenistan</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ukraine</i>	1 206	424	(35.2)	-	-	434	(36.0)	145	(12.0)	-	-	12	(1.0)
<i>Uzbekistan</i>	147	34	(23.1)	-	-	11	(7.5)	15	(10.2)	-	-	26	(17.7)
<b>Subtotal non-EU/EEA</b>	<b>5 291</b>	<b>1 868</b>	<b>(35.3)</b>	<b>799</b>	<b>(15.1)</b>	<b>1 371</b>	<b>(25.9)</b>	<b>455</b>	<b>(8.6)</b>	<b>0</b>	<b>(0.0)</b>	<b>546</b>	<b>(10.3)</b>
<b>Total European Region</b>	<b>5 485</b>	<b>1 923</b>	<b>(35.1)</b>	<b>838</b>	<b>(15.3)</b>	<b>1 411</b>	<b>(25.7)</b>	<b>478</b>	<b>(8.7)</b>	<b>28</b>	<b>(0.5)</b>	<b>555</b>	<b>(10.1)</b>
<b>Subtotal 18 HPCs</b>	<b>5 449</b>	<b>1 910</b>	<b>(35.1)</b>	<b>836</b>	<b>(15.3)</b>	<b>1 411</b>	<b>(25.9)</b>	<b>477</b>	<b>(8.8)</b>	<b>17</b>	<b>(0.3)</b>	<b>546</b>	<b>(10.0)</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB high-priority countries are presented in italics. EU/EEA: country data are shown as missing (-) when data on treatment outcome are not reported. For inclusion in the cohort, drug-susceptibility data are also required.

HPCs = high-priority countries.

XDR TB = extensively drug-resistant tuberculosis.

<sup>a</sup> For EU/EEA countries, cases diagnosed postmortem are excluded, and cases with no treatment enrolment data reported are assumed to be enrolled to treatment.

<sup>b</sup> In previous reports defined as "defaulted".

<sup>c</sup> In previous reports defined as "transferred out and unknown".

<sup>d</sup> (In accordance with Security Council Resolution 1244 (1999)).

**Table 25. Treatment outcome after 36 months of XDR-TB notified in 2014, EU/EEA, 2017**

Country	XDR-TB notified in 2014	Success		Died		Failed		Lost to follow-up <sup>a</sup>		Not evaluated <sup>b</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>											
Austria	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Belgium	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Bulgaria	3	0	(0.0)	2	(66.7)	0	(0.0)	0	(0.0)	1	(33.3)
Croatia	0	0	-	0	-	0	-	0	-	0	-
Cyprus	0	0	-	0	-	0	-	0	-	0	-
Czech Republic	0	0	-	0	-	0	-	0	-	0	-
Denmark	0	0	-	0	-	0	-	0	-	0	-
Estonia	8	3	(37.5)	1	(12.5)	3	(37.5)	0	(0.0)	1	(12.5)
Finland	-	-	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-	-	-
Germany	11	2	(18.2)	0	(0.0)	0	(0.0)	0	(0.0)	9	(81.8)
Greece	-	-	-	-	-	-	-	-	-	-	-
Hungary	0	0	-	0	-	0	-	0	-	0	-
Iceland	0	0	-	0	-	0	-	0	-	0	-
Ireland	0	0	-	0	-	0	-	0	-	0	-
Italy	-	-	-	-	-	-	-	-	-	-	-
Latvia	13	10	(76.9)	2	(15.4)	1	(7.7)	0	(0.0)	0	(0.0)
Liechtenstein	0	0	-	0	-	0	-	0	-	0	-
Lithuania	61	15	(24.6)	21	(34.4)	11	(18.0)	11	(18.0)	3	(4.9)
Luxembourg	0	0	-	0	-	0	-	0	-	0	-
Malta	0	0	-	0	-	0	-	0	-	0	-
Netherlands	0	0	-	0	-	0	-	0	-	0	-
Norway	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)
Poland	5	1	(20.0)	1	(20.0)	0	(0.0)	0	(0.0)	3	(60.0)
Portugal	3	2	(66.7)	1	(33.3)	0	(0.0)	0	(0.0)	0	(0.0)
Romania	58	9	(15.5)	15	(25.9)	28	(48.3)	6	(10.3)	0	(0.0)
Slovakia	0	0	-	0	-	0	-	0	-	0	-
Slovenia	0	0	-	0	-	0	-	0	-	0	-
Spain	-	-	-	-	-	-	-	-	-	-	-
Sweden	1	0	(0.0)	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
United Kingdom	3	2	(66.7)	0	(0.0)	0	(0.0)	1	(33.3)	0	(0.0)
<b>Total EU/EEA</b>	<b>170</b>	<b>47</b>	<b>(27.6)</b>	<b>44</b>	<b>(25.9)</b>	<b>43</b>	<b>(25.3)</b>	<b>18</b>	<b>(10.6)</b>	<b>18</b>	<b>(10.6)</b>

Notes: WHO European Region TB HPCs are presented in italics. EU/EEA: country data are shown as missing (-) when data on treatment outcome are not reported. For inclusion in the cohort, drug-susceptibility data are also required.

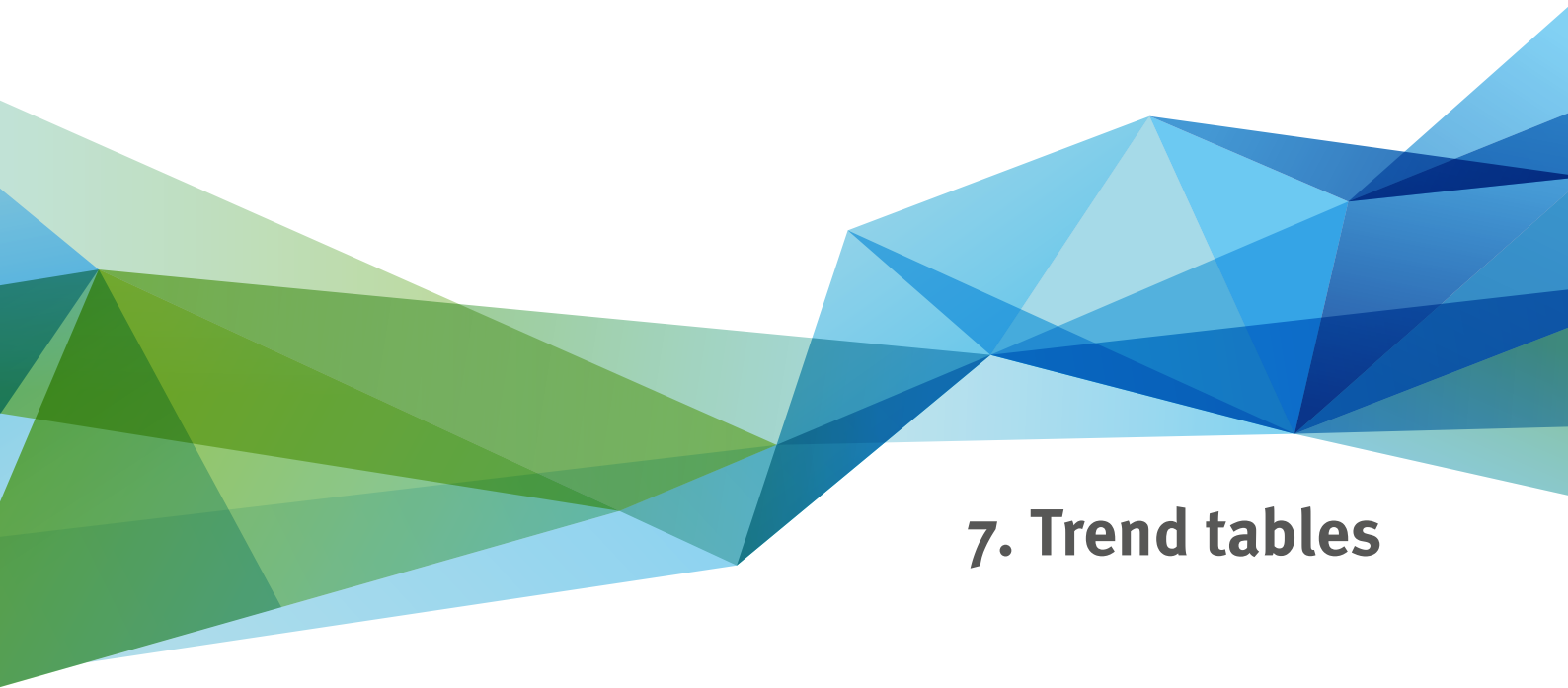
HPCs = high-priority countries.

XDR TB = extensively drug-resistant tuberculosis.

<sup>a</sup> In previous reports defined as "defaulted".

<sup>b</sup> In previous reports defined as "transferred out and unknown".





## **7. Trend tables**

Table I. Estimated TB mortality per 100 000 population, European Region, 2008–2017<sup>a</sup>

Country	2008		2009		2010		2011		2012		2013	
	N	Rate per 100 000	N	Rate per 100 000	N	Rate per 100 000	N	Rate per 100 000	N	Rate per 100 000	N	Rate per 100 000
<b>EU/EEA</b>												
Austria	49	(0.6)	48	(0.6)	39	(0.5)	55	(0.7)	42	(0.5)	68	(0.8)
Belgium	78	(0.7)	60	(0.6)	60	(0.6)	53	(0.5)	59	(0.5)	56	(0.5)
Bulgaria	240	(3.2)	200	(2.7)	200	(2.8)	170	(2.4)	170	(2.4)	160	(2.1)
Croatia	100	(2.3)	120	(2.8)	83	(1.9)	66	(1.5)	60	(1.4)	54	(1.3)
Cyprus	1	(0.1)	0	(0.0)	2	(0.1)	5	(0.4)	6	(0.5)	2	(0.1)
Czech Republic	54	(0.5)	52	(0.5)	40	(0.4)	56	(0.5)	30	(0.3)	67	(0.6)
Denmark	17	(0.3)	28	(0.5)	36	(0.6)	16	(0.3)	23	(0.4)	16	(0.3)
Estonia	56	(4.2)	50	(3.7)	42	(3.1)	46	(3.5)	36	(2.7)	26	(1.9)
Finland	60	(1.1)	54	(1.0)	48	(0.9)	61	(1.1)	49	(0.9)	31	(0.6)
France	690	(1.1)	680	(1.1)	650	(1.0)	640	(1.0)	550	(0.9)	560	(0.9)
Germany	370	(0.5)	350	(0.4)	360	(0.5)	350	(0.4)	370	(0.5)	380	(0.5)
Greece	86	(0.8)	94	(0.8)	78	(0.7)	75	(0.7)	110	(1.0)	78	(0.7)
Hungary	190	(1.9)	170	(1.7)	150	(1.6)	130	(1.3)	130	(1.3)	98	(1.0)
Iceland	1	(0.3)	7	(2.2)	2	(0.6)	1	(0.3)	1	(0.3)	0	(0.0)
Ireland	32	(0.7)	36	(0.8)	35	(0.8)	29	(0.6)	27	(0.6)	23	(0.5)
Italy	400	(0.7)	410	(0.7)	380	(0.6)	390	(0.7)	340	(0.6)	270	(0.5)
Latvia	120	(5.7)	110	(5.2)	91	(4.3)	80	(3.8)	62	(3.0)	100	(5.1)
Liechtenstein	–	–	–	–	–	–	–	–	–	–	–	–
Lithuania	360	(11.0)	270	(8.6)	220	(7.2)	220	(7.2)	260	(8.6)	220	(7.2)
Luxembourg	0	(0.0)	0	(0.0)	1	(0.2)	2	(0.4)	0	(0.0)	0	(0.0)
Malta	1	(0.2)	1	(0.2)	1	(0.3)	3	(0.7)	1	(0.2)	3	(0.7)
Netherlands	53	(0.3)	65	(0.4)	56	(0.3)	37	(0.2)	35	(0.2)	39	(0.2)
Norway	26	(0.6)	28	(0.6)	29	(0.6)	30	(0.6)	22	(0.4)	21	(0.4)
Poland	880	(2.3)	810	(2.1)	630	(1.6)	690	(1.8)	680	(1.8)	580	(1.5)
Portugal	260	(2.5)	280	(2.6)	230	(2.1)	230	(2.2)	230	(2.2)	230	(2.2)
Romania	1 600	(7.9)	1 500	(7.4)	1 500	(7.3)	1 300	(6.4)	1 300	(6.2)	1 100	(5.7)
Slovakia	43	(0.8)	43	(0.8)	35	(0.7)	26	(0.5)	17	(0.3)	20	(0.4)
Slovenia	35	(1.7)	25	(1.2)	20	(1.0)	14	(0.7)	11	(0.5)	9	(0.4)
Spain	360	(0.8)	410	(0.9)	400	(0.9)	300	(0.6)	330	(0.7)	300	(0.6)
Sweden	64	(0.7)	61	(0.7)	36	(0.4)	47	(0.5)	39	(0.4)	44	(0.5)
United Kingdom	440	(0.7)	410	(0.7)	370	(0.6)	330	(0.5)	330	(0.5)	350	(0.5)
<b>Subtotal EU/EEA</b>	<b>6 700</b>	<b>(1.3)</b>	<b>6 400</b>	<b>(1.3)</b>	<b>5 800</b>	<b>(1.1)</b>	<b>5 500</b>	<b>(1.1)</b>	<b>5 300</b>	<b>(1.0)</b>	<b>4 900</b>	<b>(1.0)</b>
<b>Non-EU/EEA</b>												
Albania	16	(0.5)	5	(0.2)	9	(0.3)	9	(0.3)	9	(0.3)	9	(0.3)
Andorra	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Armenia	180	(6.2)	150	(5.3)	160	(5.7)	120	(4.2)	140	(4.8)	110	(3.6)
Azerbaijan	480	(5.5)	690	(7.7)	800	(8.9)	660	(7.2)	420	(4.6)	440	(4.7)
Belarus	1 000	(11.0)	900	(9.5)	910	(9.6)	880	(9.2)	780	(8.3)	650	(6.9)
Bosnia and Herzegovina	190	(4.9)	180	(4.9)	180	(4.9)	180	(4.9)	170	(4.5)	150	(4.1)
Georgia	220	(5.1)	230	(5.4)	240	(5.6)	240	(5.8)	240	(5.8)	230	(5.8)
Israel	28	(0.4)	24	(0.3)	28	(0.4)	22	(0.3)	22	(0.3)	15	(0.2)
Kazakhstan	3 000	(19.0)	2 500	(15.0)	2 200	(13.0)	1 900	(11.0)	1 800	(11.0)	1 200	(6.8)
Kyrgyzstan	660	(13.0)	620	(12.0)	650	(12.0)	680	(12.0)	650	(12.0)	650	(11.0)
Monaco	0	(0.3)	0	(0.3)	0	(0.3)	0	(0.2)	0	(0.1)	0	(0.1)
Montenegro	4	(0.6)	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)
North Macedonia	48	(2.3)	19	(0.9)	34	(1.7)	27	(1.3)	23	(1.1)	20	(1.0)
Republic of Moldova	660	(16.0)	690	(17.0)	630	(16.0)	550	(13.0)	530	(13.0)	390	(9.5)
Russian Federation	27 000	(19.0)	25 000	(18.0)	23 000	(16.0)	21 000	(15.0)	19 000	(14.0)	18 000	(12.0)
San Marino	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Serbia	190	(2.0)	180	(2.0)	170	(1.9)	150	(1.6)	150	(1.7)	140	(1.5)
Switzerland	34	(0.5)	27	(0.4)	28	(0.4)	25	(0.3)	23	(0.3)	20	(0.2)
Tajikistan	610	(8.3)	570	(7.6)	530	(7.0)	510	(6.5)	490	(6.1)	480	(5.8)
Turkey	970	(1.4)	1 300	(1.8)	1 000	(1.5)	1 000	(1.4)	880	(1.2)	720	(1.0)
Turkmenistan	740	(15.0)	710	(14.0)	680	(13.0)	660	(13.0)	650	(12.0)	630	(12.0)
Ukraine	11 000	(24.0)	9 000	(20.0)	8 200	(18.0)	7 500	(16.0)	7 400	(16.0)	6 600	(15.0)
Uzbekistan	2 900	(11.0)	2 800	(9.9)	2 600	(9.0)	2 400	(8.3)	2 100	(7.2)	2 100	(6.9)
<b>Subtotal non-EU/EEA</b>	<b>50 000</b>	<b>(13.0)</b>	<b>46 000</b>	<b>(11.9)</b>	<b>42 000</b>	<b>(10.8)</b>	<b>39 000</b>	<b>(10.0)</b>	<b>35 000</b>	<b>(8.9)</b>	<b>33 000</b>	<b>(8.4)</b>
<b>Total European Region</b>	<b>56 000</b>	<b>(6.3)</b>	<b>52 000</b>	<b>(5.8)</b>	<b>48 000</b>	<b>(5.4)</b>	<b>44 000</b>	<b>(4.9)</b>	<b>41 000</b>	<b>(4.5)</b>	<b>37 000</b>	<b>(4.1)</b>
<b>Subtotal 18 HPCs</b>	<b>52 000</b>	<b>(13.5)</b>	<b>47 000</b>	<b>(12.1)</b>	<b>44 000</b>	<b>(11.3)</b>	<b>40 000</b>	<b>(10.2)</b>	<b>37 000</b>	<b>(9.4)</b>	<b>34 000</b>	<b>(8.6)</b>

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs presented in italics.

HPCs = high-priority countries.

<sup>a</sup> Excludes HIV coinfected cases.

	2014		2015		2016		2017		Mean annual % change in rate, 2013–2017	Mean annual % change in rate, 2008–2017	Country
	N	Rate per 100 000	N	Rate per 100 000	N	Rate per 100 000	N	Rate per 100 000			
											<b>EU/EEA</b>
	71	(0.8)	64	(0.7)	38	(0.4)	38	(0.4)	-13.6%	-3.2%	Austria
	41	(0.4)	61	(0.5)	61	(0.5)	61	(0.5)	1.9%	-3.1%	Belgium
	130	(1.8)	120	(1.6)	100	(1.5)	91	(1.3)	-11.3%	-9.5%	Bulgaria
	40	(1.0)	46	(1.1)	58	(1.4)	41	(1.0)	-7.1%	-9.1%	Croatia
	6	(0.5)	3	(0.2)	3	(0.3)	3	(0.3)	18.9%	7.1%	Cyprus
	39	(0.4)	57	(0.5)	43	(0.4)	43	(0.4)	-10.7%	-2.9%	Czech Republic
	13	(0.2)	17	(0.3)	17	(0.3)	18	(0.3)	1.7%	0.0%	Denmark
	29	(2.2)	22	(1.6)	17	(1.3)	12	(0.9)	-16.4%	-15.4%	Estonia
	41	(0.7)	33	(0.6)	30	(0.5)	26	(0.5)	-5.1%	-9.0%	Finland
	480	(0.8)	450	(0.7)	400	(0.6)	350	(0.6)	-10.8%	-7.4%	France
	320	(0.4)	320	(0.4)	320	(0.4)	320	(0.4)	-4.0%	-1.8%	Germany
	55	(0.5)	45	(0.4)	45	(0.4)	45	(0.4)	-12.7%	-6.7%	Greece
	87	(0.9)	110	(1.1)	66	(0.7)	54	(0.6)	-13.9%	-12.9%	Hungary
	0	(0.0)	2	(0.6)	0	(0.0)	0	(0.0)	-	-100.0%	Iceland
	24	(0.5)	24	(0.5)	24	(0.5)	24	(0.5)	1.0%	-3.6%	Ireland
	290	(0.5)	340	(0.6)	340	(0.6)	340	(0.6)	6.1%	-1.8%	Italy
	67	(3.3)	96	(4.8)	72	(3.7)	62	(3.2)	-11.0%	-6.2%	Latvia
	-	-	-	-	-	-	-	-	-	-	Liechtenstein
	230	(7.9)	190	(6.6)	180	(6.0)	170	(5.8)	-5.3%	-6.9%	Lithuania
	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)	-	-	Luxembourg
	1	(0.2)	2	(0.5)	2	(0.5)	2	(0.5)	-10.9%	7.5%	Malta
	35	(0.2)	39	(0.2)	30	(0.2)	30	(0.2)	-5.9%	-6.2%	Netherlands
	13	(0.3)	12	(0.2)	12	(0.2)	12	(0.2)	-13.9%	-9.7%	Norway
	580	(1.5)	580	(1.5)	490	(1.3)	450	(1.2)	-5.4%	-7.0%	Poland
	220	(2.1)	220	(2.1)	210	(2.0)	210	(2.0)	-2.4%	-2.4%	Portugal
	1 100	(5.7)	1 100	(5.4)	980	(5.0)	920	(4.7)	-4.7%	-5.6%	Romania
	35	(0.6)	35	(0.6)	35	(0.6)	35	(0.6)	13.9%	-2.3%	Slovakia
	21	(1.0)	11	(0.5)	13	(0.6)	12	(0.6)	7.6%	-11.1%	Slovenia
	290	(0.6)	250	(0.5)	250	(0.5)	250	(0.5)	-4.2%	-4.0%	Spain
	30	(0.3)	25	(0.3)	26	(0.3)	26	(0.3)	-12.8%	-10.3%	Sweden
	360	(0.6)	350	(0.5)	350	(0.5)	350	(0.5)	-0.5%	-3.2%	United Kingdom
	<b>4 600</b>	<b>(0.9)</b>	<b>4 600</b>	<b>(0.9)</b>	<b>4 200</b>	<b>(0.8)</b>	<b>4 000</b>	<b>(0.8)</b>	<b>-5.8%</b>	<b>-5.7%</b>	<b>Subtotal EU/EEA</b>
											<b>Non-EU/EEA</b>
	9	(0.3)	9	(0.3)	9	(0.3)	9	(0.3)	0.0%	-6.5%	Albania
	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	Andorra
	81	(2.8)	68	(2.3)	56	(1.9)	36	(1.2)	-24.0%	-16.7%	Armenia
	430	(4.5)	570	(5.9)	710	(7.3)	860	(8.7)	16.6%	5.2%	Azerbaijan
	510	(5.4)	370	(3.9)	220	(2.3)	76	(0.8)	-41.5%	-25.2%	Belarus
	130	(3.7)	130	(3.7)	130	(3.7)	130	(3.7)	-2.5%	-3.1%	Bosnia and Herzegovina
	230	(5.7)	220	(5.6)	210	(5.5)	210	(5.3)	-2.2%	0.4%	Georgia
	15	(0.2)	15	(0.2)	15	(0.2)	15	(0.2)	-1.3%	-8.5%	Israel
	1 000	(5.9)	820	(4.6)	460	(2.6)	160	(0.9)	-39.9%	-28.8%	Kazakhstan
	540	(9.4)	480	(8.3)	440	(7.5)	400	(6.7)	-11.7%	-7.1%	Kyrgyzstan
	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	-100.0%	-100.0%	Monaco
	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)	0.0%	-11.8%	Montenegro
	20	(1.0)	20	(1.0)	20	(1.0)	20	(1.0)	0.0%	-9.0%	North Macedonia
	390	(9.5)	330	(8.2)	300	(7.4)	250	(6.1)	-10.5%	-10.2%	Republic of Moldova
	16 000	(11.0)	14 000	(10.0)	12 000	(8.6)	10 000	(7.3)	-11.7%	-10.1%	Russian Federation
	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	San Marino
	110	(1.3)	83	(0.9)	81	(0.9)	66	(0.8)	-15.9%	-10.3%	Serbia
	13	(0.2)	17	(0.2)	17	(0.2)	17	(0.2)	-4.5%	-8.6%	Switzerland
	470	(5.6)	470	(5.5)	460	(5.3)	460	(5.2)	-2.7%	-5.1%	Tajikistan
	670	(0.9)	610	(0.8)	510	(0.6)	410	(0.5)	-14.4%	-10.6%	Turkey
	620	(11.0)	600	(11.0)	590	(10.0)	570	(9.9)	-4.7%	-4.5%	Turkmenistan
	5 800	(13.0)	5 100	(11.0)	4 500	(10.0)	3 800	(8.7)	-12.7%	-10.7%	Ukraine
	2 100	(6.8)	2 000	(6.3)	1 800	(5.9)	1 700	(5.4)	-5.9%	-7.6%	Uzbekistan
	<b>29 000</b>	<b>(7.3)</b>	<b>26 000</b>	<b>(6.5)</b>	<b>23 000</b>	<b>(5.7)</b>	<b>19 000</b>	<b>(4.7)</b>	<b>-10.5%</b>	<b>-10.7%</b>	<b>Subtotal non-EU/EEA</b>
	<b>34 000</b>	<b>(3.7)</b>	<b>31 000</b>	<b>(3.4)</b>	<b>27 000</b>	<b>(2.9)</b>	<b>24 000</b>	<b>(2.6)</b>	<b>-10.2%</b>	<b>-9.3%</b>	<b>Total European Region</b>
	<b>30 000</b>	<b>(7.6)</b>	<b>27 000</b>	<b>(6.8)</b>	<b>24 000</b>	<b>(6.0)</b>	<b>20 000</b>	<b>(5.0)</b>	<b>-10.7%</b>	<b>-10.5%</b>	<b>Subtotal 18 HPCs</b>





	2014		2015		2016		2017		Mean annual % change in rate, 2013–2017	Mean annual % change in rate, 2008–2017	Country
	N	Rate per 100 000	N	Rate per 100 000	N	Rate per 100 000	N	Rate per 100 000			
											<b>EU/EEA</b>
	650	(7.5)	650	(7.5)	710	(8.2)	650	(7.4)	-3.1%	-3.3%	Austria
	1 000	(9.1)	1 100	(9.5)	1 100	(10.0)	1 100	(9.2)	-0.3%	-0.9%	Belgium
	2 300	(32.0)	2 000	(28.0)	1 900	(27.0)	1 800	(25.0)	-6.7%	-7.2%	Bulgaria
	570	(13.0)	560	(13.0)	520	(12.0)	420	(10.0)	-8.1%	-10.1%	Croatia
	45	(3.9)	72	(6.2)	66	(5.6)	60	(5.1)	5.6%	0.0%	Cyprus
	550	(5.1)	580	(5.5)	590	(5.5)	570	(5.4)	1.4%	-5.4%	Czech Republic
	340	(5.9)	370	(6.5)	340	(5.9)	290	(5.1)	-6.6%	-3.3%	Denmark
	270	(21.0)	240	(18.0)	220	(16.0)	200	(15.0)	-10.1%	-8.7%	Estonia
	290	(5.3)	310	(5.6)	260	(4.7)	270	(4.9)	-3.3%	-4.2%	Finland
	5 500	(8.5)	5 400	(8.4)	5 700	(8.7)	5 900	(9.0)	0.3%	-2.2%	France
	5 000	(6.1)	6 500	(8.0)	6 600	(8.1)	6 200	(7.5)	6.2%	2.7%	Germany
	560	(4.9)	500	(4.5)	470	(4.2)	500	(4.5)	-2.6%	-3.0%	Greece
	920	(9.4)	990	(10.0)	850	(8.7)	750	(7.7)	-10.5%	-7.8%	Hungary
	9	(2.8)	8	(2.4)	7	(2.1)	15	(4.5)	3.6%	8.3%	Iceland
	340	(7.3)	340	(7.2)	340	(7.1)	350	(7.3)	-4.3%	-4.5%	Ireland
	4 000	(6.7)	4 000	(6.7)	4 300	(7.3)	4 400	(7.4)	6.3%	-0.9%	Italy
	850	(42.0)	800	(40.0)	740	(37.0)	620	(32.0)	-10.1%	-5.8%	Latvia
	-	-	-	-	-	-	-	-	-	-	Liechtenstein
	1 700	(58.0)	1 600	(55.0)	1 500	(53.0)	1 500	(50.0)	-4.5%	-4.4%	Lithuania
	28	(5.0)	34	(6.1)	33	(5.8)	37	(6.3)	-5.8%	-0.5%	Luxembourg
	52	(12.0)	37	(8.6)	58	(13.0)	48	(11.0)	-5.9%	-1.8%	Malta
	940	(5.5)	980	(5.8)	1 000	(5.9)	890	(5.2)	-2.3%	-2.8%	Netherlands
	350	(6.8)	330	(6.3)	320	(6.1)	270	(5.1)	-11.2%	-3.8%	Norway
	7 500	(20.0)	7 200	(19.0)	7 100	(18.0)	6 400	(17.0)	-5.1%	-2.8%	Poland
	2 500	(24.0)	2 400	(23.0)	2 100	(20.0)	2 000	(20.0)	-6.3%	-4.4%	Portugal
	17 000	(86.0)	16 000	(82.0)	15 000	(74.0)	14 000	(72.0)	-5.2%	-5.5%	Romania
	370	(6.8)	350	(6.5)	320	(5.9)	260	(4.8)	-13.1%	-9.7%	Slovakia
	160	(7.9)	150	(7.2)	140	(6.5)	130	(6.2)	-5.3%	-7.1%	Slovenia
	5 500	(12.0)	4 600	(10.0)	5 400	(12.0)	5 000	(11.0)	-4.1%	-5.9%	Spain
	730	(7.5)	900	(9.2)	810	(8.2)	560	(5.7)	-6.0%	-6.0%	Sweden
	7 400	(11.0)	6 600	(10.0)	6 500	(9.9)	5 900	(8.9)	-9.0%	-5.6%	United Kingdom
	<b>67 000</b>	<b>(13.1)</b>	<b>66 000</b>	<b>(12.9)</b>	<b>65 000</b>	<b>(12.7)</b>	<b>61 000</b>	<b>(11.9)</b>	<b>-3.9%</b>	<b>-4.3%</b>	<b>Subtotal EU/EEA</b>
											<b>Non-EU/EEA</b>
	470	(16.0)	480	(16.0)	480	(16.0)	580	(20.0)	1.3%	2.5%	Albania
	7	(8.7)	5	(5.9)	5	(6.0)	1	(1.5)	-32.2%	-13.4%	Andorra
	1 700	(57.0)	1 500	(50.0)	1 300	(44.0)	1 100	(36.0)	-12.0%	-7.3%	Armenia
	7 200	(76.0)	6 800	(71.0)	6 400	(66.0)	6 500	(67.0)	-3.7%	-5.2%	Azerbaijan
	4 800	(51.0)	4 700	(50.0)	4 000	(42.0)	3 500	(37.0)	-11.0%	-6.4%	Belarus
	1 500	(42.0)	1 400	(39.0)	1 100	(32.0)	960	(27.0)	-11.5%	-8.0%	Bosnia and Herzegovina
	4 200	(106.0)	3 900	(99.0)	3 600	(92.0)	3 400	(86.0)	-7.2%	-5.3%	Georgia
	420	(5.2)	320	(4.0)	290	(3.5)	270	(3.2)	-8.2%	-5.3%	Israel
	16 000	(91.0)	14 000	(80.0)	13 000	(72.0)	12 000	(66.0)	-10.7%	-9.1%	Kazakhstan
	8 200	(142.0)	8 400	(144.0)	8 600	(144.0)	8 700	(144.0)	0.5%	-1.5%	Kyrgyzstan
	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	-100.0%	-100.0%	Monaco
	130	(21.0)	92	(15.0)	100	(16.0)	86	(14.0)	-10.7%	-5.8%	Montenegro
	350	(17.0)	350	(17.0)	330	(16.0)	270	(13.0)	-9.1%	-7.8%	North Macedonia
	4 700	(115.0)	4 100	(102.0)	4 100	(101.0)	3 900	(95.0)	-7.0%	-3.0%	Republic of Moldova
	101 000	(70.0)	97 000	(67.0)	92 000	(64.0)	86 000	(60.0)	-4.8%	-4.5%	Russian Federation
	-	-	-	-	-	-	-	-	-	-	San Marino
	2 100	(24.0)	1 900	(21.0)	1 700	(19.0)	1 700	(19.0)	-8.4%	-6.3%	Serbia
	490	(5.9)	610	(7.3)	660	(7.8)	610	(7.2)	2.2%	0.3%	Switzerland
	7 600	(91.0)	7 400	(86.0)	7 500	(85.0)	7 500	(85.0)	-4.0%	-6.5%	Tajikistan
	15 000	(20.0)	14 000	(18.0)	14 000	(18.0)	14 000	(17.0)	-4.0%	-5.8%	Turkey
	3 200	(58.0)	2 700	(49.0)	2 600	(46.0)	2 500	(43.0)	-11.8%	-8.4%	Turkmenistan
	42 000	(94.0)	41 000	(91.0)	39 000	(87.0)	37 000	(84.0)	-3.3%	-3.8%	Ukraine
	25 000	(82.0)	25 000	(79.0)	24 000	(76.0)	23 000	(73.0)	-4.0%	-4.0%	Uzbekistan
	<b>246 000</b>	<b>(61.9)</b>	<b>236 000</b>	<b>(59.0)</b>	<b>225 000</b>	<b>(55.9)</b>	<b>214 000</b>	<b>(52.9)</b>	<b>-5.1%</b>	<b>-4.9%</b>	<b>Subtotal non-EU/EEA</b>
	<b>313 000</b>	<b>(34.4)</b>	<b>302 000</b>	<b>(33.1)</b>	<b>290 000</b>	<b>(31.6)</b>	<b>275 000</b>	<b>(29.9)</b>	<b>-4.7%</b>	<b>-4.7%</b>	<b>Total European Region</b>
	<b>263 000</b>	<b>(66.3)</b>	<b>251 000</b>	<b>(62.9)</b>	<b>239 000</b>	<b>(59.6)</b>	<b>227 000</b>	<b>(56.3)</b>	<b>-5.3%</b>	<b>-5.0%</b>	<b>Subtotal 18 HPCs</b>





















	2016					2017					Country
	All TB cases (N)	Cases with known HIV status		HIV positive		All TB cases (N)	Cases with known HIV status		HIV positive		
		N	%	N	% <sup>a</sup>		N	%	N	% <sup>a</sup>	
											<b>EU/EEA</b>
	–	–	–	–	–	–	–	–	–	–	Austria
	1 042	477	(45.8)	33	(6.9)	972	517	(53.2)	43	(8.3)	Belgium
	1 603	1 260	(78.6)	0	(0.0)	1 463	1 204	(82.3)	3	(0.2)	Bulgaria
	464	4	(0.9)	0	(0.0)	371	4	(1.1)	1	(25.0)	Croatia
	60	48	(80.0)	0	(0.0)	53	49	(92.5)	0	(0.0)	Cyprus
	516	205	(39.7)	5	(2.4)	505	197	(39.0)	8	(4.1)	Czech Republic
	330	150	(45.5)	9	(6.0)	275	211	(76.7)	3	(1.4)	Denmark
	193	186	(96.4)	22	(11.8)	175	163	(93.1)	14	(8.6)	Estonia
	–	–	–	–	–	–	–	–	–	–	Finland
	–	–	–	–	–	–	–	–	–	–	France
	–	–	–	–	–	–	–	–	–	–	Germany
	440	296	(67.3)	8	(2.7)	467	389	(83.3)	13	(3.3)	Greece
	786	19	(2.4)	1	(5.3)	685	18	(2.6)	1	(5.6)	Hungary
	6	6	(100.0)	0	(0.0)	14	13	(92.9)	0	(0.0)	Iceland
	315	137	(43.5)	4	(2.9)	318	102	(32.1)	14	(13.7)	Ireland
	–	–	–	–	–	–	–	–	–	–	Italy
	660	507	(76.8)	57	(11.2)	552	471	(85.3)	52	(11.0)	Latvia
	–	–	–	–	–	–	–	–	–	–	Liechtenstein
	1 442	1 138	(78.9)	41	(3.6)	1 387	1 125	(81.1)	42	(3.7)	Lithuania
	29	5	(17.2)	2	(40.0)	32	3	(9.4)	1	(33.3)	Luxembourg
	50	46	(92.0)	8	(17.4)	42	37	(88.1)	0	(0.0)	Malta
	887	639	(72.0)	20	(3.1)	787	526	(66.8)	22	(4.2)	Netherlands
	295	255	(86.4)	10	(3.9)	261	228	(87.4)	7	(3.1)	Norway
	–	–	–	–	–	–	–	–	–	–	Poland
	1 936	1 697	(87.7)	183	(10.8)	1 800	1 183	(65.7)	135	(11.4)	Portugal
	13 601	10 844	(79.7)	305	(2.8)	13 004	10 760	(82.7)	232	(2.2)	Romania
	296	132	(44.6)	0	(0.0)	249	227	(91.2)	0	(0.0)	Slovakia
	118	95	(80.5)	1	(1.1)	112	77	(68.8)	0	(0.0)	Slovenia
	5 063	3 781	(74.7)	234	(6.2)	4 570	3 408	(74.6)	277	(8.1)	Spain
	–	–	–	–	–	–	–	–	–	–	Sweden
	6 116	5 233	(85.6)	161	(3.1)	5 567	4 671	(83.9)	138	(3.0)	United Kingdom
	<b>36 248</b>	<b>27 160</b>	<b>(74.9)</b>	<b>1 104</b>	<b>(4.1)</b>	<b>33 661</b>	<b>25 583</b>	<b>(76.0)</b>	<b>1 006</b>	<b>(3.9)</b>	<b>Subtotal EU/EEA</b>
											<b>Non-EU/EEA</b>
	415	223	(53.7)	6	(2.7)	503	235	(46.7)	4	(1.7)	Albania
	4	0	(0.0)	0	–	1	–	–	–	–	Andorra
	1 080	1 027	(95.1)	57	(5.6)	926	838	(90.5)	66	(7.9)	Armenia
	6 707	4 722	(70.4)	99	(2.1)	7 129	5 889	(82.6)	95	(1.6)	Azerbaijan
	3 598	3 148	(87.5)	275	(8.7)	3 052	2 781	(91.1)	202	(7.3)	Belarus
	907	1	(0.1)	1	(100.0)	768	18	(2.3)	0	(0.0)	Bosnia and Herzegovina
	3 330	2 866	(86.1)	61	(2.1)	2 927	2 442	(83.4)	43	(1.8)	Georgia
	250	250	(100.0)	18	(7.2)	234	234	(100.0)	12	(5.1)	Israel
	12 658	10 616	(83.9)	576	(5.4)	12 942	11 056	(85.4)	443	(4.0)	Kazakhstan
	7 995	6 254	(78.2)	210	(3.4)	7 695	5 966	(77.5)	216	(3.6)	Kyrgyzstan
	–	–	–	–	–	–	–	–	–	–	Monaco
	87	60	(69.0)	0	(0.0)	77	63	(81.8)	0	(0.0)	Montenegro
	267	207	(77.5)	0	(0.0)	219	178	(81.3)	0	(0.0)	North Macedonia
	4 134	3 366	(81.4)	293	(8.7)	3 858	3 352	(86.9)	277	(8.3)	Republic of Moldova
	121 046	79 935	(66.0)	16 570	(20.7)	114 187	81 443	(71.3)	15 695	(19.3)	Russian Federation
	–	–	–	–	–	–	–	–	–	–	San Marino
	1 488	482	(32.4)	5	(1.0)	1 466	372	(25.4)	8	(2.2)	Serbia
	771	84	(10.9)	5	(6.0)	745	71	(9.5)	8	(11.3)	Serbia excluding Kosovo <sup>c</sup>
	717	398	(55.5)	0	(0.0)	721	301	(41.7)	0	(0.0)	Kosovo <sup>c</sup>
	–	–	–	–	–	–	–	–	–	–	Switzerland
	6 241	5 850	(93.7)	201	(3.4)	6 279	5 937	(94.6)	219	(3.7)	Tajikistan
	12 417	8 549	(68.8)	56	(0.7)	12 046	8 423	(69.9)	65	(0.8)	Turkey
	–	–	–	–	–	–	–	–	–	–	Turkmenistan
	34 088	28 194	(82.7)	5 832	(20.7)	31 584	26 623	(84.3)	5 955	(22.4)	Ukraine
	18 441	18 441	(100.0)	758	(4.1)	19 329	16 842	(87.1)	935	(5.6)	Uzbekistan
	<b>235 153</b>	<b>174 191</b>	<b>(74.1)</b>	<b>25 018</b>	<b>(14.4)</b>	<b>225 222</b>	<b>172 692</b>	<b>(76.7)</b>	<b>24 235</b>	<b>(14.0)</b>	<b>Subtotal non-EU/EEA</b>
	<b>271 401</b>	<b>201 351</b>	<b>(74.2)</b>	<b>26 122</b>	<b>(13.0)</b>	<b>258 883</b>	<b>198 275</b>	<b>(76.6)</b>	<b>25 241</b>	<b>(12.7)</b>	<b>Total European Region</b>
	<b>249 234</b>	<b>186 903</b>	<b>(75.0)</b>	<b>25 413</b>	<b>(13.6)</b>	<b>238 535</b>	<b>185 315</b>	<b>(77.7)</b>	<b>24 554</b>	<b>(13.2)</b>	<b>Subtotal 18 HPCs</b>





**Table XII. Treatment success after 24 months of RR/MDR-TB cases started on treatment,<sup>a</sup> European Region, 2011–2015**

Country/area	2011			2012			2013			2014			2015		
	Cases reported	Success		Cases reported	Success		Cases reported	Success		Cases reported	Success		Cases reported	Success	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	
<b>EU/EEA</b>															
Austria	22	15 (68.2)	27	14 (51.9)	16	12 (75.0)	21	13 (61.9)	13	12 (92.3)					
Belgium	17	13 (76.5)	25	17 (68.0)	14	11 (78.6)	13	7 (53.8)	16	16 (100.0)					
Bulgaria	65	37 (56.9)	58	38 (65.5)	37	17 (45.9)	44	22 (50.0)	28	17 (60.7)					
Croatia	0	0	1	0 (0.0)	0	0	1	0 (0.0)	1	1 (100.0)					
Cyprus	–	–	0	0	–	–	0	0	0	0					
Czech Republic	13	7 (53.8)	5	2 (40.0)	0	0	7	3 (42.9)	9	3 (33.3)					
Denmark	3	0 (0.0)	1	0 (0.0)	2	1 (50.0)	2	1 (50.0)	7	0 (0.0)					
Estonia	70	40 (57.1)	57	42 (73.7)	54	34 (63.0)	51	32 (62.7)	40	25 (62.5)					
Finland	0	0	0	0	0	0	7	2 (28.6)	9	4 (44.4)					
France	–	–	–	–	–	–	–	–	–	–					
Germany	65	34 (52.3)	71	35 (49.3)	114	41 (36.0)	105	35 (33.3)	128	54 (42.2)					
Greece	–	–	–	–	–	–	–	–	–	–					
Hungary	8	4 (50.0)	13	6 (46.2)	11	4 (36.4)	4	4 (100.0)	9	2 (22.2)					
Iceland	0	0	–	–	0	0	0	0	0	0					
Ireland	3	1 (33.3)	4	4 (100.0)	4	3 (75.0)	2	1 (50.0)	1	0 (0.0)					
Italy	–	–	–	–	–	–	–	–	–	–					
Latvia	96	52 (54.2)	107	66 (61.7)	79	54 (68.4)	71	52 (73.2)	63	39 (61.9)					
Liechtenstein	0	0	0	0	0	0	0	0	0	0					
Lithuania	306	111 (36.3)	285	101 (35.4)	274	90 (32.8)	279	91 (32.6)	248	101 (40.7)					
Luxembourg	–	–	0	0	0	0	–	–	0	0					
Malta	0	0	0	0	2	1 (50.0)	0	0	1	0 (0.0)					
Netherlands	17	11 (64.7)	14	10 (71.4)	17	17 (100.0)	7	6 (85.7)	10	6 (60.0)					
Norway	4	3 (75.0)	7	3 (42.9)	7	5 (71.4)	11	9 (81.8)	6	6 (100.0)					
Poland	49	16 (32.7)	41	7 (17.1)	47	10 (21.3)	49	9 (18.4)	45	16 (35.6)					
Portugal	40	22 (55.0)	27	13 (48.1)	18	10 (55.6)	28	15 (53.6)	26	9 (34.6)					
Romania	618	184 (29.8)	777	290 (37.3)	657	258 (39.3)	597	246 (41.2)	588	259 (44.0)					
Slovakia	4	2 (50.0)	1	0 (0.0)	2	0 (0.0)	4	2 (50.0)	3	1 (33.3)					
Slovenia	0	0	0	0	0	0	0	0	0	0					
Spain	–	–	–	–	–	–	–	–	–	–					
Sweden	18	14 (77.8)	15	13 (86.7)	10	7 (70.0)	17	15 (88.2)	26	24 (92.3)					
United Kingdom	92	49 (53.3)	85	55 (64.7)	79	52 (65.8)	57	34 (59.6)	53	34 (64.2)					
<b>Subtotal EU/EEA</b>	<b>1 510</b>	<b>615 (40.7)</b>	<b>1 621</b>	<b>716 (44.2)</b>	<b>1 444</b>	<b>627 (43.4)</b>	<b>1 377</b>	<b>599 (43.5)</b>	<b>1 330</b>	<b>629 (47.3)</b>					
<b>Non-EU/EEA</b>															
Albania	0	0	0	0	0	0	0	0	3	3 (100.0)					
Andorra	0	0	0	0	0	0	0	0	0	0					
Armenia	121	61 (50.4)	115	51 (44.3)	104	45 (43.3)	118	68 (57.6)	95	40 (42.1)					
Azerbaijan	565	339 (60.0)	373	225 (60.3)	647	382 (59.0)	745	441 (59.2)	800	473 (59.1)					
Belarus	1 600	807 (50.4)	2 509	1 366 (54.4)	2 136	1 152 (53.9)	1 472	872 (59.2)	1 400	899 (64.2)					
Bosnia and Herzegovina	5	1 (20.0)	7	3 (42.9)	1	1 (100.0)	3	2 (66.7)	1	1 (100.0)					
Georgia	611	305 (49.9)	623	296 (47.5)	411	176 (42.8)	411	201 (48.9)	412	231 (56.1)					
Israel	11	7 (63.6)	13	12 (92.3)	7	4 (57.1)	16	12 (75.0)	10	8 (80.0)					
Kazakhstan	5 261	3 910 (74.3)	7 213	5 265 (73.0)	6 527	4 730 (72.5)	6 320	4 813 (76.2)	6 482	5 063 (78.1)					
Kyrgyzstan	492	280 (56.9)	775	486 (62.7)	1 064	611 (57.4)	1 157	650 (56.2)	1 162	624 (53.7)					
Monaco	0	0	0	0	0	0	0	0	0	0					
Montenegro	1	0 (0.0)	1	1 (100.0)	0	0	2	0 (0.0)	1	1 (100.0)					
North Macedonia	1	1 (100.0)	3	2 (66.7)	2	1 (50.0)	3	1 (33.3)	5	2 (40.0)					
Republic of Moldova	761	413 (54.3)	856	504 (58.9)	943	538 (57.1)	919	457 (49.7)	996	487 (48.9)					
Russian Federation	15 896	5 895 (37.1)	16 021	6 427 (40.1)	18 213	8 802 (48.3)	20 089	10 170 (50.6)	22 607	12 117 (53.6)					
San Marino	0	0	0	0	0	0	0	0	0	0					
Serbia	14	9 (64.3)	7	4 (57.1)	19	15 (78.9)	19	12 (63.2)	10	9 (90.0)					
Serbia excluding Kosovo <sup>b</sup>	–	–	6	3 (50.0)	13	10 (76.9)	13	7 (53.8)	5	4 (80.0)					
Kosovo <sup>b</sup>	–	–	1	1 (100.0)	6	5 (83.3)	6	5 (83.3)	5	5 (100.0)					
Switzerland	0	0	0	0	0	0	12	9 (75.0)	16	7 (43.8)					
Tajikistan	380	242 (63.7)	535	351 (65.6)	625	375 (60.0)	804	398 (49.5)	682	398 (58.4)					
Turkey	275	181 (65.8)	291	193 (66.3)	228	149 (65.4)	257	163 (63.4)	230	156 (67.8)					
Turkmenistan	0	0	0	0	81	–	213	143 (67.1)	210	142 (67.6)					
Ukraine	3 810	1 298 (34.1)	5 556	1 909 (34.4)	7 633	2 948 (38.6)	7 174	3 297 (46.0)	7 592	3 855 (50.8)					
Uzbekistan	855	455 (53.2)	1 491	737 (49.4)	2 647	1 390 (52.5)	3 602	2 216 (61.5)	2 149	1 259 (58.6)					
<b>Subtotal non-EU/EEA</b>	<b>30 659</b>	<b>14 204 (46.3)</b>	<b>36 389</b>	<b>17 832 (49.0)</b>	<b>41 288</b>	<b>21 319 (51.6)</b>	<b>43 336</b>	<b>23 925 (55.2)</b>	<b>44 863</b>	<b>25 775 (57.5)</b>					
<b>Total European Region</b>	<b>32 169</b>	<b>14 819 (46.1)</b>	<b>38 010</b>	<b>18 548 (48.8)</b>	<b>42 732</b>	<b>21 946 (51.4)</b>	<b>44 713</b>	<b>24 524 (54.8)</b>	<b>46 193</b>	<b>26 404 (57.2)</b>					
<b>Subtotal 18 HPCs</b>	<b>31 782</b>	<b>14 610 (46.0)</b>	<b>37 642</b>	<b>18 347 (48.7)</b>	<b>42 360</b>	<b>21 751 (51.3)</b>	<b>44 323</b>	<b>24 332 (54.9)</b>	<b>45 784</b>	<b>26 185 (57.2)</b>					

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs presented in italics. EU/EEA: country data are shown as missing (–) when data on treatment outcome are not reported. For inclusion in the cohort, drug-susceptibility data are also required. HPCs = high-priority countries.

MDR-TB = multidrug-resistant tuberculosis.

RR-TB = rifampicin-resistant tuberculosis.

<sup>a</sup> For EU/EEA countries, cases diagnosed postmortem were excluded, and cases with no data on treatment enrolment were assumed to be enrolled to treatment.

<sup>b</sup> (In accordance with Security Council Resolution 1244 (1999)).



Table XIV. Treatment success after 36 months of XDR-TB cases notified in EU/EEA, 2010–2014

Country	2010			2011			2012			2013			2014		
	XDR-TB cases	Success		XDR-TB cases	Success		XDR-TB cases	Success		XDR-TB cases	Success		XDR-TB cases	Success	
		N	(%)		N	(%)		N	(%)		N	(%)		N	(%)
<b>EU/EEA</b>															
Austria	1	1	(100.0)	7	4	(57.1)	7	2	(28.6)	3	2	(66.7)	2	2	(100.0)
Belgium	2	2	(100.0)	3	3	(100.0)	2	2	(100.0)	0	0	–	1	1	(100.0)
<i>Bulgaria</i>	1	1	(100.0)	0	0	–	5	1	(20.0)	4	0	(0.0)	3	0	(0.0)
Croatia	0	0	–	0	0	–	0	0	–	0	0	–	0	0	–
Cyprus	0	0	–	0	0	–	0	0	–	–	–	–	0	0	–
Czech Republic	1	1	(100.0)	2	0	(0.0)	1	0	(0.0)	0	0	–	0	0	–
Denmark	0	0	–	0	0	–	0	0	–	1	1	(100.0)	0	0	–
<i>Estonia</i>	11	5	(45.5)	15	6	(40.0)	4	1	(25.0)	10	5	(50.0)	8	3	(37.5)
Finland	0	0	–	0	0	–	–	–	–	0	0	–	–	–	–
France	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	0	0	–	1	1	(100.0)	1	0	(0.0)	3	0	(0.0)	11	2	(18.2)
Greece	0	0	–	–	–	–	0	0	–	0	0	–	–	–	–
Hungary	2	0	(0.0)	0	0	–	2	1	(50.0)	1	0	(0.0)	0	0	–
Iceland	0	0	–	0	0	–	0	0	–	0	0	–	0	0	–
Ireland	0	0	–	0	0	–	0	0	–	–	–	–	0	0	–
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	13	9	(69.2)	12	7	(58.3)	17	9	(52.9)	15	11	(73.3)	13	10	(76.9)
Liechtenstein	0	0	–	0	0	–	0	0	–	0	0	–	0	0	–
<i>Lithuania</i>	50	3	(6.0)	52	11	(21.2)	52	6	(11.5)	47	11	(23.4)	61	15	(24.6)
Luxembourg	0	0	–	0	0	–	0	0	–	0	0	–	0	0	–
Malta	0	0	–	0	0	–	0	0	–	–	–	–	0	0	–
Netherlands	0	0	–	0	0	–	0	0	–	0	0	–	0	0	–
Norway	0	0	–	0	0	–	0	0	–	1	0	(0.0)	1	0	(0.0)
Poland	1	1	(100.0)	1	0	(0.0)	0	0	–	1	0	(0.0)	5	1	(20.0)
Portugal	4	3	(75.0)	9	7	(77.8)	4	4	(100.0)	4	4	(100.0)	3	2	(66.7)
<i>Romania</i>	27	2	(7.4)	34	6	(17.6)	41	5	(12.2)	56	11	(19.6)	58	9	(15.5)
Slovakia	0	0	–	0	0	–	0	0	–	0	0	–	0	0	–
Slovenia	0	0	–	0	0	–	0	0	–	0	0	–	0	0	–
Spain	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sweden	0	0	–	0	0	–	2	2	(100.0)	2	2	(100.0)	1	0	(0.0)
United Kingdom	3	2	(66.7)	6	3	(50.0)	2	1	(50.0)	3	3	(100.0)	3	2	(66.7)
<b>Total EU/EEA</b>	<b>116</b>	<b>30</b>	<b>(25.9)</b>	<b>142</b>	<b>48</b>	<b>(33.8)</b>	<b>140</b>	<b>34</b>	<b>(24.3)</b>	<b>151</b>	<b>50</b>	<b>(33.1)</b>	<b>170</b>	<b>47</b>	<b>(27.6)</b>

Notes: WHO European Region TB HPCs presented in italics. EU/EEA: country data are shown as missing (–) when data on treatment outcome are not reported. For inclusion in the cohort, drug-susceptibility data are also required.  
HPCs = high-priority countries.  
XDR-TB = extensively drug-resistant tuberculosis.



**Table XV. New and relapse TB cases tested using WRD such as Xpert MTB/RIF,<sup>a</sup> European Region, 2015–2017**

Country/area	2015			2016			2017			
	New and relapse TB cases reported <sup>b</sup>	Cases tested using WRD <sup>cd</sup>		New and relapse TB cases reported <sup>b</sup>	Cases tested using WRD <sup>c</sup>		New and relapse TB cases reported <sup>b</sup>	Cases tested using WRD <sup>c</sup>		
		N	N		(%)	N		N	(%)	N
<b>EU/EEA</b>										
Austria	564	424	(75.2)	619	490	(79.2)	562	445	(79.2)	
Belgium <sup>e</sup>	919	444	(48.3)	982	473	(48.2)	916	484	(52.8)	
<i>Bulgaria</i>	1 619	10	(0.6)	1 525	6	(0.4)	1 408	5	(0.4)	
Croatia	485	0	(0.0)	452	0	(0.0)	364	0	(0.0)	
Cyprus	63	5	(7.9)	57	4	(7.0)	52	14	(26.9)	
Czech Republic	507	273	(53.8)	511	252	(49.3)	499	336	(67.3)	
Denmark <sup>e</sup>	320	186	(58.1)	292	209	(71.6)	253	198	(78.3)	
<i>Estonia</i>	206	153	(74.3)	189	145	(76.7)	171	134	(78.4)	
Finland	267	84	(31.5)	222	61	(27.5)	234	89	(38.0)	
France	4 457	0	(0.0)	4 623	0	(0.0)	4 839	0	(0.0)	
Germany	5 623	4 134	(73.5)	5 763	4 407	(76.5)	5 353	4 092	(76.4)	
Greece	438	187	(42.7)	417	168	(40.3)	434	204	(47.0)	
Hungary	858	0	(0.0)	737	0	(0.0)	650	0	(0.0)	
Iceland	7	6	(85.7)	6	5	(83.3)	13	12	(92.3)	
Ireland <sup>d</sup>	266	84	(31.6)	291	118	(40.5)	301	117	(38.9)	
Italy	3 476	0	(0.0)	3 778	0	(0.0)	3 828	0	(0.0)	
<i>Latvia</i>	697	0	(0.0)	641	0	(0.0)	543	178	(32.8)	
Liechtenstein	1	0	(0.0)	2	0	(0.0)	1	1	(100.0)	
<i>Lithuania</i>	1 395	0	(0.0)	1 347	0	(0.0)	1 268	0	(0.0)	
Luxembourg	30	0	(0.0)	29	0	(0.0)	32	0	(0.0)	
Malta	32	2	(6.3)	50	17	(34.0)	42	13	(31.0)	
Netherlands	846	634	(74.9)	875	0	(0.0)	776	0	(0.0)	
Norway <sup>e</sup>	282	252	(89.4)	273	233	(85.3)	237	211	(89.0)	
Poland	6 237	743	(11.9)	6 143	888	(14.5)	5 535	1 037	(18.7)	
Portugal	2 155	333	(15.5)	1 891	349	(18.5)	1 760	377	(21.4)	
<i>Romania</i>	14 215	1	(0.0)	12 774	846	(6.6)	12 310	3 149	(25.6)	
Slovakia	308	68	(22.1)	281	58	(20.6)	228	56	(24.6)	
Slovenia	129	109	(84.5)	118	96	(81.4)	112	95	(84.8)	
Spain	4 819	997	(20.7)	4 915	1 163	(23.7)	4 379	1 137	(26.0)	
Sweden	776	551	(71.0)	691	461	(66.7)	488	412	(84.4)	
United Kingdom <sup>e</sup>	5 838	305	(5.2)	5 726	380	(6.6)	5 248	397	(7.6)	
<b>Subtotal EU/EEA</b>	<b>57 835</b>	<b>9 985</b>	<b>(17.3)</b>	<b>56 220</b>	<b>10 829</b>	<b>(19.3)</b>	<b>52 836</b>	<b>13 193</b>	<b>(25.0)</b>	
<b>Non-EU/EEA</b>										
Albania	415	0	(0.0)	415	0	(0.0)	503	0	(0.0)	
Andorra	4	3	(75.0)	4	4	(100.0)	1	1	(100.0)	
Armenia	1 171	192	(16.4)	1 027	57	(5.6)	841	631	(75.0)	
<i>Azerbaijan</i>	5 456	2 339	(42.9)	5 159	2 025	(39.3)	5 231	2 869	(54.8)	
<i>Belarus</i>	3 765	2 708	(71.9)	3 211	2 555	(79.6)	2 781	2 452	(88.2)	
Bosnia and Herzegovina	1 092	1 092	(100.0)	907	0	(0.0)	766	0	(0.0)	
<i>Georgia</i>	3 152	2 008	(63.7)	2 983	2 421	(81.2)	2 597	2 099	(80.8)	
Israel	280	0	(0.0)	250	0	(0.0)	234	0	(0.0)	
Kazakhstan	14 006	11 631	(83.0)	12 322	10 505	(85.3)	12 449	10 226	(82.1)	
<i>Kyrgyzstan</i>	7 027	1 502	(21.4)	7 026	2 533	(36.1)	6 687	4 330	(64.8)	
Monaco	0	0	–	0	0	–	0	0	–	
Montenegro	80	0	(0.0)	87	25	(28.7)	75	48	(64.0)	
North Macedonia	282	0	(0.0)	263	0	(0.0)	216	152	(70.4)	
<i>Republic of Moldova</i>	3 608	3 054	(84.6)	3 571	1 813	(50.8)	3 358	3 129	(93.2)	
<i>Russian Federation</i>	99 590	0	(0.0)	92 407	64 512	(69.8)	84 510	65 843	(77.9)	
San Marino	0	0	–	0	0	–	0	0	–	
Serbia	1 649	0	(0.0)	1 472	0	(0.0)	1 450	275	(19.0)	
Serbia excluding Kosovo <sup>f</sup>	–	–	–	–	–	–	738	0	(0.0)	
Kosovo <sup>f</sup>	–	–	–	–	–	–	712	275	(38.6)	
Switzerland	531	0	(0.0)	573	0	(0.0)	529	354	(66.9)	
<i>Tajikistan</i>	5 894	0	(0.0)	5 965	4 368	(73.2)	5 895	3 075	(52.2)	
<i>Turkey</i>	12 550	0	(0.0)	12 186	0	(0.0)	11 821	0	(0.0)	
<i>Turkmenistan</i>	2 191	0	(0.0)	2 068	0	(0.0)	1 968	1 488	(75.6)	
<i>Ukraine</i>	30 151	23 177	(76.9)	29 052	0	(0.0)	27 229	0	(0.0)	
<i>Uzbekistan</i>	16 315	0	(0.0)	16 050	12 270	(76.4)	16 842	11 368	(67.5)	
<b>Subtotal non-EU/EEA</b>	<b>209 209</b>	<b>47 706</b>	<b>(22.8)</b>	<b>196 998</b>	<b>103 088</b>	<b>(52.3)</b>	<b>185 983</b>	<b>108 340</b>	<b>(58.3)</b>	
<b>Total European Region</b>	<b>267 044</b>	<b>57 691</b>	<b>(21.6)</b>	<b>253 218</b>	<b>113 917</b>	<b>(45.0)</b>	<b>238 819</b>	<b>121 533</b>	<b>(50.9)</b>	
<b>Subtotal 18 HPCs</b>	<b>223 008</b>	<b>46 775</b>	<b>(21.0)</b>	<b>209 503</b>	<b>104 056</b>	<b>(49.7)</b>	<b>197 909</b>	<b>110 976</b>	<b>(56.1)</b>	

Notes: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs presented in italics.

HPCs = high-priority countries.

WRD = WHO-recommended rapid diagnostics.

<sup>a</sup> WHO (2013). Automated real-time nucleic acid amplification technology for rapid and simultaneous detection of tuberculosis and rifampicin resistance. Xpert MTB/RIF assay for the diagnosis of pulmonary and extrapulmonary TB in adults and children: policy update. Geneva: World Health Organization; (WHO/HTM/TB/2013.16; <https://apps.who.int/iris/handle/10665/112472>).

<sup>b</sup> Cases with unknown previous TB history are included among new TB cases.

<sup>c</sup> All nucleic acid amplification tests are counted as "tested using WHO-recommended rapid diagnostics" for EU/EEA countries.

<sup>d</sup> Non-EU/EEA countries and areas reporting zero coverage with the WRD does not necessarily mean they do not do the testing; some of them experience technical difficulties in reporting actual testing coverage.

<sup>e</sup> Previous TB history is defined as previous diagnosis.

<sup>f</sup> (In accordance with Security Council Resolution 1244 (1999)).





## **8. Country profiles**





AD	Andorra	GE	Georgia	PL	Poland
AL	Albania	HR	Croatia	PT	Portugal
AM	Armenia	HU	Hungary	RO	Romania
AT	Austria	IE	Ireland	RS	Serbia
AZ	Azerbaijan	IL	Israel	RU	Russian Federation
BA	Bosnia and Herzegovina	IS	Iceland	SE	Sweden
BE	Belgium	IT	Italy	SI	Slovenia
BG	Bulgaria	KG	Kyrgyzstan	SK	Slovakia
BY	Belarus	KZ	Kazakhstan	TJ	Tajikistan
CH	Switzerland	LI	Liechtenstein	TM	Turkmenistan
CY	Cyprus	LT	Lithuania	TR	Turkey
CZ	Czech Republic	LU	Luxembourg	UA	Ukraine
DE	Germany	LV	Latvia	UK	United Kingdom
DK	Denmark	MD	Republic of Moldova	UZ	Uzbekistan
EE	Estonia	ME	Montenegro		
EL	Greece	MK	North Macedonia		
ES	Spain	MT	Malta		
FI	Finland	NL	Netherlands		
FR	France	NO	Norway		



# Albania

Population estimate 2017 by UN Statistical Database: 2 930 187

## TB case notifications, 2017

Total number of cases	503
Notification rate per 100 000	17.2
New <sup>a</sup> and relapses	503
New <sup>a</sup> and relapses notification rate per 100 000	17.2
Pulmonary new and relapse:	346 (68.8%)
of which smear-positive	-
of which laboratory-confirmed	210 (60.7%)
Laboratory-confirmed TB cases	210 (41.7%)
Mean age of new and relapse TB cases	44.1 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	479 (95.2%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	79 (37.6%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	9–1–17
Pulmonary MDR-TB cases notified	1 (0.0%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	4 (5.1%)
of which XDR-TB cases	0 -
TB cases tested for HIV	235 (46.7%)
HIV-positive TB cases	6 (1.7%)
of these on ART	6 (100.0%)

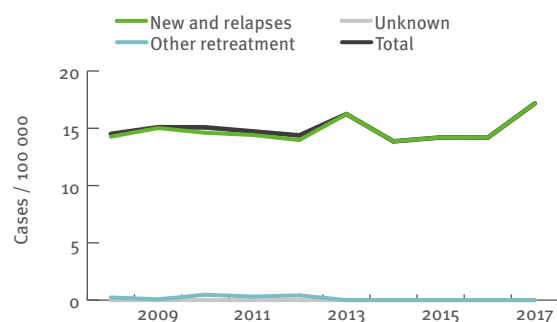
<sup>a</sup>National coverage 100% or culturing 90%. C+/all TB cases 50%. DST done for C+ 75%. EQA 95%.  
<sup>b</sup> More than 50% of TB cases tested for HIV.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	409	3
Success	357 (87.3%)	3 (100.0%)
Died	10 (2.4%)	0 -
Failed	3 (0.7%)	0 -
Lost to follow-up	20 (4.9%)	0 -
Not evaluated	19 (4.6%)	0 -

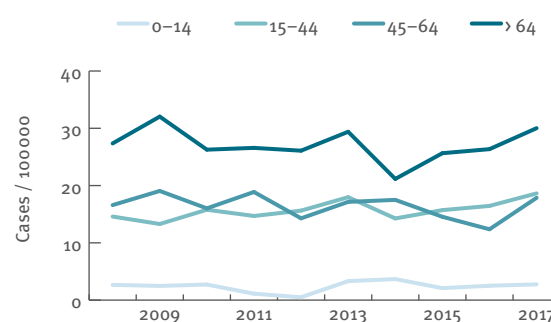
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



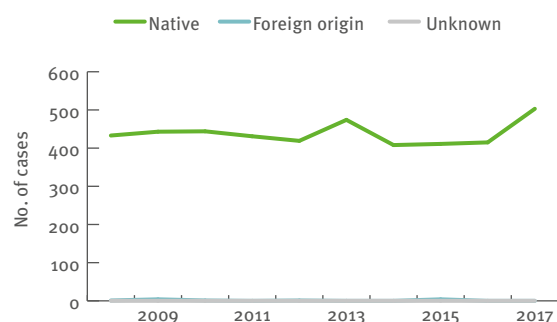
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

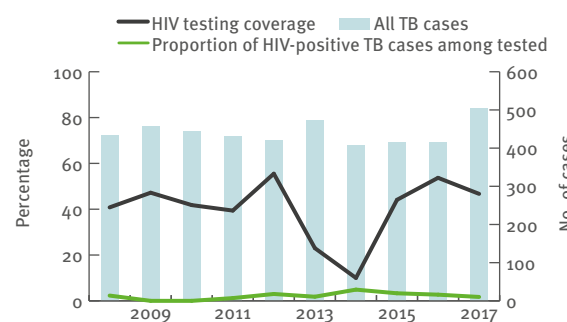


<sup>a</sup> Data up to 2012 include new TB cases only.

## TB cases by geographical origin, 2008–2017

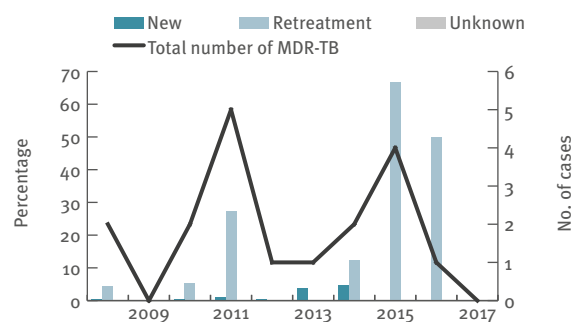


## TB/HIV coinfection, 2008–2017<sup>a</sup>

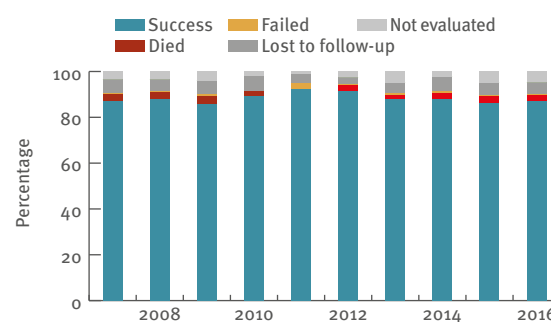


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2008–2017<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.

# Andorra

Population estimate 2016 by UN Statistical Database: 76 963

## TB case notifications, 2017

Total number of cases	1
Notification rate per 100 000	1.3
New <sup>a</sup> and relapses	1
New <sup>a</sup> and relapses notification rate per 100 000	1.3
Pulmonary	1 (100.0%)
of which smear-positive	-
of which laboratory-confirmed	1 (100.0%)
Laboratory-confirmed TB cases	1
Mean age of new and relapse TB cases	20.0 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	4 (100.0%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	1 (50.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	0–0–1
Pulmonary MDR-TB cases notified	0 (0.0%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	0
of which XDR-TB cases	0
TB cases tested for HIV	0 (0.0%)
HIV-positive TB cases	0
of these on ART	0

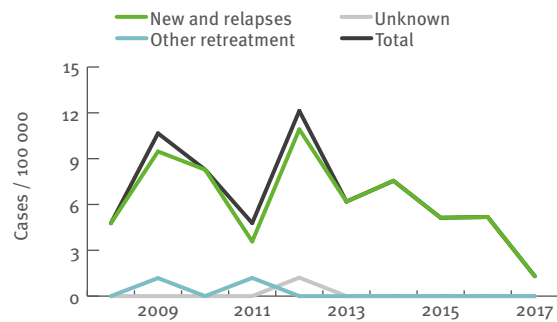
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National		
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>	
Case-linked data reporting	Yes		
Cases notified	4	0	
Success	3 (75.0%)	-	-
Died	1 (25.0%)	-	-
Failed	0 (0.0%)	-	-
Lost to follow-up	0 (0.0%)	-	-
Not evaluated	0 (0.0%)	-	-

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



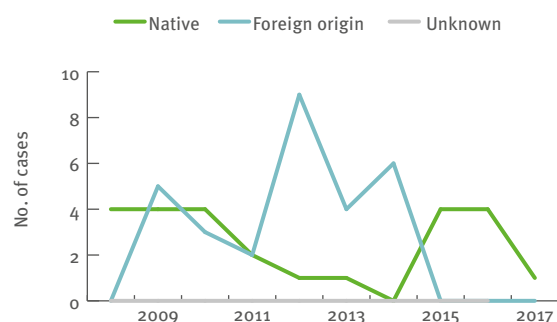
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

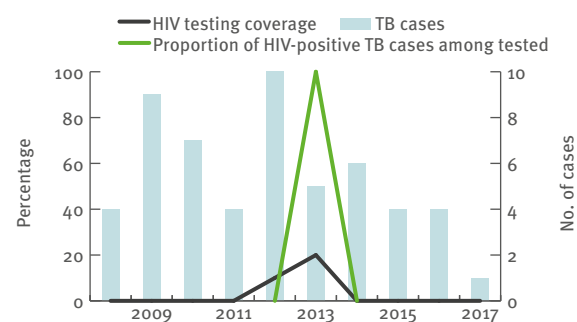


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017



## TB/HIV coinfection, 2008–2017<sup>a</sup>

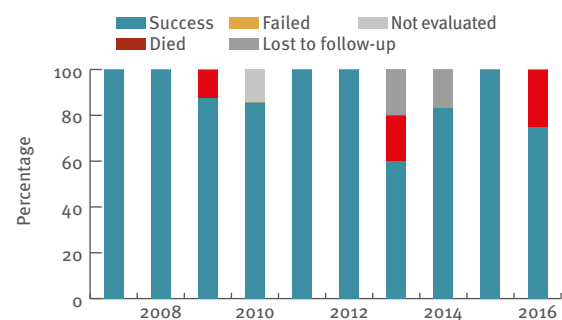


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017

No MDR-TB cases reported

## Treatment outcome, new and relapsed TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.



# Armenia

Population estimate 2016 by UN Statistical Database: 2 930 450

## TB case notifications, 2017

Total number of cases	926	
Notification rate per 100 000	31.6	
New <sup>a</sup> and relapses	841	
New <sup>a</sup> and relapses notification rate per 100 000	28.7	
Pulmonary	652	(77.5%)
of which smear-positive	-	-
of which laboratory-confirmed	369	(56.6%)
Laboratory-confirmed TB cases	454	-
Mean age of new and relapse TB cases	43.1 years	
Mean age of new foreign TB cases	- years	
Foreign origin of all TB cases	7	(0.8%)
New (not previously treated)	691	(74.6%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes	
Completeness of HIV data <sup>b</sup>	Yes	
Case-linked data reporting	Yes	
Cases with DST results	428	(94.3%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	180–150–210	
Pulmonary MDR-TB cases notified	81	(18.9%)
of which XDR-TB cases	13	(16.0%)
Notified MDR-TB	99	(23.1%)
of which XDR-TB cases	13	(13.3%)
TB cases tested for HIV	838	(99.6%)
HIV-positive TB cases	66	(7.9%)
of these on ART	53	(80.3%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

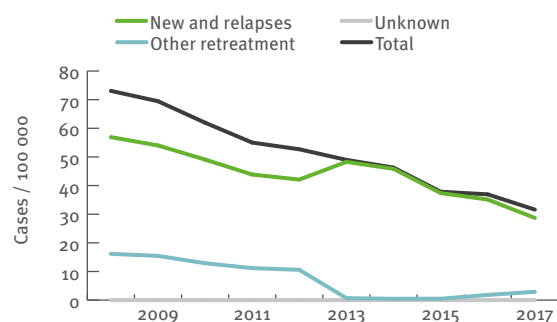
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Outcome cohort	869	95
Case-linked data reporting	Yes	
Cases notified	869	95
Success	703 (80.9%)	40 (42.1%)
Died	48 (5.5%)	7 (7.4%)
Failed	18 (2.1%)	16 (16.8%)
Lost to follow-up	99 (11.4%)	31 (32.6%)
Not evaluated	1 (0.1%)	1 (1.1%)

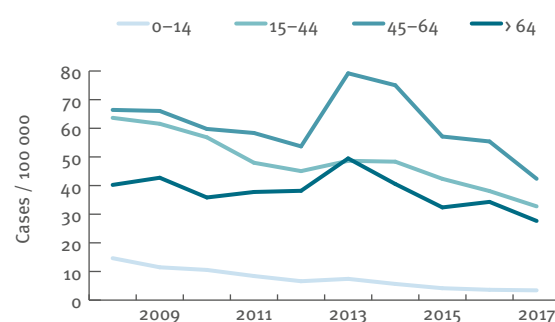
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



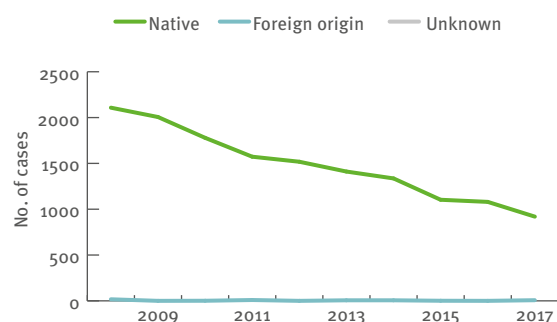
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

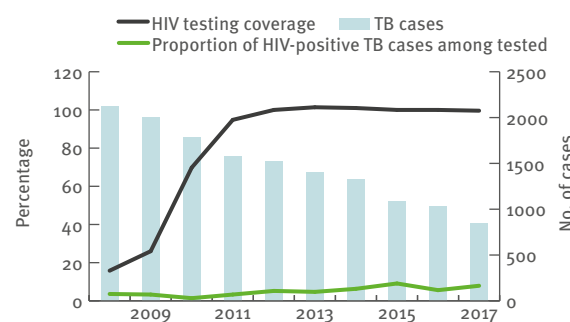


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

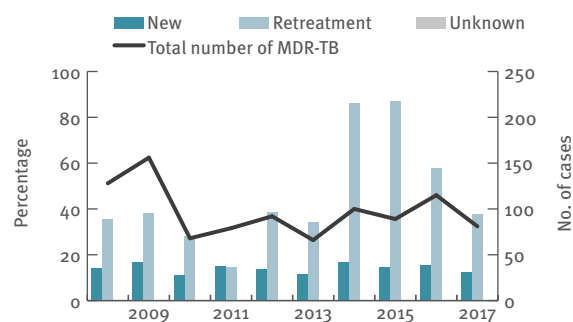


## TB/HIV coinfection, 2008–2017<sup>a</sup>

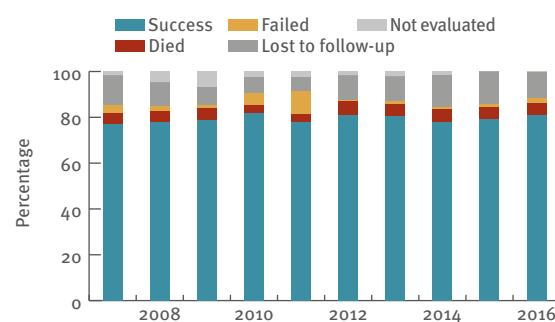


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.

# Austria

Total population at 23 April 2018 by EUROSTAT: 8 772 865

## TB case notifications, 2017

Total number of cases	570
Notification rate per 100 000	6.5
New <sup>a</sup> and relapses	562
New <sup>a</sup> and relapses notification rate per 100 000	6.4
Pulmonary	431 (75.6%)
of which microscopy-positive	153 (35.5%)
of which laboratory-confirmed	358 (83.1%)
Laboratory-confirmed TB cases	445 (78.1%)
Mean age of new native TB cases	55.6 years
Mean age of new foreign TB cases	34.4 years
Foreign origin of all TB cases	373 (65.4%)
New (not previously treated)	428 (75.1%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data reporting	Yes
Cases with DST results	425 (95.5%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	13-5-21
Pulmonary MDR-TB cases notified	16 (4.6%)
of which XDR-TB cases	3 (18.8%)
Notified MDR-TB	18 (4.2%)
of which XDR-TB cases	3 (16.7%)
TB cases tested for HIV	-
HIV-positive TB cases	-
of these on ART	-

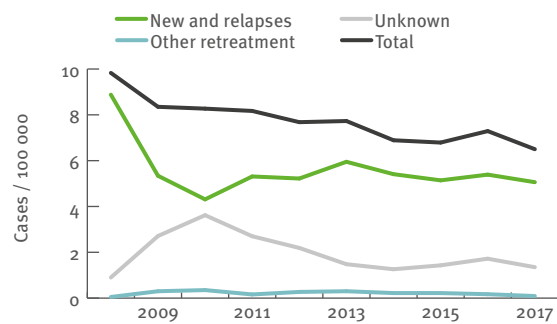
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

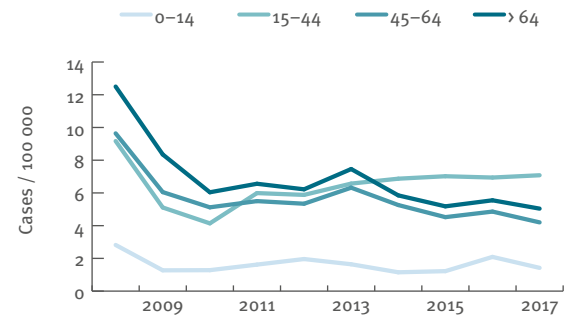
Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	268	12
Success	200 (74.6%)	11 (91.7%)
Died	16 (6.0%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	6 (2.2%)	0 (0.0%)
Still on treatment	28 (10.4%)	0 (0.0%)
Not evaluated	18 (6.7%)	1 (8.3%)

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

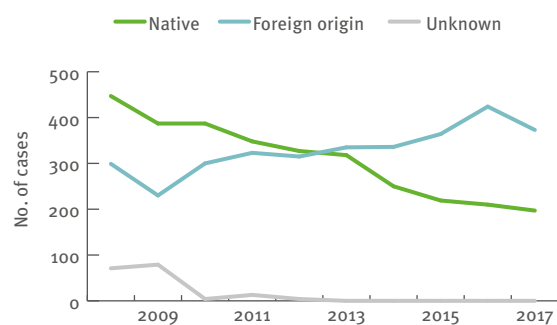
## TB notification rates by treatment history, 2008-2017



## New and relapsed TB cases – notification rates by age group, 2008-2017



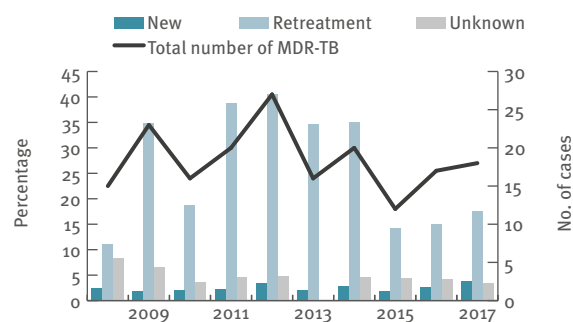
## TB cases by geographical origin, 2008-2017



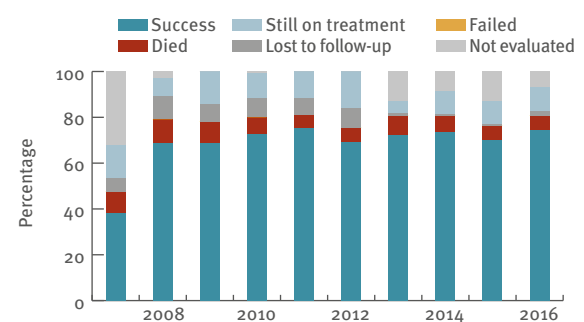
## TB/HIV coinfection, 2008-2017

Data not available

## MDR-TB cases by previous treatment history, 2008-2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007-2016



# Azerbaijan

Population estimate 2017 by UN Statistical Database: 9 827 589

## TB case notifications, 2017

Total number of cases	7 129
Notification rate per 100 000	72.5
New <sup>a</sup> and relapses	5 231
New <sup>a</sup> and relapses notification rate per 100 000	53.2
Pulmonary	4 207 (80.4%)
of which smear-positive	-
of which laboratory-confirmed	3 125 (74.3%)
Laboratory-confirmed TB cases	4 923 (69.1%)
Mean age of new and relapse TB cases	37.1 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	3 871 (54.3%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	4 663 (94.7%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	1300–1200–1300
Pulmonary MDR-TB cases notified	665 (21.9%)
of which XDR-TB cases	-
Notified MDR-TB	1 007 (21.6%)
of which XDR-TB cases	118 (14.5%)
TB cases tested for HIV	5 889 (82.6%)
HIV-positive TB cases	95 (1.6%)
of these on ART	79 (83.2%)

<sup>a</sup> National coverage 100% or culturing 90%, C+/all TB cases >50%, DST done for C+ >75%, EQA >95%.

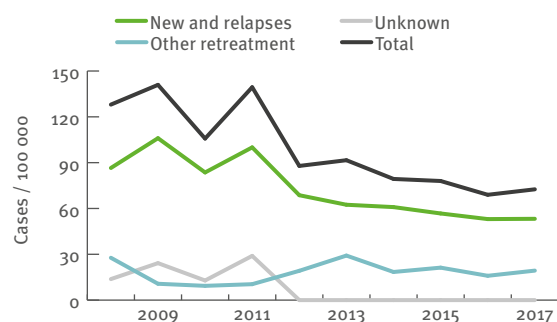
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	Bacteriologically confirmed new TB cases in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	1 464	800
Success	1 225 (83.7%)	473 (59.1%)
Died	26 (1.8%)	123 (15.4%)
Failed	73 (5.0%)	143 (17.9%)
Lost to follow-up	118 (8.1%)	61 (7.6%)
Not evaluated	22 (1.5%)	0 (0.0%)

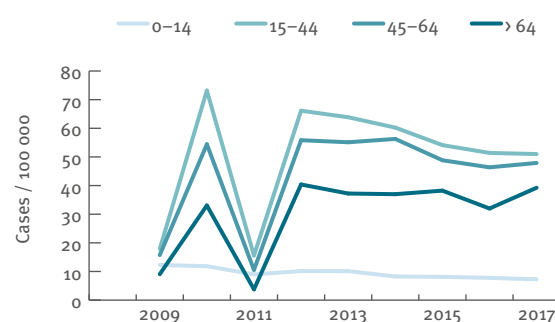
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



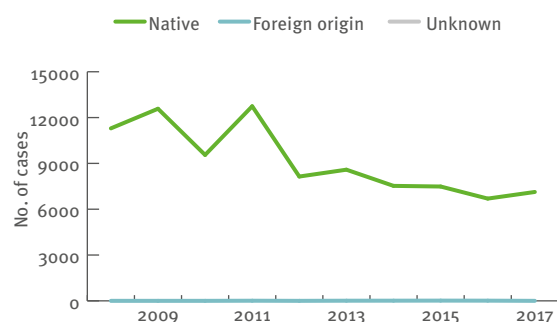
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

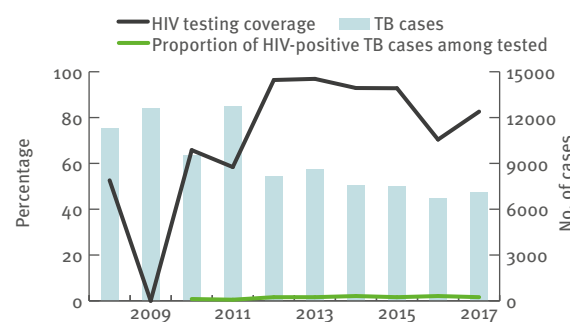


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

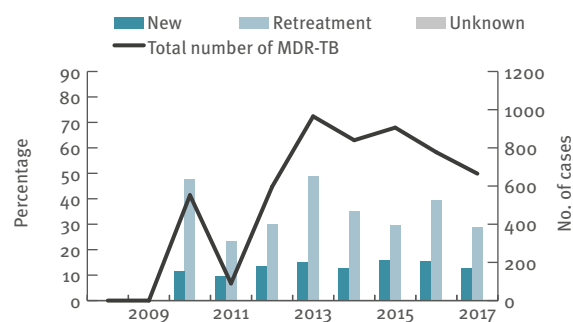


## TB/HIV coinfection, 2008–2017<sup>a</sup>

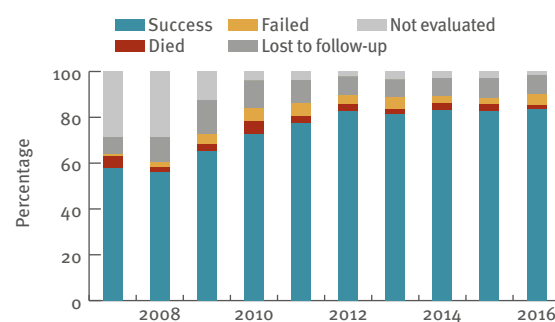


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome of new TB cases, 2007–2016



# Belarus

Population estimate 2017 by UN Statistical Database: 9 468 338

## TB case notifications, 2017

Total number of cases	3 052
Notification rate per 100 000	32.2
New <sup>a</sup> and relapses	2 781
New <sup>a</sup> and relapses notification rate per 100 000	29.4
Pulmonary	2 567 (92.3%)
of which smear-positive	-
of which laboratory-confirmed	2 171 (84.6%)
Laboratory-confirmed TB cases	2 390 (78.3%)
Mean age of new and relapse TB cases	47.3 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	2 289 (75.0%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	2 390 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	1300-1300-1400
Pulmonary MDR-TB cases notified	1 088 (45.5%)
of which XDR-TB cases	343 (31.5%)
Notified MDR-TB	1 117 (46.7%)
of which XDR-TB cases	343 (30.7%)
TB cases tested for HIV	2 781 (100.0%)
HIV-positive TB cases	202 (7.3%)
of these on ART	155 (76.7%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

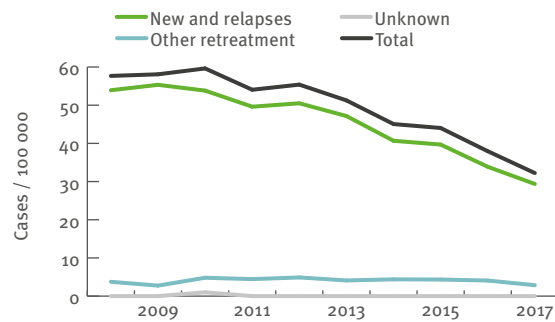
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases enrolled into MDR treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	2 123	1 400
Success	1 894 (89.2%)	899 (64.2%)
Died	112 (5.3%)	132 (9.4%)
Failed	45 (2.1%)	218 (15.6%)
Lost to follow-up	68 (3.2%)	138 (9.9%)
Not evaluated	4 (0.2%)	13 (0.9%)

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008-2017<sup>a</sup>



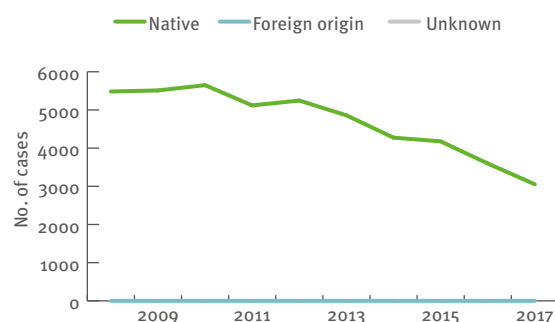
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008-2017<sup>a</sup>

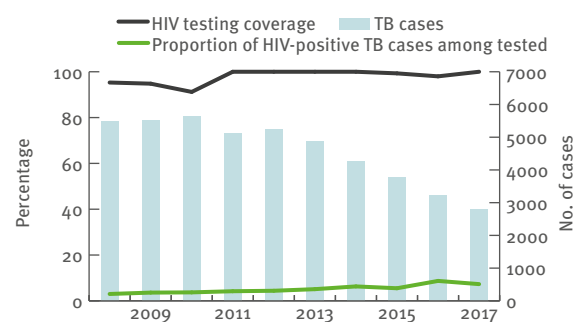


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008-2017

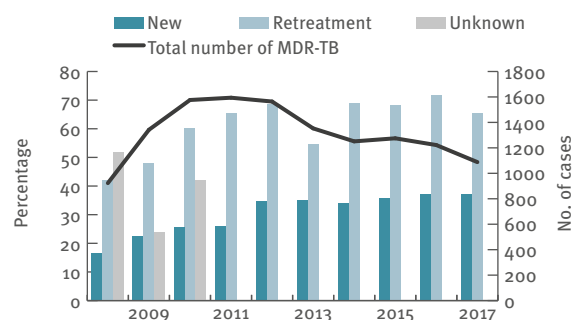


## TB/HIV coinfection, 2008-2017<sup>a</sup>

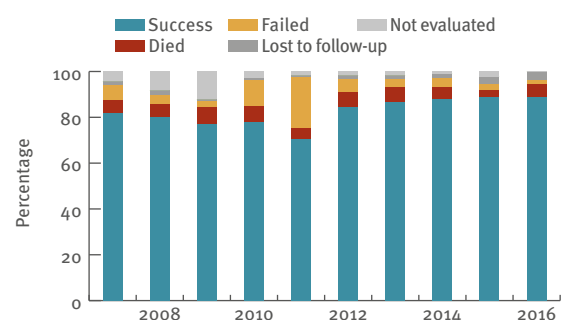


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008-2017



## Treatment outcome, new and relapsed TB cases, 2007-2016<sup>a</sup>



<sup>a</sup> 2007-2011 cohorts include new cases only.

# Belgium

Total population at 23 April 2018 by EUROSTAT: 11 351 727

## TB case notifications, 2017

Total number of cases	972
Notification rate per 100 000	8.6
New <sup>a</sup> and relapses	916
New <sup>a</sup> and relapses notification rate per 100 000	8.1
Pulmonary	697 (71.7%)
of which microscopy-positive	332 (47.6%)
of which laboratory-confirmed	574 (82.4%)
Laboratory-confirmed TB cases	758 (78.0%)
Mean age of new native TB cases	42.8 years
Mean age of new foreign TB cases	34.0 years
Foreign origin of all TB cases	506 (52.1%)
New (not previously treated)	715 (73.6%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	729 (96.2%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	16–6–25
Pulmonary MDR-TB cases notified	3 (0.5%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	5 (0.7%)
of which XDR-TB cases	0 (0.0%)
TB cases tested for HIV	517 (53.2%)
HIV-positive TB cases of these on ART	43 (8.3%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

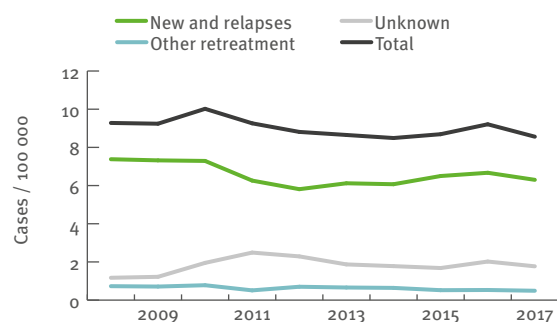
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	438	15
Success	351 (80.1%)	15 (100.0%)
Died	30 (6.8%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	29 (6.6%)	0 (0.0%)
Still on treatment	14 (3.2%)	0 (0.0%)
Not evaluated	14 (3.2%)	0 (0.0%)

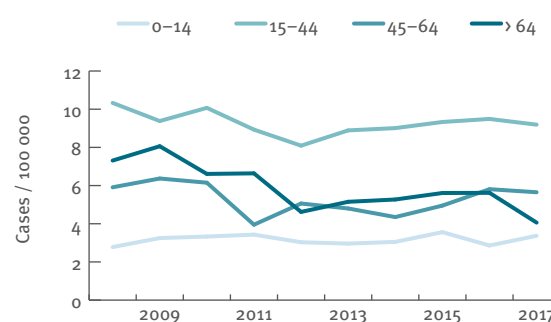
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

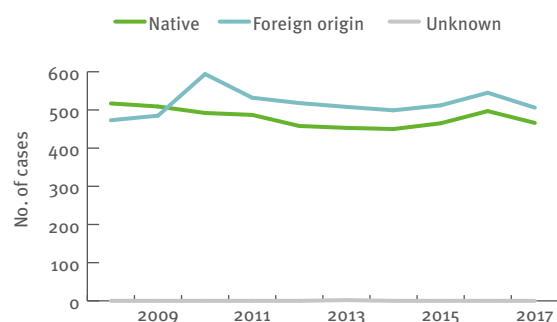
## TB notification rates by treatment history, 2008–2017



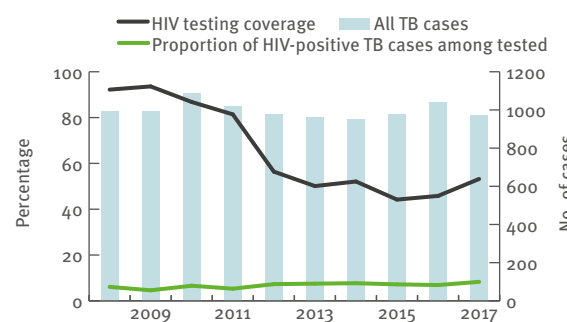
## New and relapsed TB cases – notification rates by age group, 2008–2017



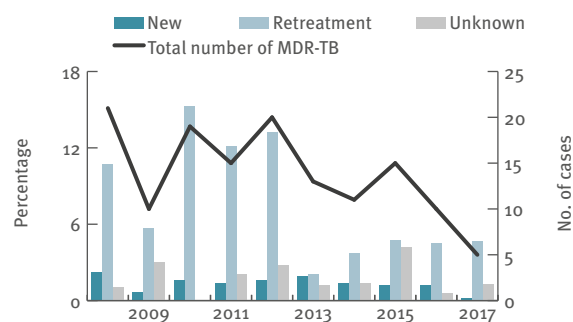
## TB cases by geographical origin, 2008–2017



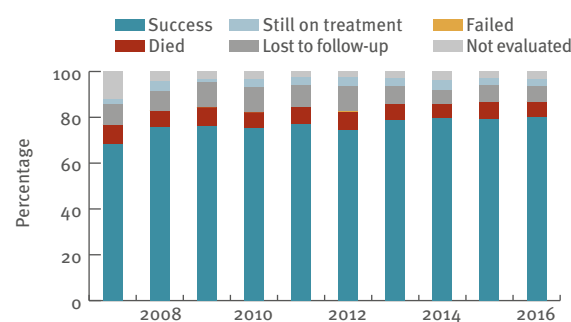
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Bosnia and Herzegovina

Population estimate 2017 by UN Statistical Database: 3 507 017

## TB case notifications, 2017

Total number of cases	768
Notification rate per 100 000	21.9
New <sup>a</sup> and relapses	766
New <sup>a</sup> and relapses notification rate per 100 000	21.8
Pulmonary	681 (88.9%)
of which smear-positive	-
of which laboratory-confirmed	479 (70.3%)
Laboratory-confirmed TB cases	479 (62.4%)
Mean age of new and relapse TB cases	52.8 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	698 (90.9%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	424 (88.5%)
Estimated RR-TB among notified pulmonary cases (best-low-high)	0-0-4
Pulmonary MDR-TB cases notified	0 (0.0%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	0 (0.0%)
of which XDR-TB cases	0 -
TB cases tested for HIV	18 (2.3%)
HIV-positive TB cases	0 (0.0%)
of these on ART	0 -

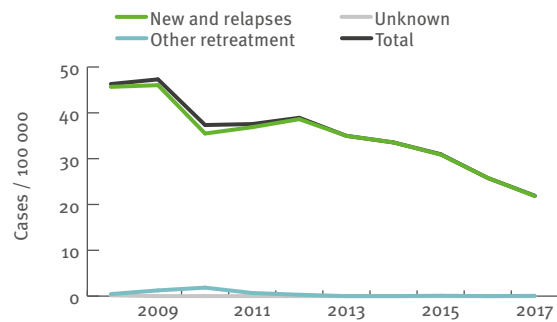
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Outcome cohort		
Case-linked data reporting	Yes	
Cases notified	907	1
Success	505 (55.7%)	1 (100.0%)
Died	64 (7.1%)	0 (0.0%)
Failed	13 (1.4%)	0 (0.0%)
Lost to follow-up	3 (0.3%)	0 (0.0%)
Not evaluated	322 (35.5%)	0 (0.0%)

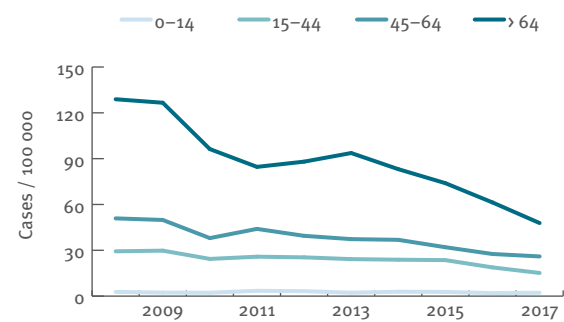
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



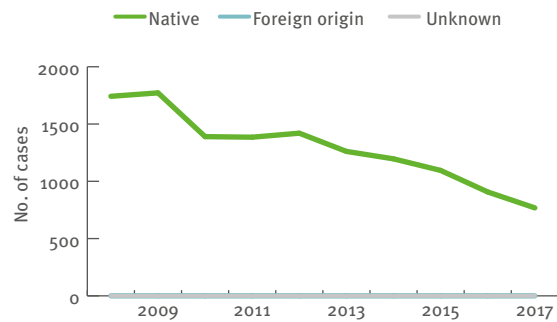
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

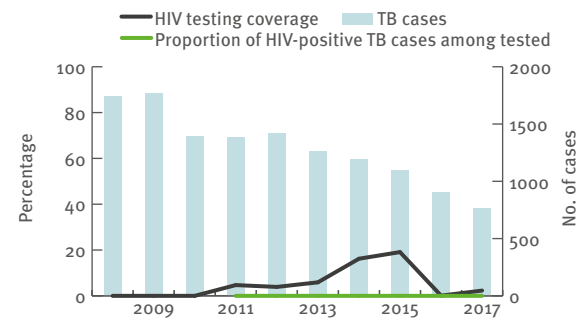


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

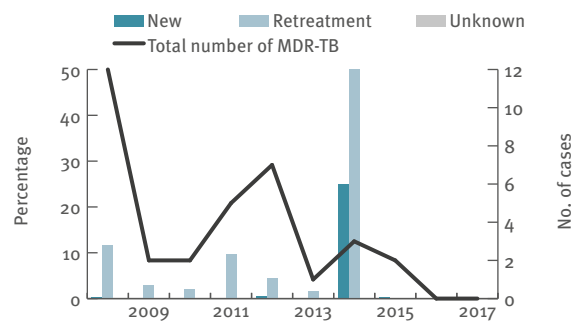


## TB/HIV coinfection, 2008–2017<sup>a</sup>

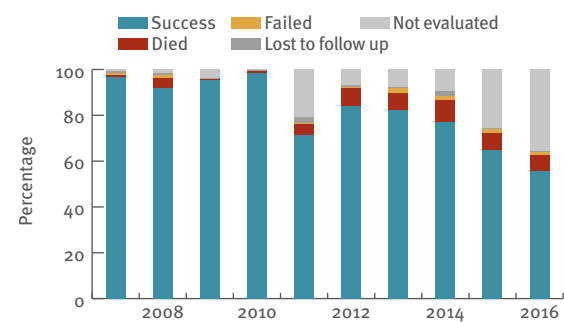


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.

# Bulgaria

Total population at 23 April 2018 by EUROSTAT: 7 101 859

## TB case notifications, 2017

Total number of cases	1463
Notification rate per 100 000	20.6
New <sup>a</sup> and relapses	1 408
New <sup>a</sup> and relapses notification rate per 100 000	19.8
Pulmonary	1 101 (75.3%)
of which microscopy-positive	571 (51.9%)
of which laboratory-confirmed	675 (61.3%)
Laboratory-confirmed TB cases	696 (47.6%)
Mean age of new native TB cases	47.4 years
Mean age of new foreign TB cases	44.8 years
Foreign origin of all TB cases	6 (0.4%)
New (not previously treated)	1 272 (86.9%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	607 (87.2%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	44–27–61
Pulmonary MDR-TB cases notified	24 (4.0%)
of which XDR-TB cases	1 (4.3%)
Notified MDR-TB	24 (4.0%)
of which XDR-TB cases	1 (4.3%)
TB cases tested for HIV	1 204 (82.3%)
HIV-positive TB cases	3 (0.2%)
of these on ART	3 (100.0%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

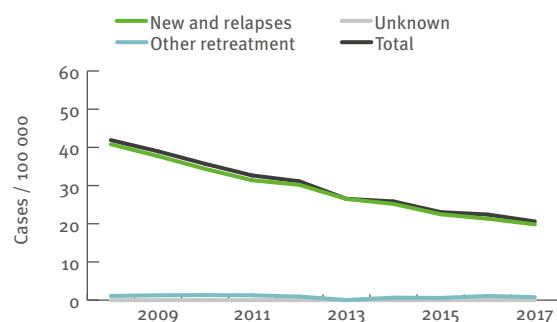
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	652	24
Success	558 (85.6%)	14 (58.3%)
Died	52 (8.0%)	5 (20.8%)
Failed	15 (2.3%)	2 (8.3%)
Lost to follow-up	23 (3.5%)	3 (12.5%)
Still on treatment	4 (0.6%)	0 (0.0%)
Not evaluated	0 (0.0%)	0 (0.0%)

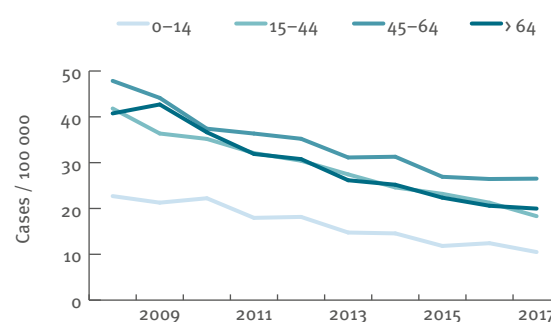
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

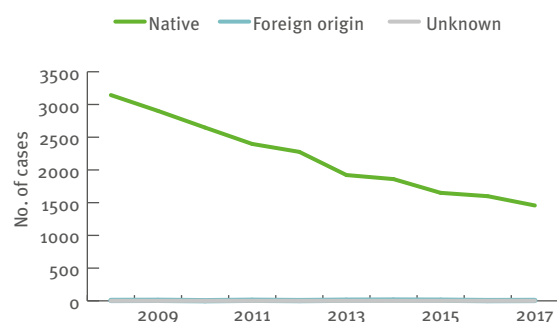
## TB notification rates by treatment history, 2008–2017



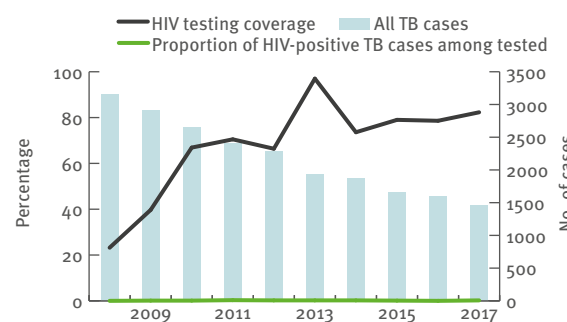
## New and relapsed TB cases – notification rates by age group, 2008–2017



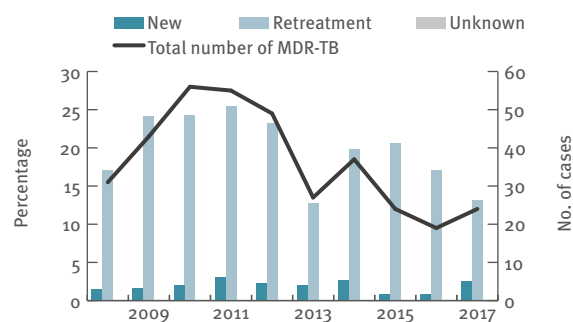
## TB cases by geographical origin, 2008–2017



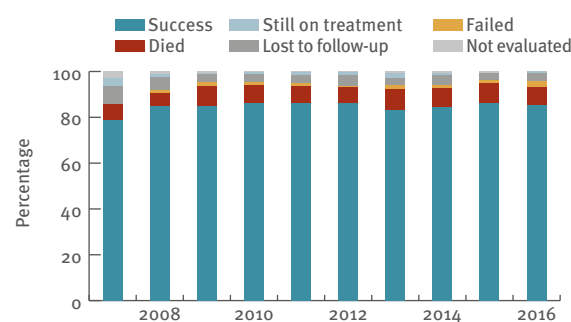
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Croatia

Total population at 23 April 2018 by EUROSTAT: 4 154 213

## TB case notifications, 2017

Total number of cases	371
Notification rate per 100 000	8.9
New <sup>a</sup> and relapses	364
New <sup>a</sup> and relapses notification rate per 100 000	8.8
Pulmonary	327 (88.1%)
of which microscopy-positive	181 (55.4%)
of which laboratory-confirmed	285 (87.2%)
Laboratory-confirmed TB cases	316 (85.2%)
Mean age of new native TB cases	56.9 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	299 (80.6%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	215 (68.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	0-0-3
Pulmonary MDR-TB cases notified	0 (0.0%)
of which XDR-TB cases	0 -
Notified MDR-TB	0 (0.0%)
of which XDR-TB cases	0 -
TB cases tested for HIV	4 (1.1%)
HIV-positive TB cases of these on ART	1 (25.0%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

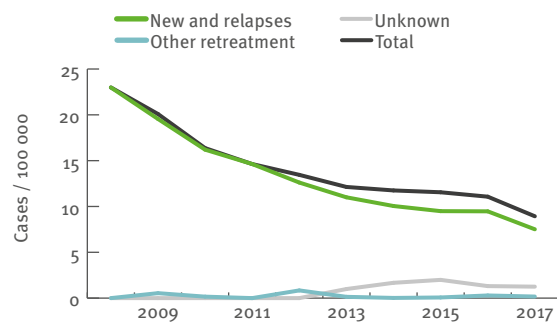
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	294	1
Success	180 (61.2%)	1 (100.0%)
Died	46 (15.6%)	0 (0.0%)
Failed	1 (0.3%)	0 (0.0%)
Lost to follow-up	9 (3.1%)	0 (0.0%)
Still on treatment	14 (4.8%)	0 (0.0%)
Not evaluated	44 (15.0%)	0 (0.0%)

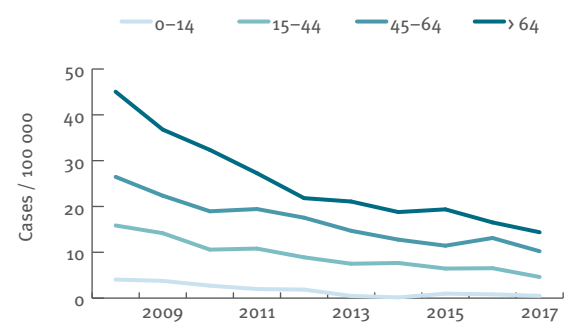
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

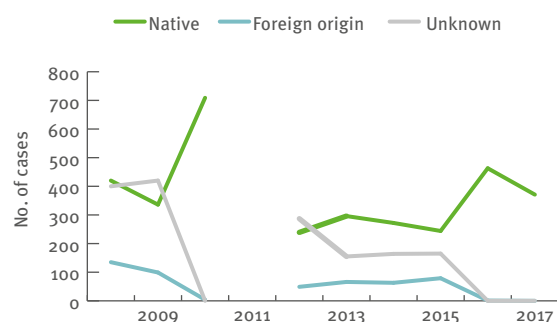
## TB notification rates by treatment history, 2008–2017



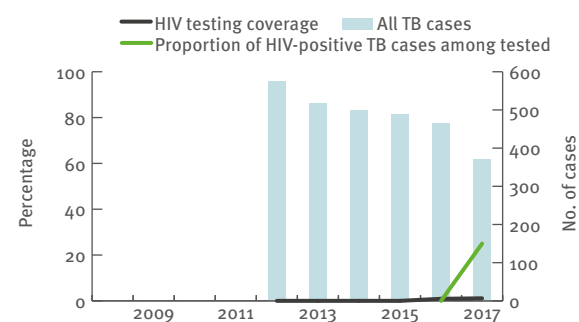
## New and relapsed TB cases – notification rates by age group, 2008–2017



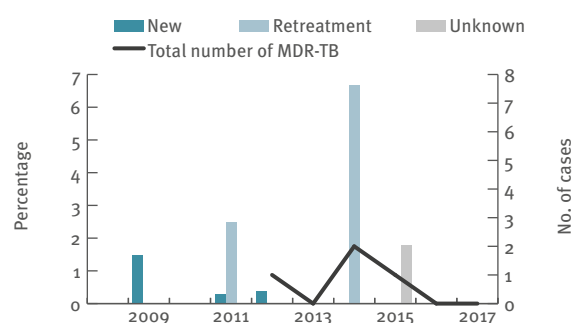
## TB cases by geographical origin, 2008–2017



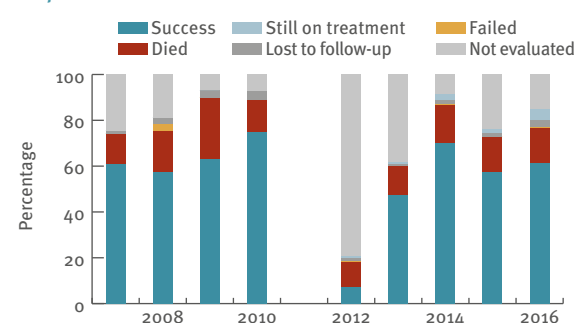
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016





# Cyprus

Total population at 23 April 2018 by EUROSTAT: 854 802

## TB case notifications, 2017

Total number of cases	53
Notification rate per 100 000	6.2
New <sup>a</sup> and relapses	52
New <sup>a</sup> and relapses notification rate per 100 000	6.1
Pulmonary	44 (83.0%)
of which microscopy-positive	21 (47.7%)
of which laboratory-confirmed	33 (75.0%)
Laboratory-confirmed TB cases	39 (73.6%)
Mean age of new native TB cases	36.2 years
Mean age of new foreign TB cases	33.9 years
Foreign origin of all TB cases	38 (71.7%)
New (not previously treated)	51 (96.2%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	39 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	0–0–2
Pulmonary MDR-TB cases notified	1 (3.0%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	1 (2.6%)
of which XDR-TB cases	0 –
TB cases tested for HIV	49 (92.5%)
HIV-positive TB cases	0 (0.0%)
of these on ART	0 –

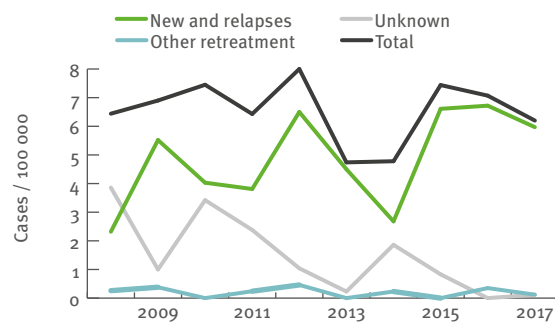
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	36	0
Success	24 (66.7%)	0 –
Died	0 (0.0%)	0 –
Failed	0 (0.0%)	0 –
Lost to follow-up	0 (0.0%)	0 –
Still on treatment	0 (0.0%)	0 –
Not evaluated	12 (33.3%)	0 –

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

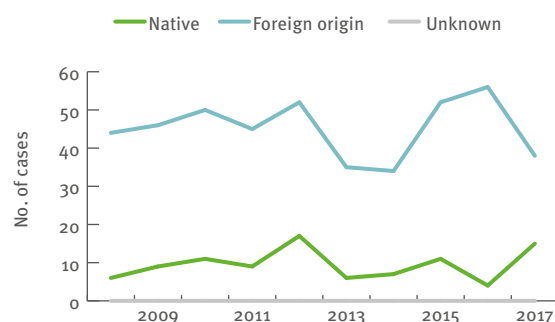
## TB notification rates by treatment history, 2008–2017



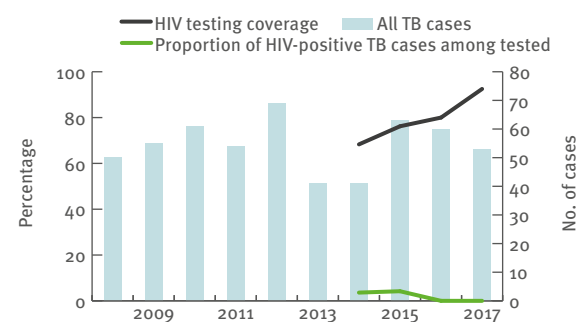
## New and relapsed TB cases – notification rates by age group, 2008–2017



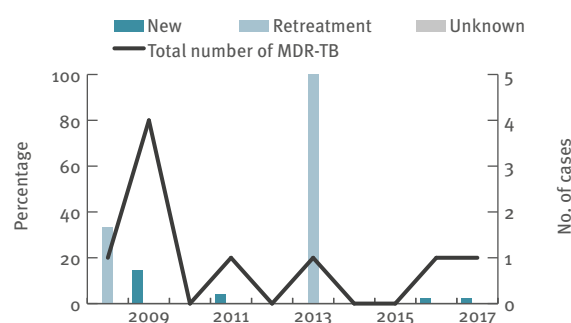
## TB cases by geographical origin, 2008–2017



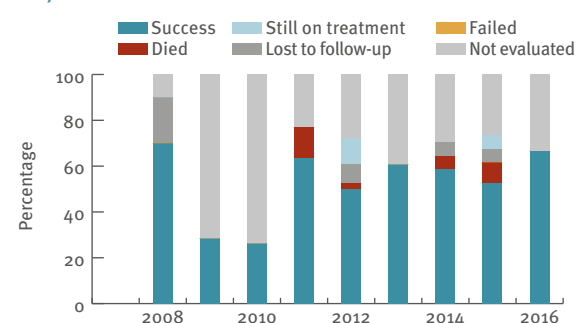
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Czech Republic

Total population at 23 April 2018 by EUROSTAT: 10 578 820

## TB case notifications, 2017

Total number of cases	505
Notification rate per 100 000	4.8
New <sup>a</sup> and relapses	499
New <sup>a</sup> and relapses notification rate per 100 000	4.7
Pulmonary	439 (86.9%)
of which microscopy-positive	201 (45.8%)
of which laboratory-confirmed	338 (77.0%)
Laboratory-confirmed TB cases	379 (75.0%)
Mean age of new native TB cases	53.9 years
Mean age of new foreign TB cases	40.9 years
Foreign origin of all TB cases	159 (31.5%)
New (not previously treated)	472 (93.5%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	350 (92.3%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	13–5–21
Pulmonary MDR-TB cases notified	6 (1.9%)
of which XDR-TB cases	2 (33.3%)
Notified MDR-TB	8 (2.3%)
of which XDR-TB cases	2 (25.0%)
TB cases tested for HIV	197 (39.0%)
HIV-positive TB cases of these on ART	8 (4.1%)

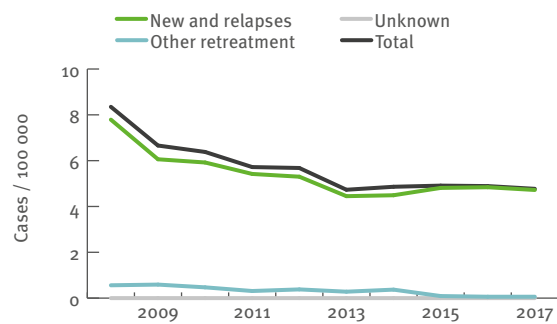
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

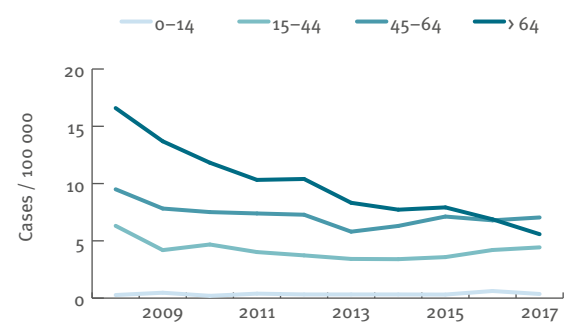
Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	331	9
Success	221 (66.8%)	3 (33.3%)
Died	54 (16.3%)	1 (11.1%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	39 (11.8%)	1 (11.1%)
Still on treatment	8 (2.4%)	2 (22.2%)
Not evaluated	9 (2.7%)	2 (22.2%)

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

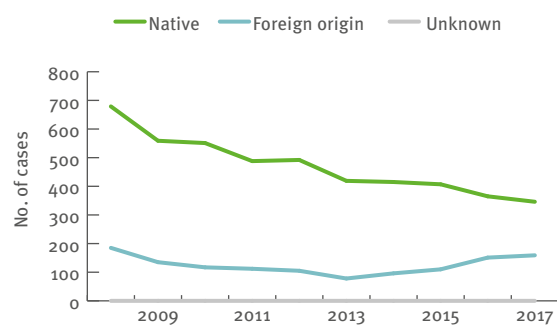
## TB notification rates by treatment history, 2008–2017



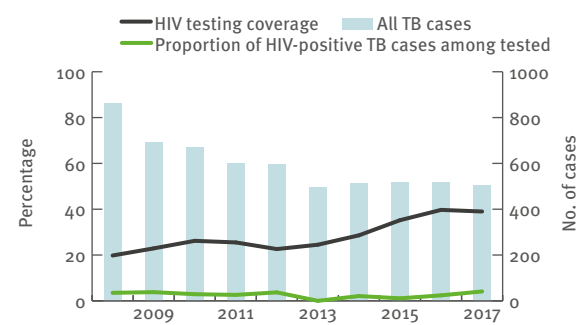
## New and relapsed TB cases – notification rates by age group, 2008–2017



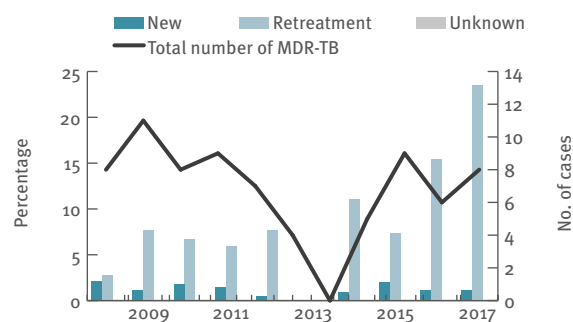
## TB cases by geographical origin, 2008–2017



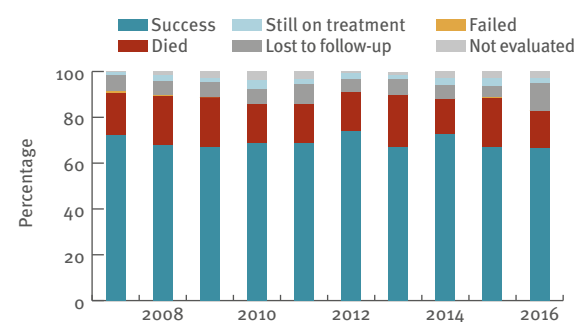
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Denmark

Total population at 23 April 2018 by EUROSTAT: 5 748 769

## TB case notifications, 2017

Total number of cases	275
Notification rate per 100 000	4.8
New <sup>a</sup> and relapses	253
New <sup>a</sup> and relapses notification rate per 100 000	4.4
Pulmonary	218 (79.3%)
of which microscopy-positive	85 (39.0%)
of which laboratory-confirmed	173 (79.4%)
Laboratory-confirmed TB cases	218 (79.3%)
Mean age of new native TB cases	45.0 years
Mean age of new foreign TB cases	41.2 years
Foreign origin of all TB cases	184 (66.9%)
New (not previously treated)	253 (92.0%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	214 (98.2%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	1–0–5
Pulmonary MDR-TB cases notified	1 (0.6%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	2 (0.9%)
of which XDR-TB cases	0 (0.0%)
TB cases tested for HIV	211 (76.7%)
HIV-positive TB cases of these on ART	3 (1.4%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

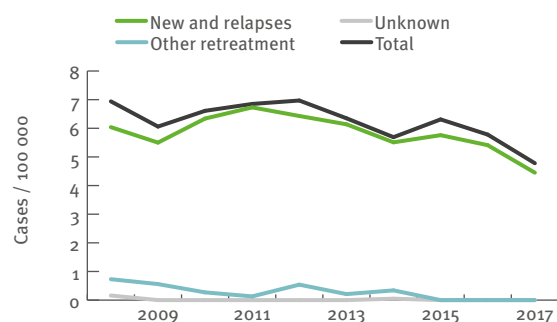
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	184	6
Success	69 (37.5%)	0 (0.0%)
Died	5 (2.7%)	0 (0.0%)
Failed	5 (2.7%)	1 (16.7%)
Lost to follow-up	0 (0.0%)	0 (0.0%)
Still on treatment	5 (2.7%)	0 (0.0%)
Not evaluated	100 (54.3%)	5 (83.3%)

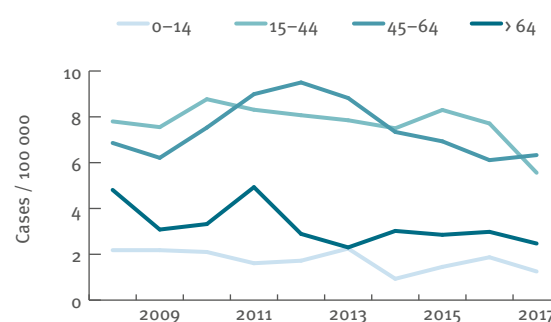
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

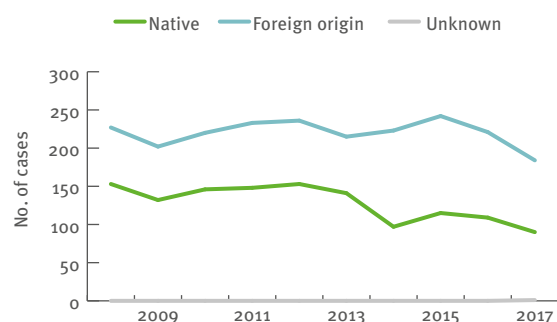
## TB notification rates by treatment history, 2008–2017



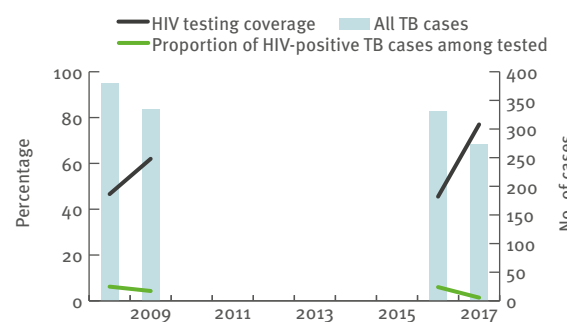
## New and relapsed TB cases – notification rates by age group, 2008–2017



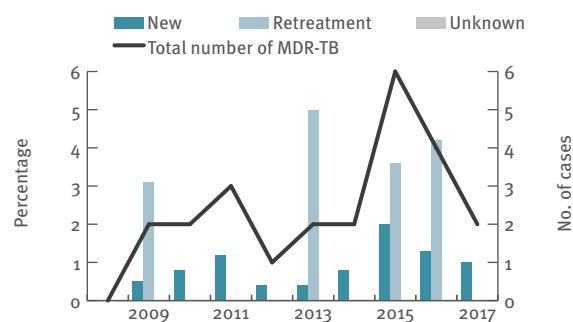
## TB cases by geographical origin, 2008–2017



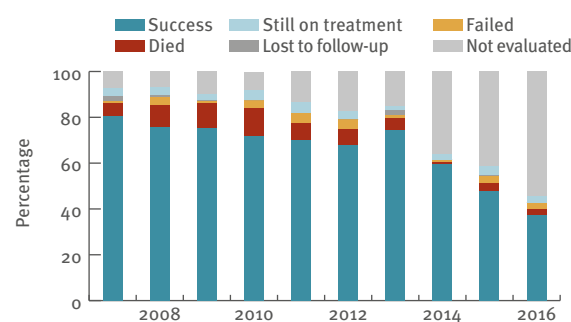
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Estonia

Total population at 23 April 2018 by EUROSTAT: 1 315 635

## TB case notifications, 2017

Total number of cases	175
Notification rate per 100 000	13.3
New <sup>a</sup> and relapses	171
New <sup>a</sup> and relapses notification rate per 100 000	13.0
Pulmonary	168 (96.0%)
of which microscopy-positive	78 (46.4%)
of which laboratory-confirmed	142 (84.5%)
Laboratory-confirmed TB cases	145 (82.9%)
Mean age of new native TB cases	51.2 years
Mean age of new foreign TB cases	66.1 years
Foreign origin of all TB cases	23 (13.1%)
New (not previously treated)	146 (83.4%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	142 (97.9%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	45–33–56
Pulmonary MDR-TB cases notified	36 (25.9%)
of which XDR-TB cases	9 (26.5%)
Notified MDR-TB	36 (25.4%)
of which XDR-TB cases	9 (26.5%)
TB cases tested for HIV	163 (93.1%)
HIV-positive TB cases	14 (8.6%)
of these on ART	12 (85.7%)

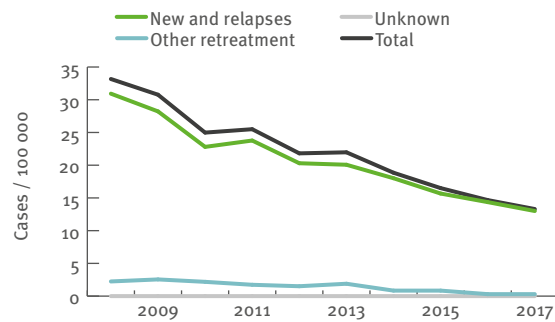
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

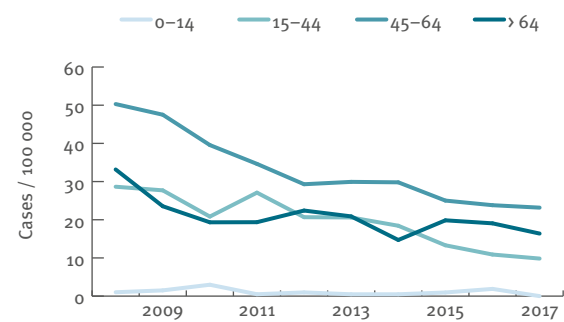
Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	133	38
Success	95 (71.4%)	20 (52.6%)
Died	23 (17.3%)	8 (21.1%)
Failed	1 (0.8%)	3 (7.9%)
Lost to follow-up	1 (0.8%)	4 (10.5%)
Still on treatment	13 (9.8%)	3 (7.9%)
Not evaluated	0 (0.0%)	0 (0.0%)

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

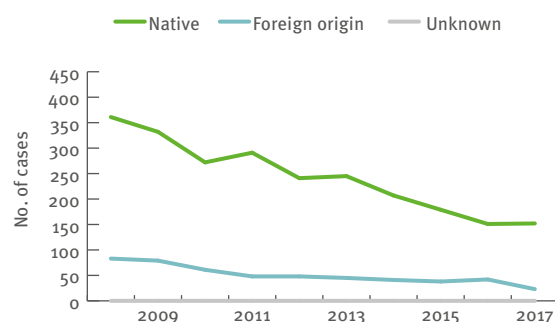
## TB notification rates by treatment history, 2008–2017



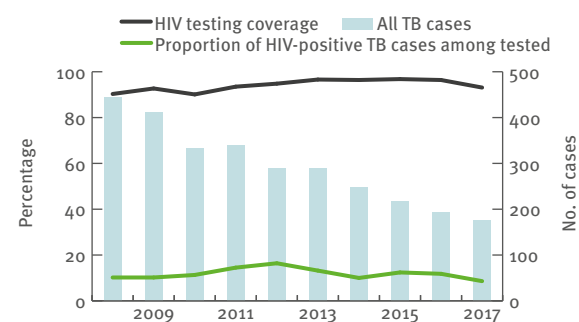
## New and relapsed TB cases – notification rates by age group, 2008–2017



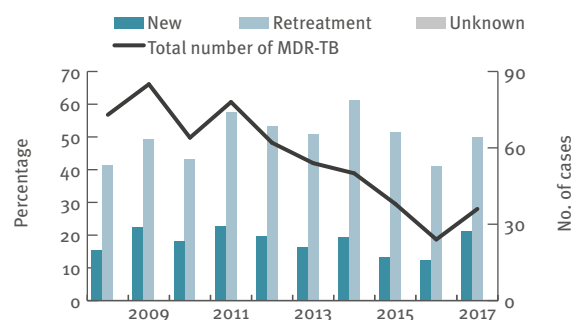
## TB cases by geographical origin, 2008–2017



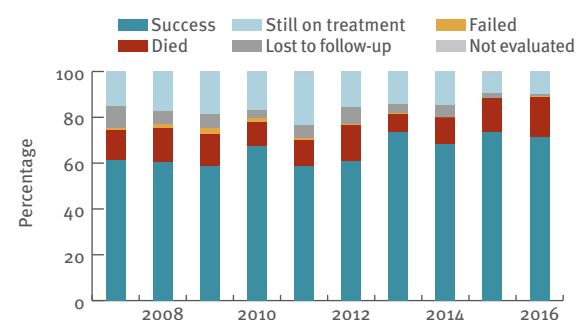
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Finland

Total population at 23 April 2018 by EUROSTAT: 5 503 297

## TB case notifications, 2017

Total number of cases	237
Notification rate per 100 000	4.3
New <sup>a</sup> and relapses	234
New <sup>a</sup> and relapses notification rate per 100 000	4.3
Pulmonary	169 (71.3%)
of which microscopy-positive	60 (35.5%)
of which laboratory-confirmed	143 (84.6%)
Laboratory-confirmed TB cases	195 (82.3%)
Mean age of new native TB cases	71.2 years
Mean age of new foreign TB cases	32.2 years
Foreign origin of all TB cases	95 (40.1%)
New (not previously treated)	225 (94.9%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data reporting	Yes
Cases with DST results	192 (98.5%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	9-3-14
Pulmonary MDR-TB cases notified	5 (3.5%)
of which XDR-TB cases	1 (20.0%)
Notified MDR-TB	5 (2.6%)
of which XDR-TB cases	1 (20.0%)
TB cases tested for HIV	-
HIV-positive TB cases	-
of these on ART	-

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

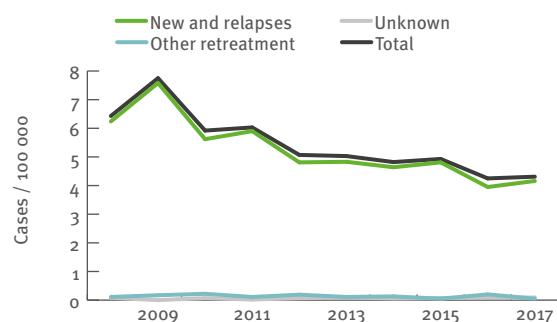
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	128	8
Success	57 (44.5%)	3 (37.5%)
Died	0 (0.0%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	3 (2.3%)	0 (0.0%)
Still on treatment	4 (3.1%)	1 (12.5%)
Not evaluated	64 (50.0%)	4 (50.0%)

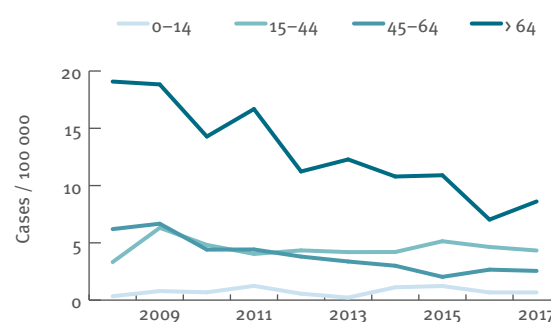
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

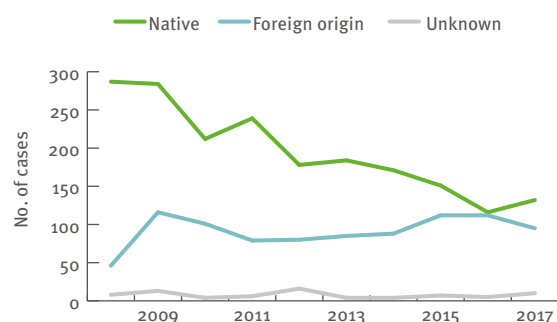
## TB notification rates by treatment history, 2008-2017



## New and relapsed TB cases – notification rates by age group, 2008-2017



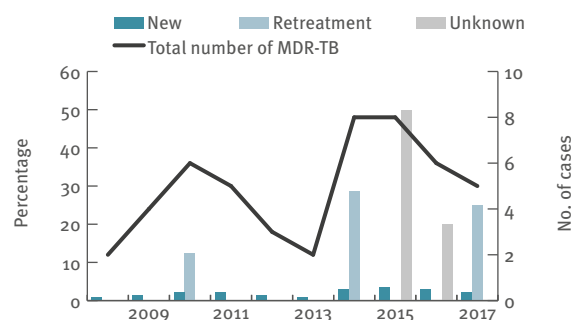
## TB cases by geographical origin, 2008-2017



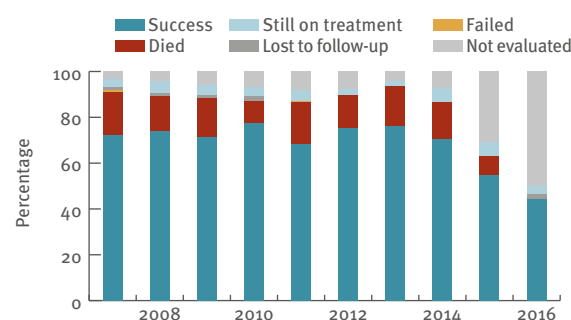
## TB/HIV coinfection, 2008-2017

Data not available

## MDR-TB cases by previous treatment history, 2008-2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007-2016



# France

Total population at 23 April 2018 by EUROSTAT: 66 989 083

## TB case notifications, 2017

Total number of cases	5 131
Notification rate per 100 000	7.7
New <sup>a</sup> and relapses	4 839
New <sup>a</sup> and relapses notification rate per 100 000	7.2
Pulmonary	3 554 (69.3%)
of which microscopy-positive	1 575 -
of which laboratory-confirmed	2 004 (56.4%)
Laboratory-confirmed TB cases	2 603 (50.7%)
Mean age of new native TB cases	44.9 years
Mean age of new foreign TB cases	37.8 years
Foreign origin of all TB cases	3 019 (58.8%)
New (not previously treated)	-

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	-
Completeness of HIV data <sup>b</sup>	-
Case-linked data reporting	No
Cases with DST results	0 (0.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	65-48-82
Pulmonary MDR-TB cases notified	-
of which XDR-TB cases	-
Notified MDR-TB	-
of which XDR-TB cases	-
TB cases tested for HIV	-
HIV-positive TB cases	-
of these on ART	-

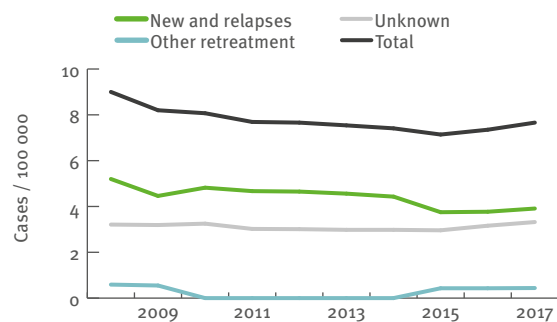
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

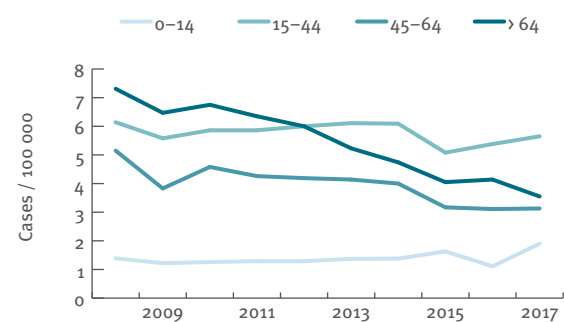
Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	1 125	-
Success	685 (60.9%)	-
Died	55 (4.9%)	-
Failed	0 (0.0%)	-
Lost to follow-up	84 (7.5%)	-
Still on treatment	27 (2.4%)	-
Not evaluated	274 (24.4%)	-

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

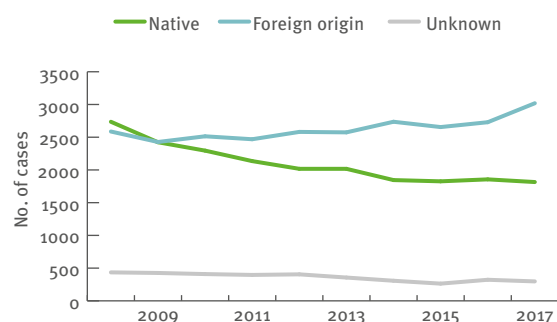
## TB notification rates by treatment history, 2008–2017



## New and relapsed TB cases – notification rates by age group, 2008–2017



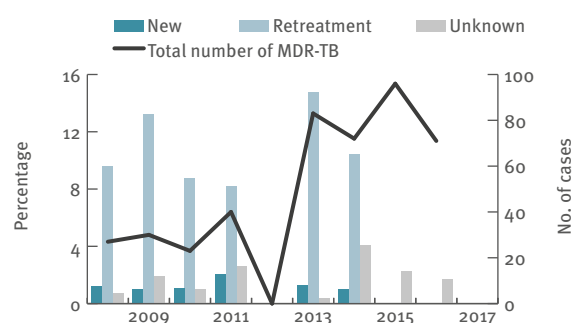
## TB cases by geographical origin, 2008–2017



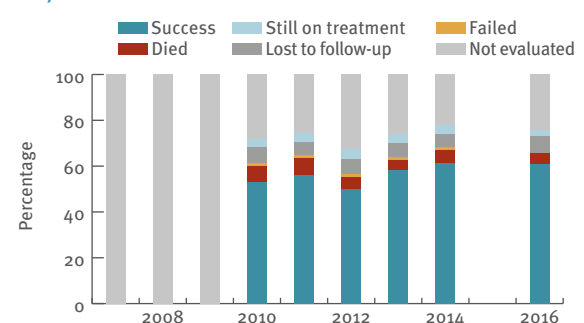
## TB/HIV coinfection, 2008–2017

Data not available

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Georgia

Population estimate 2017 by UN Statistical Database: 3 912 061

## TB case notifications, 2017

Total number of cases	2 927
Notification rate per 100 000	74.8
New <sup>a</sup> and relapses	2 597
New <sup>a</sup> and relapses notification rate per 100 000	66.4
Pulmonary	2 068 (79.6%)
of which smear-positive	-
of which laboratory-confirmed	1 780 (86.1%)
Laboratory-confirmed TB cases	2 061 (70.4%)
Mean age of new and relapse TB cases	42.3 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	2 164 (73.9%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	1 979 (96.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	400–360–440
Pulmonary MDR-TB cases notified	262 (13.2%)
of which XDR-TB cases	44 (17.9%)
Notified MDR-TB	324 (16.4%)
of which XDR-TB cases	46 (17.3%)
TB cases tested for HIV	2 442 (94.0%)
HIV-positive TB cases	43 (1.8%)
of these on ART	43 (100.0%)

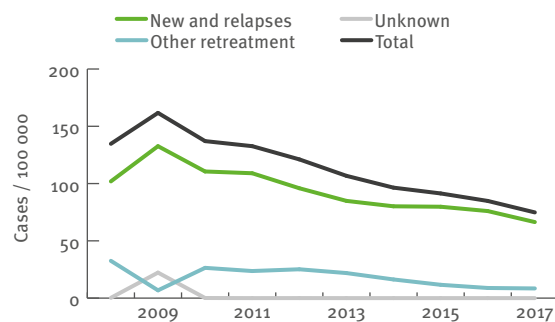
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	2 715	412
Success	2 263 (83.4%)	231 (56.1%)
Died	113 (4.2%)	26 (6.3%)
Failed	53 (2.0%)	42 (10.2%)
Lost to follow-up	235 (8.7%)	101 (24.5%)
Not evaluated	51 (1.9%)	12 (2.9%)

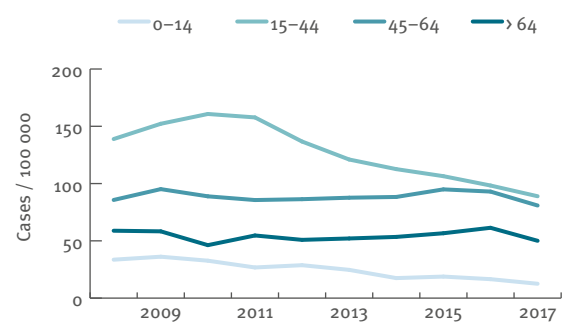
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



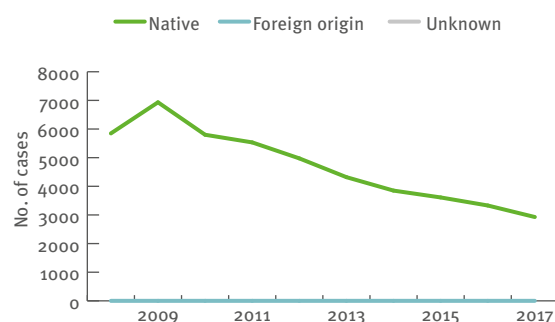
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New TB cases – notification rates by age group, 2008–2017<sup>a</sup>

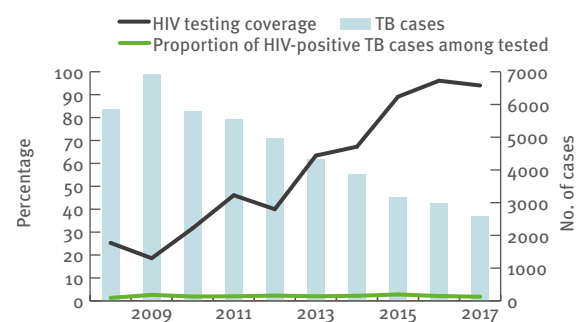


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

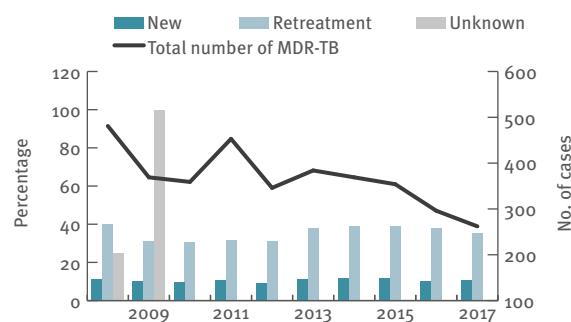


## TB/HIV coinfection, 2008–2017<sup>a</sup>

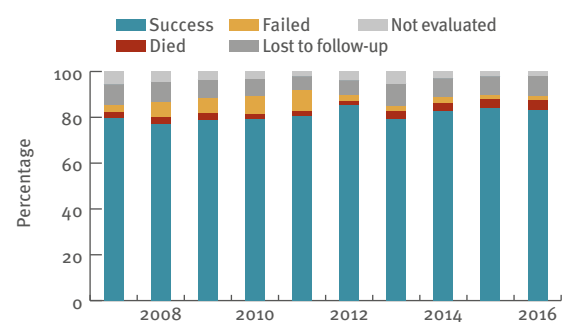


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.

# Germany

Total population at 23 April 2018 by EUROSTAT: 82 521 653

## TB case notifications, 2017

Total number of cases	5 486
Notification rate per 100 000	6.6
New <sup>a</sup> and relapses	5 353
New <sup>a</sup> and relapses notification rate per 100 000	6.5
Pulmonary	3 892 (70.9%)
of which microscopy-positive	1 804 (46.4%)
of which laboratory-confirmed	3 090 (79.4%)
Laboratory-confirmed TB cases	3 978 (72.5%)
Mean age of new native TB cases	65.4 years
Mean age of new foreign TB cases	40.8 years
Foreign origin of all TB cases	3 820 (69.6%)
New (not previously treated)	5 252 (95.7%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data reporting	Yes
Cases with DST results	3 555 (89.4%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	140-65-210
Pulmonary MDR-TB cases notified	87 (3.1%)
of which XDR-TB cases	4 (5.7%)
Notified MDR-TB	105 (3.0%)
of which XDR-TB cases	4 (4.9%)
TB cases tested for HIV	-
HIV-positive TB cases	-
of these on ART	-

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

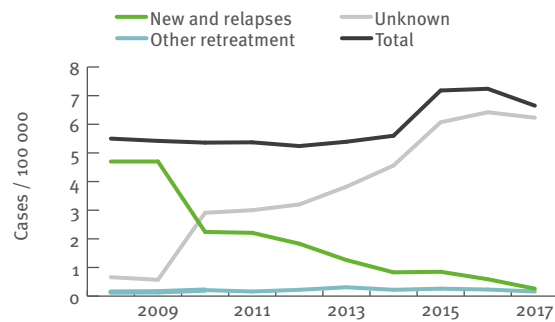
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	199	110
Success	118 (59.3%)	44 (40.0%)
Died	17 (8.5%)	5 (4.5%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	2 (1.0%)	7 (6.4%)
Still on treatment	12 (6.0%)	11 (10.0%)
Not evaluated	50 (25.1%)	43 (39.1%)

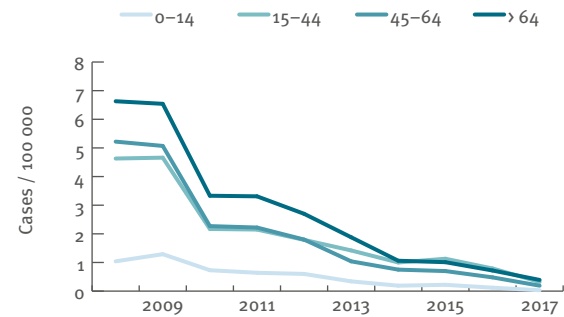
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

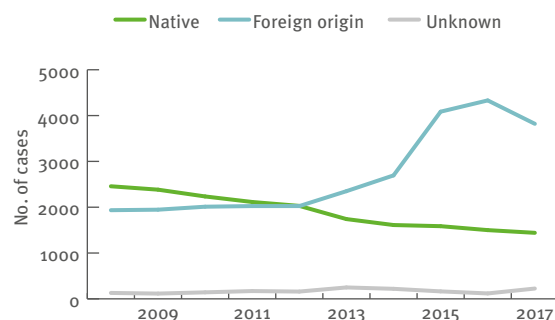
## TB notification rates by treatment history, 2008–2017



## New and relapsed TB cases – notification rates by age group, 2008–2017



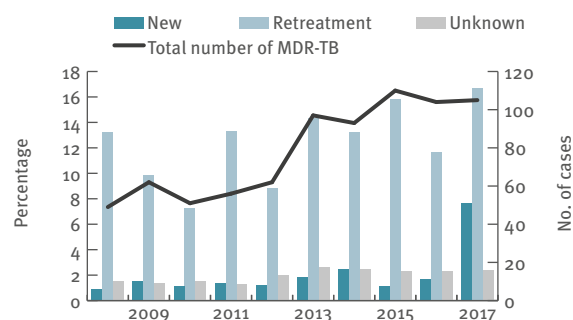
## TB cases by geographical origin, 2008–2017



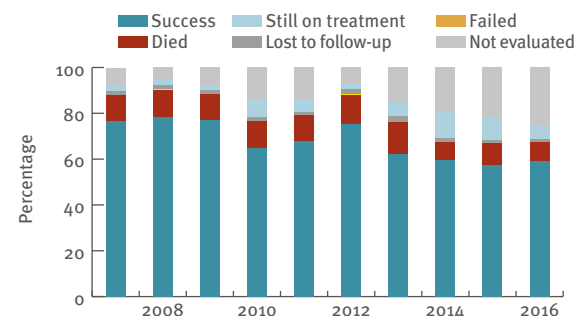
## TB/HIV coinfection, 2008–2017

Data not available

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016





# Greece

Total population at 23 April 2018 by EUROSTAT: 10 768 193

## TB case notifications, 2017

Total number of cases	467
Notification rate per 100 000	4.3
New <sup>a</sup> and relapses	434
New <sup>a</sup> and relapses notification rate per 100 000	4.0
Pulmonary	391 (83.7%)
of which microscopy-positive	227 (58.1%)
of which laboratory-confirmed	233 (59.6%)
Laboratory-confirmed TB cases	265 (56.7%)
Mean age of new native TB cases	62.8 years
Mean age of new foreign TB cases	34.7 years
Foreign origin of all TB cases	197 (42.2%)
New (not previously treated)	414 (88.7%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

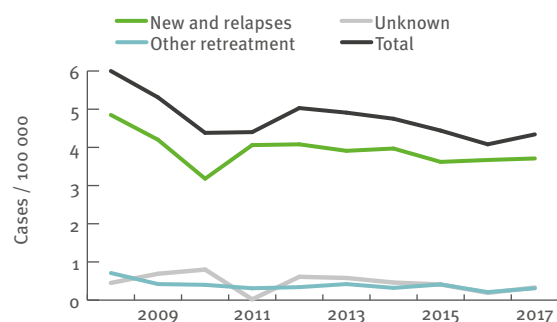
Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	191 (72.1%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	10–0–24
Pulmonary MDR-TB cases notified	6 (3.6%)
of which XDR-TB cases	1 (16.7%)
Notified MDR-TB	7 (3.7%)
of which XDR-TB cases	2 (28.6%)
TB cases tested for HIV	389 (83.3%)
HIV-positive TB cases of these on ART	13 (3.3%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

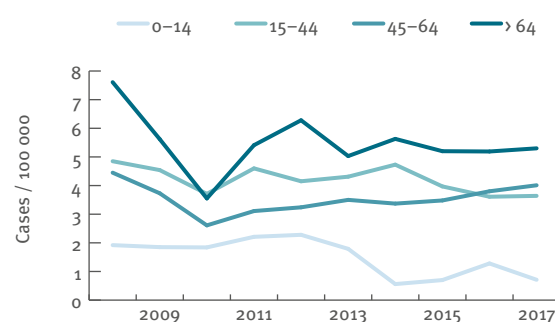
## Treatment outcome monitoring

Data not available

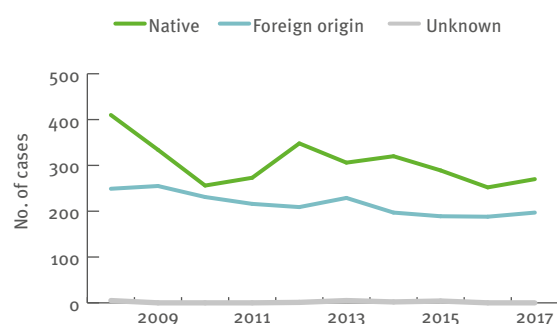
## TB notification rates by treatment history, 2008–2017



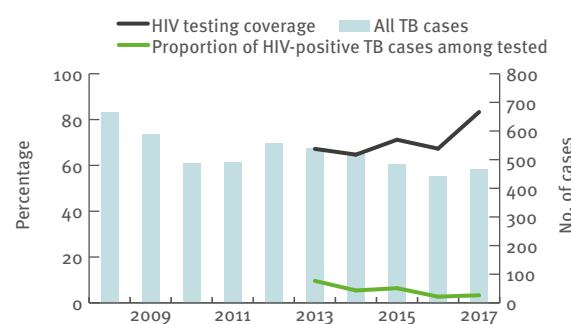
## New and relapsed TB cases – notification rates by age group, 2008–2017



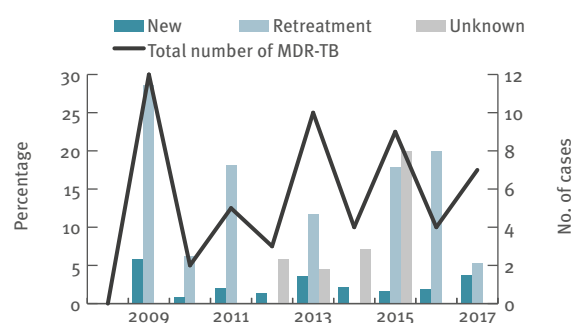
## TB cases by geographical origin, 2008–2017



## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016

Data not available

# Hungary

Total population at 23 April 2018 by EUROSTAT: 9 797 561

## TB case notifications, 2017

Total number of cases	685
Notification rate per 100 000	7.0
New <sup>a</sup> and relapses	650
New <sup>a</sup> and relapses notification rate per 100 000	6.6
Pulmonary	658 (96.1%)
of which microscopy-positive	210 (31.9%)
of which laboratory-confirmed	344 (52.3%)
Laboratory-confirmed TB cases	352 (51.4%)
Mean age of new native TB cases	54.3 years
Mean age of new foreign TB cases	27.8 years
Foreign origin of all TB cases	25 (3.6%)
New (not previously treated)	616 (89.9%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	318 (90.3%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	23–13–32
Pulmonary MDR-TB cases notified	11 (3.5%)
of which XDR-TB cases	4 (40.0%)
Notified MDR-TB	11 (3.5%)
of which XDR-TB cases	4 (40.0%)
TB cases tested for HIV	18 (2.6%)
HIV-positive TB cases of these on ART	1 (5.6%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

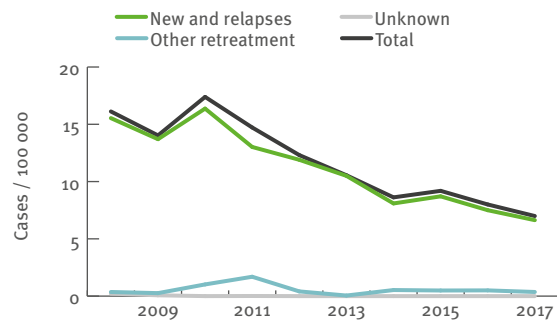
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	346	8
Success	230 (66.5%)	2 (25.0%)
Died	49 (14.2%)	4 (50.0%)
Failed	6 (1.7%)	0 (0.0%)
Lost to follow-up	24 (6.9%)	1 (12.5%)
Still on treatment	28 (8.1%)	1 (12.5%)
Not evaluated	9 (2.6%)	0 (0.0%)

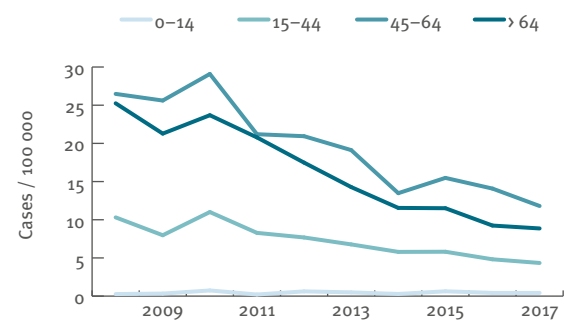
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

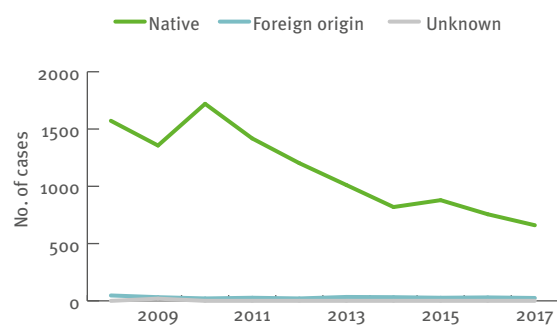
## TB notification rates by treatment history, 2008–2017



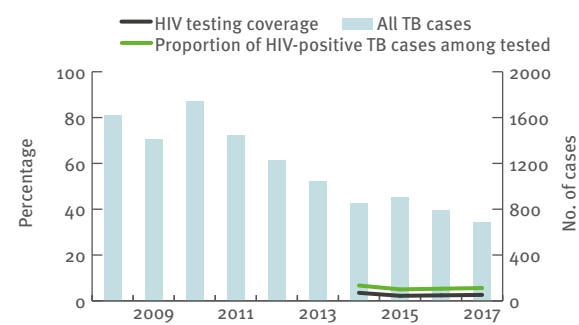
## New and relapsed TB cases – notification rates by age group, 2008–2017



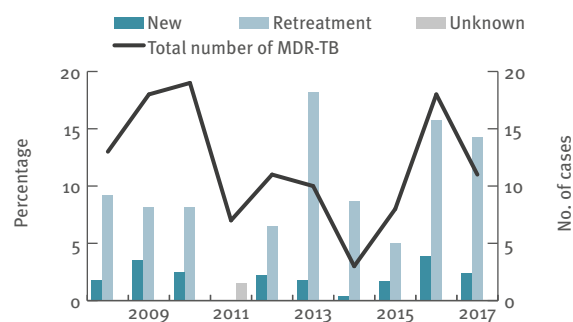
## TB cases by geographical origin, 2008–2017



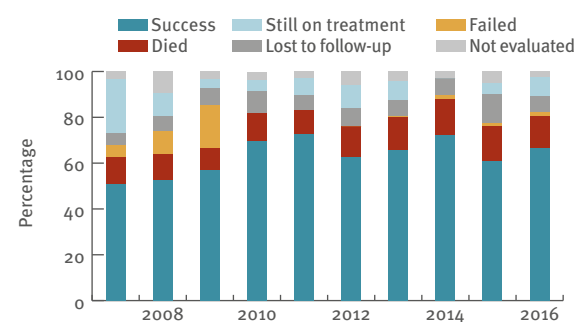
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Iceland

Total population at 23 April 2018 by EUROSTAT: 338 349

## TB case notifications, 2017

Total number of cases	14
Notification rate per 100 000	4.1
New <sup>a</sup> and relapses	13
New <sup>a</sup> and relapses notification rate per 100 000	3.8
Pulmonary	11 (78.6%)
of which microscopy-positive	5 (45.5%)
of which laboratory-confirmed	8 (72.7%)
Laboratory-confirmed TB cases	10 (71.4%)
Mean age of new native TB cases	49.3 years
Mean age of new foreign TB cases	38.3 years
Foreign origin of all TB cases	8 (57.1%)
New (not previously treated)	12 (85.7%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	10 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	0–0–2
Pulmonary MDR-TB cases notified	0 (0.0%)
of which XDR-TB cases	0 –
Notified MDR-TB	0 (0.0%)
of which XDR-TB cases	0 –
TB cases tested for HIV	13 (92.9%)
HIV-positive TB cases	0 (0.0%)
of these on ART	– –

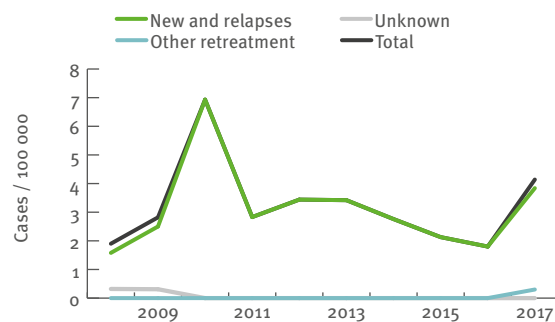
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	5	0
Success	4 (80.0%)	0 –
Died	0 (0.0%)	0 –
Failed	0 (0.0%)	0 –
Lost to follow-up	0 (0.0%)	0 –
Still on treatment	0 (0.0%)	0 –
Not evaluated	1 (20.0%)	0 –

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

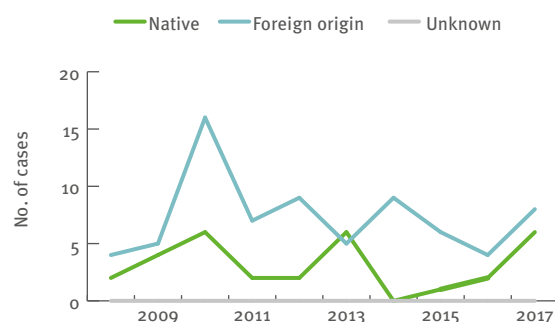
## TB notification rates by treatment history, 2008–2017



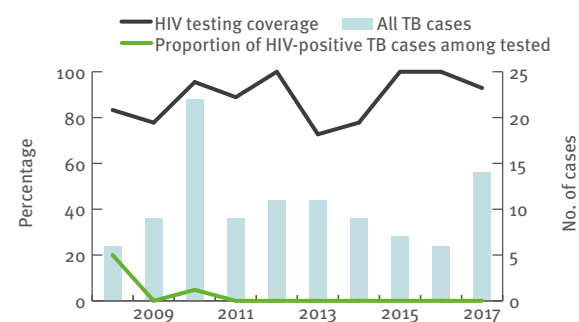
## New and relapsed TB cases – notification rates by age group, 2008–2017



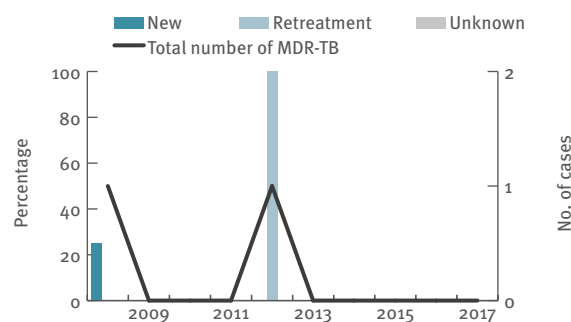
## TB cases by geographical origin, 2008–2017



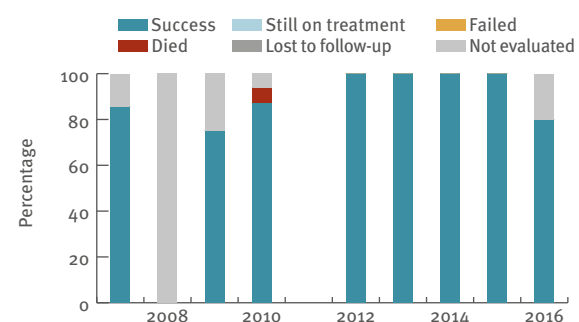
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Ireland

Total population at 23 April 2018 by EUROSTAT: 4 784 383

## TB case notifications, 2017

Total number of cases	318
Notification rate per 100 000	6.6
New <sup>a</sup> and relapses	301
New <sup>a</sup> and relapses notification rate per 100 000	6.3
Pulmonary	210 (66.0%)
of which microscopy-positive	78 (37.1%)
of which laboratory-confirmed	158 (75.2%)
Laboratory-confirmed TB cases	214 (67.3%)
Mean age of new native TB cases	51.5 years
Mean age of new foreign TB cases	35.2 years
Foreign origin of all TB cases	144 (45.3%)
New (not previously treated)	301 (94.7%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	196 (91.6%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	2–0–7
Pulmonary MDR-TB cases notified	5 (3.4%)
of which XDR-TB cases	1 (20.0%)
Notified MDR-TB	5 (2.6%)
of which XDR-TB cases	1 (20.0%)
TB cases tested for HIV	102 (32.1%)
HIV-positive TB cases	14 (13.7%)
of these on ART	7 (50.0%)

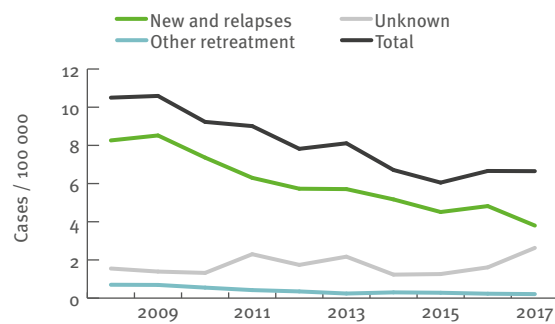
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

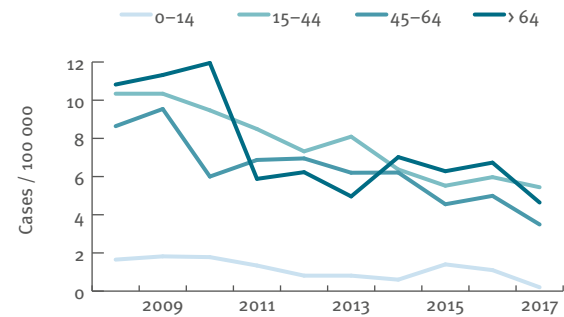
Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	131	1
Success	60 (45.8%)	0 (0.0%)
Died	6 (4.6%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	1 (0.8%)	0 (0.0%)
Still on treatment	3 (2.3%)	1 (100.0%)
Not evaluated	61 (46.6%)	0 (0.0%)

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

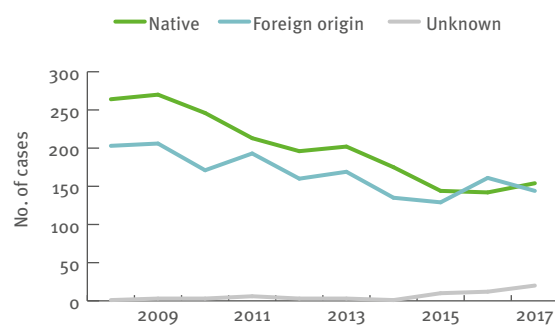
## TB notification rates by treatment history, 2008–2017



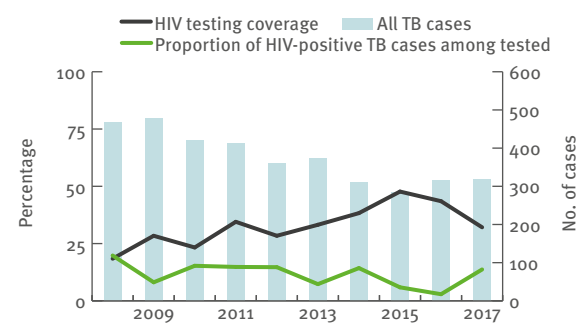
## New and relapsed TB cases – notification rates by age group, 2008–2017



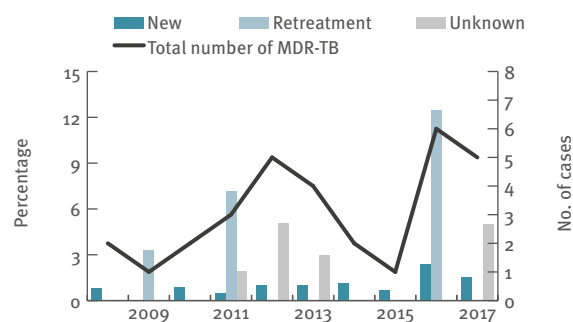
## TB cases by geographical origin, 2008–2017



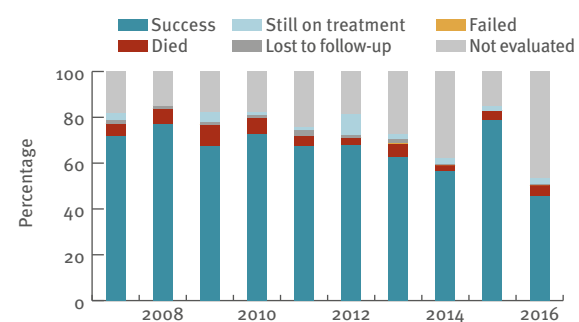
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Israel

Population estimate 2017 by UN Statistical Database: 8 321 570

## TB case notifications, 2017

Total number of cases	234
Notification rate per 100 000	2.8
New <sup>a</sup> and relapses	234
New <sup>a</sup> and relapses notification rate per 100 000	2.8
Pulmonary	171 (73.1%)
of which smear-positive	-
of which laboratory-confirmed	131 (76.6%)
Laboratory-confirmed TB cases	131 (56.0%)
Mean age of new and relapse TB cases	40.2 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	190 (81.2%)
New (not previously treated)	227 (97.0%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	131 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	12-4-20
Pulmonary MDR-TB cases notified	8 (6.1%)
of which XDR-TB cases	1 (12.5%)
Notified MDR-TB	8 (6.1%)
of which XDR-TB cases	1 (12.5%)
TB cases tested for HIV	234 (100.0%)
HIV-positive TB cases	12 (5.1%)
of these on ART	10 (83.3%)

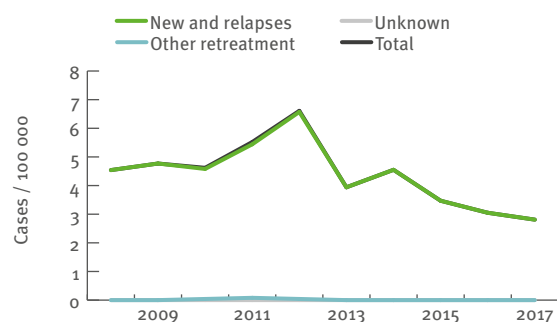
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	250	10
Success	198 (79.2%)	8 (80.0%)
Died	16 (6.4%)	0 (0.0%)
Failed	1 (0.4%)	0 (0.0%)
Lost to follow-up	12 (4.8%)	0 (0.0%)
Not evaluated	23 (9.2%)	2 (20.0%)

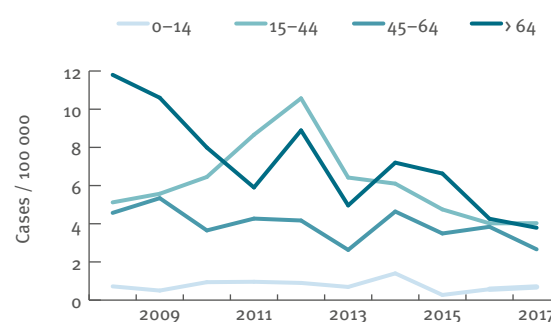
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008-2017<sup>a</sup>



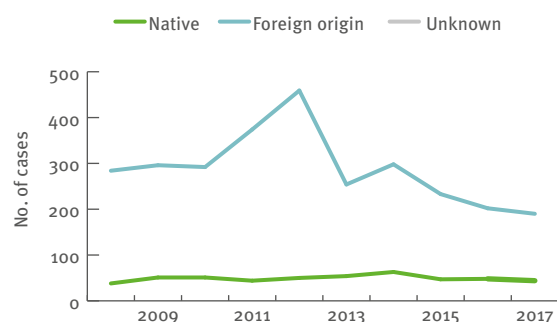
<sup>a</sup> Cases with unknown previous treatment included to new cases.

## New and relapsed TB cases – notification rates by age group, 2008-2017<sup>a</sup>

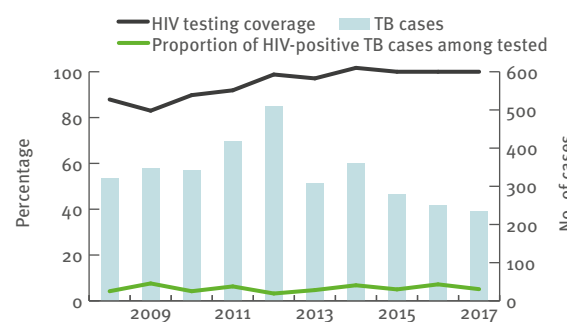


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008-2017

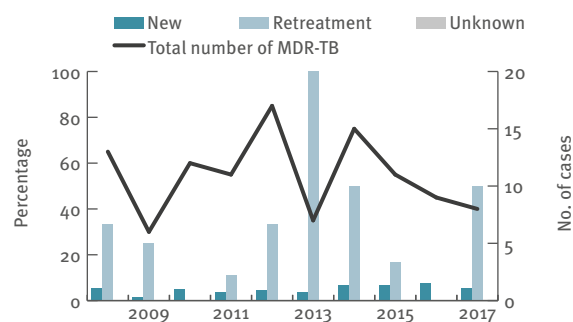


## TB/HIV coinfection, 2008-2017<sup>a</sup>

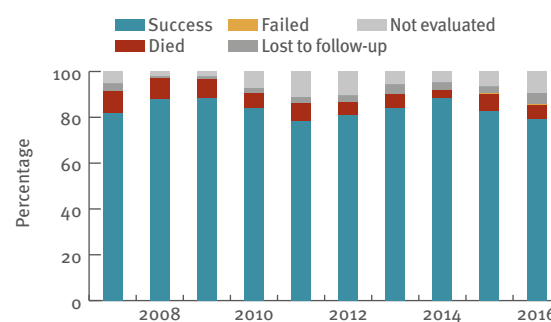


<sup>a</sup> Data up to 2014 includes all TB cases.

## MDR-TB cases by previous treatment history, 2008-2017



## Treatment outcome, new and relapsed TB cases, 2007-2016<sup>a</sup>



<sup>a</sup> 2007-2011 cohorts include new cases only.

# Italy

Total population at 23 April 2018 by EUROSTAT: 60 589 445

## TB case notifications, 2017

Total number of cases	3 944
Notification rate per 100 000	6.5
New <sup>a</sup> and relapses	3 828
New <sup>a</sup> and relapses notification rate per 100 000	6.3
Pulmonary	2 772 (70.3%)
of which microscopy-positive	1 224 (44.2%)
of which laboratory-confirmed	2 231 (80.5%)
Laboratory-confirmed TB cases	2 666 (67.6%)
Mean age of new native TB cases	50.9 years
Mean age of new foreign TB cases	34.3 years
Foreign origin of all TB cases	2 611 (66.2%)
New (not previously treated)	3 828 (97.1%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

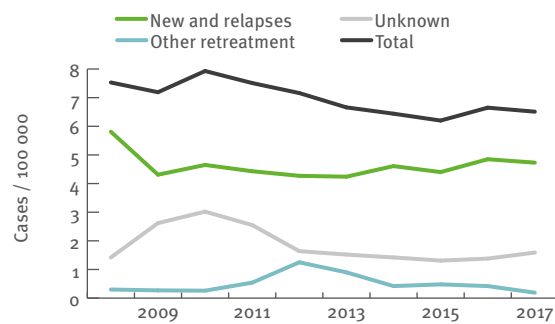
Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	-
Case-linked data reporting	No
Cases with DST results	2 666 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	91-59-120
Pulmonary MDR-TB cases notified	56 (2.5%)
of which XDR-TB cases	5 (11.1%)
Notified MDR-TB	66 (2.5%)
of which XDR-TB cases	5 (9.3%)
TB cases tested for HIV	-
HIV-positive TB cases	-
of these on ART	-

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

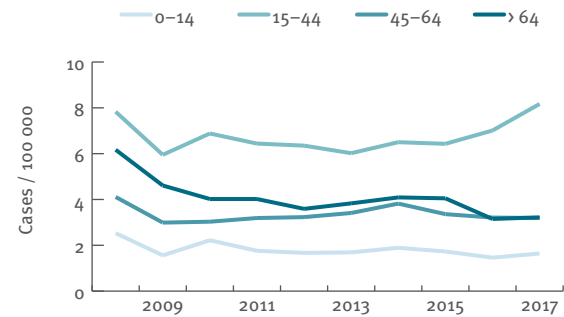
## Treatment outcome monitoring

Data not available

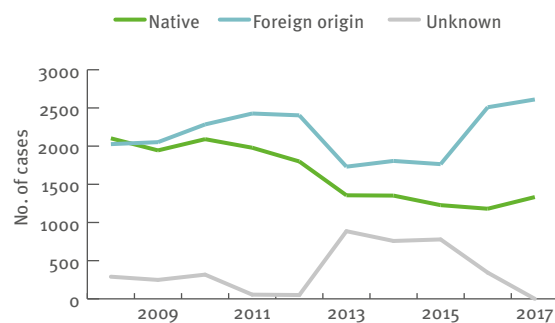
## TB notification rates by treatment history, 2008–2017



## New and relapsed TB cases – notification rates by age group, 2008–2017



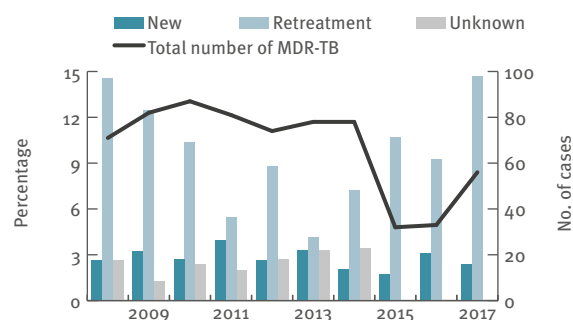
## TB cases by geographical origin, 2008–2017



## TB/HIV coinfection, 2008–2017

Data not available

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016

Data not available

# Kazakhstan

Population estimate 2017 by UN Statistical Database: 18 204 499

## TB case notifications, 2017

Total number of cases	12 942
Notification rate per 100 000	71.1
New <sup>a</sup> and relapses	12 449
New <sup>a</sup> and relapses notification rate per 100 000	68.4
Pulmonary	10 992 (88.3%)
of which smear-positive	-
of which laboratory-confirmed	9 489 (86.3%)
Laboratory-confirmed TB cases	9 982 (77.1%)
Mean age of new and relapse TB cases	40.7 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	9 417 (72.8%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2016

Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	6 411 (64.2%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	3 600–3 500–3 700
Pulmonary MDR-TB cases notified	1 663 (39.6%)
of which XDR-TB cases	-
TB cases tested for HIV	2 963 (46.2%)
Notified MDR-TB	299 (13.7%)
of which XDR-TB cases	11 056 (88.8%)
HIV-positive TB cases	443 (4.0%)
of these on ART	417 (94.1%)

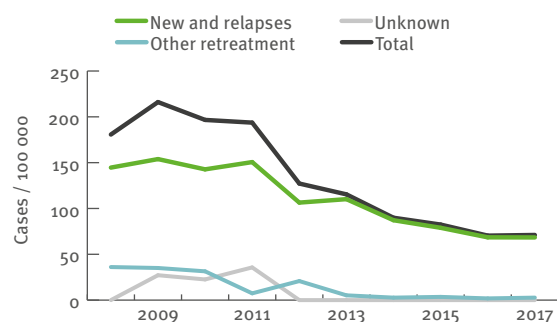
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	6 775	6 482
Success	5 962 (88.0%)	5 063 (78.1%)
Died	442 (6.5%)	609 (9.4%)
Failed	261 (3.9%)	395 (6.1%)
Lost to follow-up	88 (1.3%)	285 (4.4%)
Not evaluated	22 (0.3%)	130 (2.0%)

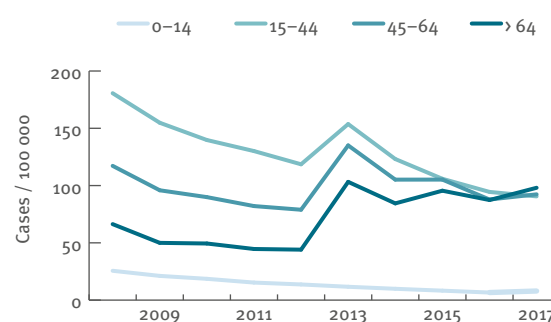
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



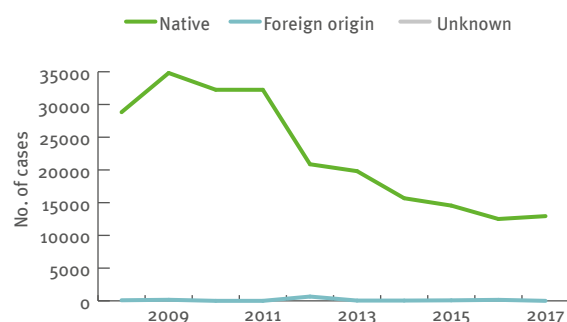
<sup>a</sup> Starting from 2013 onward cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

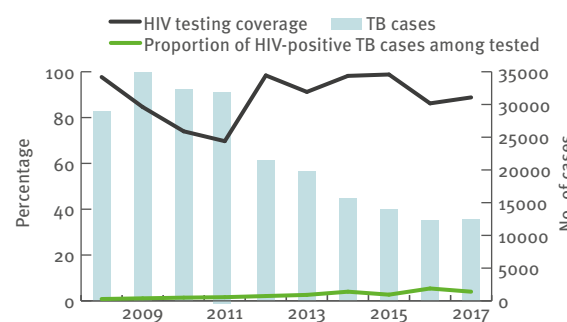


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

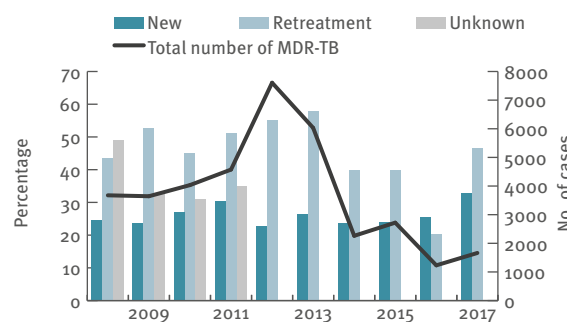


## TB/HIV coinfection, 2008–2017<sup>a</sup>

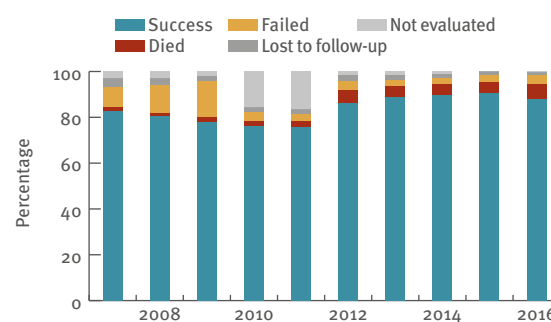


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.

# Kyrgyzstan

Population estimate 2017 by UN Statistical Database: 6 045 117

## TB case notifications, 2017

Total number of cases	7 695
Notification rate per 100 000	127.3
New <sup>a</sup> and relapses	6 687
New <sup>a</sup> and relapses notification rate per 100 000	110.6
Pulmonary	5 106 (76.4%)
of which smear-positive	-
of which laboratory-confirmed	3 171 (62.1%)
Laboratory-confirmed TB cases	3 849 (50.0%)
Mean age of new and relapse TB cases	37.8 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	5 630 (73.2%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	3 376 (87.7%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	2 300–2 200–2 400
Pulmonary MDR-TB cases notified	827 (31.6%)
of which XDR-TB cases	127 (36.0%)
Notified MDR-TB	1 250 (37.0%)
of which XDR-TB cases	127 (19.3%)
TB cases tested for HIV	5 966 (89.2%)
HIV-positive TB cases	216 (3.6%)
of these on ART	160 (74.1%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

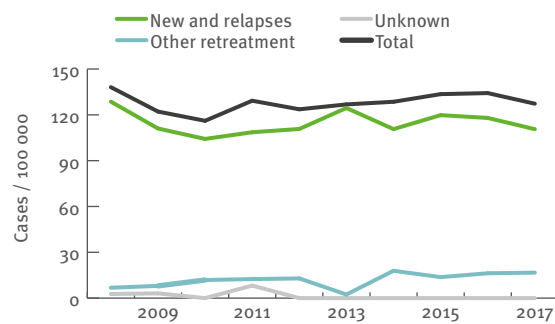
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	6 072	1 162
Success	4 968 (81.8%)	624 (53.7%)
Died	360 (5.9%)	145 (12.5%)
Failed	112 (1.8%)	124 (10.7%)
Lost to follow-up	609 (10.0%)	269 (23.1%)
Not evaluated	23 (0.4%)	0 (0.0%)

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

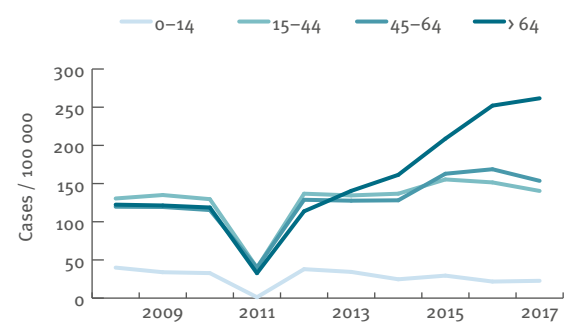
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



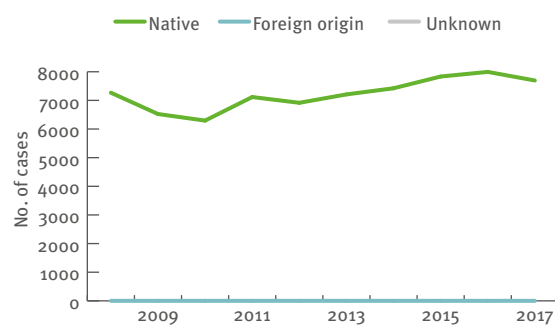
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases - notification rates by age group, 2008–2017<sup>a</sup>

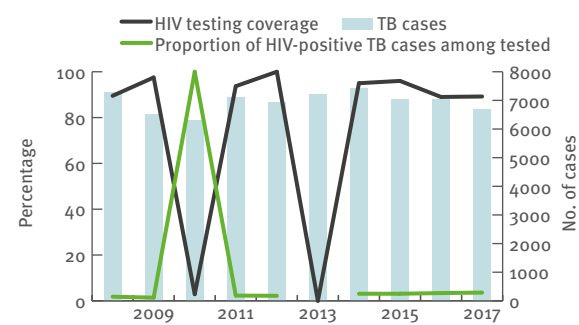


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

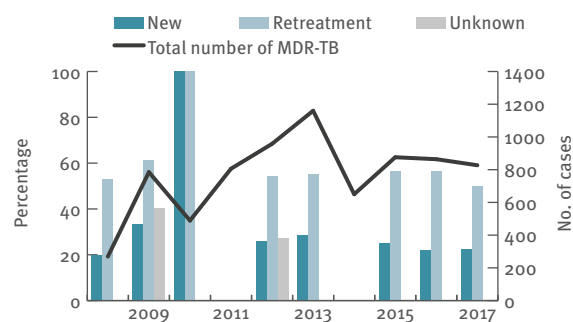


## TB/HIV coinfection, 2008–2017<sup>a</sup>

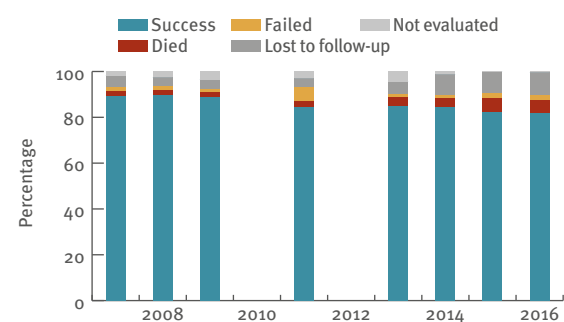


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome of new TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.



# Latvia

Total population at 23 April 2018 by EUROSTAT: 1 950 116

## TB case notifications, 2017

Total number of cases	552
Notification rate per 100 000	28.3
New <sup>a</sup> and relapses	543
New <sup>a</sup> and relapses notification rate per 100 000	27.8
Pulmonary	522 (94.6%)
of which microscopy-positive	213 (40.8%)
of which laboratory-confirmed	441 (84.5%)
Laboratory-confirmed TB cases	453 (82.1%)
Mean age of new native TB cases	45.0 years
Mean age of new foreign TB cases	51.1 years
Foreign origin of all TB cases	41 (7.4%)
New (not previously treated)	483 (87.5%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	434 (95.8%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	57–42–72
Pulmonary MDR-TB cases notified	45 (10.6%)
of which XDR-TB cases	17 (37.8%)
Notified MDR-TB	46 (10.6%)
of which XDR-TB cases	18 (39.1%)
TB cases tested for HIV	471 (85.3%)
HIV-positive TB cases	52 (11.0%)
of these on ART	35 (67.3%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

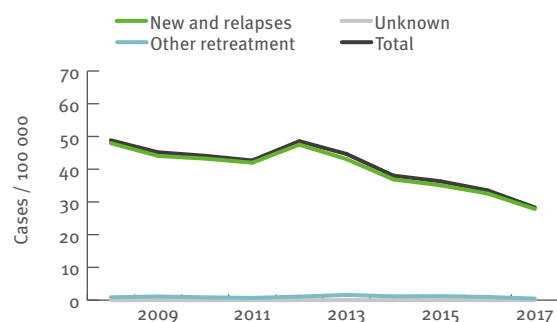
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	442	63
Success	358 (81.0%)	39 (61.9%)
Died	36 (8.1%)	8 (12.7%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	20 (4.5%)	15 (23.8%)
Still on treatment	25 (5.7%)	1 (1.6%)
Not evaluated	3 (0.7%)	0 (0.0%)

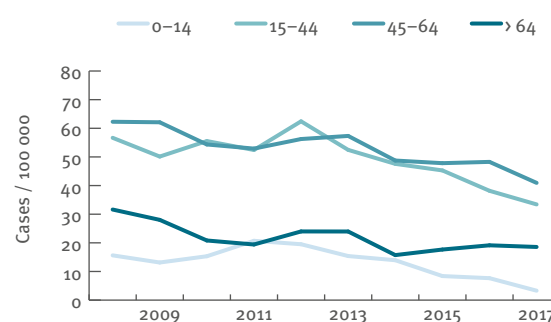
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

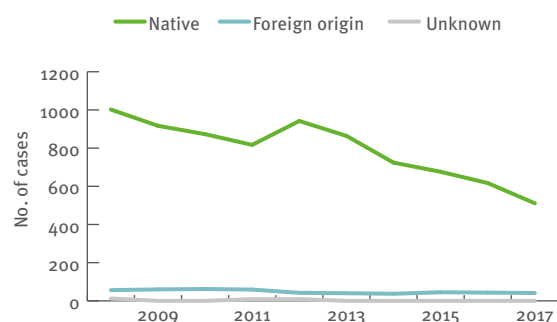
## TB notification rates by treatment history, 2008–2017



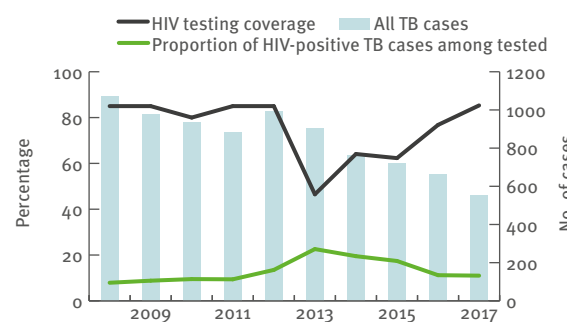
## New and relapsed TB cases – notification rates by age group, 2008–2017



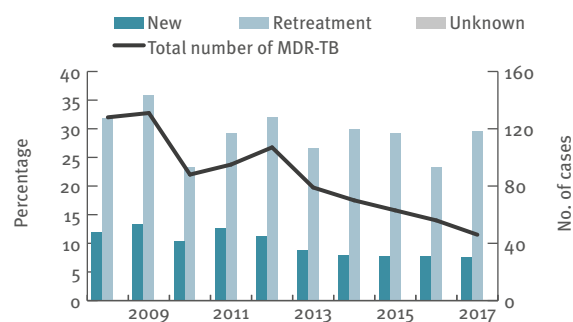
## TB cases by geographical origin, 2008–2017



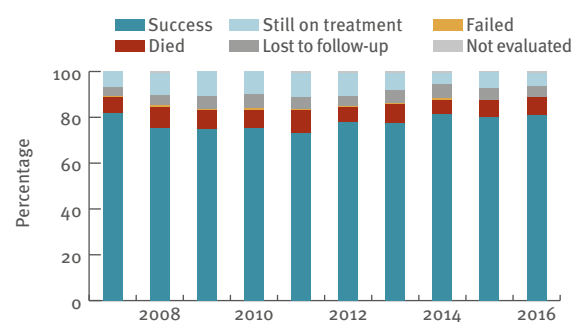
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Liechtenstein

Total population at 23 April 2018 by EUROSTAT: 37 810

## TB case notifications, 2017

Total number of cases	1
Notification rate per 100 000	2.6
New <sup>a</sup> and relapses	1
New <sup>a</sup> and relapses notification rate per 100 000	2.6
Pulmonary	1 (100.0%)
of which microscopy-positive	1 (100.0%)
of which laboratory-confirmed	1 (100.0%)
Laboratory-confirmed TB cases	1 (100.0%)
Mean age of new native TB cases	44.0 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	1 (100.0%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data reporting	Yes
Cases with DST results	1 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	-
Pulmonary MDR-TB cases notified	0 (0.0%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	0 (0.0%)
of which XDR-TB cases	0 -
TB cases tested for HIV	- -
HIV-positive TB cases	- -
of these on ART	- -

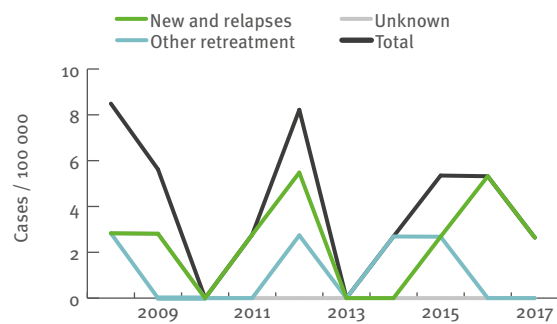
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

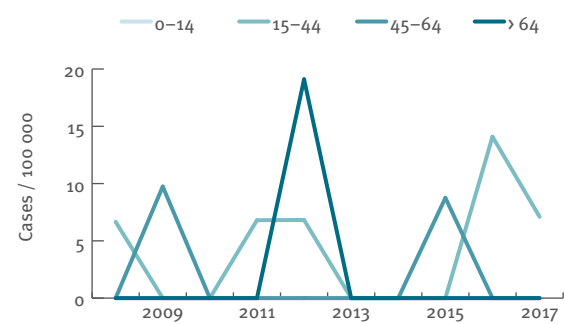
Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	1	0
Success	1 (100.0%)	0 -
Died	0 (0.0%)	0 -
Failed	0 (0.0%)	0 -
Lost to follow-up	0 (0.0%)	0 -
Still on treatment	0 (0.0%)	0 -
Not evaluated	0 (0.0%)	0 -

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

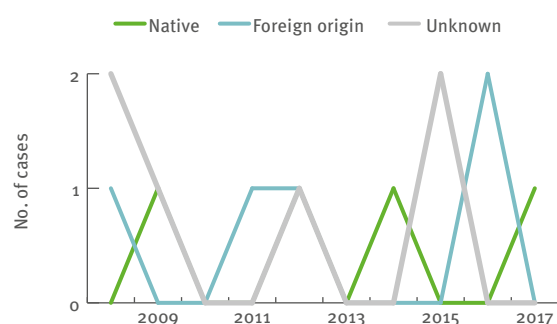
## TB notification rates by treatment history, 2008–2017



## New and relapsed TB cases - notification rates by age group, 2008–2017



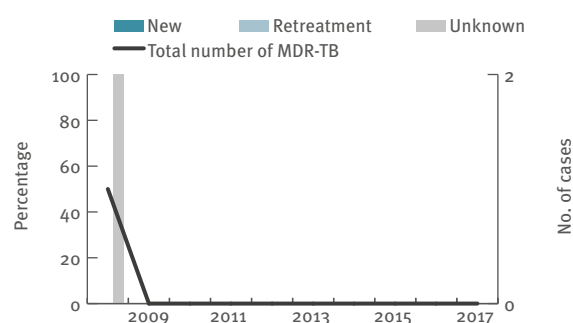
## TB cases by geographical origin, 2008–2017



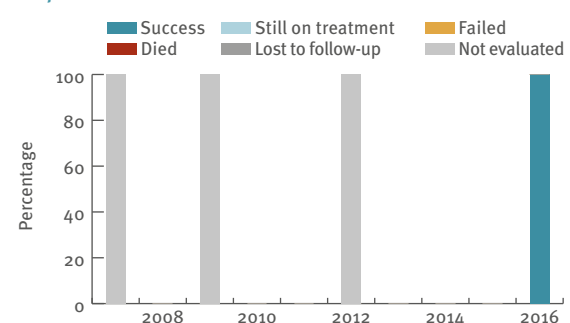
## TB/HIV coinfection, 2008–2017

Data not available

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Lithuania

Total population at 23 April 2018 by EUROSTAT: 2 847 904

## TB case notifications, 2017

Total number of cases	1 387
Notification rate per 100 000	48.7
New <sup>a</sup> and relapses	1 268
New <sup>a</sup> and relapses notification rate per 100 000	44.5
Pulmonary	1 285 (92.6%)
of which microscopy-positive	810 (63.0%)
of which laboratory-confirmed	1 123 (87.4%)
Laboratory-confirmed TB cases	1 148 (82.8%)
Mean age of new native TB cases	46.9 years
Mean age of new foreign TB cases	47.7 years
Foreign origin of all TB cases	15 (1.1%)
New (not previously treated)	1 116 (80.5%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	1 148 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	290–260–310
Pulmonary MDR-TB cases notified	248 (22.1%)
of which XDR-TB cases	87 (35.1%)
Notified MDR-TB	249 (21.7%)
of which XDR-TB cases	87 (34.9%)
TB cases tested for HIV	1 125 (81.1%)
HIV-positive TB cases of these on ART	42 (3.7%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

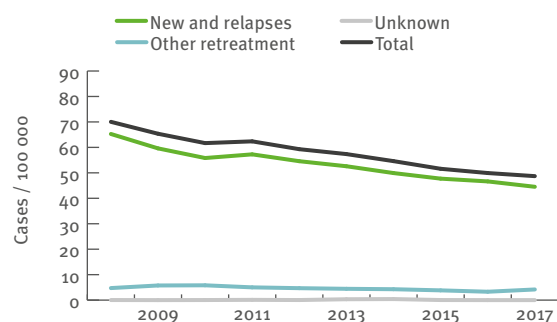
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	880	241
Success	639 (72.6%)	95 (39.4%)
Died	93 (10.6%)	55 (22.8%)
Failed	8 (0.9%)	25 (10.4%)
Lost to follow-up	43 (4.9%)	51 (21.2%)
Still on treatment	92 (10.5%)	15 (6.2%)
Not evaluated	5 (0.6%)	0 (0.0%)

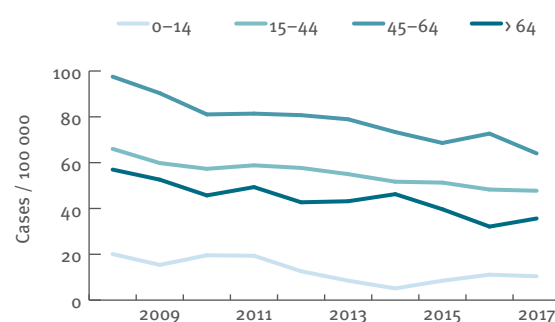
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

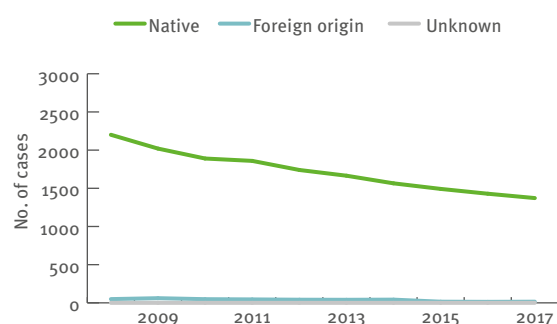
## TB notification rates by treatment history, 2008–2017



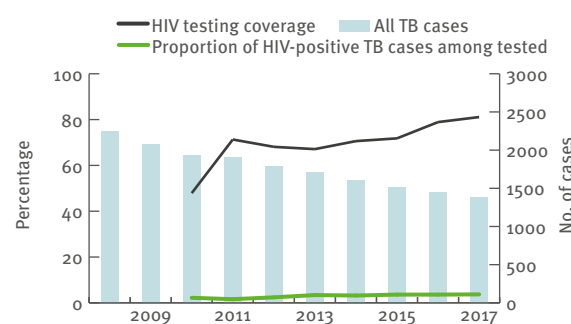
## New and relapsed TB cases – notification rates by age group, 2008–2017



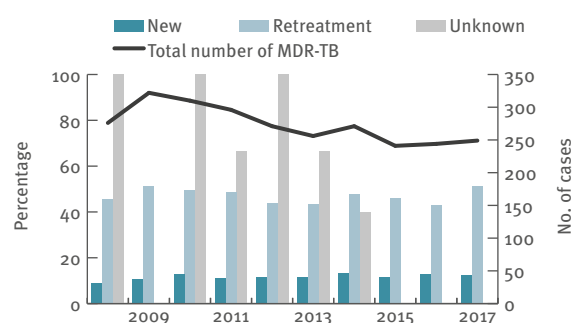
## TB cases by geographical origin, 2008–2017



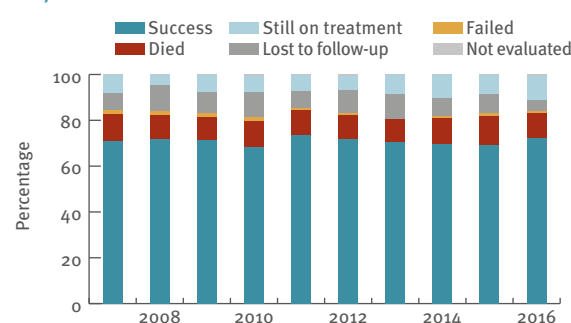
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Luxembourg

Total population at 23 April 2018 by EUROSTAT: 590 667

## TB case notifications, 2017

Total number of cases	32
Notification rate per 100 000	5.4
New <sup>a</sup> and relapses	32
New <sup>a</sup> and relapses notification rate per 100 000	5.4
Pulmonary	24 (75.0%)
of which microscopy-positive	8 (33.3%)
of which laboratory-confirmed	21 (87.5%)
Laboratory-confirmed TB cases	23 (71.9%)
Mean age of new native TB cases	- years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	25 (78.1%)
New (not previously treated)	32 (100.0%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

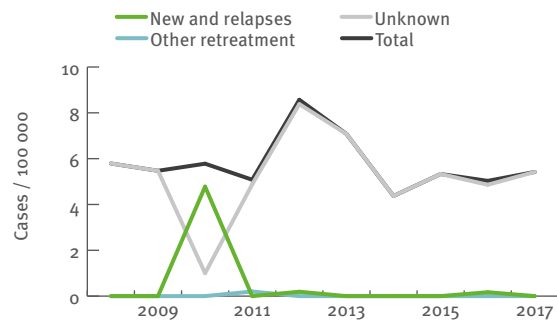
Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	23 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	1–0–1
Pulmonary MDR-TB cases notified	1 (4.8%)
of which XDR-TB cases	0 -
Notified MDR-TB	1 (4.3%)
of which XDR-TB cases	0 -
TB cases tested for HIV	3 (9.4%)
HIV-positive TB cases of these on ART	1 (18.5%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Data not available

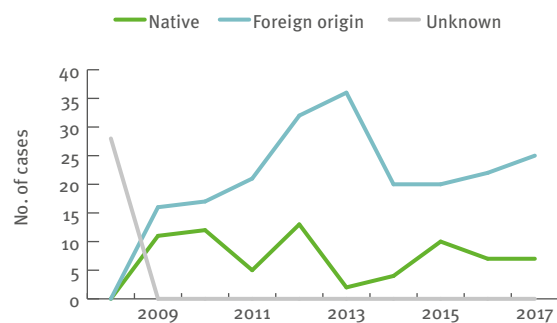
## TB notification rates by treatment history, 2008–2017



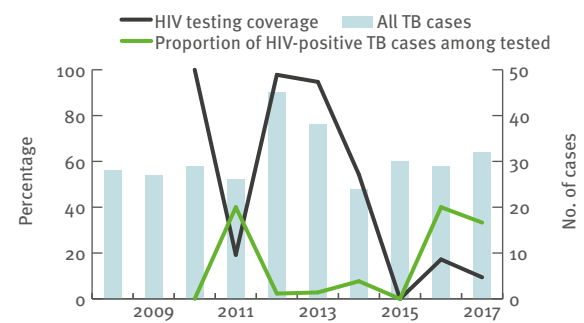
## New and relapsed TB cases – notification rates by age group, 2008–2017



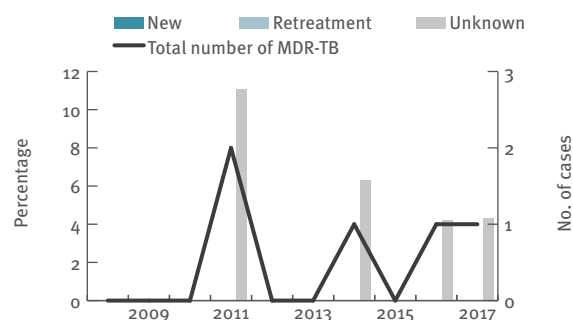
## TB cases by geographical origin, 2008–2017



## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016

Data not available

# Malta

Total population at 23 April 2018 by EUROSTAT: 460 297

## TB case notifications, 2017

Total number of cases	42
Notification rate per 100 000	9.1
New <sup>a</sup> and relapses	42
New <sup>a</sup> and relapses notification rate per 100 000	9.1
Pulmonary	30 (71.4%)
of which microscopy-positive	12 (40.0%)
of which laboratory-confirmed	24 (80.0%)
Laboratory-confirmed TB cases	33 (78.6%)
Mean age of new native TB cases	62.0 years
Mean age of new foreign TB cases	31.1 years
Foreign origin of all TB cases	39 (92.9%)
New (not previously treated)	42 (100.0%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	31 (93.9%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	0–0–4
Pulmonary MDR-TB cases notified	0 (0.0%)
of which XDR-TB cases	0 –
Notified MDR-TB	0 (0.0%)
of which XDR-TB cases	0 –
TB cases tested for HIV	37 (88.1%)
HIV-positive TB cases	0 (0.0%)
of these on ART	0 –

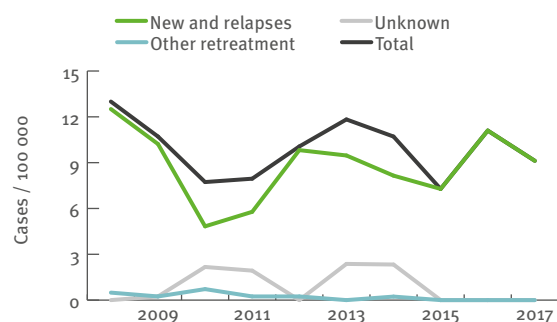
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

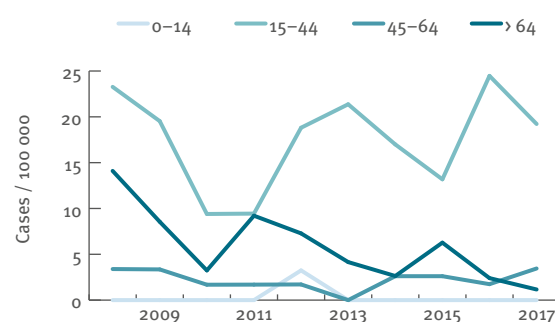
## Treatment outcome monitoring

Data not available

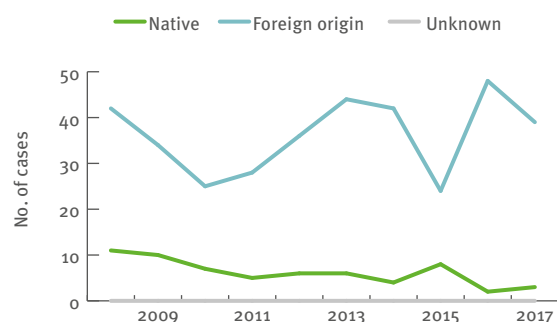
## TB notification rates by treatment history, 2008–2017



## New and relapsed TB cases – notification rates by age group, 2008–2017

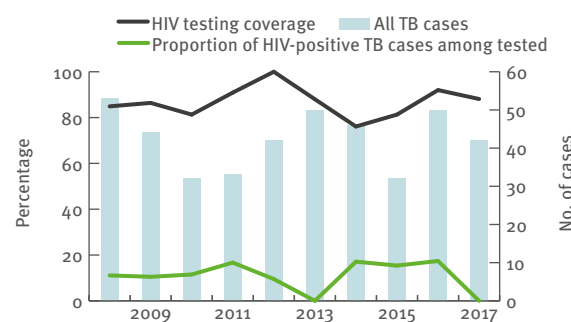


## TB cases by geographical origin, 2008–2017

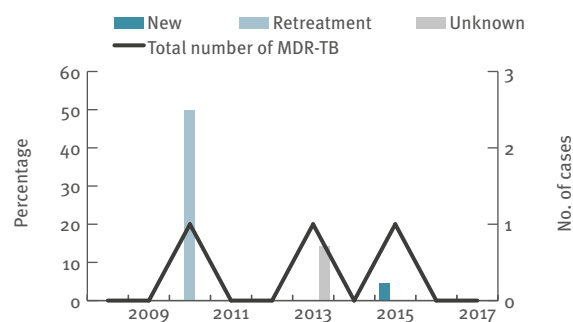


<sup>a</sup> By nationality for 2000–2006

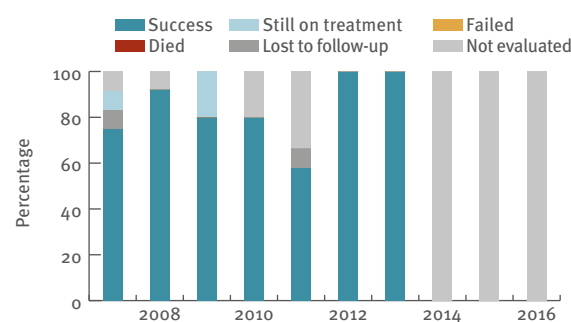
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Montenegro

Population estimate 2017 by UN Statistical Database: 628 960

## TB case notifications, 2017

Total number of cases	77
Notification rate per 100 000	12.2
New <sup>a</sup> and relapses	75
New <sup>a</sup> and relapses notification rate per 100 000	11.9
Pulmonary	70 (93.3%)
of which smear-positive	-
of which laboratory-confirmed	58 (82.9%)
Laboratory-confirmed TB cases	58
Mean age of new and relapse TB cases	49.1 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	3 (3.9%)
New (not previously treated)	63 (81.8%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	58 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	2-0-5
Pulmonary MDR-TB cases notified	1 (1.7%)
of which XDR-TB cases	1 (100.0%)
Notified MDR-TB	1 (1.7%)
of which XDR-TB cases	1 (100.0%)
TB cases tested for HIV	63 (84.0%)
HIV-positive TB cases of these on ART	0 (0.0%)

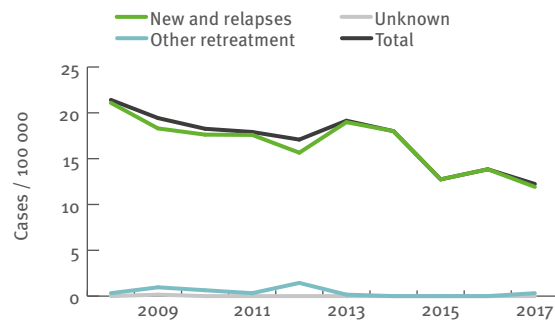
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	87	1
Success	70 (80.5%)	1 (100.0%)
Died	11 (12.6%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	5 (5.7%)	0 (0.0%)
Not evaluated	1 (1.1%)	0 (0.0%)

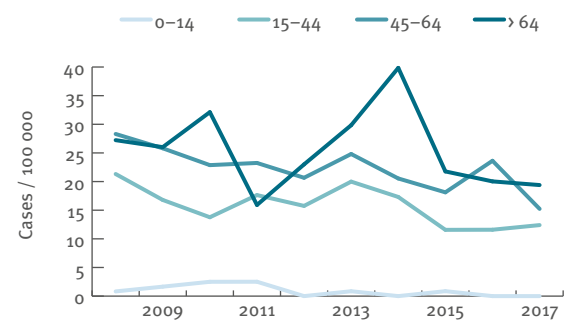
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



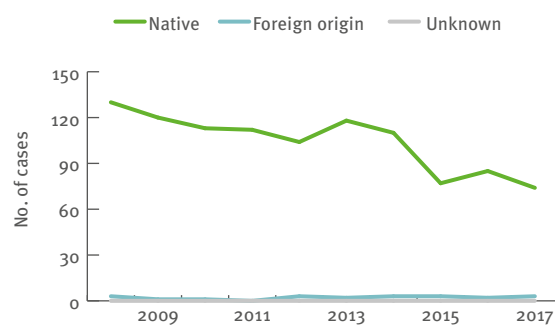
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

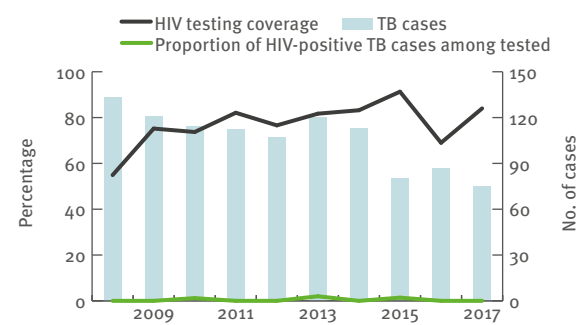


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

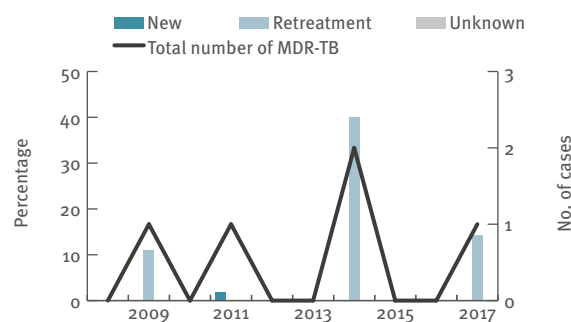


## TB/HIV coinfection, 2008–2017<sup>a</sup>

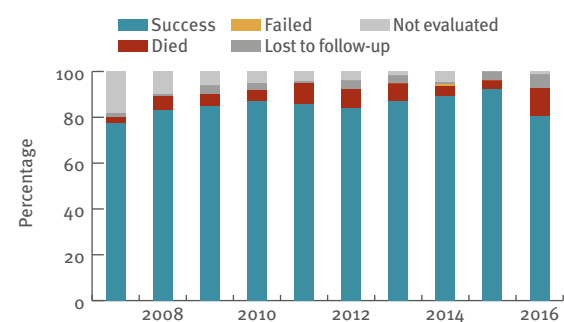


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome of new TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.

# Netherlands

Total population at 23 April 2018 by EUROSTAT: 17 081 507

## TB case notifications, 2017

Total number of cases	787
Notification rate per 100 000	4.6
New <sup>a</sup> and relapses	776
New <sup>a</sup> and relapses notification rate per 100 000	4.5
Pulmonary	457 (58.1%)
of which microscopy-positive	213 (46.6%)
of which laboratory-confirmed	369 (80.7%)
Laboratory-confirmed TB cases	542 (68.9%)
Mean age of new native TB cases	42.9 years
Mean age of new foreign TB cases	37.5 years
Foreign origin of all TB cases	586 (74.5%)
New (not previously treated)	760 (96.6%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	542 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	9–3–16
Pulmonary MDR-TB cases notified	6 (1.6%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	10 (1.8%)
of which XDR-TB cases	0 (0.0%)
TB cases tested for HIV	526 (66.8%)
HIV-positive TB cases	22 (4.2%)
of these on ART	13 (59.1%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

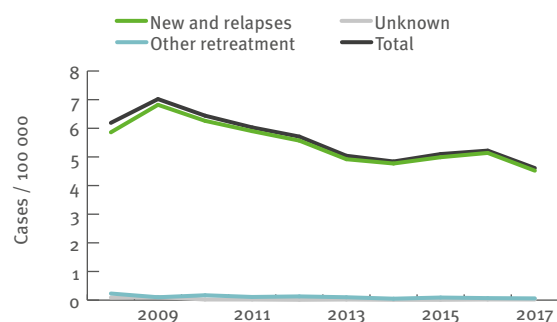
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	346	8
Success	279 (80.6%)	4 (50.0%)
Died	22 (6.4%)	1 (12.5%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	16 (4.6%)	1 (12.5%)
Still on treatment	6 (1.7%)	0 (0.0%)
Not evaluated	23 (6.6%)	2 (25.0%)

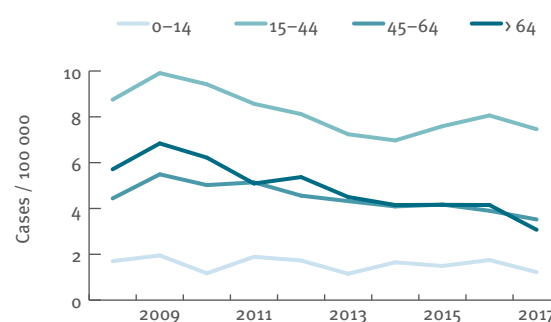
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

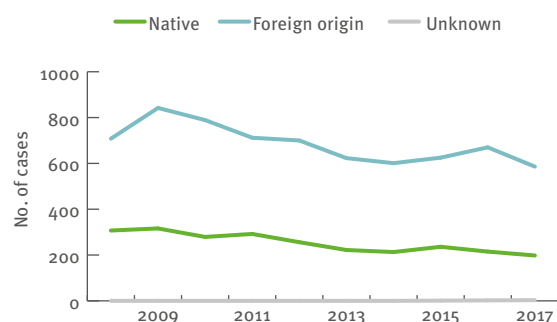
## TB notification rates by treatment history, 2008–2017



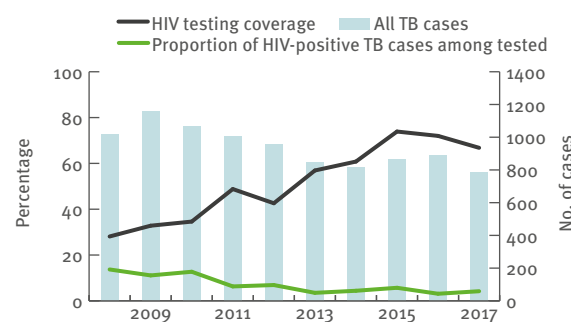
## New and relapsed TB cases – notification rates by age group, 2008–2017



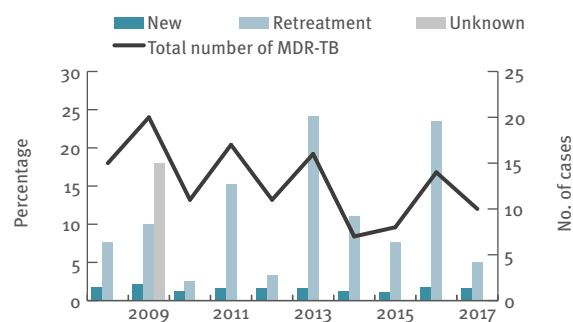
## TB cases by geographical origin, 2008–2017



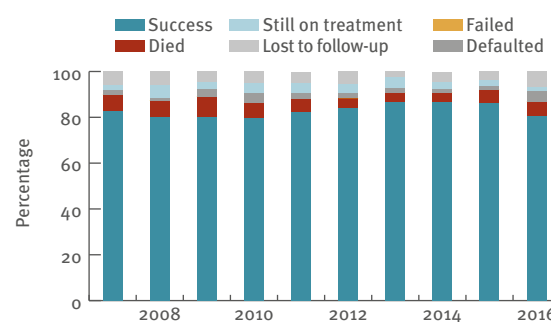
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# North Macedonia

Population estimate 2017 by UN Statistical Database: 2 083 160

## TB case notifications, 2017

Total number of cases	219
Notification rate per 100 000	10.5
New <sup>a</sup> and relapses	216
New <sup>a</sup> and relapses notification rate per 100 000	10.4
Pulmonary	171 (79.2%)
of which smear-positive	-
of which laboratory-confirmed	152 (88.9%)
Laboratory-confirmed TB cases	155 (70.8%)
Mean age of new and relapse TB cases	44.5 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	3 (1.4%)
New (not previously treated)	197 (90.0%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	155 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	0-0-3
Pulmonary MDR-TB cases notified	1 (0.6%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	0 (0.0%)
of which XDR-TB cases	0 -
TB cases tested for HIV	178 (82.4%)
HIV-positive TB cases	0 (0.0%)
of these on ART	0 -

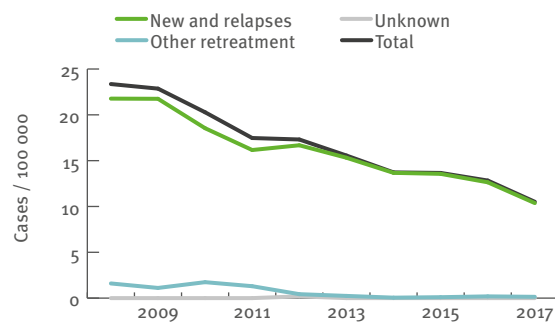
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	263	-
Success	232 (88.2%)	-
Died	18 (6.8%)	-
Failed	1 (0.4%)	-
Lost to follow-up	11 (4.2%)	-
Not evaluated	1 (0.4%)	-

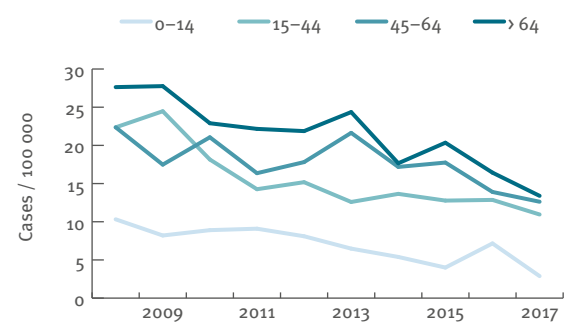
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



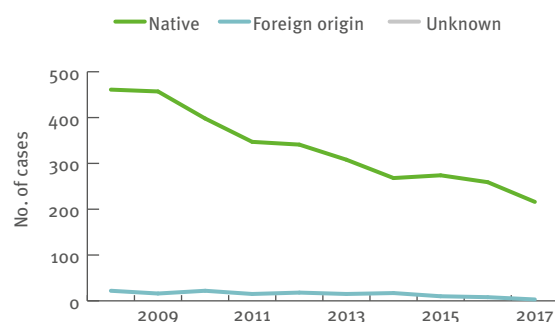
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

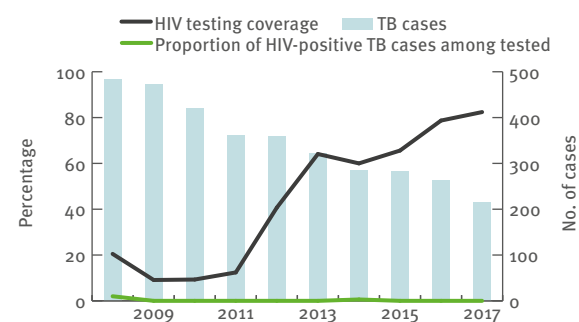


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

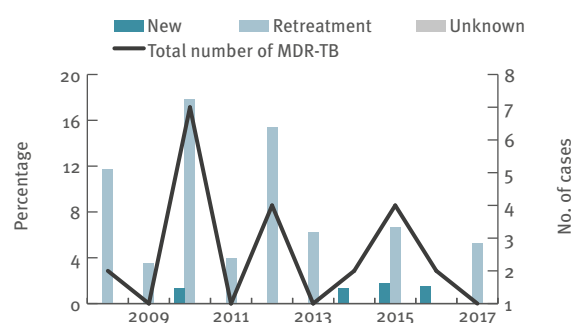


## TB/HIV coinfection, 2008–2017<sup>a</sup>

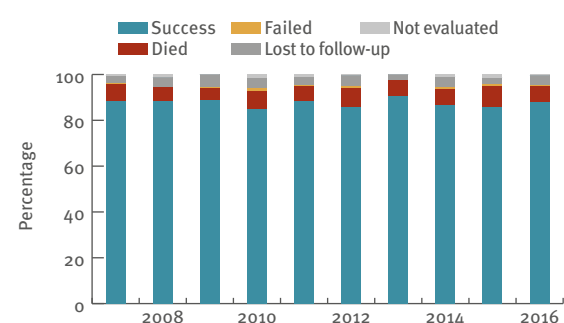


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.



# Norway

Total population at 23 April 2018 by EUROSTAT: 5 258 317

## TB case notifications, 2017

Total number of cases	261
Notification rate per 100 000	5.0
New <sup>a</sup> and relapses	237
New <sup>a</sup> and relapses notification rate per 100 000	4.5
Pulmonary	158 (60.5%)
of which microscopy-positive	52 (32.9%)
of which laboratory-confirmed	144 (91.1%)
Laboratory-confirmed TB cases	216 (82.8%)
Mean age of new native TB cases	32.7 years
Mean age of new foreign TB cases	33.1 years
Foreign origin of all TB cases	231 (88.5%)
New (not previously treated)	237 (90.8%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	213 (98.6%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	7–0–13
Pulmonary MDR-TB cases notified	6 (4.3%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	9 (4.2%)
of which XDR-TB cases	0 (0.0%)
TB cases tested for HIV	228 (87.4%)
HIV-positive TB cases of these on ART	7 (3.1%)

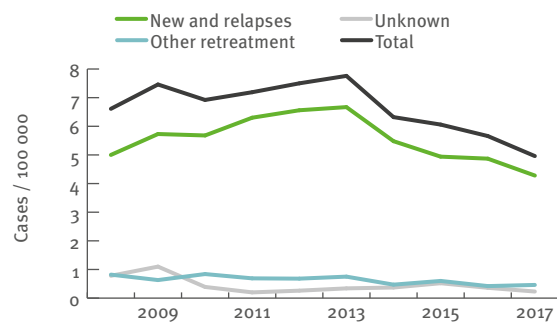
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

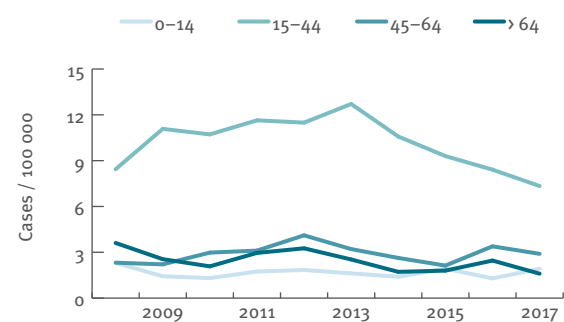
Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	136	5
Success	116 (85.3%)	5 (100.0%)
Died	3 (2.2%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	3 (2.2%)	0 (0.0%)
Still on treatment	6 (4.4%)	0 (0.0%)
Not evaluated	8 (5.9%)	0 (0.0%)

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

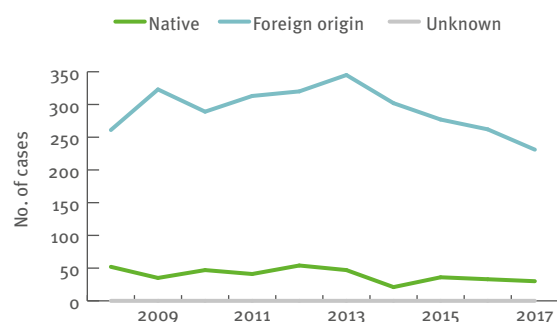
## TB notification rates by treatment history, 2008–2017



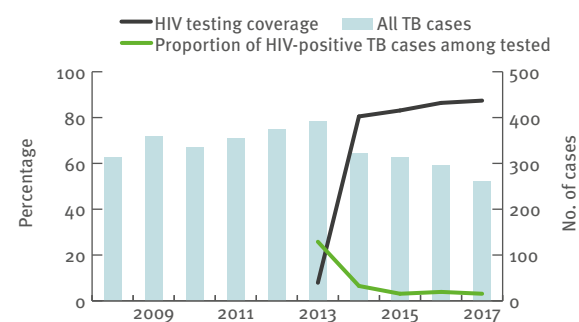
## New and relapsed TB cases – notification rates by age group, 2008–2017



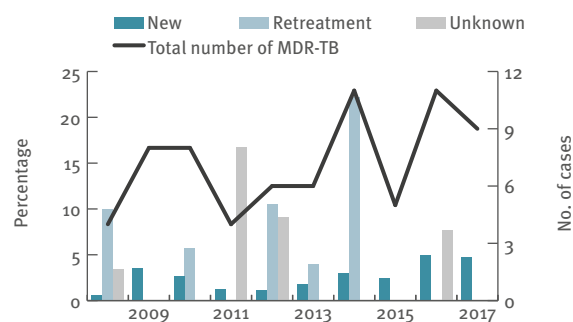
## TB cases by geographical origin, 2008–2017



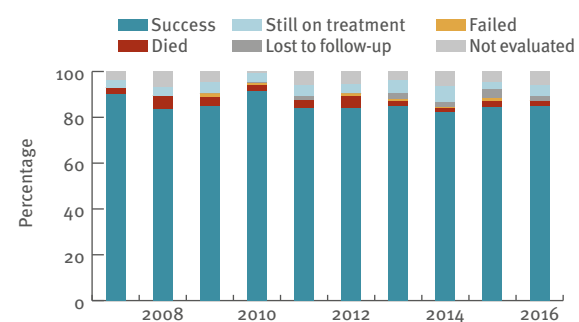
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Poland

Total population at 23 April 2018 by EUROSTAT: 37 972 964

## TB case notifications, 2017

Total number of cases	5 787
Notification rate per 100 000	15.2
New <sup>a</sup> and relapses	5 535
New <sup>a</sup> and relapses notification rate per 100 000	14.6
Pulmonary	5 531 (95.6%)
of which microscopy-positive	2 498 (45.2%)
of which laboratory-confirmed	4 057 (73.4%)
Laboratory-confirmed TB cases	4 179 (72.2%)
Mean age of new native TB cases	53.9 years
Mean age of new foreign TB cases	35.4 years
Foreign origin of all TB cases	108 (1.9%)
New (not previously treated)	5 127 (88.6%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data reporting	Yes
Cases with DST results	3 809 (91.1%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	80-59-100
Pulmonary MDR-TB cases notified	44 (1.2%)
of which XDR-TB cases	5 (14.3%)
Notified MDR-TB	44 (1.2%)
of which XDR-TB cases	5 (14.3%)
TB cases tested for HIV	-
HIV-positive TB cases	-
of these on ART	-

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

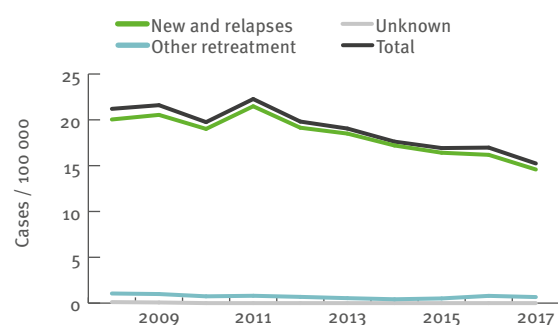
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	3 973	35
Success	2 199 (55.3%)	11 (31.4%)
Died	400 (10.1%)	6 (17.1%)
Failed	2 (0.1%)	0 (0.0%)
Lost to follow-up	209 (5.3%)	1 (2.9%)
Still on treatment	19 (0.5%)	1 (2.9%)
Not evaluated	1 144 (28.8%)	16 (45.7%)

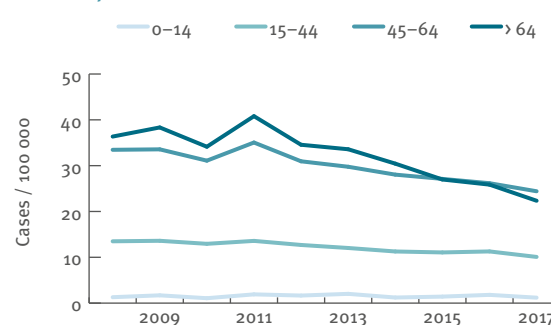
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

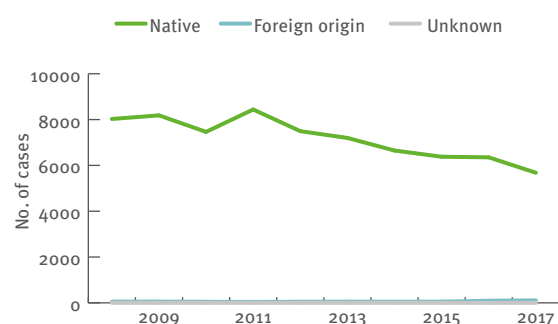
## TB notification rates by treatment history, 2008–2017



## New and relapsed TB cases – notification rates by age group, 2008–2017



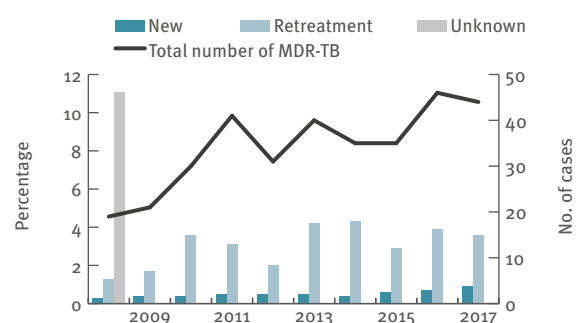
## TB cases by geographical origin, 2008–2017



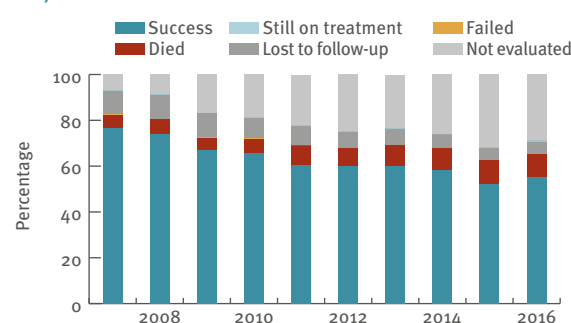
## TB/HIV coinfection, 2008–2017

Data not available

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Portugal

Total population at 23 April 2018 by EUROSTAT: 10 309 573

## TB case notifications, 2017

Total number of cases	1 800
Notification rate per 100 000	17.5
New <sup>a</sup> and relapses	1 760
New <sup>a</sup> and relapses notification rate per 100 000	17.1
Pulmonary	1 290 (71.7%)
of which microscopy-positive	750 (58.1%)
of which laboratory-confirmed	945 (73.3%)
Laboratory-confirmed TB cases	1 106 (61.4%)
Mean age of new native TB cases	52.6 years
Mean age of new foreign TB cases	38.4 years
Foreign origin of all TB cases	351 (19.5%)
New (not previously treated)	1 680 (93.3%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	738 (66.7%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	19–10–27
Pulmonary MDR-TB cases notified	10 (1.5%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	10 (1.4%)
of which XDR-TB cases	0 (0.0%)
TB cases tested for HIV	1 183 (65.7%)
HIV-positive TB cases of these on ART	135 (11.4%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

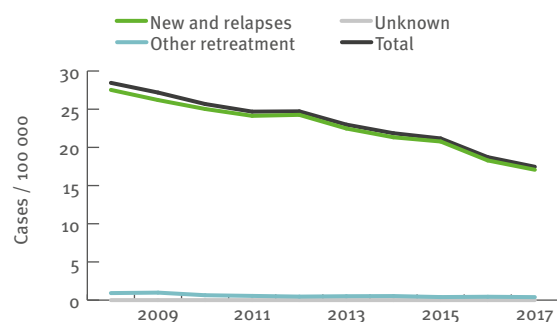
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	1 035	23
Success	749 (72.4%)	7 (30.4%)
Died	77 (7.4%)	5 (21.7%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	31 (3.0%)	1 (4.3%)
Still on treatment	140 (13.5%)	5 (21.7%)
Not evaluated	38 (3.7%)	5 (21.7%)

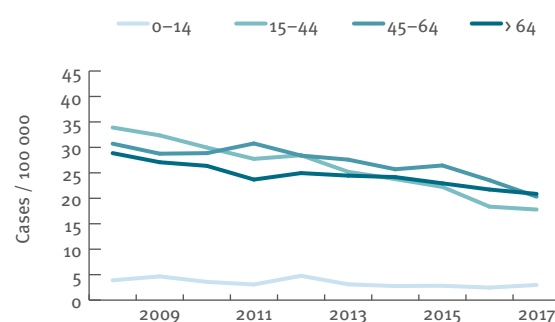
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

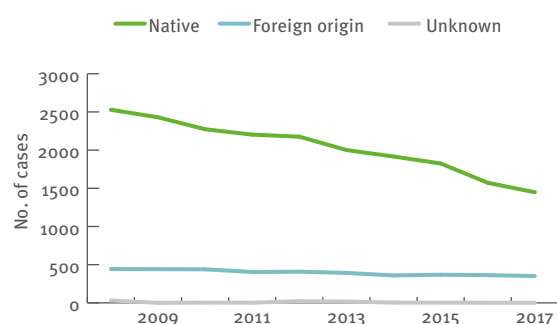
## TB notification rates by treatment history, 2008–2017



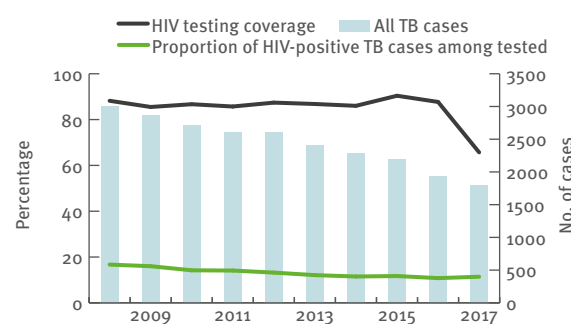
## New and relapsed TB cases – notification rates by age group, 2008–2017



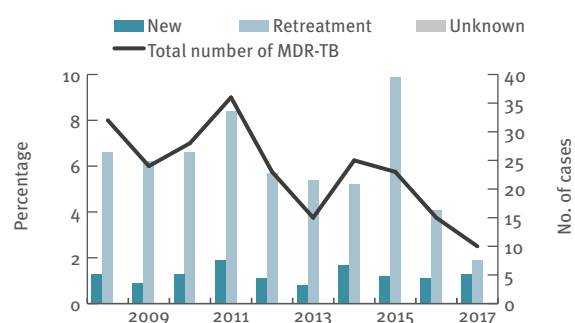
## TB cases by geographical origin, 2008–2017



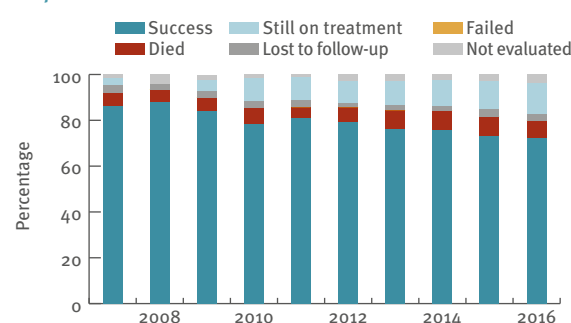
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Republic of Moldova

Population estimate 2017 by UN Statistical Database: 4 051 212

## TB case notifications, 2017

Total number of cases	3 858
Notification rate per 100 000	95.2
New <sup>a</sup> and relapses	3 358
New <sup>a</sup> and relapses notification rate per 100 000	82.9
Pulmonary	3 017 (89.8%)
of which smear-positive	-
of which laboratory-confirmed	1 880 (62.3%)
Laboratory-confirmed TB cases	2 267 (58.8%)
Mean age of new native TB cases	42.9 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	24 (0.6%)
New (not previously treated)	2 690 (69.7%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	1 953 (86.1%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	1300-1200-1400
Pulmonary MDR-TB cases notified	486 (32.7%)
of which XDR-TB cases	30 (6.3%)
Notified MDR-TB	679 (34.8%)
of which XDR-TB cases	32 (6.0%)
TB cases tested for HIV	3 352 (99.8%)
HIV-positive TB cases	277 (8.3%)
of these on ART	190 (68.6%)

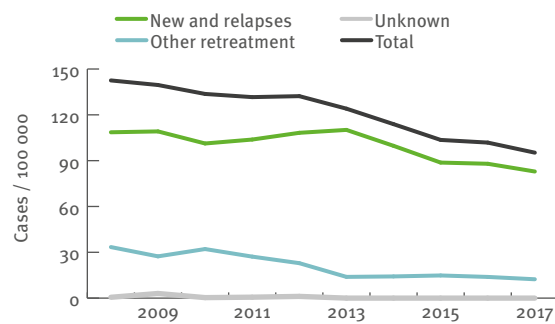
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	3 048	996
Success	2 515 (82.5%)	487 (48.9%)
Died	294 (9.6%)	120 (12.0%)
Failed	77 (2.5%)	177 (17.8%)
Lost to follow-up	123 (4.0%)	202 (20.3%)
Not evaluated	39 (1.3%)	10 (1.0%)

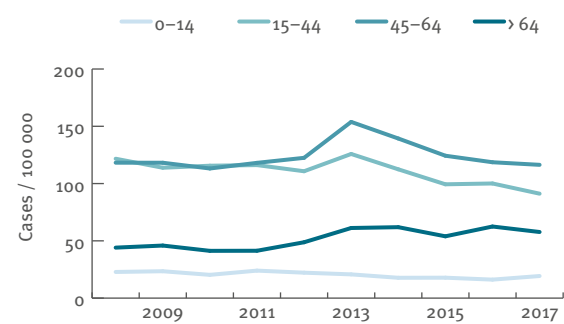
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



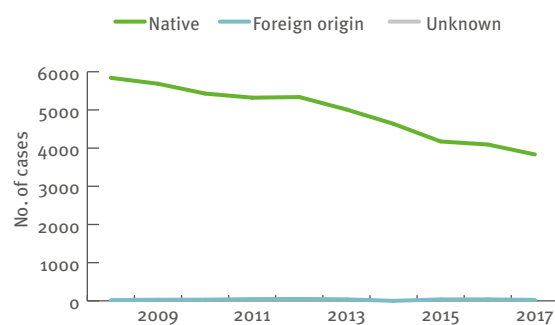
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

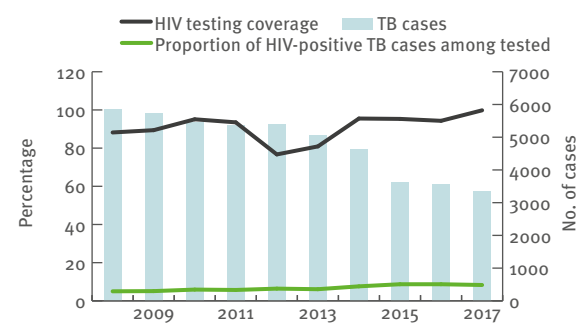


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

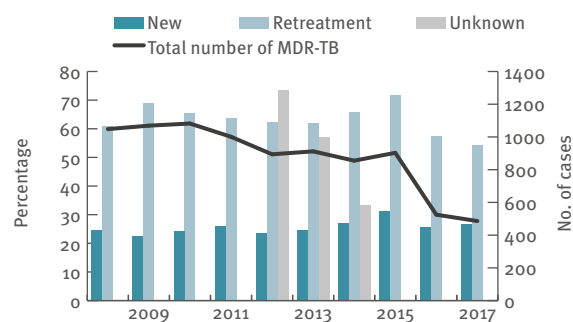


## TB/HIV coinfection, 2008–2017<sup>a</sup>

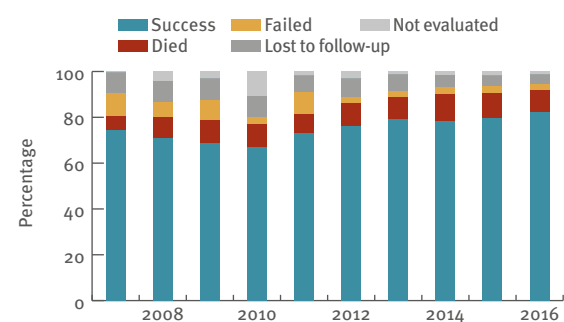


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.

# Romania

Total population at 23 April 2018 by EUROSTAT: 19 644 350

## TB case notifications, 2017

Total number of cases	13 004
Notification rate per 100 000	66.2
New <sup>a</sup> and relapses	12 310
New <sup>a</sup> and relapses notification rate per 100 000	62.7
Pulmonary	11 047 (85.0%)
of which microscopy-positive	7 255 (65.7%)
of which laboratory-confirmed	8 878 (80.4%)
Laboratory-confirmed TB cases	9 194 (70.7%)
Mean age of new native TB cases	44.0 years
Mean age of new foreign TB cases	32.4 years
Foreign origin of all TB cases	27 (0.2%)
New (not previously treated)	10 377 (79.8%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	8 183 (89.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	590–540–650
Pulmonary MDR-TB cases notified	356 (4.5%)
of which XDR-TB cases	43 (30.3%)
Notified MDR-TB	361 (4.4%)
of which XDR-TB cases	45 (30.8%)
TB cases tested for HIV	10 760 (82.7%)
HIV-positive TB cases	232 (2.2%)
of these on ART	173 (74.6%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

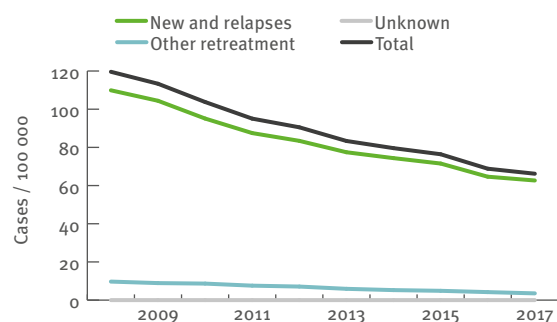
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	6 890	537
Success	5 861 (85.1%)	222 (41.3%)
Died	512 (7.4%)	94 (17.5%)
Failed	133 (1.9%)	157 (29.2%)
Lost to follow-up	288 (4.2%)	61 (11.4%)
Still on treatment	90 (1.3%)	3 (0.6%)
Not evaluated	6 (0.1%)	0 (0.0%)

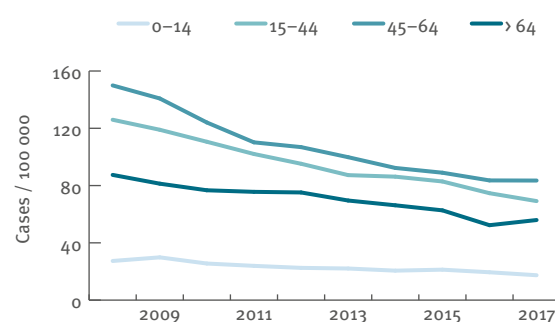
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

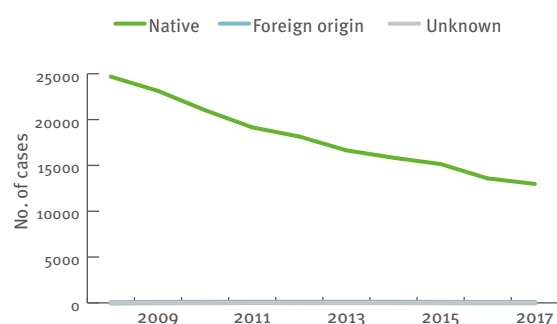
## TB notification rates by treatment history, 2008–2017



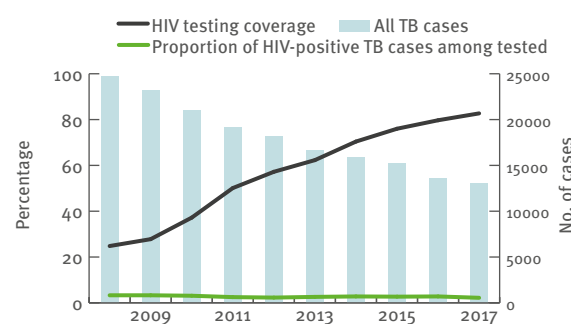
## New and relapsed TB cases – notification rates by age group, 2008–2017



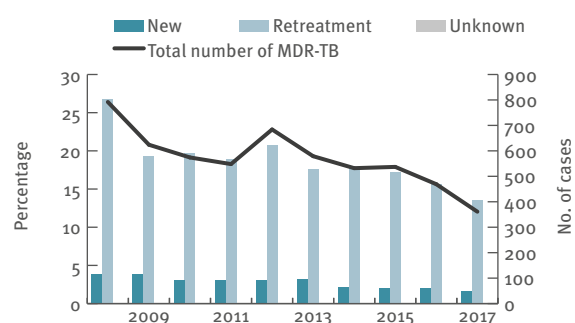
## TB cases by geographical origin, 2008–2017



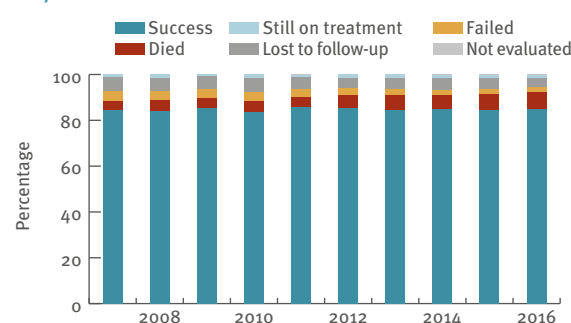
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Russia Federation

Population estimate 2017 by UN Statistical Database: 143 989 754

## TB case notifications, 2017

Total number of cases	114 187
Notification rate per 100 000 <sup>a</sup>	79.3
New <sup>a</sup> and relapses	84 510
New <sup>a</sup> and relapses notification rate per 100 000	58.7
Pulmonary	77 574 (91.8%)
of which smear-positive	-
of which laboratory-confirmed	40 254 (51.9%)
Laboratory-confirmed TB cases <sup>ba</sup>	59 036 (51.7%)
Mean age of new and relapse TB cases	41.4 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	2 498 (2.2%)
New (not previously treated)	70 861 (62.1%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.  
<sup>b</sup> UN Population Division estimates are lower than the population registered by the Federal State Statistics Service of the Russian Federation.  
<sup>ba</sup> New and relapses before start of treatment.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	- (91.3%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	49 000-49 000-50 000
Pulmonary MDR-TB cases notified	22 817 (42.4%)
of which XDR-TB cases	3 562 (17.4%)
Notified MDR-TB	25 879 (48.0%)
of which XDR-TB cases	3 562 (15.8%)
TB cases tested for HIV	81 443 (96.4%)
HIV-positive TB cases	15 695 (19.3%)
of these on ART	9 748 (62.1%)

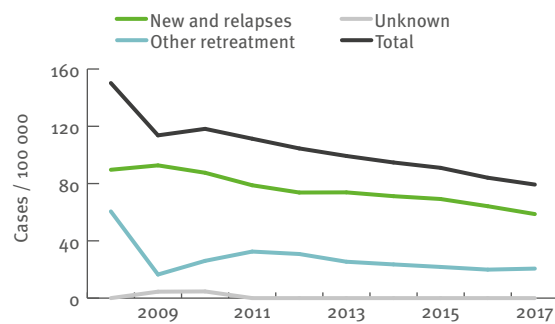
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	73 137	22 607
Success	52 335 (71.6%)	12 117 (53.6%)
Died	7 423 (10.1%)	3 554 (15.7%)
Failed	4 602 (6.3%)	2 778 (12.3%)
Lost to follow-up	3 541 (4.8%)	1 909 (8.4%)
Not evaluated	5 236 (7.2%)	2 249 (9.9%)

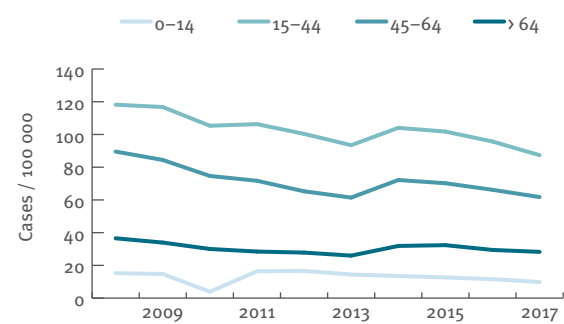
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



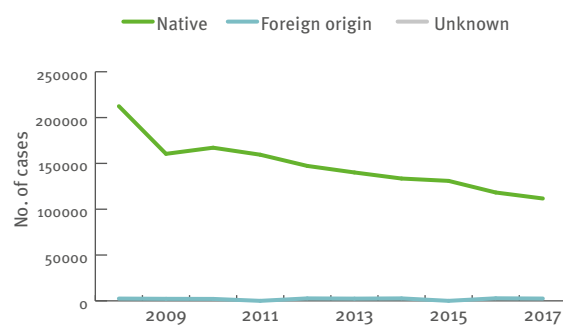
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

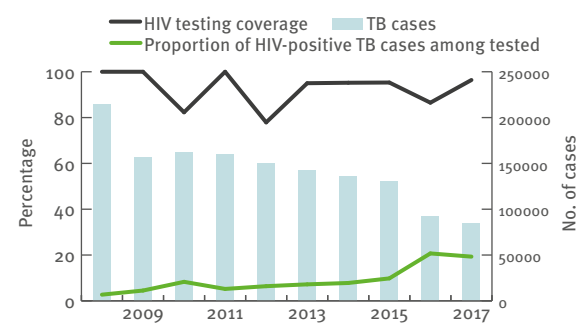


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

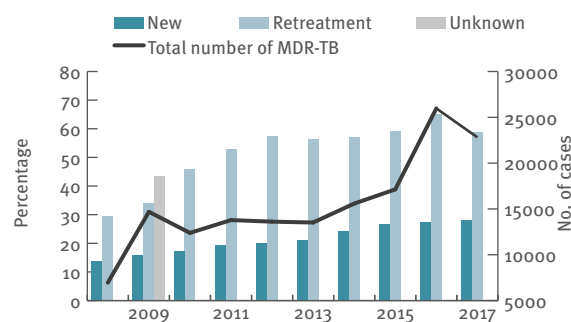


## TB/HIV coinfection, 2008–2017<sup>a</sup>

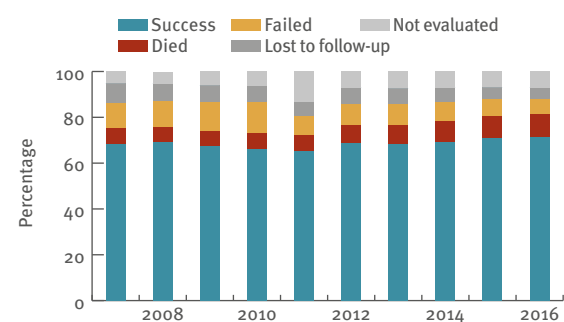


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.

# Serbia

Population estimate 2017 by UN Statistical Database: 8 790 574

## TB case notifications, 2017

Total number of cases	1 466
Notification rate per 100 000	16.7
New <sup>a</sup> and relapses	1 450
New <sup>a</sup> and relapses notification rate per 100 000	16.5
Pulmonary	1 135 (78.3%)
of which microscopy-positive	-
of which laboratory-confirmed	781 (68.8%)
Laboratory-confirmed TB cases	783 (53.4%)
Mean age of new native TB cases	49.8 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	1 354 (92.4%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	357 (45.6%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	16-7-26
Pulmonary MDR-TB cases notified	5 (1.4%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	5 (1.4%)
of which XDR-TB cases	0
TB cases tested for HIV	71 (4.9%)
HIV-positive TB cases	8 (11.3%)
of these on ART	8 (100.0%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

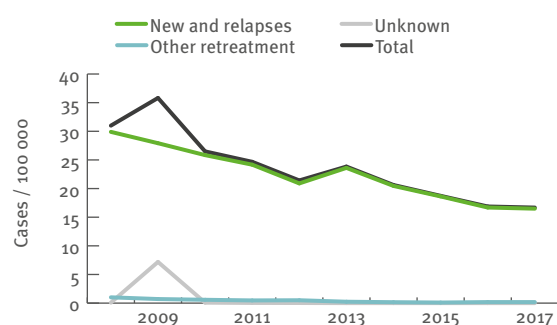
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	1 443	5
Success	1 191 (82.5%)	4 (80.0%)
Died	100 (6.9%)	0 (0.0%)
Failed	9 (0.6%)	1 (20.0%)
Lost to follow-up	88 (6.1%)	0 (0.0%)
Not evaluated	55 (3.8%)	0 (0.0%)

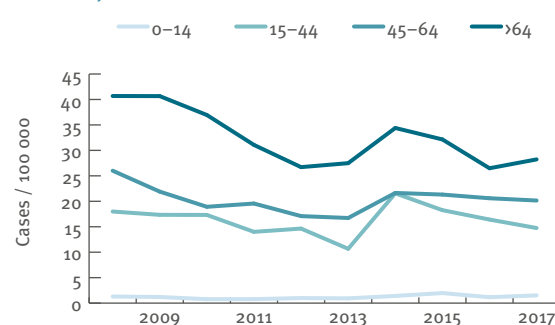
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

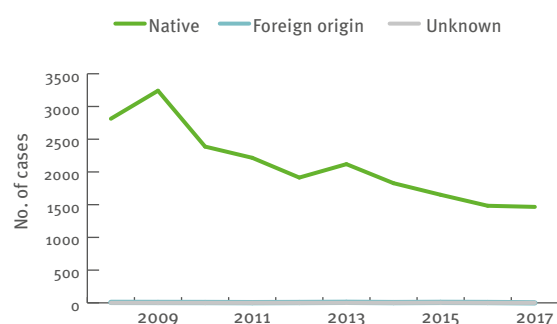
## TB notification rates by treatment history, 2008–2017



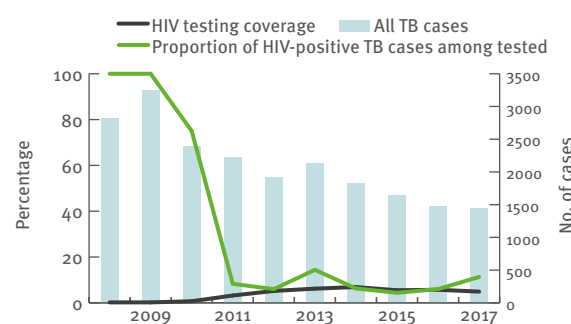
## New and relapsed TB cases – notification rates by age group, 2008–2017



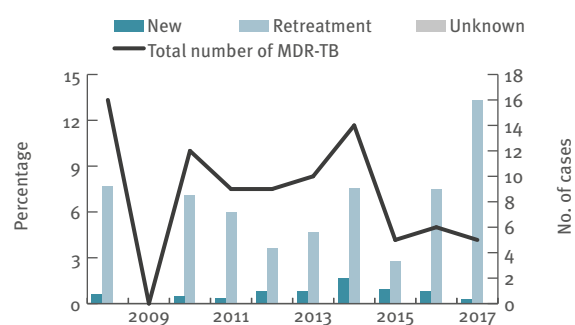
## TB cases by geographical origin, 2008–2017



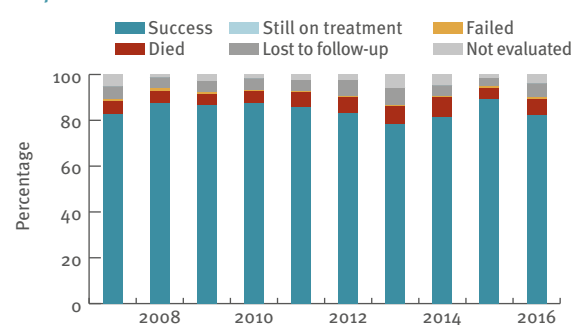
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Slovakia

Total population at 23 April 2018 by EUROSTAT: 5 435 343

## TB case notifications, 2017

Total number of cases	249
Notification rate per 100 000	4.6
New <sup>a</sup> and relapses	228
New <sup>a</sup> and relapses notification rate per 100 000	4.2
Pulmonary	206 (82.7%)
of which microscopy-positive	76 (36.9%)
of which laboratory-confirmed	125 (60.7%)
Laboratory-confirmed TB cases	134 (53.8%)
Mean age of new native TB cases	43.0 years
Mean age of new foreign TB cases	43.0 years
Foreign origin of all TB cases	5 (2.0%)
New (not previously treated)	208 (83.5%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	134 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	10–2–18
Pulmonary MDR-TB cases notified	5 (4.0%)
of which XDR-TB cases	2 (40.0%)
Notified MDR-TB	6 (4.5%)
of which XDR-TB cases	2 (33.3%)
TB cases tested for HIV	227 (91.2%)
HIV-positive TB cases	0 (0.0%)
of these on ART	0 –

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

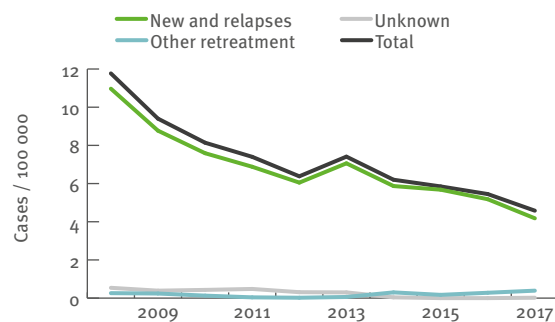
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	93	2
Success	74 (79.6%)	0 (0.0%)
Died	17 (18.3%)	2 (100.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	0 (0.0%)	0 (0.0%)
Still on treatment	1 (1.1%)	0 (0.0%)
Not evaluated	1 (1.1%)	0 (0.0%)

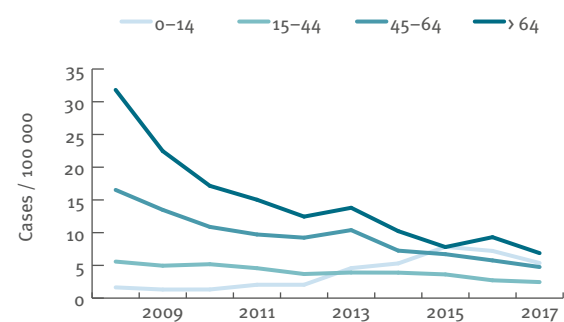
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

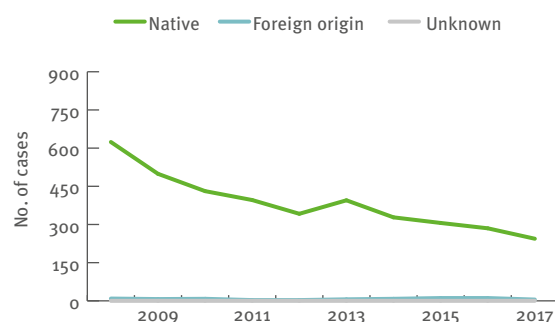
## TB notification rates by treatment history, 2008–2017



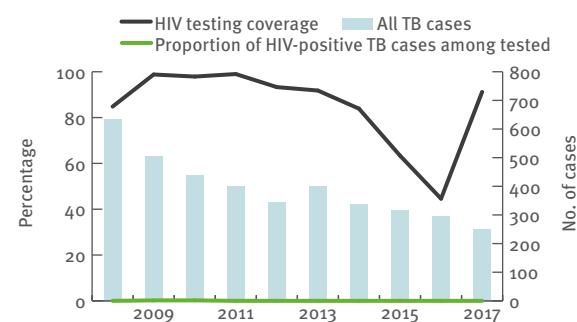
## New and relapsed TB cases – notification rates by age group, 2008–2017



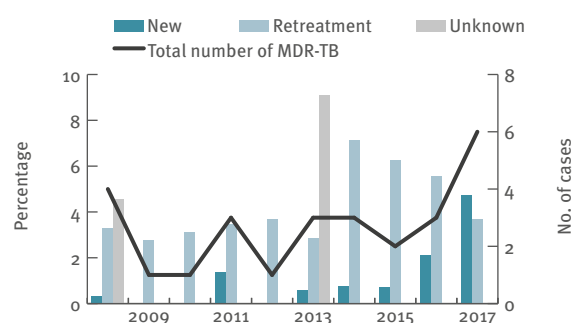
## TB cases by geographical origin, 2008–2017



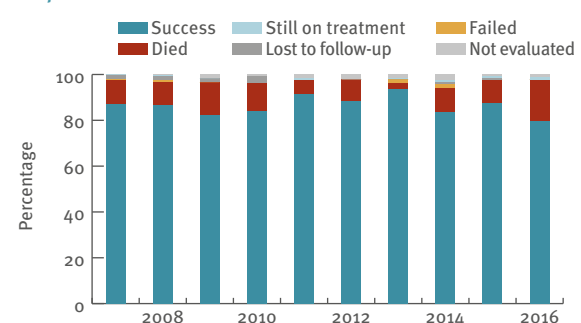
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016





# Slovenia

Total population at 23 April 2018 by EUROSTAT: 2 065 895

## TB case notifications, 2017

Total number of cases	112
Notification rate per 100 000	5.4
New <sup>a</sup> and relapses	112
New <sup>a</sup> and relapses notification rate per 100 000	5.4
Pulmonary	91 (81.3%)
of which microscopy-positive	40 (44.0%)
of which laboratory-confirmed	89 (97.8%)
Laboratory-confirmed TB cases	109 (97.3%)
Mean age of new native TB cases	65.9 years
Mean age of new foreign TB cases	54.3 years
Foreign origin of all TB cases	46 (41.1%)
New (not previously treated)	107 (95.5%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	109 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	0–0–2
Pulmonary MDR-TB cases notified	1 (1.1%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	1 (0.9%)
of which XDR-TB cases	0 (0.0%)
TB cases tested for HIV	77 (68.8%)
HIV-positive TB cases	0 (0.0%)
of these on ART	-

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

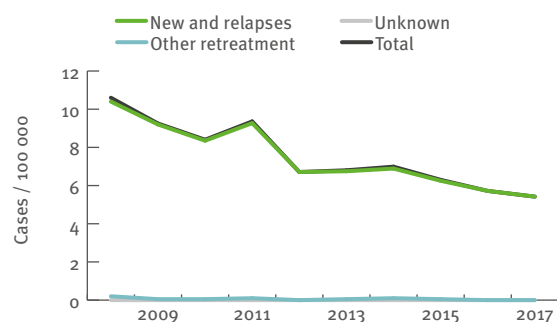
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	93	0
Success	66 (71.0%)	0 -
Died	18 (19.4%)	0 -
Failed	0 (0.0%)	0 -
Lost to follow-up	0 (0.0%)	0 -
Still on treatment	7 (7.5%)	0 -
Not evaluated	2 (2.2%)	0 -

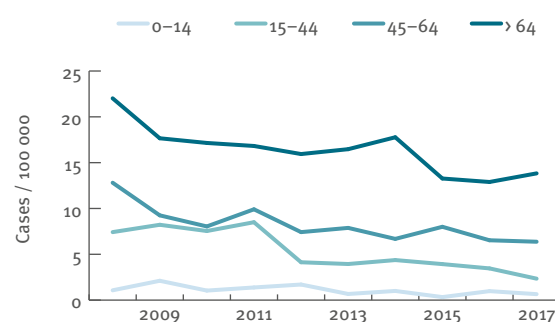
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

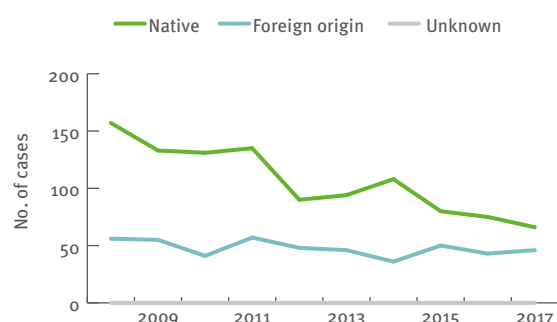
## TB notification rates by treatment history, 2008–2017



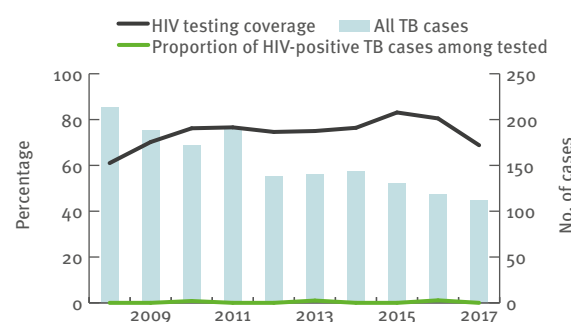
## New and relapsed TB cases – notification rates by age group, 2008–2017



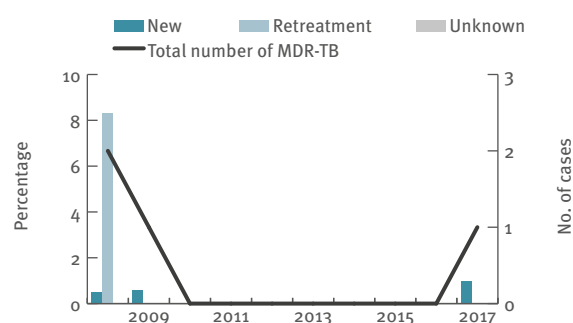
## TB cases by geographical origin, 2008–2017



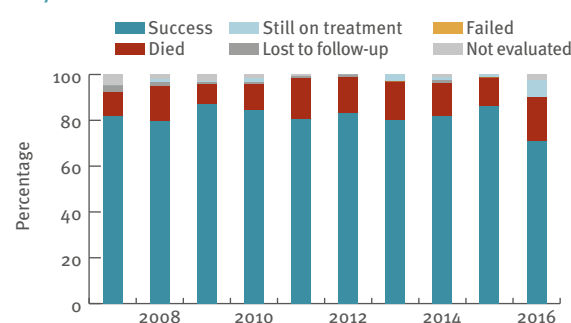
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Spain

Total population at 23 April 2018 by EUROSTAT: 46 528 024

## TB case notifications, 2017

Total number of cases	4 570
Notification rate per 100 000	9.8
New <sup>a</sup> and relapses	4 379
New <sup>a</sup> and relapses notification rate per 100 000	9.4
Pulmonary	3 315 (72.5%)
of which microscopy-positive	1 592 (48.0%)
of which laboratory-confirmed	2 625 (79.2%)
Laboratory-confirmed TB cases	3 216 (70.4%)
Mean age of new native TB cases	51.2 years
Mean age of new foreign TB cases	37.9 years
Foreign origin of all TB cases	1 352 (29.6%)
New (not previously treated)	4 379 (95.8%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	969 (30.1%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	17–120–210
Pulmonary MDR-TB cases notified	16 (1.7%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	19 (2.0%)
of which XDR-TB cases	0 (0.0%)
TB cases tested for HIV	3 408 (74.6%)
HIV-positive TB cases of these on ART	277 (8.1%)

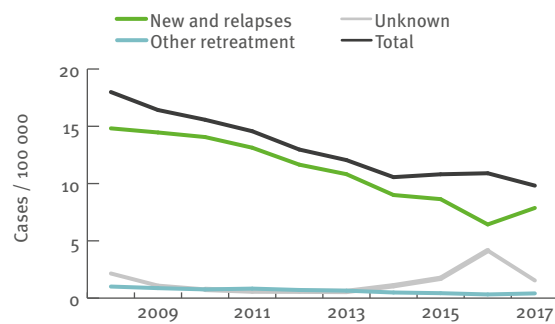
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

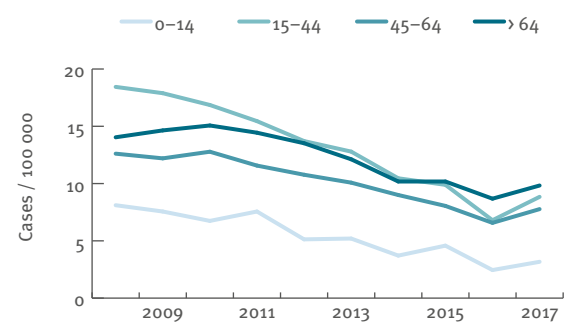
Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	1794	-
Success	1257 (70.1%)	-
Died	129 (7.2%)	-
Failed	0 (0.0%)	-
Lost to follow-up	12 (0.7%)	-
Still on treatment	33 (1.8%)	-
Not evaluated	363 (20.2%)	-

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

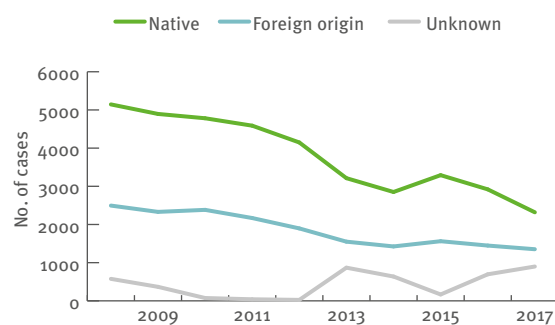
## TB notification rates by treatment history, 2008–2017



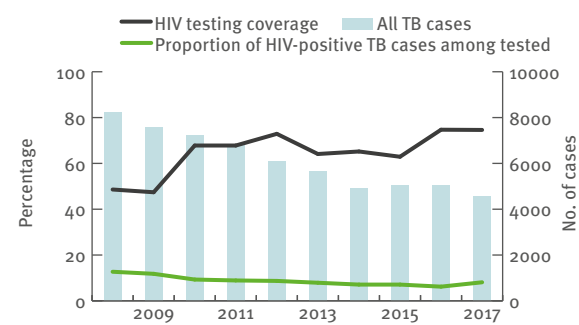
## New and relapsed TB cases – notification rates by age group, 2008–2017



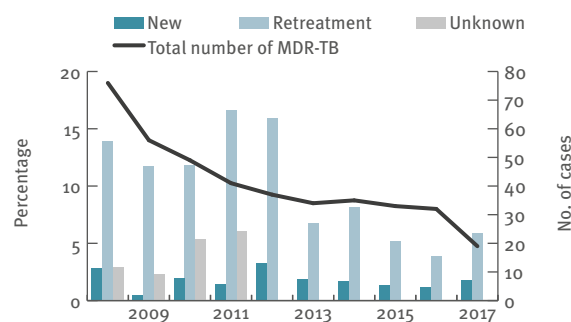
## TB cases by geographical origin, 2008–2017



## TB/HIV coinfection, 2008–2017

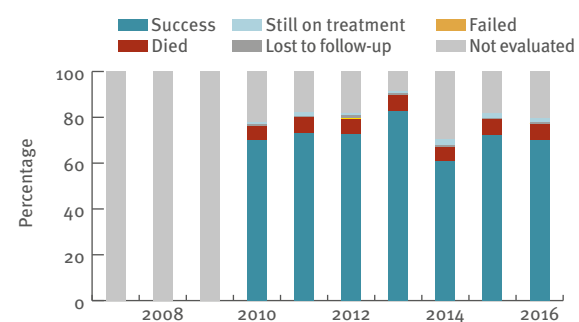


## MDR-TB cases by previous treatment history, 2008–2017<sup>a</sup>



<sup>a</sup> In 2013, 2015 and 2016, only pulmonary MDR-TB cases were reported.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Sweden

Total population at 23 April 2018 by EUROSTAT: 9 995 153

## TB case notifications, 2017

Total number of cases	520
Notification rate per 100 000	5.2
New <sup>a</sup> and relapses	488
New <sup>a</sup> and relapses notification rate per 100 000	4.9
Pulmonary	324 (62.3%)
of which microscopy-positive	104 (32.1%)
of which laboratory-confirmed	287 (88.6%)
Laboratory-confirmed TB cases	424 (81.5%)
Mean age of new native TB cases	56.8 years
Mean age of new foreign TB cases	35.0 years
Foreign origin of all TB cases	468 (90.0%)
New (not previously treated)	484 (93.1%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data reporting	Yes
Cases with DST results	422 (99.5%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	13-5-20
Pulmonary MDR-TB cases notified	9 (3.2%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	11 (2.6%)
of which XDR-TB cases	0 (0.0%)
TB cases tested for HIV	-
HIV-positive TB cases	-
of these on ART	-

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

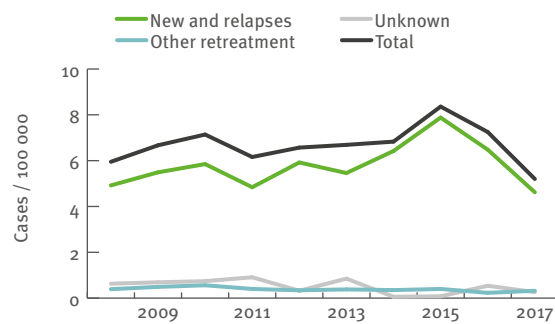
## Treatment outcome monitoring

Geographical coverage	National		
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>	
Case-linked data reporting	Yes		
Cases notified	370	22	
Success	326 (88.1%)	20 (90.9%)	
Died	10 (2.7%)	0 (0.0%)	
Failed	0 (0.0%)	0 (0.0%)	
Lost to follow-up	5 (1.4%)	0 (0.0%)	
Still on treatment	10 (2.7%)	1 (4.5%)	
Not evaluated	19 (5.1%)	1 (4.5%)	

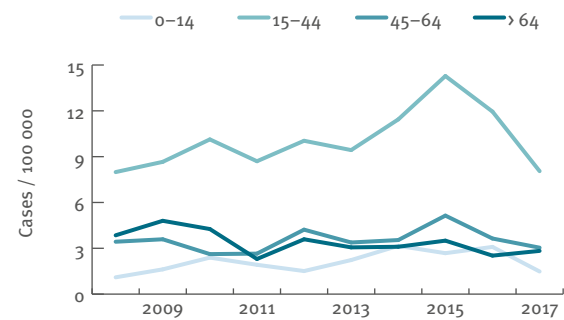
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

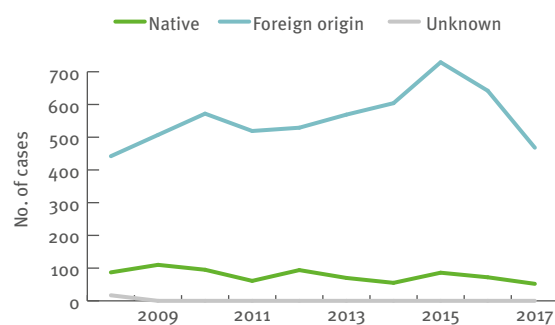
## TB notification rates by treatment history, 2008-2017



## New and relapsed TB cases – notification rates by age group, 2008-2017



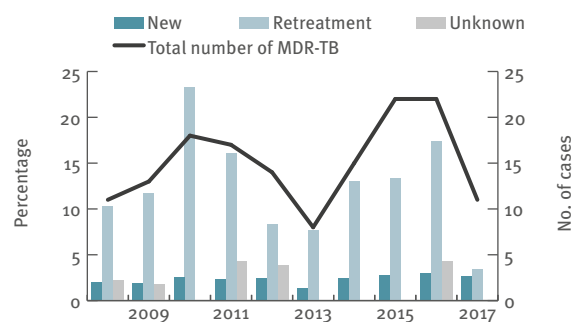
## TB cases by geographical origin, 2008-2017



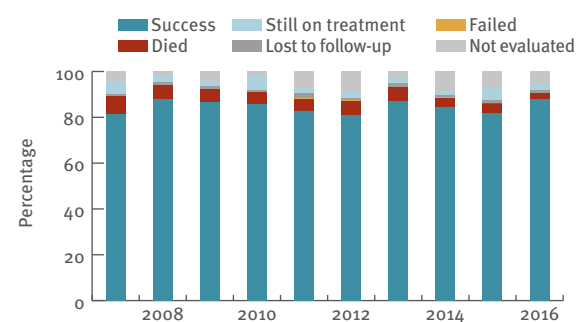
## TB/HIV coinfection, 2008-2017

Data not available

## MDR-TB cases by previous treatment history, 2008-2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007-2016



# Switzerland

Population estimate 2017 by UN Statistical Database: 8 476 005

## TB case notifications, 2017

Total number of cases	555
Notification rate per 100 000	6.5
New <sup>a</sup> and relapses	529
New <sup>a</sup> and relapses notification rate per 100 000	6.2
Pulmonary	379 (71.6%)
of which smear-positive	-
of which laboratory-confirmed	348 (91.8%)
Laboratory-confirmed TB cases	364 (65.6%)
Mean age of new and relapse TB cases	38.1 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	366 (65.9%)
New (not previously treated)	529 (95.3%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	276 (75.8%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	19-9-29
Pulmonary MDR-TB cases notified	8 (2.9%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	9 (3.3%)
of which XDR-TB cases	0 -
TB cases tested for HIV	- -
HIV-positive TB cases	- -
of these on ART	- -

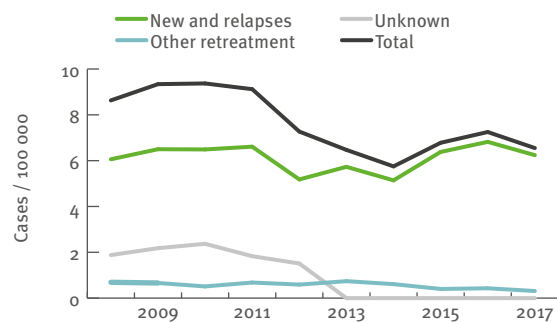
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	565	16
Success	384 (68.0%)	7 (43.8%)
Died	10 (1.8%)	0 (0.0%)
Failed	1 (0.2%)	0 (0.0%)
Lost to follow-up	9 (1.6%)	1 (6.3%)
Not evaluated	161 (28.5%)	8 (50.0%)

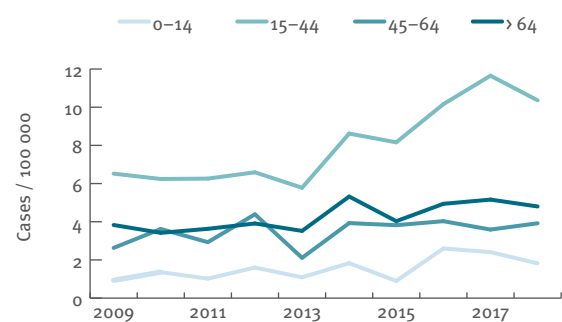
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



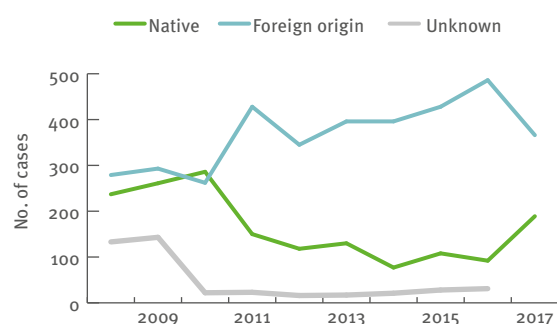
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>



<sup>a</sup> Data up to 2012 includes new TB cases only.

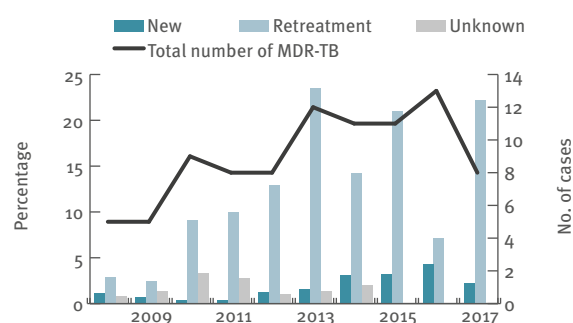
## TB cases by geographical origin, 2008–2017



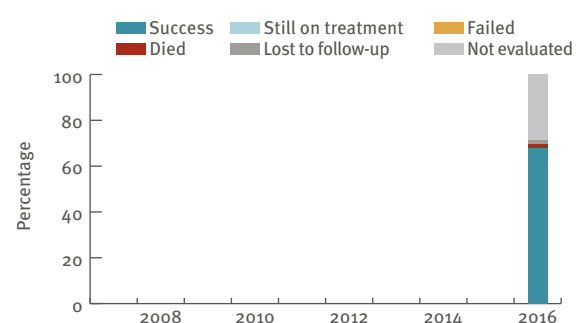
## TB/HIV coinfection, 2008–2017

Data not available

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2007–2016



# Tajikistan

Population estimate 2017 by UN Statistical Database: 8 921 343

## TB case notifications, 2017

Total number of cases	6 279
Notification rate per 100 000	70.4
New <sup>a</sup> and relapses	5 895
New <sup>a</sup> and relapses notification rate per 100 000	66.1
Pulmonary	4 119 (69.9%)
of which smear-positive	-
of which laboratory-confirmed	2 820 (68.5%)
Laboratory-confirmed TB cases	3 084 (49.1%)
Mean age of new and relapse TB cases	36.0 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	5 231 (83.3%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	3 084 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	940-870-1000
Pulmonary MDR-TB cases notified	546 (84.0%)
of which XDR-TB cases	279 (54.9%)
Notified MDR-TB	643 (20.8%)
of which XDR-TB cases	122 (26.3%)
TB cases tested for HIV	5 937 (100.7%)
HIV-positive TB cases	219 (3.7%)
of these on ART	117 (53.4%)

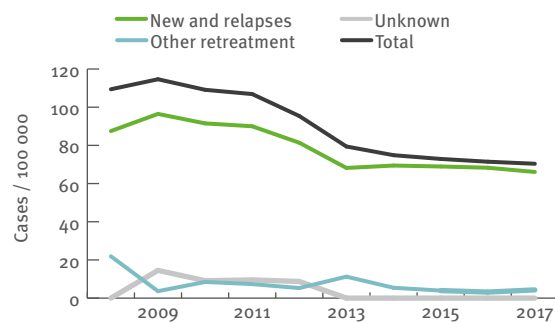
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Outcome cohort		
Case-linked data reporting	Yes	
Cases notified	5 324	682
Success	4 751 (89.2%)	398 (58.4%)
Died	228 (4.3%)	122 (17.9%)
Failed	104 (2.0%)	54 (7.9%)
Lost to follow-up	198 (3.7%)	100 (14.7%)
Not evaluated	43 (0.8%)	8 (1.2%)

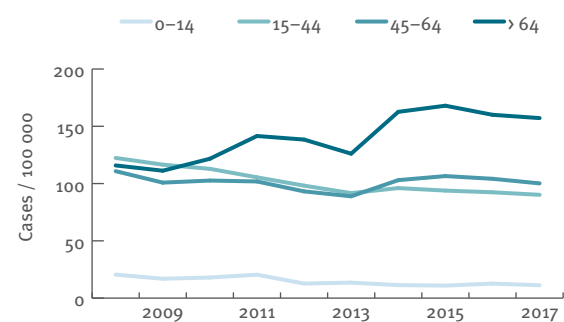
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008-2017<sup>a</sup>



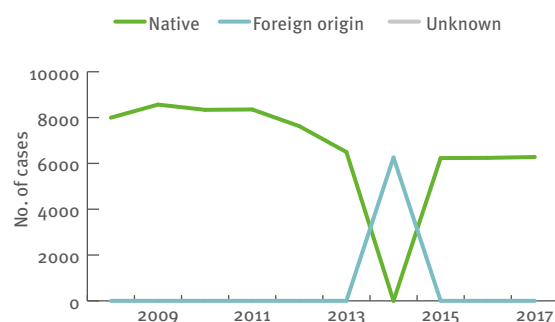
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008-2017<sup>a</sup>

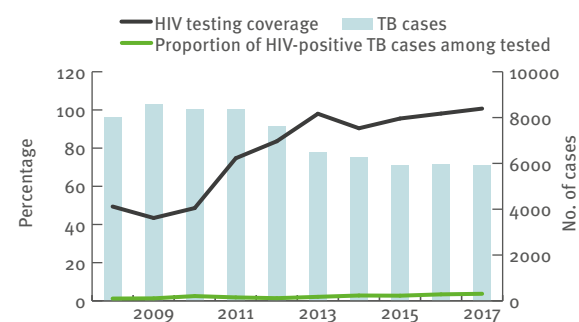


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008-2017

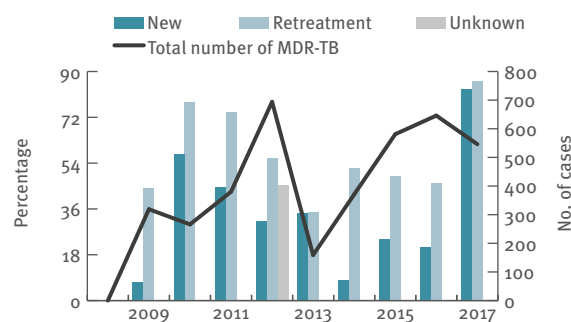


## TB/HIV coinfection, 2008-2017<sup>a</sup>

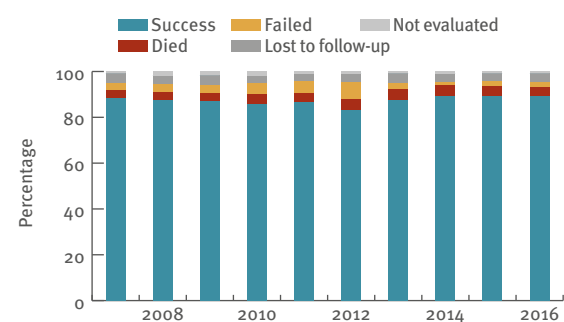


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008-2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007-2016<sup>a</sup>



<sup>a</sup> 2007-2011 cohorts include new cases only.

# Turkey

Population estimate 2017 by UN Statistical Database: 80 745 020

## TB case notifications, 2017

Total number of cases	12 046
Notification rate per 100 000	14.9
New <sup>a</sup> and relapses	11 821
New <sup>a</sup> and relapses notification rate per 100 000	14.6
Pulmonary (new and relapse) of which smear-positive	7 767 (65.7%)
of which laboratory-confirmed	6 162 (79.3%)
Laboratory-confirmed TB cases	6 338 (52.6%)
Mean age of new and relapse TB cases	44.2 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	1 107 (9.2%)
New (not previously treated)	11 101 (92.2%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	5 460 (86.1%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	350–310–390
Pulmonary MDR-TB cases notified of which XDR-TB cases	182 (3.3%) 2 (2.0%)
Notified MDR-TB of which XDR-TB cases	239 (4.4%) 2 (1.7%)
TB cases tested for HIV	8 423 (71.3%)
HIV-positive TB cases of these on ART	65 (0.8%) 51 (78.5%)

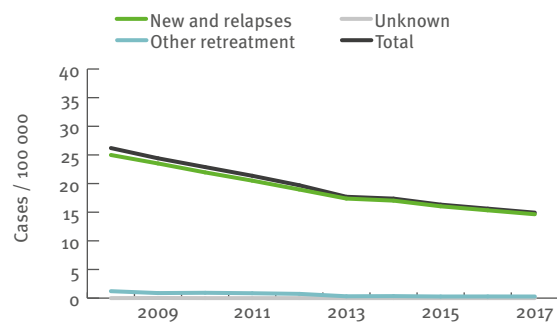
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	12 017	230
Success	10 462 (87.1%)	156 (67.8%)
Died	705 (5.9%)	15 (6.5%)
Failed	32 (0.3%)	18 (7.8%)
Lost to follow-up	325 (2.7%)	26 (11.3%)
Not evaluated	493 (4.1%)	15 (6.5%)

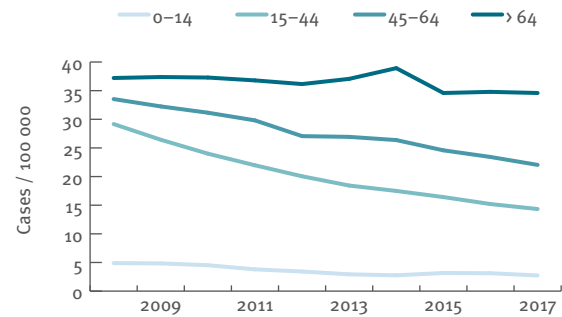
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



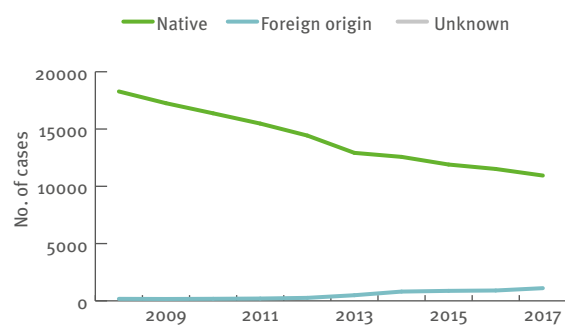
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

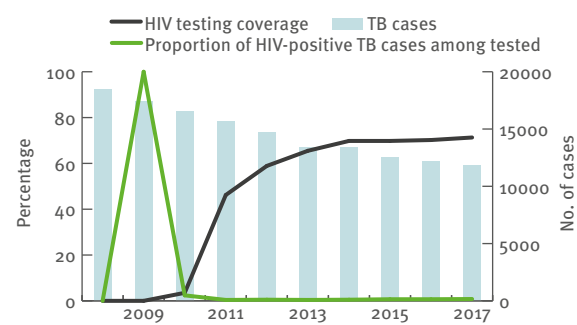


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

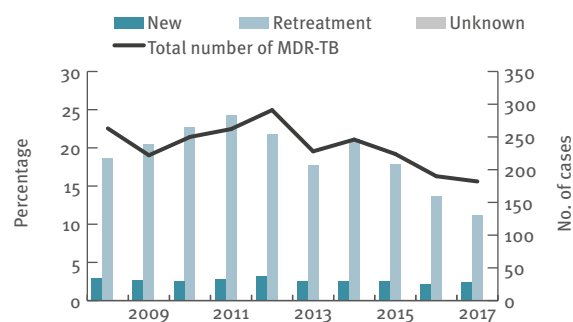


## TB/HIV coinfection, 2008–2017<sup>a</sup>

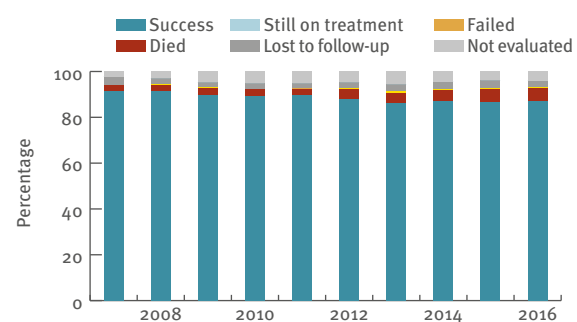


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.

# Turkmenistan

Population estimate 2017 by UN Statistical Database: 5 758 075

## TB case notifications, 2017

Total number of cases	2 232
Notification rate per 100 000	38.8
New <sup>a</sup> and relapses	1 968
New <sup>a</sup> and relapses notification rate per 100 000	34.2
Pulmonary	1 488 (75.6%)
of which smear-positive	-
of which laboratory-confirmed	693 (46.6%)
Laboratory-confirmed TB cases	921 (41.3%)
Mean age of new and relapse TB cases	38.4 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	1 880 (84.2%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	No
Case-linked data reporting	Yes
Cases with DST results	1 085 (100.0%)
Estimated RR-TB among notified pulmonary cases N, (best-low-high)	450-390-520
Pulmonary MDR-TB cases notified	-
of which XDR-TB cases	-
Notified MDR-TB	343 (31.6%)
of which XDR-TB cases	6
TB cases tested for HIV	-
HIV-positive TB cases	-
of these on ART	-

<sup>a</sup> National coverage 100% or culturing 90%, C+/all TB cases >50%, DST done for C+ >75%, EQA >95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

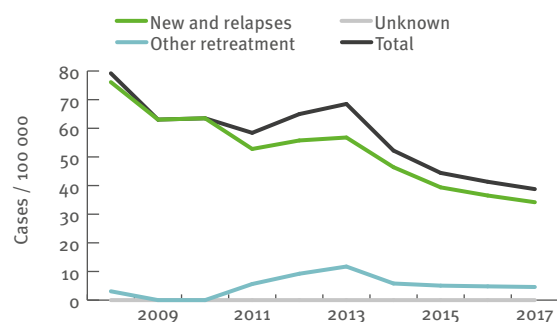
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	2 068	210
Success	1 738 (84.0%)	142 (67.6%)
Died	84 (4.1%)	23 (11.0%)
Failed	85 (4.1%)	31 (14.8%)
Lost to follow-up	102 (4.9%)	14 (6.7%)
Not evaluated	59 (2.9%)	0 (0.0%)

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

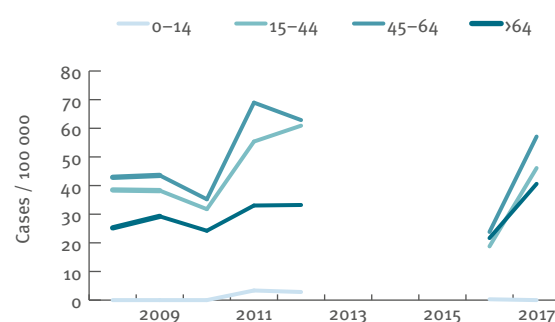
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008-2017<sup>a</sup>



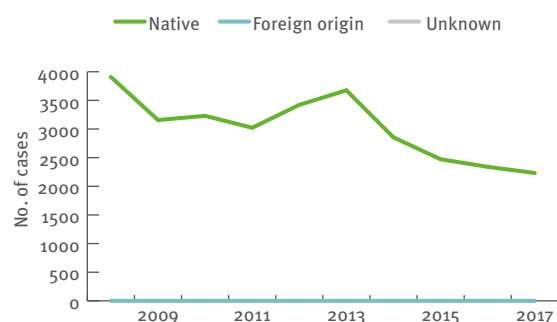
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008-2017<sup>a</sup>



<sup>a</sup> Data up to 2012 includes new TB cases only.

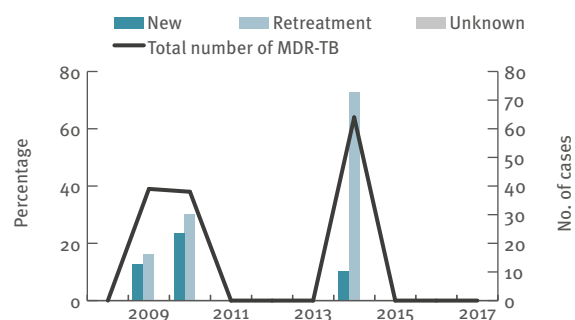
## TB cases by geographical origin, 2008-2017



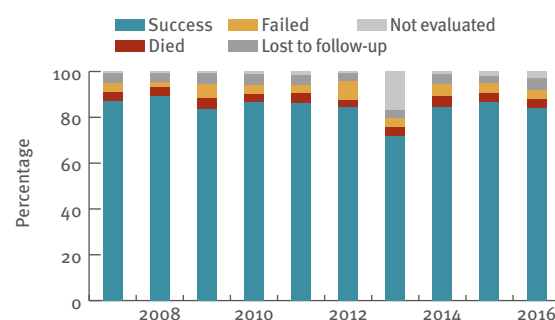
## TB/HIV coinfection, 2006-2014

Data not available

## MDR-TB cases by previous treatment history, 2008-2017



## Treatment outcome of new TB cases, 2007-2016<sup>a</sup>



<sup>a</sup> 2007-2011 cohorts include new cases only.

# Ukraine

Population estimate 2017 by UN Statistical Database: 44 222 947

## TB case notifications, 2017

Total number of cases	31 584
Notification rate per 100 000	71.4
New <sup>a</sup> and relapses	27 229
New <sup>a</sup> and relapses notification rate per 100 000	61.6
Pulmonary	24 735 (90.8%)
of which smear-positive	-
of which laboratory-confirmed	16 561 (67.0%)
Laboratory-confirmed TB cases	20 052 (63.5%)
Mean age of new and relapse TB cases	42.9 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	26 (0.1%)
New (not previously treated)	21 899 (69.3%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	18 624 (92.9%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	10 000–9800–10 000
Pulmonary MDR-TB cases notified	5 008 (26.9%)
of which XDR-TB cases	1001 (20.0%)
Notified MDR-TB	6 501 (34.9%)
of which XDR-TB cases	1 097 (16.6%)
TB cases tested for HIV	26 623 (97.8%)
HIV-positive TB cases	5 955 (22.4%)
of these on ART	4 426 (74.3%)

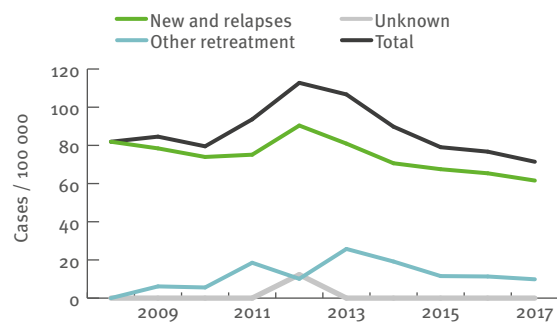
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	22 615	7 592
Success	17 234 (76.2%)	3 855 (50.8%)
Died	2 140 (9.5%)	1 193 (15.7%)
Failed	1 760 (7.8%)	1 220 (16.1%)
Lost to follow-up	1 387 (6.1%)	1 257 (16.6%)
Not evaluated	94 (0.4%)	67 (0.9%)

<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



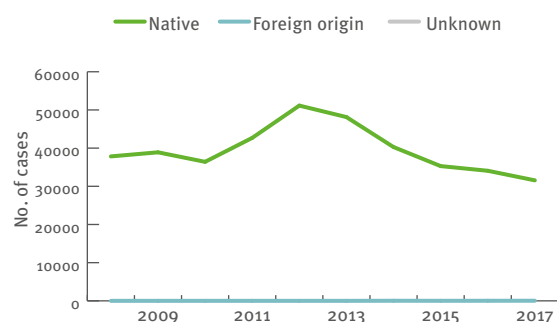
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

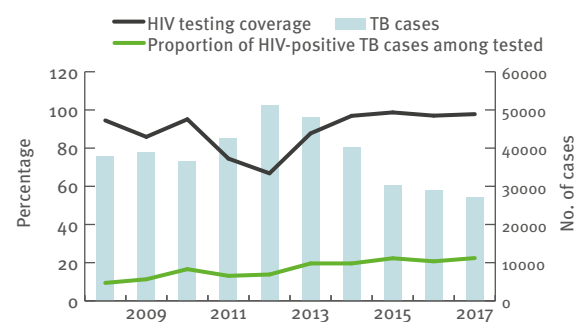


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

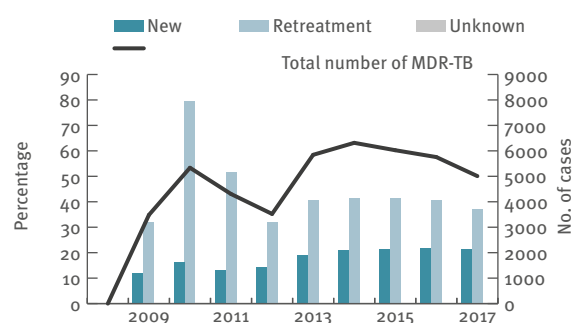


## TB/HIV coinfection, 2008–2017<sup>a</sup>

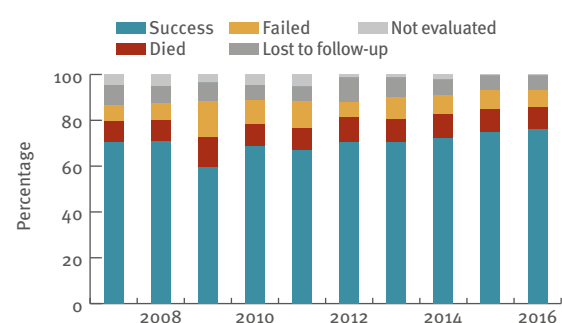


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.



# United Kingdom

Total population at 23 April 2018 by EUROSTAT: 65 808 573

## TB case notifications, 2017

Total number of cases	5 567
Notification rate per 100 000	8.5
New <sup>a</sup> and relapses	5 248
New <sup>a</sup> and relapses notification rate per 100 000	8.0
Pulmonary	3 048 (54.8%)
of which microscopy-positive	1 202 (39.4%)
of which laboratory-confirmed	2 287 (75.0%)
Laboratory-confirmed TB cases	3 478 (62.5%)
Mean age of new native TB cases	43.3 years
Mean age of new foreign TB cases	42.0 years
Foreign origin of all TB cases	3 797 (68.2%)
New (not previously treated)	5 248 (94.3%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2017

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	3 400 (97.8%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	55–36–74
Pulmonary MDR-TB cases notified	32 (1.4%)
of which XDR-TB cases	3 (10.0%)
Notified MDR-TB	47 (1.4%)
of which XDR-TB cases	3 (6.8%)
TB cases tested for HIV	4 671 (83.9%)
HIV-positive TB cases	138 (3.0%)
of these on ART	115 (83.3%)

<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.

<sup>b</sup> More than 50% of TB cases with reported HIV status.

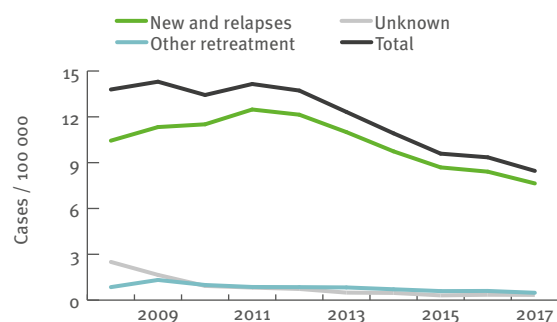
## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New culture positive pulmonary TB cases notified in 2016 <sup>a</sup>	All MDR-TB cases notified in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	2 284	48
Success	1 736 (76.0%)	29 (60.4%)
Died	155 (6.8%)	3 (6.3%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	118 (5.2%)	3 (6.3%)
Still on treatment	209 (9.2%)	10 (20.8%)
Not evaluated	66 (2.9%)	3 (6.3%)

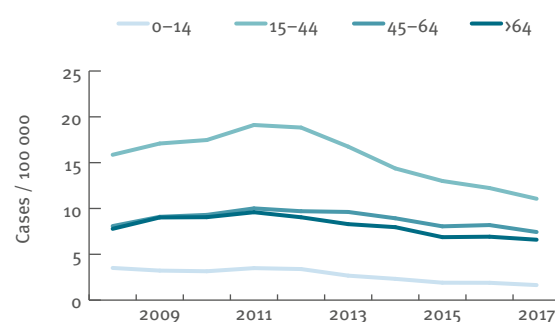
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

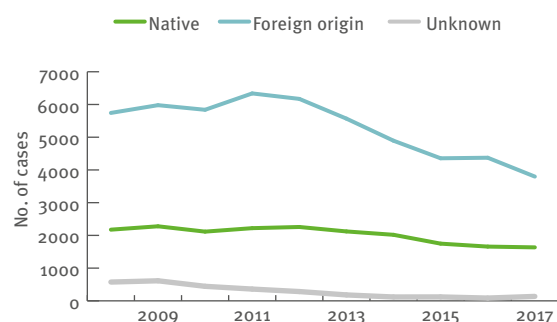
## TB notification rates by treatment history, 2008–2017



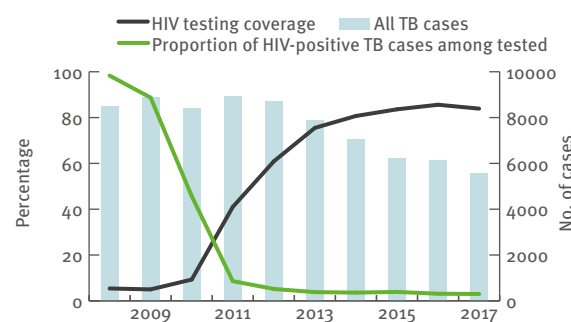
## New and relapsed TB cases – notification rates by age group, 2008–2017



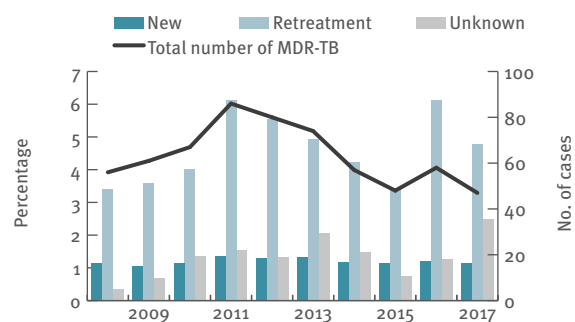
## TB cases by geographical origin, 2008–2017



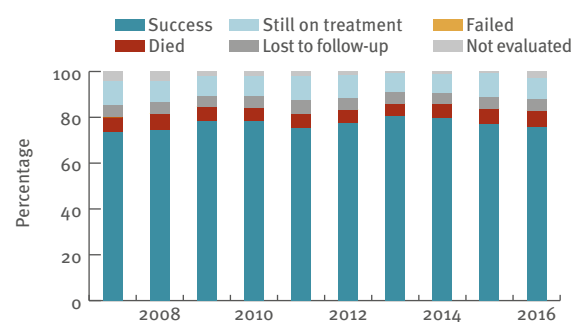
## TB/HIV coinfection, 2008–2017



## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2007–2016



# Uzbekistan

Population estimate 2017 by UN Statistical Database: 31 910 641

## TB case notifications, 2017

Total number of cases	19 329
Notification rate per 100 000	60.6
New <sup>a</sup> and relapses	16 842
New <sup>a</sup> and relapses notification rate per 100 000	52.8
Pulmonary (new and relapse)	11 179 (66.4%)
of which smear-positive	-
of which laboratory-confirmed	5 705 (51.0%)
Laboratory-confirmed TB cases	8 192 (42.4%)
Mean age of new and relapse TB cases	40.3 years
Mean age of new foreign TB cases	- years
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	14 553 (75.3%)

<sup>a</sup> Cases with unknown previous treatment included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2016

Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data reporting	Yes
Cases with DST results	6 526 (79.7%)
Estimated RR-TB among notified pulmonary cases N, (best–low–high)	3900–3800–4100
Pulmonary MDR-TB cases notified	540 (10.7%)
of which XDR-TB cases	0 (0.0%)
Notified MDR-TB	1 857 (28.5%)
of which XDR-TB cases	0 (0.0%)
TB cases tested for HIV	16 842 (100.0%)
HIV-positive TB cases	935 (5.6%)
of these on ART	935 (100.0%)

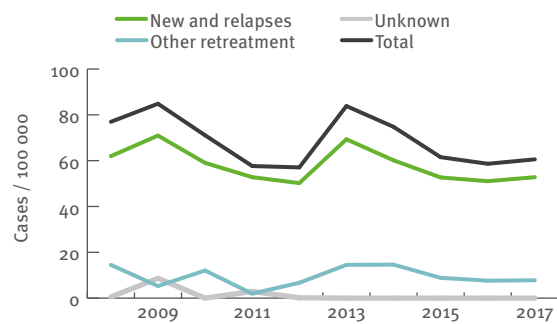
<sup>a</sup> National coverage 100% or culturing 90%, C+/all TB cases 50%, DST done for C+75%, EQA 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
Outcome cohort	New and relapsed TB cases notified in 2016 <sup>a</sup>	All RR/MDR-TB cases enrolled into second-line treatment in 2015 <sup>b</sup>
Case-linked data reporting	Yes	
Cases notified	14 743	2 149
Success	12 906 (87.5%)	1 259 (58.6%)
Died	639 (4.3%)	357 (16.6%)
Failed	219 (1.5%)	153 (7.1%)
Lost to follow-up	311 (2.1%)	167 (7.8%)
Not evaluated	668 (4.5%)	213 (9.9%)

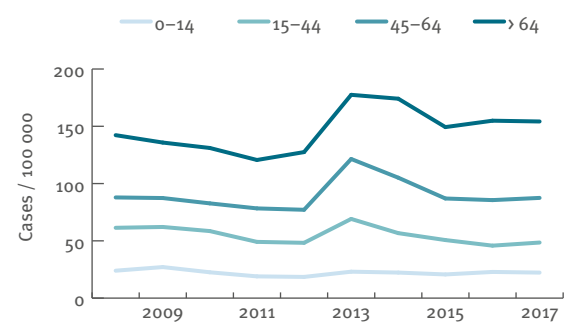
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by treatment history, 2008–2017<sup>a</sup>



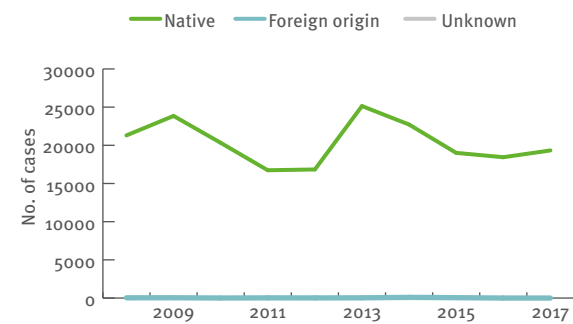
<sup>a</sup> Starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapsed TB cases – notification rates by age group, 2008–2017<sup>a</sup>

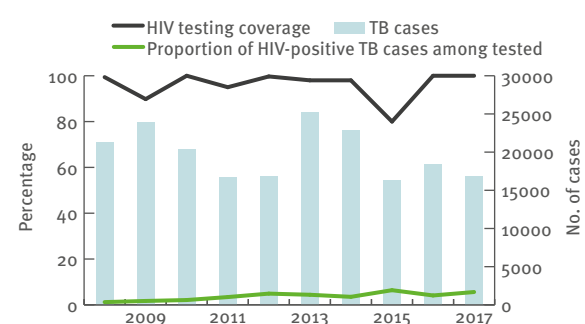


<sup>a</sup> Data up to 2012 includes new TB cases only.

## TB cases by geographical origin, 2008–2017

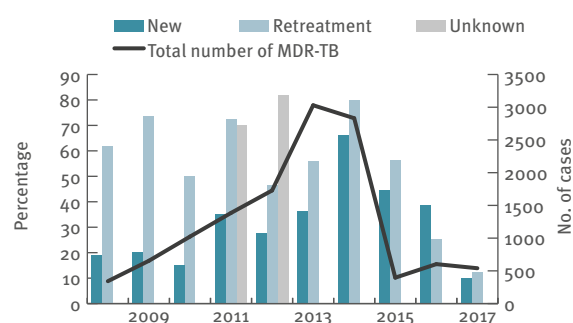


## TB/HIV coinfection, 2008–2017<sup>a</sup>

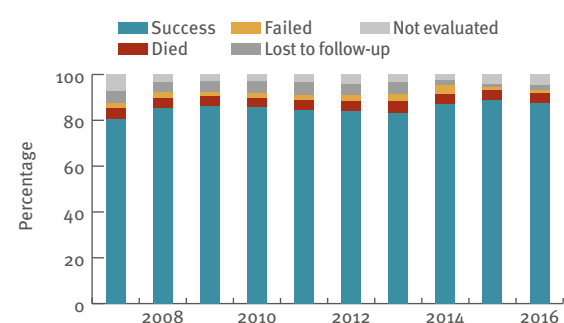


<sup>a</sup> Data up to 2014 include all TB cases.

## MDR-TB cases by previous treatment history, 2008–2017



## Treatment outcome, new and relapsed TB cases, 2007–2016<sup>a</sup>



<sup>a</sup> 2007–2011 cohorts include new cases only.



Publications Office

## EU publications

You can download or order free and priced EU publications from EU Bookshop at: <http://publications.europa.eu/eubookshop>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see <http://europa.eu/contact>).



Address requests about publications of the WHO Regional Office for Europe to:  
Publications

WHO Regional Office for Europe  
UN City, Marmorvej 51  
DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office website (<http://www.euro.who.int/pubrequest>).

**European Centre for Disease  
Prevention and Control (ECDC)**

Gustav den III:s Boulevard 40, SE-169 73, Solna, Sweden

Tel. +46 858 60 10 00

Fax +46 858 60 10 01

[www.ecdc.europa.eu](http://www.ecdc.europa.eu)

Contact us  
[publications@ecdc.europa.eu](mailto:publications@ecdc.europa.eu)

 Follow us on Twitter  
[@ECDC\\_EU](https://twitter.com/ECDC_EU)

 Like our Facebook page  
[www.facebook.com/ECDC.EU](http://www.facebook.com/ECDC.EU)

**World Health Organization  
Regional Office for Europe**

UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark

Tel. +45 45 33 70 00

Fax +45 45 33 70 01

[www.euro.who.int](http://www.euro.who.int)

Contact us  
[eurocontact@who.int](mailto:eurocontact@who.int)

 Follow us on Twitter  
[@WHO\\_EUROPE](https://twitter.com/WHO_EUROPE)

 Like our Facebook page  
[www.facebook.com/WHOEurope](http://www.facebook.com/WHOEurope)