

# Tuberculosis surveillance and monitoring in Europe

# 2023

2021 data



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# Abstract

This report provides an overview of the latest tuberculosis (TB) epidemiological situation and is published jointly by the WHO Regional Office for Europe and the European Centre for Disease Prevention and Control (ECDC). Despite the slight recovery of 1.1% in 2021 compared to 2020, the European Region still recorded 23% fewer new and relapse TB cases in 2021 than in 2019. Notwithstanding the potential issues of underdiagnosis and underreporting which continued throughout 2021, 166 026 incident TB cases were notified in the European Region. The epidemic patterns and trends vary widely - with an incidence level of under 10 per 100 000 population achieved in European Union/European Economic Area countries, while overall the Region still has nine of the 30 countries with the highest multidrug-resistant TB burden in the world.

## Keywords

TUBERCULOSIS – EPIDEMIOLOGY  
TB – EPIDEMIOLOGY  
TB SURVEILLANCE

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Suggested citation. European Centre for Disease Prevention and Control, WHO Regional Office for Europe. Tuberculosis surveillance and monitoring in Europe 2023 – 2021 data. Stockholm: European Centre for Disease Prevention and Control and Copenhagen: WHO Regional Office for Europe. 2023.

**Cataloguing-in-Publication (CIP) data.** CIP data are available at <http://apps.who.int/iris>.

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# Acknowledgements

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

Review and production support was provided by Andrei Dadu (WHO Regional Office for Europe), Soudeh Ehsani (WHO Regional Office for Europe), Ogtay Gozalov (WHO Regional Office for Europe), Arax Hovanesyan (freelance consultant), Anastasia Pharris (ECDC), Marieke J. van der Werf (ECDC) and Askar Yedilbayev (WHO Regional Office for Europe).

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

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: Anush Khachatryan; Austria: Bernhard Benka, Alexander Indra; Azerbaijan: Sevinj Taghiyeva; Belarus: Dzmitry Klimuk, Dmitry Zhurkin; Belgium: Wouter Arrozala de Oñate, Vinciane Sizaire; Bosnia and Herzegovina: Snježana Brčkalo; Bulgaria: Elizabeta Batchiiska; Croatia: Zvezdana Lovrić, Goranka Petrović; Cyprus: Costas Constantinou, Anna Papandreou; Czechia: Věra Dvořáková, Pavel Slezák, Jiří Wallenfels; Denmark: Anders Koch, Troels Lillebaek; Estonia: Vahur Hollo, Piret Viiklepp; Finland: Silja Mentula, Hanna Soini; France: Jean-Paul Guthmann, Delphine Viriot; Georgia: Mamuka Chincharauli, Nino Lomtadze; Germany: Walter Haas, Stefan Kroeger; Greece: Sofia Chatzianastasiou; Hungary: Ágnes Bakos; Iceland: Kamilla Sigridur Josefsdottir; Ireland: Sarah Jackson, Paul McKeown; Israel: Yana Levin; Italy: Stefania D'Amato, Daniela Maria Cirillo; Kazakhstan: Elena Arbutova; Kosovo<sup>1</sup>: Xhevat Kurhasani; Kyrgyzstan: Elmira Abdrahmanova; Latvia: Bormane Antra, Ieva Rimšāne; Liechtenstein: Esther Walser-Domjan; Lithuania: Giedrė Aleksienė, Edita

Davidavičienė, Kęstutis Miškinis, Alvyda Naujokaitė, Jurgita Pakalniškiene; Luxembourg: Irene Demuth, Gilles Urth; Malta: Analita Pace Ascjak, Tanya Melillo; Monaco: Jean Lorenzi; Montenegro: Stevan Lučić; Netherlands: Erika Slump, Jossy van den Boogaard; North Macedonia: Maja Zakoska; Norway: Trude Margrete Arnesen, Einar Heldal, Anne Torunn Mengshoel; Poland: Maria Korzeniewska-Koseła; Portugal: Isabel Carvalho, Raquel Duarte, Marta Gomes, Pedro Pinto Leite, André Santos Silva; Republic of Moldova: Andrei Corloteanu; Romania: Nicoleta Valentina Cioran, Odette Popovici; Russian Federation: Sergey Sterlikov; Serbia: Maja Stosic; Slovakia: Monika Polanova, Ivan Solovič; Slovenia: Urska Bidovec, Petra Svetina; Spain: Rosa Cano Portero, Zaida Herrador Ortiz, Fernando Simón Soria; Sweden: Maria Axelsson, Sara Byfors, Petra Edquist, Jerker Jonsson; Switzerland: Ekkehardt Altpeter; Tajikistan: Firuza Sharipova; Türkiye: Mine Yenice; Turkmenistan: Aisoltan Charyeva; Ukraine: Larissa Korinchuk; United Kingdom: Colin Campbell, Michael Devine, Lisa Glaser, Jim McMenamin, Morris Muzyamba, Mark O'Doherty, Malorie Perry, Arlene Reynolds, Grace Smith, Lucy Thomas; Uzbekistan: Shahnoza Usmonova.

<sup>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

# Abbreviations

<b>ART</b>	antiretroviral therapy
<b>CI</b>	confidence interval
<b>COVID-19</b>	coronavirus 2019
<b>DRS</b>	drug-resistance surveillance
<b>DST</b>	drug-susceptibility testing
<b>(E)</b>	European (indicator)
<b>ECDC</b>	European Centre for Disease Prevention and Control
<b>EEA</b>	European Economic Area
<b>EQA</b>	external quality assessment
<b>ERLTB-Net</b>	European Reference Laboratory Network for Tuberculosis
<b>EU</b>	European Union
<b>EU/EEA</b>	European Union/European Economic Area
<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, Türkiye, Turkmenistan, Ukraine and Uzbekistan)
<b>LTBI</b>	latent tuberculosis infection
<b>MDR</b>	multidrug resistance
<b>MDR-TB</b>	multidrug-resistant tuberculosis
<b>PLHIV</b>	people living with HIV
<b>pre-XDR</b>	pre-extensive drug resistance
<b>pre-XDR-TB</b>	pre-extensively drug-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>UI</b>	Uncertainty intervals
<b>WRD</b>	WHO-recommended rapid diagnostics (tests)
<b>XDR</b>	extensive drug resistance
<b>XDR-TB</b>	extensively drug-resistant tuberculosis





**Executive summary/  
Краткое резюме**



# Executive summary

## The WHO European Region

The data in this report present tuberculosis (TB) notifications through to the end of 2021, the period of the global COVID-19 pandemic. Although 2020–2021 data are compared with those for previous years, the rates and trends should be interpreted with caution, due to the impact on TB detection and reporting of the public health and social measures introduced by countries in response to the COVID-19 pandemic [1].

### TB burden

An estimated 230 000 people (95% uncertainty interval (UI): 211 000–251 000) fell ill with TB in 2021, equivalent to 25 cases (95% UI: 23–27) per 100 000 population. Although by 2020 the Region had overachieved on the End TB strategy milestone of a 20% cumulative reduction for TB incidence for the period 2015–2020, in 2021, for the first time in two decades, the incidence rate is estimated to have increased by 1.2% compared to 2020. This reversal reflects the impact of disruption to TB services caused by the COVID-19 pandemic.

An estimated 20 000 TB deaths occurred among HIV-negative people in the European Region in 2021, equivalent to 2.2 deaths per 100 000 population. Between 2012 and 2021, the TB mortality rate at regional level fell cumulatively by 52%, from 4.4 to 2.1 deaths per 100 000 population – on average a decline of 7.7% per year. Between 2020 and 2021, TB mortality in the Region came to a standstill for the first time in two decades as a consequence of undiagnosed and untreated TB and the associated increase in the number of deaths due to disruptions to TB services caused by the COVID-19 pandemic.

Between 2020 and 2021, the burden of rifampicin-resistant TB is estimated to have increased, the first year-on-year increase in a decade, with an estimated 73 000 (95% CI: 64 000–81 000) new cases of rifampicin-resistant and multidrug-resistant TB (RR/MDR-TB) in the Region. Among newly notified bacteriologically-confirmed pulmonary TB patients there were an estimated 37 000 rifampicin-resistant cases. The proportion of RR/MDR-TB among new and previously treated TB cases in the Region also significantly exceeds the global average (26% of new and 57% of previously treated cases compared to 3.6% and 18% respectively) [2].

HIV prevalence in incident TB cases was estimated to be 13% in 2021, another year with no change after an unprecedented rise from 4% to 12% during the period 2007–2016. There were an estimated 29 000 HIV-positive TB cases in the Region, with around 84% of these thought to be in the Russian Federation (62%) and Ukraine (22%).

## TB disease notification and treatment outcomes

In 2021, 166 026 incident TB cases were reported in 51 of the 53 countries in the Region<sup>2</sup>. This amounted to 72% of the estimated new and relapse cases. There was a slight recovery in TB notifications, amounting to 1.1% in 2021 compared to the previous year and many countries also reported a year-on-year increase in the number of notified TB cases against 2020. However, the WHO European Region still recorded 23% fewer new and relapse TB cases in 2021 than in 2019.

A total of 137 212 patients with pulmonary TB (82.6%) were notified among incident TB cases, 69.9% of which were laboratory-confirmed. Among bacteriologically confirmed pulmonary TB cases, 94.1% were tested for rifampicin resistance.

Overall, 32.6% of pulmonary TB patients who were reported as having tested for drug susceptibility had RR/MDR-TB. Prevalence of RR/MDR-TB among new and previously treated bacteriologically confirmed pulmonary TB cases was 22.6% and 53.0% respectively.

Data on drug-susceptibility testing (DST) to fluoroquinolones were available for 89.7% of all notified pulmonary RR-TB cases. Overall, 33.4% of pulmonary RR/MDR-TB cases with DST results for fluoroquinolones had pre-extensively drug-resistant TB (pre-XDR-TB) in 2021. Among pre-XDR-TB patients tested for any other Group A drugs, the prevalence of extensively drug-resistant tuberculosis (XDR-TB) was 11.2% at regional level.

Among new and relapse TB patients notified from countries reporting HIV testing data, 92.8% were screened for HIV. A total of 20 175 TB cases were detected with HIV-positive status, which is 14.8% of those tested.

A total of 15 909 (80.1%) HIV-positive patients are reported to have received antiretroviral therapy (ART). Although ART coverage has been increasing over the last five years, it is still below the WHO target of universal ART coverage for TB/HIV coinfecting patients.

The treatment success rate in the Region remains below the respective regional targets of 80% treatment success by 2025 and 85% treatment success by 2030.

## Conclusions

The remarkable progress in containing the burden of TB in the Region observed between 2015 and 2019 was jeopardised in 2020 and 2021 by the COVID-19 pandemic. As a result, in 2021, the downward trend in TB mortality came to a halt and incidence reversed, meaning that far fewer people were diagnosed and treated for TB. Consequently,

<sup>2</sup> San Marino, Monaco reported zero cases in 2021. Liechtenstein is an EEA Member State, but not a WHO Member State.

fewer people were tested for drug resistance and enrolled into RR/MDR-TB treatment.

In 2020, the downward trend in the number of TB deaths came to a standstill and this remained the same in 2021 – a consequence of delay in, or lack of, TB diagnosis due to disruption to TB services, leading to increased severity of disease and an associated increase in deaths. The burden of drug-resistant TB (DR-TB) is also estimated to have increased between 2020 and 2021.

The rate of successful treatment outcomes among new and relapse TB cases is lower compared to previous years, indicating that countries are facing increasing challenges to ensure the delivery of appropriate care to TB patients. On a positive note, the treatment success rate of RR-TB, particularly among pre-XDR-TB patients, is slowly but consistently improving in the Region, most likely reflecting the scale-up of new and repurposed TB drug use and shorter, all-oral treatment regimens for DR-TB patients. Nevertheless, despite the slow improvement, the treatment success rates for new and relapse cases and RR/MDR-TB patients are still below regional and global targets. Similarly, notwithstanding the efforts made, the burden in relation to RR-TB and TB/HIV remains considerable, underlining the need to introduce more innovative and effective approaches to the diagnosis and treatment of TB and MDR-TB.

The Tuberculosis Action Plan for the WHO European Region 2016–2020 came to an end in 2020 and the progress made was assessed and reported to the 70th session of the Regional Committee for Europe [3]. The new Tuberculosis action plan for the WHO European Region 2023–2030, developed based on consultations with Member States, partners, civil society organizations and affected communities, was submitted to the 72nd session of the WHO Regional Committee for Europe and adopted by the Member States as resolution EUR/RC72(2) [4–5].

The Regional action plan will operationalise the global End TB Strategy through Region-specific actions, placing people at the heart of the response, in line with the European Programme of Work, 2020–2025 – ‘United Action for Better Health in Europe’ [6]. By contributing to the European Programme of Work, moving towards attaining universal health coverage, promoting health and well-being and protecting against health emergencies, the Regional Action Plan strives for a better balance in providing support at the regional, sub-regional and country levels for greater impact at the population level.

## European Union and European Economic Area countries

### Epidemiology and treatment outcome

In 2021, 33 520 cases of TB were reported in 29 European Union and European Economic Area (EU/EEA) countries (Iceland did not report data), resulting in a notification rate of 7.4 per 100 000 population in the EU/EEA. The overall notification rate in most countries has decreased over the last five years. The rates for 2020–2021 should be interpreted with caution, given the potential impact

that measures implemented to mitigate the COVID-19 pandemic may have had on TB data collection and access to health services.

Of all notified TB cases, 25 402 (75.8%) were newly diagnosed and 21 701 (86.2%) were confirmed by culture, or smear and nucleic acid amplification test. In 2021, adults aged between 25 and 64 years accounted for 65.8% of all new and relapse TB cases, while children under 15 years accounted for 3.5% of all new and relapse TB cases. Romania reported the highest notification rates among children, with 9.2 cases per 100 000 population aged 0–4 years. In 2021, new and relapse TB cases were more frequently reported in males than females, with a male-to-female ratio of 2.0. Just over one-third (33.8%) of TB cases reported in the EU/EEA in 2021 were of foreign origin.

Of 16 895 cases with DST results for at least rifampicin, 630 (3.8%) had MDR-TB. The countries with the highest proportion of MDR-TB cases among cases with DST results were Estonia (28.4%) and Lithuania (17.5%). Pre-XDR-TB was reported for 115 (28.5%) of the 404 RR/MDR-TB cases tested for fluoroquinolone susceptibility. Among the pre-XDR cases, 79 (68.7%) were tested for susceptibility to any other group A drug, and 43 (54.4%) met the XDR-TB definition.

In 2021, 21 countries reported data on HIV co-infection. In the past, the number of countries reporting data on HIV coinfection varied, with reporting peaking at 23 countries in 2016 and 2017, before decreasing to 21 countries in 2018 and again in 2019 and 2020 to 19 countries. Of the 12 277 TB cases with known HIV status, 472 (3.8%) were reported as HIV-positive.

TB in prisons remains poorly reported. For the 14 EU/EEA countries reporting data, the notification rate was 332 new and relapse TB cases per 100 000 prison population, and prisoners had a relative risk of 8.9 compared to the general population in the same countries.

Of all 20 760 TB cases notified in 2020 with a treatment outcome reported in 2021, 71.7% were treated successfully, 8.4% died, 0.8% experienced treatment failure, 3.3% were lost to follow up, 2.2% were still on treatment 12 months after starting, and for 13.7% the treatment outcome was not evaluated. Of 781 RR/MDR-TB cases notified in 2019 with a treatment outcome reported in 2021, 51.7% were treated successfully, 14.2% died and 9.1% experienced treatment failure. Of 159 pre-XDR-TB cases with a treatment outcome reported in 2021, 27 (17.0%) were treated successfully, 30 (18.9%) died, 22 (13.8%) experienced treatment failure, 14 (8.8%) were lost to follow up, 58 (36.5%) were still on treatment 24 months after starting and for 8 (5.0%) the treatment outcome was not evaluated. Treatment success was only reported for 18 (66.7%) of the 27 XDR-TB cases notified in 2018, while 11.1% of cases were reported to have died and 11.1% to have experienced treatment failure.

### Conclusions

In 2021, 29 of 30 EU/EEA countries reported TB notification data. There was a further slight decline in the overall TB notification rate between 2020 and 2021, continuing

the trend observed since 2002. The decline between 2019 and 2021 data must be interpreted with caution due to the possible impact of measures implemented to mitigate the COVID-19 response. Nevertheless, there is significant work ahead to reach the United Nations Sustainable Development Goal 3 target of achieving a notification rate of 2.4 per 100 000 population at EU/EEA level by 2030. Despite the slight increase in the number of reported MDR-TB cases, which accounted for a small proportion of all reported TB cases in 2021, the data shows a similar trend across EU/EEA countries in 2021 when compared to data before 2020.

Across all cohorts, reported treatment success remains well below WHO's 90% treatment success target. Of all TB cases notified in 2020 with a treatment outcome reported in 2021, 71.7% were treated successfully. Treatment success was lower for XDR-TB cases at 36 months (66.7%) and lower still among RR/MDR-TB cases at 24 months (51.7%) while the proportion of deaths for these cohorts was 11.1% and 18.9%, respectively.

Across the EU/EEA, further efforts are needed to improve reporting of HIV coinfection, TB in prisons, and treatment outcomes.

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<sup>3</sup> All weblinks were accessed on 16 February 2023.



# Краткое резюме

## Европейский регион ВОЗ

В настоящем докладе представлены данные о регистрации случаев туберкулеза (ТБ) за период глобальной пандемии COVID-19 по состоянию на конец 2021 г. Хотя данные за 2020–2021 гг. сравниваются с данными за предыдущие годы, показатели и тенденции следует интерпретировать с осторожностью ввиду влияния на выявление и регистрацию ТБ мер в области общественного здравоохранения и социальной защиты, принятых странами в ответ на пандемию COVID-19 [1].

### Бремя ТБ

По оценкам, в 2021 г. ТБ заболели 230 000 человек (95% интервал неопределенности [UI]: 211 000–251 000), что эквивалентно 25 случаям (95% UI: 23–27) на 100 000 населения. Хотя к 2020 г. Регион преодолел веху, предусмотренную стратегией ВОЗ по ликвидации туберкулеза, по кумулятивному сокращению инцидентности ТБ, превысив ее контрольное значение на 20% в период 2015–2020 гг., в 2021 г. впервые за два десятилетия показатель заболеваемости, по оценкам, вырос на 1,2%. по сравнению с 2020 г. Подобный регресс отражает влияние сбоев в работе противотуберкулезных служб, вызванных пандемией COVID-19.

Согласно оценкам, в 2021 г. в Европейском регионе было зарегистрировано 20 000 случаев смерти вследствие ТБ среди ВИЧ-отрицательных людей, что эквивалентно 2,2 случаям смерти на 100 000 населения. В период с 2012 г. по 2021 г. показатель смертности от ТБ на региональном уровне в совокупности снизился на 52%, с 4,4 до 2,1 случаев смерти на 100 000 населения (снижение в среднем на 7,7% в год). В период 2020–2021 гг. смертность от ТБ в Регионе впервые за два десятилетия не изменилась, что является следствием увеличения числа случаев невыявленного и нелеченого ТБ и связанного с этим увеличения числа смертей из-за сбоев в работе противотуберкулезных служб, вызванных пандемией COVID-19.

По оценкам, с 2020 г. по 2021 г. бремя устойчивого к рифампицину ТБ увеличилось (первое за десятилетие повышение в годовом исчислении) с регистрацией в Регионе примерно 73 000 (95% доверительный интервал [CI]: 64 000–81 000) новых случаев ТБ, устойчивого к рифампицину, и ТБ с множественной лекарственной устойчивостью (РУ/МЛУ-ТБ). Среди впервые зарегистрированных пациентов с бактериологически подтвержденным ТБ легких в 37 000 случаев, согласно оценкам, выявлялась устойчивость к рифампицину. Доля РУ/МЛУ-ТБ среди новых и ранее леченных случаев ТБ в Регионе также значительно превышает среднмировой показатель (26% новых и 57% ранее леченных случаев в сравнении с 3,6% и 18% соответственно) [2].

Распространенность ВИЧ-инфекции среди инцидентных случаев ТБ оценивалась как 13% в 2021 г., оказавшись еще одним не принесшим изменений годом после беспрецедентного роста с 4% до 12% в период 2007–2016 гг. По оценкам, в Регионе было зарегистрировано 29 000 случаев ТБ среди ВИЧ-положительных лиц, из которых около 84% приходится на Российскую Федерацию (62%) и Украину (22%).

### Регистрация и исходы лечения активного ТБ

В 2021 г. было зарегистрировано 166 026 инцидентных случаев ТБ в 51 из 53 стран в Регионе,<sup>4</sup> что составило лишь 72% от оценочного значения новых и рецидивных случаев. В 2021 г. произошел незначительный рост числа зарегистрированных случаев ТБ – 1,1% по сравнению с предыдущим годом; многие страны также сообщили об увеличении числа зарегистрированных случаев ТБ в годовом исчислении в сравнении с 2020 г. Однако в 2021 г. в Европейском регионе ВОЗ по-прежнему регистрировалось на 23% меньше новых и рецидивных случаев, чем в 2019 г.

В общей сложности среди инцидентных случаев ТБ было зарегистрировано 137 212 пациентов с ТБ легких (82,6%), из которых 69,9% имели лабораторное подтверждение диагноза. Среди бактериологически подтвержденных случаев ТБ легких 94,1% обследовались на устойчивость к рифампицину.

В целом, 32,6% больных легочными формами ТБ, зарегистрированных как прошедшие тестирование лекарственной чувствительности, страдали РУ/МЛУ-ТБ. Распространенность РУ/МЛУ-ТБ среди новых и ранее леченных бактериологически подтвержденных случаев ТБ легких составила 22,6% и 53,0% соответственно.

Сведения о тестировании лекарственной чувствительности (ТЛЧ) к фторхинолонам были доступны для 89,7% всех случаев регистрации РУ-ТБ легких. В общей сложности 33,4% случаев РУ-МЛУ/ТБ легких с результатами ТЛЧ к фторхинолонам в 2021 г. были случаями с предширокой лекарственной устойчивостью (пре-ШЛУ-ТБ). Среди пациентов с пре-ШЛУ-ТБ, обследованных на чувствительность к любым другим противотуберкулезным препаратам группы А, распространенность ШЛУ-ТБ на региональном уровне составила 11,2%.

Среди новых и рецидивных пациентов с ТБ, зарегистрированных странами с указанием сведений о тестировании на ВИЧ, 92,8% прошли скрининг на ВИЧ. Среди пациентов с ТБ в 20 175 случаях был выявлен ВИЧ-положительный статус, что составляет 14,8% обследованных.

<sup>4</sup> Сан-Марино не подало сведений, Монако доложило об отсутствии случаев в 2021 г. Лихтенштейн – государство-член ЕЭЗ, но не государство-член ВОЗ.

Были поданы сведения о 15909 (80,1%) ВИЧ-положительных пациентах, получивших антиретровирусную терапию (АРТ). Хотя за последние пять лет охват АРТ увеличивался, он до сих пор не достигает целевого ориентира ВОЗ по всеобщему охвату АРТ пациентов с коинфекцией ТБ/ВИЧ.

Частота успешного лечения в Регионе остается ниже соответствующих региональных целевых ориентиров – 85% и 75%. Исходы успешного лечения для когорт инцидентного ТБ и РУ/МЛУ-ТБ составили 73,4% и 57,2% соответственно.

## Выводы

Заметный прогресс в снижении бремени ТБ в Регионе, наблюдавшийся в период с 2015 г. по 2019 г., оказался под угрозой в 2020–2021 гг. из-за пандемии COVID-19. В результате в 2021 г. прекратился нисходящий тренд – тенденция к снижению смертности от ТБ, а заболеваемость начала расти, означая, что гораздо меньше больных людей были диагностированы и лечились от ТБ. Следовательно, меньше людей обследовались на лекарственную устойчивость и получили лечение по поводу РУ/МЛУ-ТБ.

В 2020 г. тенденция к снижению числа смертей вследствие ТБ прекратилась, оставаясь неизменной и в 2021 г., что можно расценивать как следствие задержки или отсутствия диагностики ТБ из-за сбоев в работе противотуберкулезных служб, что приводит к увеличению тяжести заболевания и сопряженному повышению показателя смертности. Согласно оценкам, в период 2020–2021 гг. увеличилось также и бремя лекарственно-устойчивого ТБ (ЛУ-ТБ).

Частота успешных исходов лечения новых и рецидивных случаев ТБ ниже в сравнении с предыдущими годами, и это говорит о том, что страны сталкиваются с нарастающими проблемами в обеспечении оказания надлежащей помощи пациентам с ТБ. Позитивным моментом является то, что показатель успешности лечения РУ-ТБ в Регионе, особенно среди пациентов с пре-ШЛУ-ТБ, медленно, но неуклонно улучшается, что, скорее всего, отражает расширение масштабов использования новых и перепрофилированных противотуберкулезных препаратов и укороченных полностью пероральных режимов лечения пациентов с ЛУ-ТБ. Тем не менее, несмотря на медленное улучшение, частота успешного лечения новых и рецидивных случаев, а также пациентов с РУ/МЛУ-ТБ по-прежнему ниже региональных и глобальных целевых ориентиров. Аналогичным образом, несмотря на предпринимаемые усилия, бремя РУ-ТБ и ТБ/ВИЧ остается значительным, что подчеркивает необходимость внедрения более инновационных и эффективных подходов к диагностике и лечению ТБ и МЛУ-ТБ.

Срок выполнения Плана действий по борьбе с туберкулезом для Европейского региона ВОЗ на 2016–2020 гг. истек в 2020 г., а достигнутый прогресс был оценен и представлен на Семидесятой сессии Европейского регионального комитета [3]. Новый План действий по борьбе с туберкулезом для Европейского региона ВОЗ

на 2023–2030 гг., разработанный на основе консультаций с государствами-членами, партнерами, организациями гражданского общества и затронутыми сообществами, был представлен на Семьдесят второй сессии Европейского регионального комитета ВОЗ и принят государствами-членами в качестве резолюции EUR/RC72(2) [4–5].

Региональный план действий позволит реализовать глобальную стратегию по ликвидации туберкулеза посредством деятельности, специфичной для конкретного региона, с принятием мер, ориентированных на нужды людей, в соответствии с Европейской программой работы на 2020–2025 гг. – «Совместные действия для улучшения здоровья жителей Европы» [6]. Внося свой вклад в Европейскую программу работы, стремясь к обеспечению всеобщего охвата услугами здравоохранения, содействуя укреплению здоровья и благополучия и защите от чрезвычайных ситуаций в области здравоохранения, Региональный план действий призван улучшить баланс в оказании поддержки на региональном, субрегиональном и страновом уровнях для достижения большего воздействия на популяционном уровне.

## Страны Европейского союза и Европейской экономической зоны

### Эпидемиология и исходы лечения

В 2021 г. в 29 странах Европейского союза и Европейской экономической зоны (ЕС/ЕЭЗ) были зарегистрированы 33 520 случаев ТБ (Исландия сведений не подавала), что соответствует частоте регистрации 7,4 на 100 000 населения ЕС/ЕЭЗ. Общая частота регистрации в большинстве стран за последние пять лет снизилась. Показатели за 2020–2021 гг. следует интерпретировать с осторожностью с учетом потенциального влияния мер, принятых странами для смягчения воздействия, которое пандемия COVID-19 могла оказать на сбор данных о ТБ и доступ к медицинскому обслуживанию.

Из всех зарегистрированных случаев ТБ 25 402 (75,8%) были впервые диагностированными; 21 701 (86,2%) были подтверждены методом посева или исследованием мазка или же методом амплификации нуклеиновых кислот. В 2021 г. взрослые в возрасте от 25 до 64 лет составляли 65,8% всех новых и рецидивных случаев ТБ, в то время как дети в возрасте младше 15 лет составляли 3,5% всех новых и рецидивных случаев ТБ. Румыния предоставила сведения о наиболее высокой частоте регистрации среди детей – 9,2 случаев на 100 000 населения в возрасте 0–4 года. В 2021 г. новые и рецидивные случаи ТБ более часто регистрировались среди мужчин, нежели среди женщин, с соотношением мужчин к женщинам, равным 2,0. Чуть более одной трети (33,8%) случаев ТБ, зарегистрированных в ЕС/ЕЭЗ в 2021 г., были иностранного происхождения.



Из 16 895 случаев с результатами ТЛЧ по меньшей мере к рифампицину 630 (3,8%) признаны случаями МЛУ-ТБ. Странами с наивысшей долей МЛУ-ТБ среди случаев с результатами ТЛЧ оказались Эстония (28,4%) и Литва (17,5%). Пре-ШЛУ-ТБ отмечался у 115 (28,5%) из 404 пациентов с РУ/МЛУ-ТБ, обследованных на чувствительность к фторхинолонам. Среди случаев пре-ШЛУ-ТБ 79 (68,7%) тестировались на чувствительность к какому-либо противотуберкулезному препарату группы А, а 43 (54,4%) удовлетворили критериям ШЛУ-ТБ согласно его определению.

В 2021 г. 21 страна подала сведения о ТБ, сочетанным с ВИЧ-инфекцией. В прошлом число стран, подававших сведения о конфеции с ВИЧ, варьировало с максимальным количеством на пике – 23 страны – в 2016–2017 гг. с последующим снижением до 21 страны в 2018 г. и повторным снижением до 19 стран в 2019–2020 гг. Из 12 277 случаев ТБ с известным ВИЧ-статусом 472 (3,8%) были зарегистрированы как ВИЧ-положительные.

По-прежнему подается недостаточно сведений о ТБ в местах лишения свободы. Для подавших сведения стран ЕС/ЕЭЗ частота регистрации составила 332 новых и рецидивных случая ТБ на 100 000 заключенных, а относительный риск среди заключенных достигал 8,9 по сравнению с общей популяцией в тех же странах.

Из всех 20 760 случаев ТБ, зарегистрированных в 2020 г., исходы лечения которых стали известны в 2021 г., 71,7% были успешно пролечены, 8,4% умерли, у 0,8% отмечалась неудача лечения, 3,3% были потеряны для последующего наблюдения, 2,2% продолжали лечение через 12 месяцев после его начала, а у 13,7% исход лечения не оценивался. Из 781 случая РУ/МЛУ-ТБ, зарегистрированных в 2019 г., исходы лечения которых стали известны в 2021 г., 51,7% были успешно пролечены, 14,2% умерли, а у 9,1% отмечалась неудача лечения. Из 159 случаев пре-ШЛУ-ТБ, исходы лечения которых стали известны в 2021 г., 27 (17,0%) были успешно пролечены, 30 (18,9%) умерли, у 22 (13,8%) отмечалась неудача лечения, 14 (8,8%) были потеряны для последующего наблюдения, 58 (36,5%) продолжали получать лечение через 24 месяца после его начала, а в 8 (5,0%) случаях исходы лечения не оценивались. Успех лечения был отмечен только у 18 (66,7%) пациентов из 27 случаев ШЛУ-ТБ, зарегистрированного в 2018 г., в 11,1% случаев констатировалась смерть, а 11,1% пациентов были потеряны для последующего наблюдения.

## Выводы

В 2021 г. 29 из 30 стран ЕС/ЕЭЗ подали сведения о регистрации ТБ. В период 2020–2021 гг. произошло дальнейшее небольшое снижение общего показателя заболеваемости ТБ в продолжение тенденции, наблюдавшейся с 2002 г. Данные о снижении в период с 2019 г. по 2021 г. должны интерпретироваться с осторожностью с учетом возможного влияния ответных мер, принятых для смягчения воздействия COVID-19. Тем не менее, предстоит еще немало потрудиться, чтобы достичь Цели 3 в области устойчивого развития Организации Объединенных Наций, что предполагает

частоту регистрации на уровне 2,4 случая на 100 000 населения ЕС/ЕЭЗ к 2030 г. Хотя увеличение числа зарегистрированных случаев МЛУ-ТБ совершенно незначительно – на их долю приходится небольшая часть всех случаев ТБ, зарегистрированных в 2021 г., схожая тенденция прослеживается во всех странах ЕС/ЕЭЗ в 2021 г. при сравнении с данными, полученными до 2020 г.

Во всех когортах успех лечения отмечается намного реже, чем в 90% случаев, что является целевым ориентиром успешного лечения, определенным ВОЗ. Из всех случаев, зарегистрированных в 2020 г. с исходами лечения, ставшими известными в 2021 г., 71,7% были успешно пролечены. Частота успешного лечения была ниже среди пациентов с ШЛУ-ТБ (66,7%) через 36 месяцев, и еще ниже среди пациентов с РУ/МЛУ-ТБ (51,7%) через 24 месяца с долей умерших в этих когортах – 11,1% и 18,9% соответственно.

В странах ЕС/ЕЭЗ необходимы дальнейшие усилия по улучшению регистрации конфеции с ВИЧ, ТБ в тюрьмах и исходах лечения.

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5 Все веб-ссылки были просмотрены 16 февраля 2023 г.





# 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* (*M. tuberculosis*) complex [1]. Until the coronavirus 2019 (COVID-19) pandemic, TB was the global leading cause of death from a single infectious agent [2]. Although TB typically affects the lungs (pulmonary TB), it can cause disease in any organ (extrapulmonary TB). TB is transmitted from person to person when, for example, an individual with pulmonary TB expels bacteria into the air by coughing.

Approximately 25% of the world's population is infected with *M. tuberculosis* [3], but only a small proportion of people ( $\approx 10\%$ ) will develop TB disease during their lifetime; the risk is much higher among immunocompromised individuals (such as people infected with 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 85% [4]. Rifampicin-resistant/multidrug-resistant TB (RR/MDR-TB), pre-extensively drug-resistant TB (pre-XDR-TB) and extensively drug-resistant TB (XDR-TB) require longer treatments with more drugs and are associated with lower success rates.

According to WHO's estimates, 10.6 million people fell ill with TB in 2021. Most cases were thought to have occurred in the WHO South-East Asia Region (45%), the WHO African Region (23%) and the WHO Western Pacific Region (18%). Smaller proportions of cases were estimated for the WHO Eastern Mediterranean Region (8%) and the WHO Region of the Americas (3%). The WHO European Region accounted for 2% of all cases [4].

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

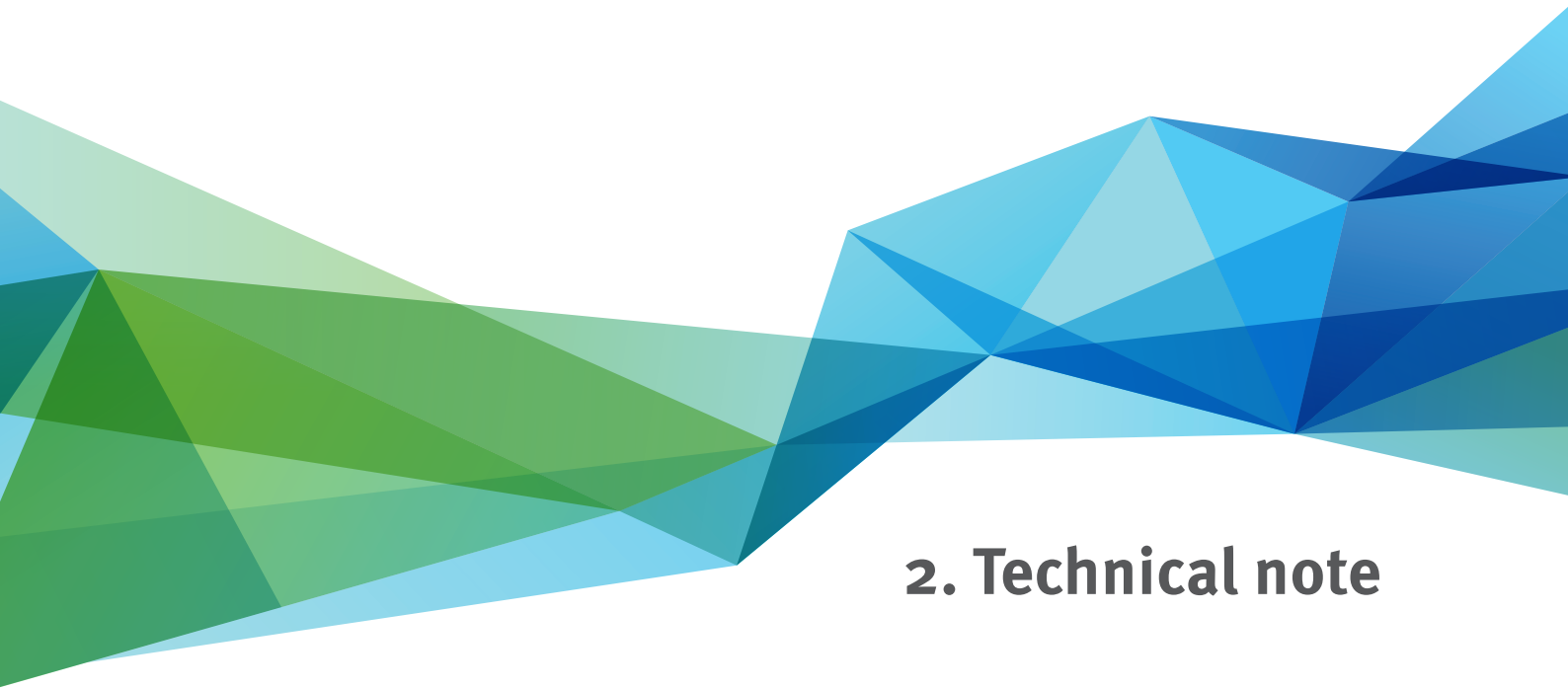
The overall aim of TB surveillance is to help inform public health action. The annual TB surveillance and monitoring report presents key figures and trends and provides an overview of the TB situation in the EU/EEA and the WHO European Region.

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## 2. Technical note





## 2. Technical note

Between 1996 and 2007, TB surveillance data from the European Region were collected and analysed 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 standardisation 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 [1,2]. In the EU/EEA, reporting follows European Union (EU) case definitions [3].

The report covers the 53 countries of the WHO European Region and Liechtenstein. These are collectively referred to as the European Region. Although the United Kingdom was part of the EU/EEA until 31 January 2020, for ease of reporting, starting with 2020, United Kingdom data and historical data are shown in the non-EU/EEA section of the tables.

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 15 November 2022.

### 2.1 Data-reporting and analysis

Designated experts within national surveillance, infectious disease or public health institutes submitted TB surveillance and control programme management data for 2021 electronically to the ECDC/WHO Regional Office for Europe Joint TB Information System via a common portal [4]. TB surveillance data from the EU/EEA countries were later submitted 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 the WHO Tuberculosis Monitoring and Evaluation (TME) platform in aggregated format. In all, 29 of 30 EU/EEA Member States reported case-based data. All countries in the European Region were also asked to provide updates for 2018, 2019 and 2020 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 2021 data (Annex 2) has been updated compared to the previous year.

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. Readers should be cautious when making comparisons across countries and areas, even though the

quality and comparability of reported data have improved in recent years and the reporting completeness is generally high in the EU/EEA, with a few exceptions, such as HIV status and drug-susceptibility testing (DST) data.

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 [5]. Population denominators were obtained from United Nations Population Division statistics [6] 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 [7] (23 April 2022) 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 and patient origin) and case management (history of previous anti-TB treatment, localisation of disease, laboratory results, HIV status and treatment outcome) variables. If indicated, associations between variables were quantified as relative risk and their 95% confidence intervals (CI), and results were considered significant if the CI did not include 1.

#### 2.1.1 TB/HIV coinfection

Case-based HIV status for 2021 was reported by Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Greece, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia and Spain. The proportion of TB/HIV 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 new and relapse TB cases with known HIV status reported in 2021, start or continuation on antiretroviral therapy (ART) was reported by nine EU/EEA Member States.

#### 2.1.2 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 79% of EU/EEA countries reporting the latter for the last six years (2016–2021). 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/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; pyrazinamide in 2017 and clofazimine, ethionamide and linezolid in 2021. Case-based information on DST is collected in countries/areas where DST results are linked to TB case notifications (28 of 29 EU/EEA reporting countries in 2021).

Where individual DST data are not available, data have been obtained from WHO's TME platform in aggregated format, when possible and deemed adequate. Information on the organisation and laboratory practices for anti-TB DST in the country/area is collected using the TME module of the joint TB surveillance system. Since 2019, when collecting data to report resistance to anti-TB drugs, EU/EEA Member States have been required to report the resistance pattern used on initiation of the treatment to TESSy, irrespective of the method used for DST or resistance prediction. 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 nation-/area-wide; 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 were not reported (or are considered incomplete) for Italy, Monaco, Serbia and Switzerland. France only reported complete national DRS data for rifampicin-resistant TB (RR-TB) cases.

EQA systems are essential for ensuring accurate diagnosis of TB and drug-resistant TB. Implementing EQA by organising regular EQA rounds and identifying training needs is one of the key activities of the European Reference Laboratory Network for TB (ERLTB-Net) [8]. The latest available EQA test results are published in Annex 5.

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

### 2.1.3 Treatment outcome monitoring

EU/EEA countries have provided treatment outcome data since the reporting year 2002 by submitting 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 pre-XDR and XDR-TB treatment outcome for cases reported three years earlier. As part of the 2022 data call, for 2021 data, outcome data were collected for TB cases reported in 2020, rifampicin-resistant

and multidrug-resistant TB (RR/MDR-TB) cases in 2019 and pre-XDR and XDR-TB cases in 2018. Non-EU/EEA countries and areas have reported aggregated treatment outcome data following the same principle since 2013.

If enrolment for treatment is taken into account for treatment outcome monitoring analysis, two types of TB cases are included: cases enrolled for treatment and cases with no indication of enrolment for 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 treatment outcome monitoring cohorts with those initially notified as pulmonary and culture- or smear-positive, depending on the type of cohort.

### 2.1.4 Geographical areas

The following 30 EU/EEA countries are presented separately in tables and in Chapter 3: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland (case based data not reported for 2021), Ireland, Italy, Latvia, Luxembourg, Liechtenstein, Lithuania, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden.

The 24 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, Türkiye, Turkmenistan, Ukraine, the United Kingdom and Uzbekistan.

Data from Serbia include TB cases reported from Kosovo<sup>7</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' [9] are presented in italics and as sub-totals alongside the sub-totals 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, Türkiye, Turkmenistan, Ukraine and Uzbekistan.

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

<sup>7</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

## 2.2 Definitions

### 2.2.1 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 [3]. This classifies cases as 'possible', 'probable' or 'confirmed'. Possible cases meet clinical criteria only. Probable cases meet the clinical criteria and at least one of the laboratory criteria for a probable case: detection of acid-fast bacilli by microscopy; detection of *M. tuberculosis* complex by nucleic acid amplification testing, or histological appearance of granulomata. In addition to meeting clinical criteria, confirmed cases require isolation of *M. tuberculosis* complex by culture or detection of both acid-fast bacilli 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]. These 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) (e.g. 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 post mortem as having gross pathological findings consistent with active TB, which would have indicated anti-TB treatment had the patient been diagnosed before dying, also fit the clinical criteria and are included.

### 2.2.2 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 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 who 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 an unknown previous TB treatment history do not fit any of the categories listed above.

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

### 2.2.3 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 is 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).

### 2.2.4 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, but 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.

### 2.2.5 Origin of cases

The geographical origin of a TB case is classified according to the place of birth of a person with TB disease (that is, born in the country/born outside of the country) for Bulgaria, Croatia, Cyprus, Czechia, 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, Tajikistan, Türkiye, 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, for cases born in the Netherlands the birthplace of parents is also 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 citizenship (nationality) of the reporting country. 'Foreign origin' refers to cases born in (or citizens of) a country different to the reporting country.

## 2.2.6 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 reinfection with resistant bacilli.

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

**Pre-extensive drug resistance (pre-XDR)** refers to resistance to: (i) at least rifampicin (that is, RR/MDR) and (ii) any fluoroquinolone.

**Extensive drug resistance (XDR)** refers to resistance to: (i) at least rifampicin (that is, RR/MDR); (ii) a fluoroquinolone; and (iii) at least one additional Group A drug [1,2].

**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, MDR, polydrug resistance or XDR.

## 2.2.7 Treatment outcome

### 2.2.7.1 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 RR-TB – for non-EU/EEA countries and areas this includes those placed on second-line treatment (defined as combination chemotherapy for drug-resistant TB).

The two groups are mutually exclusive. For EU/EEA countries, the case types are based on DST results. 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.

### 2.2.7.2 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 RR/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>8</sup> For pre-XDR and 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>9</sup> Non-EU/EEA countries and areas evaluate treatment outcomes according to the WHO definition.

### 2.2.7.3 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' applies only to EU/EEA Member States. The categories are as follows.

**Cured** – 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, pre-XDR-TB and XDR-TB** – 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** – treatment completed but does not meet the criteria to be classified as cured or treatment failed.

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

**Treatment failed for MDR-TB, pre-XDR-TB and XDR-TB case** – 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

<sup>8</sup> The degree of adherence to the 12-month limit is unknown, and a number of countries are known to exceed it.

<sup>9</sup> The degree of adherence to the 24-month limit is unknown.

- evidence of additional acquired resistance to fluoroquinolones or second-line injectable drugs; or
- adverse drug reactions.

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

**Lost to follow-up** – 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**<sup>10</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** – 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’.

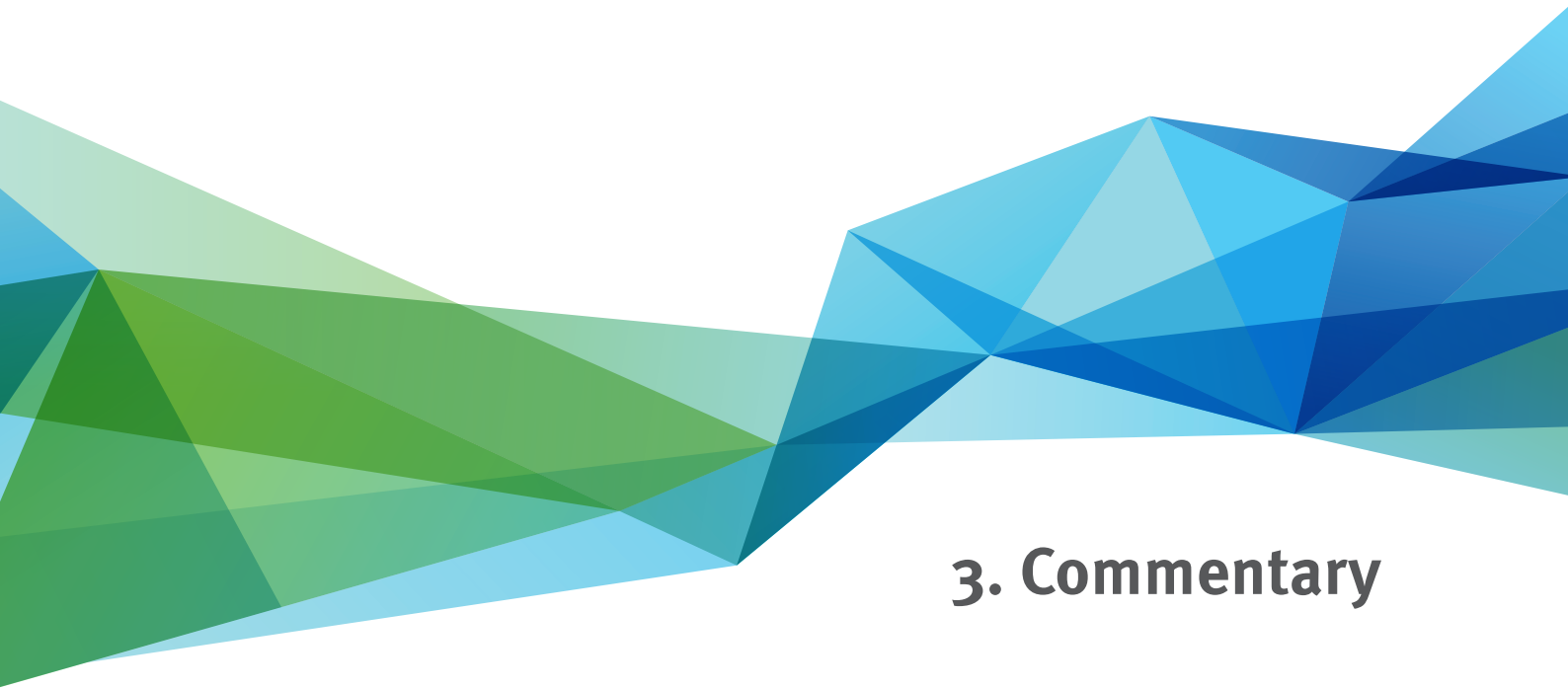
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<sup>10</sup> This definition is applicable to EU/EEA countries only.

<sup>11</sup> All weblinks accessed on 16 February 2023.





## 3. Commentary





## 3. Commentary

### 3.1 The WHO European Region

#### 3.1.1 TB burden estimates (incidence and mortality, HIV and RR/MDR)

An estimated 230 000 new and relapse TB cases (range 211 000–251 000) occurred in countries and areas of the WHO European Region in 2021, equivalent to an average incidence of 25 cases (range 23–27) per 100 000 population. This represents about 2.2% of the total burden of TB in the world.

The absolute number of incident TB cases in the WHO European Region increased by 3 000 in 2021 compared to the previous year. Around 85% of the estimated TB cases in the Region occurred in the 18 HPCs, where estimated TB incidence was 48 cases per 100 000 population, which is almost five times higher than the EU/EEA average. The five countries with the absolute highest number of incident TB cases over 10 000 were the Russian Federation (69 000), Ukraine (31 000), Uzbekistan (21 000), Türkiye (15 000) and Kazakhstan (14 000). The number relative to population (incidence rate) was highest in Kyrgyzstan (130 per 100 000 population), followed by Tajikistan (88), the Republic of Moldova (85), Kazakhstan (73) and Ukraine (71) (Table II).

Although by 2020 the European Region had overachieved the End TB strategy milestone of 20% cumulative reduction for TB incidence during the period 2015–2020, in 2021, for the first time in two decades, the incidence rate is estimated to have increased by 1.2% against 2020. This reversal of the trend reflects the impact of the disruption to TB services caused by the COVID-19 pandemic. During the period 2012–2021, the average annual decline in the TB incidence rate was 4.6%, which is notably higher than the global rate of decline for TB incidence (2%) and the fastest decline in the world compared to other regions [1]. This decline was mostly driven by the situation in the Russian Federation, where incidence fell by 5.2% per year between 2012 and 2021. It should nevertheless be emphasised that most of the HPCs in the Region have also experienced a decline in the TB incidence rate. During the period 2012–2021, the HPCs with the highest annual rate of decline were Latvia (–12.9%), Estonia (–9.7%), Lithuania (–9.3%), Belarus (–8.0%), Romania (–7.9%), Armenia (–6.7%), and Georgia (–6.6%).

An estimated 20 000 TB deaths occurred among HIV-negative people in the European Region in 2021, equivalent to 2.1 deaths per 100 000 population. Between 2012 and 2021, the TB mortality rate at regional level fell cumulatively by 52%, from 4.4 to 2.1 deaths per 100 000 population, which on average is a decline of 7.7% per year (Table I). Between 2020 and 2021, TB mortality in the Region came to a standstill for the first time in the last two decades. This was a consequence of undiagnosed and untreated TB and an associated increase in deaths due to disruptions to TB

services caused by the COVID-19 pandemic. Considerable variation was seen across the Region, ranging from under one TB death per 100 000 population in western European countries to 10 per 100 000 and higher in HPCs. The TB mortality rate was highest in Tajikistan (12.3 deaths per 100 000), followed by Turkmenistan (10.2), Romania (8.8), Azerbaijan (8.6), Kyrgyzstan (8.4), and Ukraine (8.3). Together, the 18 HPCs accounted for 90% of TB deaths in the Region.

An estimated 13% (range 11–15%) of incident TB cases in 2021 were coinfecting with HIV (Table 2). The proportion of TB cases coinfecting with HIV was highest in the Russian Federation (26%), followed by Turkmenistan (22%), Ukraine (20%), the Republic of Moldova and Armenia (11% each). The top five countries with the highest absolute number of TB/HIV coinfection cases were the Russian Federation (18 000) and Ukraine (6 300), representing 84% of the total number of cases, followed by Kazakhstan (930), Turkmenistan (670) and Uzbekistan (600).

Nine of the 30 countries with the highest RR/MDR-TB burden in the world are in the WHO European Region.<sup>12</sup> In 2021, the WHO European Region had an estimated 37 000 incident cases of RR/MDR-TB among notified bacteriologically-confirmed pulmonary TB cases (Table 2). An estimated 26% (95% CI: 21–31%) of newly diagnosed patients and 57% (95% CI: 41–72%) of previously treated patients had RR/MDR-TB. Overall, an estimated 73 000 (range 64 000–81 000) incident cases of RR/MDR-TB occurred in the Region in 2021.

#### 3.1.2 TB notification and trends

In 2021, 197 184 TB patients were reported from 51 countries and areas<sup>13</sup> in the WHO European Region. Of these, 166 026 were incident TB patients (Table III). This represents a 1.1% increase in the number of notified TB patients against 2020; a slight recovery following an unprecedented 24% drop in TB notification between 2019 and 2020 due to the impact of the COVID-19 pandemic. This translates into TB treatment coverage of 72% (95% CI: 66–79%) in 2021 (approximated as notifications divided by incidence), down from 88% (95% CI: 77–100%) in 2019. In the 18 HPCs the trend in notifications varied considerably. Kyrgyzstan, Romania, the Republic of Moldova, Türkiye, Ukraine and Uzbekistan, which all experienced large reductions in 2020, partially increased their notification in 2021 against 2020, from 1% in Ukraine to 17.9% in the Republic of Moldova. Meanwhile, despite a large drop in notifications in 2020 compared to 2019, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia,

<sup>12</sup> The nine countries from the WHO European Region included in the global list of 30 countries with highest RR/MDR-TB burden are (in alphabetical order): Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Tajikistan, Ukraine and Uzbekistan.

<sup>13</sup> San Marino and Iceland did not report, and Monaco reported zero cases in 2021.

Georgia, Lithuania, Russian Federation and Turkmenistan reported a further decline in the number of TB cases in 2021 against 2020, from 1% in Azerbaijan to 26% in Bulgaria. The number of TB cases reported from Kazakhstan and Tajikistan in 2021 is comparable to 2020.

The notification rate of new and relapse cases in 2021 varies widely among countries, from zero (Monaco) to 70 (Kyrgyzstan) per 100 000 population (Map 1 and Table III). Forty-one countries, mainly located in the western and central part of the Region, had low notifications of new and relapse cases (fewer than 20 cases per 100 000) in 2021. Ten countries reported new and relapse case rates of between 20 and 50 per 100 000 population and three reported over 50 cases per 100 000 population (Kyrgyzstan (70.4), Republic of Moldova (67.5), and Kazakhstan (50.8)). The new and relapse case notifications from the 18 HPCs account for about 82% of the regional burden. Over a third of new and relapse cases (56 922) come from the Russian Federation, even though the country only accounts for 16% of the Region's population.

The notification rate of new and relapse cases in the 18 HPCs is almost twice as high as for the Region overall (33 cases per 100 000, compared to 18 cases per 100 000 for the Region) and over five times higher than the rate in the EU/EEA (seven cases per 100 000 population) (Fig. 3.1.1).

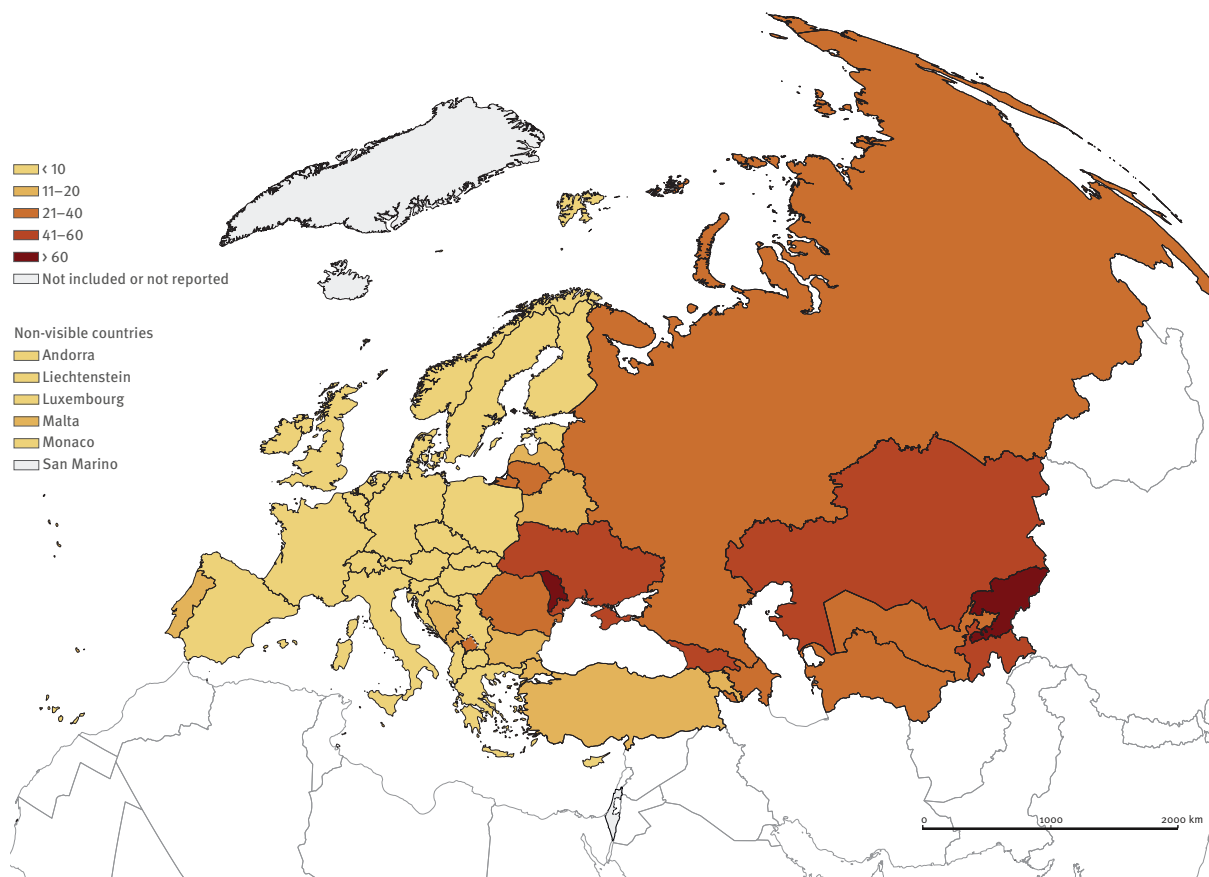
### 3.1.3 Previous treatment history

In 2021, previously treated cases represented 9.9% and 32.5% in the EU/EEA and non-EU/EEA, respectively (Table 4). The average in the 18 HPCs was 32.8%, which is above the pan-European average of 28.7%. Previously treated cases accounted for 15% or more of all TB cases in 12 countries: Azerbaijan (48.7%), the Russian Federation (43.0%), Turkmenistan (39.6%), Belarus (30.7%), Kazakhstan (29.4%), the Republic of Moldova (28.1%), Ukraine (25.9%), Kyrgyzstan (25.1%), Uzbekistan (21.3%), Georgia (21.1%), Romania (19.8%), and Estonia (17.1%). Reasons for the high percentage of previously treated cases include clinical failure or poor treatment adherence in previous treatment episodes, and possible reinfection and misclassification during the current treatment episode.

### 3.1.4 Disease localisation

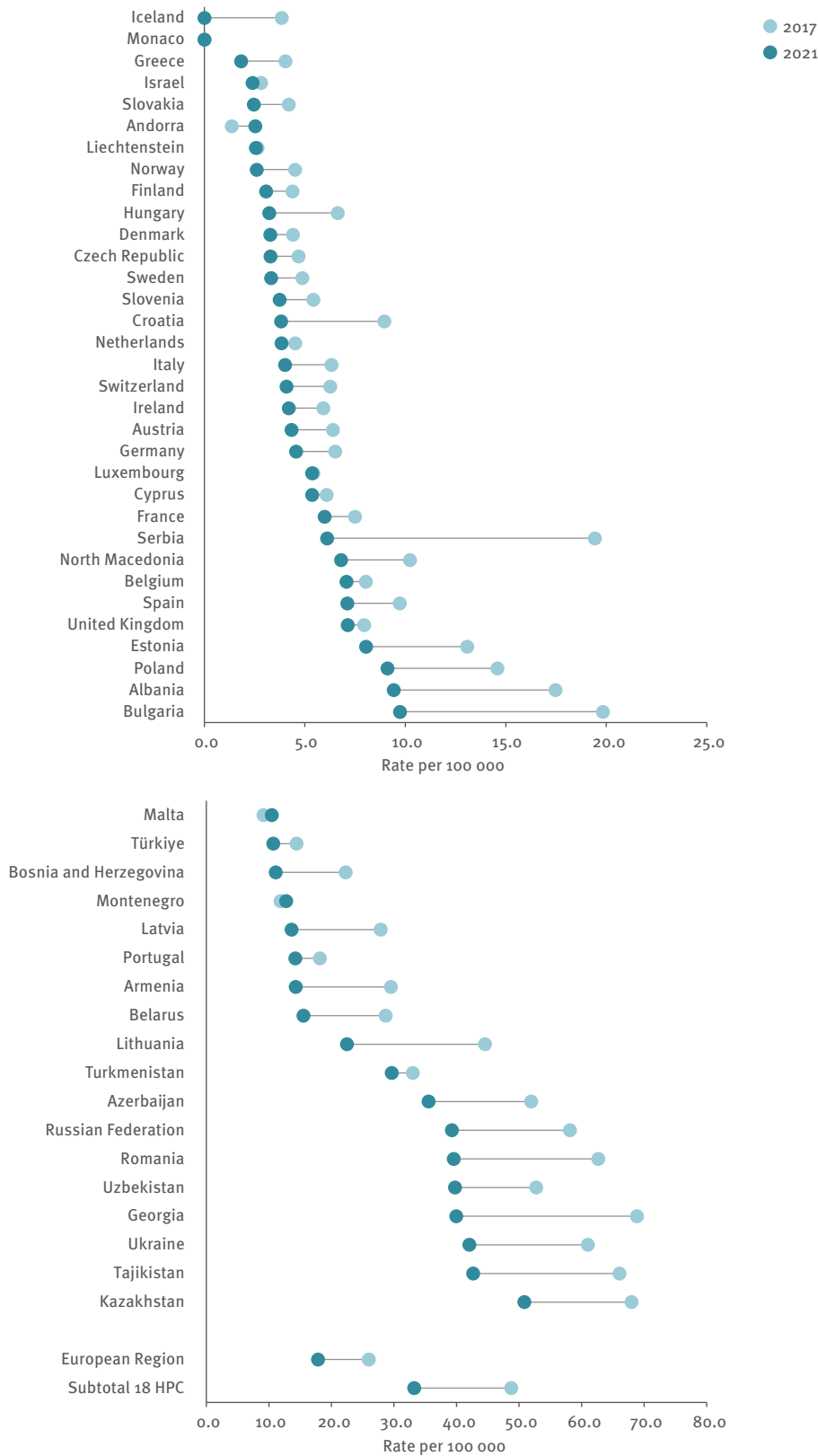
Pulmonary localisation was notified in 82.6% of the incident TB cases in the Region in 2021 (Table 6). The proportion of patients with pulmonary localisation in the non-EU/EEA countries and areas was higher than in the EU/EEA. Eleven countries reported more than 30% of their TB cases having extrapulmonary localisation: Belgium, Finland, France, Israel, the Netherlands, Norway, Sweden, Tajikistan, Türkiye, the United Kingdom and Uzbekistan.

**Map 1. TB notification rates of new TB cases and relapses per 100 000 population, European Region, 2021**



Sources: 2021 data from the European Surveillance Systems (TESSy) and 2021 data from the WHO global TB data-collection system. Map production: ©ECDC.

**Fig. 3.1.1.** Trend in TB notification rate per 100 000 between 2017 and 2021 for countries with under 10 cases per 100 000 (upper panel) and 10 cases and over per 100 000 (lower panel) in the WHO European Region



Note: Monaco did not report data in 2021 and is excluded.

### 3.1.5 Bacteriological confirmation

Bacteriological confirmation of TB diagnosis was reported for 95 855 (69.9%) of all 137 212 new and relapse pulmonary cases in the Region (Table 6). Although testing rates with WHO recommended rapid diagnostics (WRDs) were much lower in the EU/EEA countries (37.2%) than in the non-EU/EEA countries and areas (78.4%), the five-year trend shows a continuing increase in the use of WRDs across the Region, from 61.4% in 2017 to 70.5% in 2021 (Fig. 3.1.2 and Table XIV). Testing also varied considerably among countries and areas, from 0.3% in Bulgaria to 99% in Kazakhstan. Bacteriological confirmation of new and relapse pulmonary cases was below 60% in four countries and areas: Hungary (59.1%), Kosovo (58.6%), the Russian Federation (55.8%) and Turkmenistan (50.8%), underlining the need to strengthen diagnostics. In 37 countries, bacteriological confirmation of new and relapse pulmonary cases was 75% and above.

### 3.1.6 Age and sex

There is wide variation in the distribution of age- and sex-specific notification rates across countries and areas (Table 8). Notification rates in eastern European countries are highest in young adults (25–44 years) and decline in older age groups, while in central Asia and Türkiye, the notification rates either increase with age or are relatively constant across adult age groups.

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

In countries and areas with at least 100 new and relapse TB cases, the proportion of TB cases notified in children (0–14 years) varied from below 1% (Bosnia and Herzegovina, Belarus, Croatia, Estonia and Ireland) to 29.9% (Slovakia) of all new and relapse cases. The difference in proportions of childhood TB cases across the countries and areas may reflect differences in case-finding practices (such as contact tracing), population age structure and under-/over-diagnosis or reporting of childhood TB. The average percentage of new and relapse TB patients under 15 years in the Region is 4.1%.

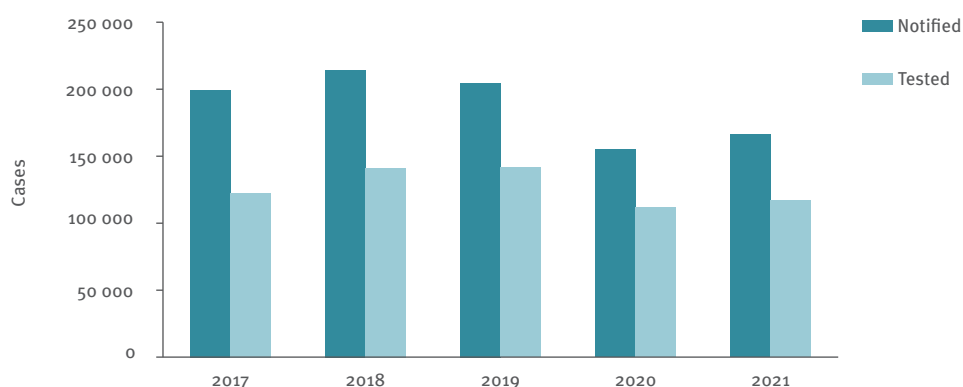
There were around twice as many males as females reported among all incident TB cases. However, large variation was observed for male predominance in the sex distribution of TB cases, ranging from almost even to over three times greater in Armenia, Belarus, Latvia and the Republic of Moldova. The exception is Norway, where the number of female TB patients outnumbered those of males. 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 seem more similar in children and younger adults (0–14 and 15–24 years). This gender difference in TB case notification most probably reflects the over-representation of males in the various TB risk groups, notably homeless people, prisoners, seasonal migrant workers and people living with HIV (PLHIV).

### 3.1.7 Drug resistance

Fifty-one countries in the Region reported test results for rifampicin resistance in 2021. Overall, DST coverage in the Region, at least for rifampicin among bacteriologically-confirmed pulmonary TB cases, was 93.6%, with 44 countries achieving coverage of 85% or higher. The percentage of confirmed RR-TB cases among 69 775 new pulmonary TB cases tested for rifampicin resistance in the Region was 22.6% (Map 2, Fig. 3.1.3, Table 11 and Table V). Although 11 countries reported no RR-TB or less than 1% among new TB cases, the rate was over 20% in eleven countries (Table 11). Overall, for EU/EEA countries, the prevalence of RR-TB cases among all confirmed new pulmonary TB cases tested for rifampicin resistance was 3.3%, while the RR-TB proportion among previously treated pulmonary cases was higher at 11.9% (Fig. 3.1.4).

Four HPCs had an RR/MDR-TB prevalence ranging from 10% to 19% among new cases tested for rifampicin resistance: Uzbekistan (18.5%), Lithuania (15.7%), Azerbaijan (12.2%) and Georgia (10.6%). Six had 20–29% RR/MDR-TB among new cases (Tajikistan (26.9%), Ukraine (26.2%), Kyrgyzstan (25.9%), the Republic of Moldova (25.8%), Armenia, and Estonia (21.1% each)) and four had an RR/MDR-TB prevalence of over 30% (Turkmenistan (46.4%), Belarus (37.8%), Kazakhstan (37.7%) and the Russian Federation (36.0%)). The percentage of RR/MDR-TB reported

Fig. 3.1.2. New and relapse TB cases tested using WRD, European Region, 2017–2021



Source: WHO (2).

for France is misleading, as DST results are only documented for RR-TB cases.

The percentage of confirmed RR/MDR-TB cases among 34 258 previously treated pulmonary bacteriologically-confirmed TB cases whose isolates were tested for first-line DST was 53.0% (Fig. 3.1.3, Table 11 and Table VI).

Fifteen countries/areas had between 15% and 49% RR/MDR-TB among previously treated TB cases tested for first-line DST. The rate was even higher in some HPCs: Belarus (73.5%), Estonia (69.2%), the Russian Federation (67.7%), Turkmenistan (55.9%) and Kyrgyzstan (50.7%) (Fig. 3.1.5, Table 11).

The rates of RR/MDR-TB notification among new and previously treated patients in 2021 at regional level were 1.7 and 2.0 per 100 000 respectively (Table V, Table VI).

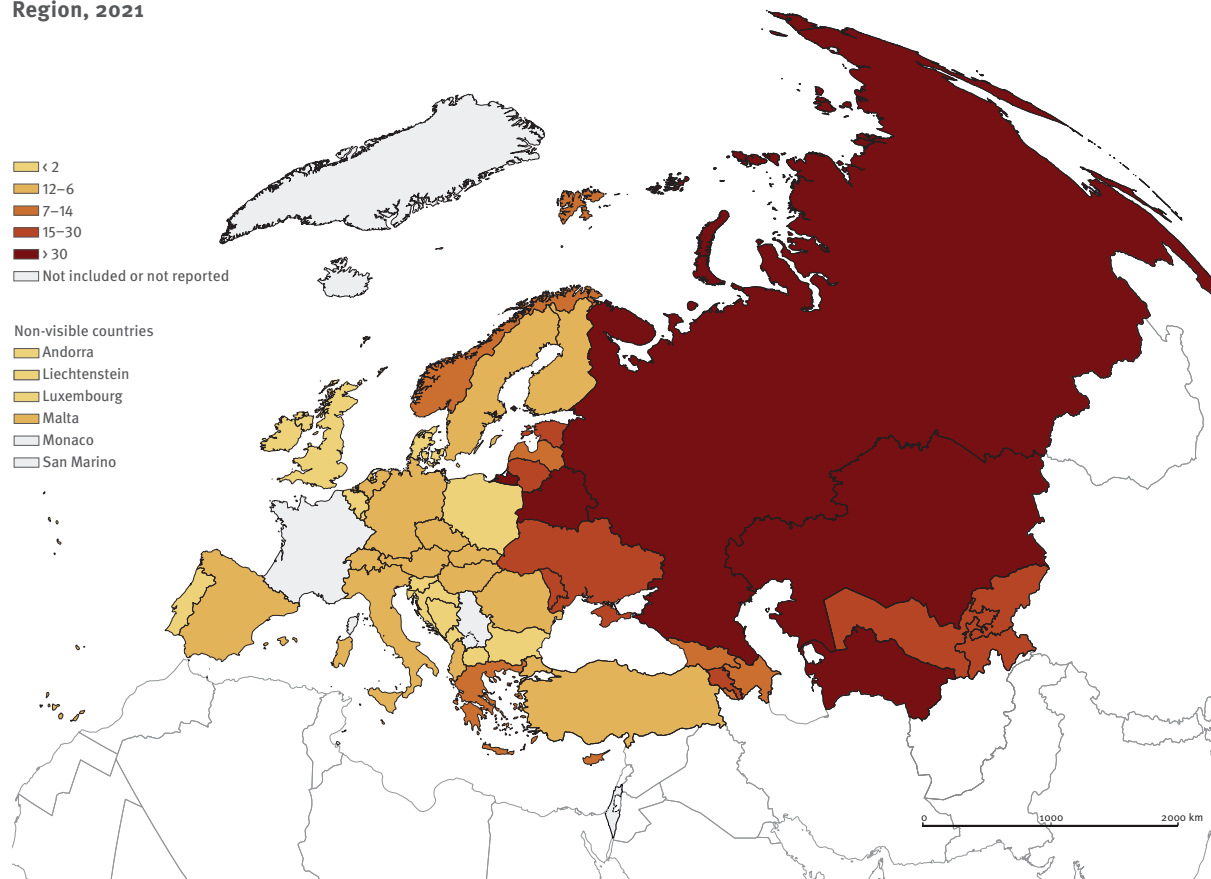
Trends in the rifampicin-resistant percentage among new bacteriologically-confirmed pulmonary TB cases and trends in the notification rate per 100 000 population have differed by country in recent years (Table V). At sub-regional level, the proportion of rifampicin resistance among new pulmonary TB cases slightly increased in the EU/EEA over the last five years, from 2.5% to 3.3%. Meanwhile the rate of notified RR/MDR-TB cases remained stable at around 0.1 case per 100 000 population. The rifampicin-resistant

percentage among new bacteriologically-confirmed pulmonary TB cases in the non-EU/EEA countries and areas increased slightly from 25.3% to 27.4%. Before the pandemic, the RR/MDR-TB notification rate among new TB patients ranged between 3.8 and 4.0 per 100 000 population, with no sign of a decreasing trend. In 2020, the RR/MDR-TB notification rate per 100 000 population declined to 3.1 per 100 000 population, with just slight recovery to 3.2 per 100 000 in 2021.

In 2021, forty-four countries reported data on DST to fluoroquinolones among pulmonary RR/MDR-TB patients. Data on DST to fluoroquinolones were available for about 89.7% of all notified pulmonary RR/MDR-TB cases. Of the 30 468 pulmonary RR/MDR-TB cases subjected to DST to fluoroquinolones, 10 186 (33.4%) were pre-XDR-TB (Table 12).

Twenty-eight countries additionally reported DST results for any other Group A drugs among pre-XDR-TB patients. Of 4 228 pre-XDR-TB patients tested for resistance against any other Group A drugs, the prevalence of XDR-TB was 11.2% at regional level (Table 12). In EU/EEA countries, where 68.7% of pre-XDR-TB cases were tested for Group A drugs, the prevalence of XDR among pre-XDR cases was 54.4%, while in non-EU/EEA countries and areas where DST coverage for other Group A drugs was only 41.2%, the XDR prevalence among pre-XDR patients was 10.4%. Among

**Map 2. Percentage of notified TB cases with RR/MDR among new pulmonary laboratory-confirmed TB cases, European Region, 2021**



Sources: 2021 data from the European Surveillance Systems (TESSy) and 2021 data from the WHO global TB data-collection system. Map production: ©ECDC.

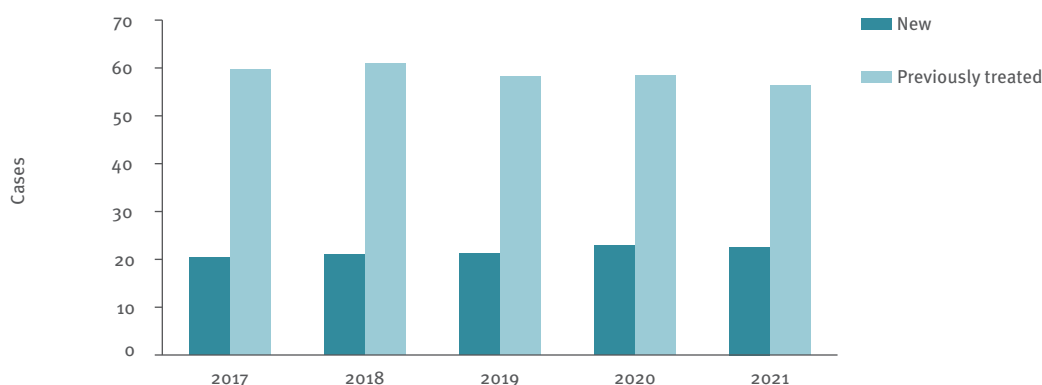
countries and areas reporting at least 30 pre-XDR cases with Group A DST results, three reported over 20% XDR prevalence among pre-XDR-TB cases: Armenia (31.6%), Georgia (28.6%) and Uzbekistan (22.6%).

In countries and areas with a long history of DST surveillance for fluoroquinolones among pulmonary RR/MDR-TB cases there is no clear trend in relation to pre-XDR-TB prevalence. In most of these countries the pre-XDR percentage varies widely from year to year, but at regional level, pre-XDR prevalence among RR/MDR-TB cases has

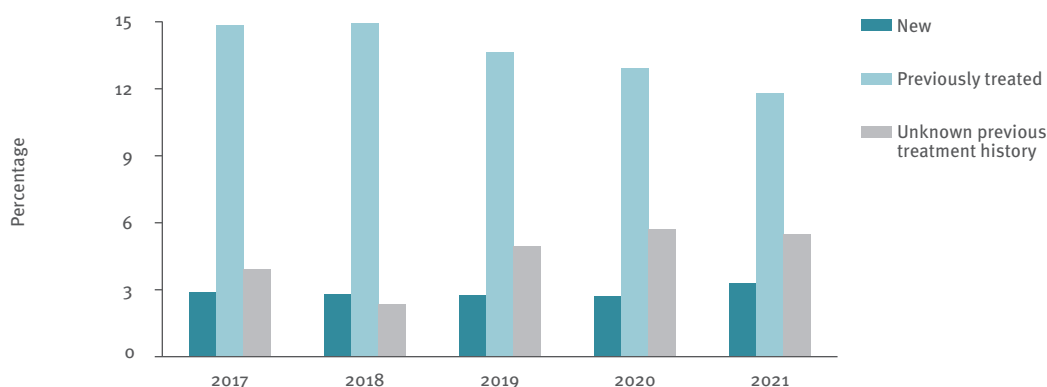
increased over the past five years, from 25.6 in 2017 to 33.4% in 2021 (Table VIII).

A total of 31839 RR/MDR-TB and 9736 pre-XDR-TB patients were enrolled in respective treatment programmes. The number of cases starting RR/MDR-TB treatment in 2021 exceeded the total number of patients notified during the same period, as many of the HPCs have reported higher numbers of cases enrolled than detected. The reasons for such discrepancies include incomplete reporting, backlogs of RR/MDR-TB patients, frequent treatment failures and

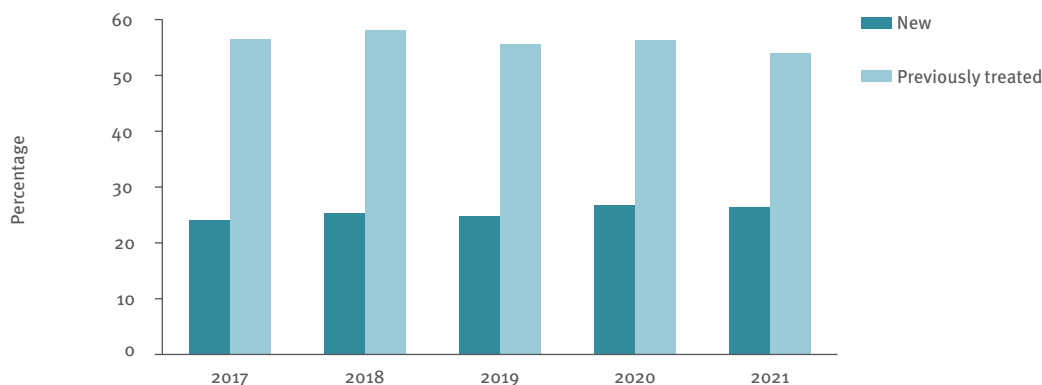
**Fig. 3.1.3.** Percentages of RR/MDR-TB among laboratory-confirmed pulmonary TB cases, European Region, 2017–2021



**Fig. 3.1.4.** Percentages of RR/MDR-TB among laboratory-confirmed pulmonary TB cases by previous treatment history, EU/EEA, 2017–2021



**Fig. 3.1.5.** Percentages of RR/MDR-TB among laboratory-confirmed pulmonary TB cases, 18 HPCs, 2017–2021



treatment interruptions leading to re-enrolment of the same patients in the same year's cohort, and weakness of surveillance. Five HPCs reported a discrepancy of over 5% between the number of RR/MDR-TB patients diagnosed and the number enrolled in RR/MDR-TB treatment (treatment coverage): Tajikistan (74.2%), Türkiye (84.9%), Azerbaijan (91.8%), Belarus (91.9%), and Georgia (94%) (Table 13).

In 2021, access to pre-XDR-TB treatment at regional level was 91.8%. Eight HPCs (Belarus, Estonia, Georgia, Kyrgyzstan, Latvia, the Russian Federation, Tajikistan and Türkiye) reported a discrepancy of over 5% in XDR-TB treatment coverage.

### 3.1.8 TB/HIV coinfection

Thirty-eight countries/areas provided surveillance data on TB/HIV coinfection (Table 14). Of the 146 818 new and relapse TB patients, 136 176 (92.8%) were screened for HIV. Twelve HPCs achieved a testing level above 90%: Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Lithuania, the Republic of Moldova, the Russian Federation, Tajikistan, Ukraine and Uzbekistan. A total of 20 175 TB cases were detected with HIV-positive status, representing 14.8% of those tested, comparable with the 14.7% recorded in 2020.

Among countries/areas reporting representative HIV testing (above 50% HIV testing coverage), six documented a significant overlap in the HIV and TB epidemics by exceeding 10% HIV prevalence among new and relapse TB cases (Table 14): the Russian Federation (25.8%), Ukraine (20.3%), Latvia (13.1%), Estonia (12.1%), the Republic of Moldova (10.7%) and Armenia (10.7%). Six countries with representative routine surveillance had 5–10% HIV prevalence among TB patients: Belarus (8.6%), Portugal (8.2%), Spain (7.6%), Israel (7.5%), Kazakhstan (6.5%) and Belgium (5.6%).

Twenty-two countries/areas in the Region provided information on ART enrolment among TB cases with HIV-positive status in 2021. Of 19 830 HIV-positive TB cases, 15 909 (80.1%) had received ART. This is higher than in 2020 (74.0%) but still below the WHO target of universal ART

coverage. Five HPCs achieved ART coverage of over 90%: Azerbaijan, Georgia, Kazakhstan, Tajikistan and Ukraine.

### 3.1.9 Country of origin

TB patients of foreign origin represent 9.9% of all TB cases notified Region-wide: 33.8% in EU/EEA countries and 4.8% in non-EU/EEA countries and areas (Table 9, Fig. 3.1.6). TB patients of foreign origin represent a large majority in several countries: Malta (98.1%), Cyprus (95.8%), Luxembourg (94.3%), Sweden (89.1%), Norway (82.8%), Israel (80.3%), the Netherlands (78.2%), the United Kingdom (75.1%), Greece (71.8%), Germany (71.4%), Denmark (70.7%), and Switzerland (70.6%).

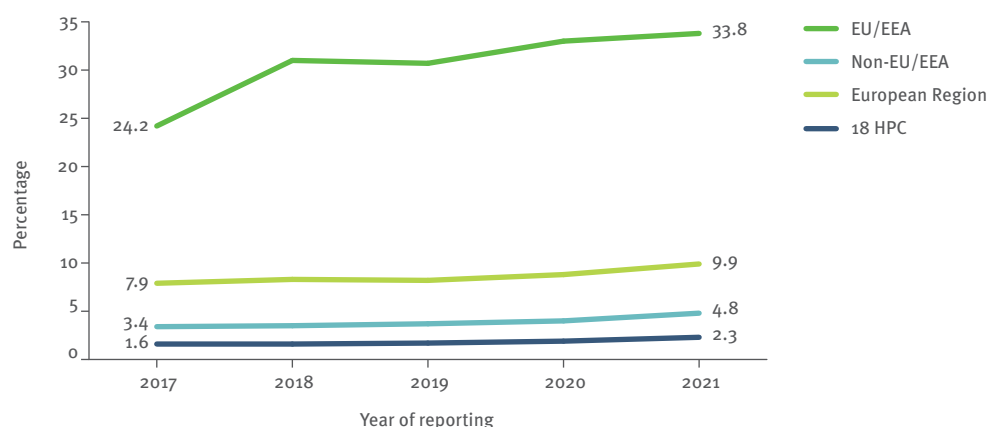
### 3.1.10 TB in prisons

Twenty-six countries/areas in the Region provided information on TB case detection and treatment in prisons during 2021 (Table 15). Overall, 6 402 (4.9%) of the new and relapse TB cases in the Region were reported from prisons, with 6 186 (96.6%) of these in the HPCs. The proportion of TB cases in prisons represented around 1.2% of the country total in EU/EEA countries; in non-EU/EEA countries and areas, the proportion was 5.5%. The notification rate in prisons in the non-EU/EEA countries and areas was 664 new TB cases per 100 000 population, which is over five times higher than in the EU/EEA sub-region (130 per 100 000). The overall notification rate for new TB cases in prisons in the WHO European Region was 548 per 100 000 population. The TB notification rate exceeded 1 000 cases per 100 000 detainees in four countries: 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 Armenia (38.1) followed by Ukraine (27.2), the Russian Federation (26), Belgium (24.2) and North Macedonia (22.6).

### 3.1.11 Treatment outcome

The treatment success rate among 125 957 new and relapse TB cases having started treatment with first-line drugs in 2020 was 73.4%, slightly lower compared to the 76.9% achieved in the 2019 cohort (Table 16, Table X). In the HPCs, the average rate of cases cured or for whom treatment was

Fig. 3.1.6. TB cases of foreign origin, 2016–2020



completed was 74.1%. The treatment success rate was lower in the EU/EEA countries than in non-EU/EEA countries and areas (71.7% versus 73.7%). Only 13 countries achieved an 85% treatment success rate in this treatment cohort. Another 11 were close to the target, with success rates of 80–85%. Ten countries had treatment success rates below 60%, with a very high proportion of cases not being evaluated.

A total of 12 448 (9.9%) cases were reported to have died in the 2020 cohort, 4.2% to have been lost to follow-up and 6.1% 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 – 0.8% in the EU/EEA versus 7.1% in non-EU/EEA countries and areas (Table 16). Countries reporting fatal outcomes in excess of 10% were Slovenia (21.6%), Estonia (18.8%), Croatia (18.6%), Czechia (15.6%), the Russian Federation (13.4%), the Republic of Moldova (13.2%), Romania (11.2%), Austria, Hungary (10.5% each), Belarus and Lithuania (10.1% each).

The treatment success rate among the 3 919 child TB cases (aged 0–14 years) in the 2020 cohort was 89.0% (Table 18). The treatment success rate in EU/EEA countries was remarkably lower than in the non-EU/EEA countries and areas (83.7% versus 90.4%). Among child TB cases in the Region, 1.2% died, 1.4% failed and 0.9% were lost to follow-up.

Of the 15 076 TB/HIV coinfecting patients who started treatment throughout the Region in 2020, only 7 146 (47.4%) had a successful treatment outcome (Table 20).

In the 2019 cohort, treatment outcome was notified for 53 612 laboratory-confirmed RR/MDR-TB cases reported by 34 countries (Table 22). The treatment success rate for the whole Region was 57.2%, which is slightly higher than the 55.9% rate reported for the 2018 RR/MDR-TB treatment cohort, which might be related to increased access and use of new and re-purposed TB drugs and shorter, all oral regimens for RR-TB treatment. The treatment success rate for RR/MDR-TB patients was higher in non-EU/EEA countries and areas than in the EU/EEA (57.2% versus 51.7%). In the Region as a whole, 14% of RR/MDR-TB cases died, 12.7% failed and 10.5% were lost to follow-up.

### 3.1.12 Conclusions for the WHO European Region

Analysis of 2021 routine surveillance data indicates that progress made in containing the TB burden, which came to a standstill because of the COVID-19 pandemic, has only partially recovered in 2021. As of December 2021, the WHO European Region was the global epicentre of the COVID-19 pandemic, accounting for 35% of COVID-19 cases and 31% of deaths [3]. TB services were disrupted because diagnostic and clinical services were repurposed and health workers reallocated to COVID-19. In addition, there were changes in patients' healthcare-seeking behaviour influenced by the restrictions on movement imposed by authorities, concerns about the risks of going to health facilities during the pandemic and stigma associated with similarities in symptoms between TB and COVID-19. As a

result, far fewer people were diagnosed and treated for TB and remarkably fewer people were tested for drug resistance and enrolled into RR/MDR-TB treatment.

In 2021, for the first time in two decades, the continuing reduction in TB incidence was reversed and the decline in TB mortality came to a standstill. The burden of drug-resistant TB is also estimated to have increased between 2020 and 2021, with 2 000 more new cases of rifampicin-resistant TB estimated in 2021 compared to 2020 (73 000 and 71 000 cases respectively).

Treatment outcomes for new and relapse TB patients also deteriorated in the 2020 cohort compared to 2019. On a more positive note, the treatment success rate for RR-TB patients has been slowly but consistently improving in the Region, probably reflecting the scale-up of new and repurposed TB treatments and shorter, all-oral treatment regimens for RR-TB patients.

There is a need to introduce and/or scale up innovative and adaptive models of care to address the challenges posed by the COVID-19 pandemic and ensure the provision of timely, good-quality TB services, despite the ongoing pandemic. Actions and innovative solutions need to be implemented to reverse the impact of the COVID-19 pandemic and restore provision of diagnostic, treatment and preventive services to pre-pandemic levels. National health programmes and health authorities need to work with community representatives and partners to maintain TB diagnostic, treatment and preventive services and build synergies between COVID-19 and TB services. Reviving political commitment, allocating adequate national and international resources and implementing innovative approaches are crucial to avoid losing the gains made during the past decade.

## 3.2 EU/EEA countries

### 3.2.1 Data completeness

TB notification data for 2021 were reported by 29 of 30 countries (there were no data reported from Iceland for 2021). In 2021, the reporting of non-mandatory variables was complete or near complete (> 95.0%) for age, gender, TB site and variables defining the origin of a case (Annex 3). Overall, previous treatment history was available for 85.7% of cases reported in 2021, however completeness ranged from below 70% in three countries (France 66.4%, Ireland 45.6%, and Spain 66.4%) to 100.0% in 13 countries (Annex 3).

Among TB cases reported in 2021, 84.2% had culture results (Annex 3), which was a slight increase compared to the proportion reported in 2020 (81.0%). Six countries had less than 75% of cases with culture results reported: Finland (72.4%), France (50.1%), Greece (65.0%), Ireland (65.9%), Latvia (46.4%) and Portugal (67.6%). Reporting completeness for microscopy in 2021 (84.3%) was comparable to 2020 data (82.8%) and ranged from 34.1% in Ireland to 100% in Liechtenstein, Lithuania and Luxembourg. For 2021, reporting completeness of drug-susceptibility test results was 71.4% for the first-line drugs (isoniazid



and rifampicin). Completeness of DST reporting for at least one second-line drug (including bedaquiline, moxifloxacin and levofloxacin) was 100% for the 24 countries that reported at least one MDR-TB case (Annex 3).

In 2021, the number of countries reporting HIV status increased to 21 (of 29) compared to 19 (of 29) countries in 2020. This is similar to 2018 with 21 (of 30) reporting, while in 2017 there were 23 (of 31) that reported HIV status. HIV status was only available for 38.3% of all TB cases reported in 2021, but seven countries reported HIV status for more than 75% of their TB cases (Annex 3).

Treatment outcome at 12 months was available for 63.9% of all cases reported in 2021. Among RR/MDR-TB cases reported in 2019, 97.0% had treatment outcome reported at 24 months. Completeness of treatment outcomes across these two cohorts are comparable to treatment outcome rates in 2020 (Annex 3).

### 3.2.2 TB notification rates and trends

In 2021, 33 520 cases of TB were reported in 29 EU/EEA countries (Table 3). The number of cases reported in Romania (7 979) accounted for 23.8% of all TB cases reported in 2021, which represents a rate per 100 000 population more than five times higher than the EU/EEA rate.

The EU/EEA notification rate in 2021 was 7.4 per 100 000 population (Table 3), continuing the downward trend observed since the launch of European enhanced TB surveillance in 1996 (Fig. 3.2.1). During the period 2017–2021, the average annual decline in the notification rate was 10.0% (Table 3).

As reported for previous years, country-specific notification rates differed considerably in 2021, ranging from 1.9 per 100 000 population in Greece to 41.6 per 100 000 population in Romania (Table 3). Rates were below 10.0 per 100 000 in 24 countries.

In 26 countries, the notification rates have fallen compared to 2017 (Table 3). The annual rate of decrease exceeded

10% in 12 countries, with the downward trend being particularly pronounced in Bulgaria, Croatia, Greece, Hungary, and Lithuania, where the average annual rate of decrease exceeded 15%.

### 3.2.3 Previous treatment, laboratory confirmation and TB site

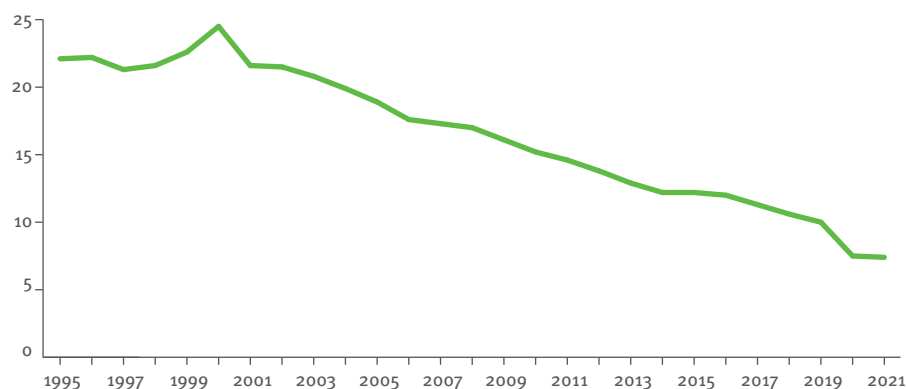
The distribution of cases by previous treatment history was similar in 2021 to that reported in previous years: 25 402 (75.8%) of 33 520 TB cases reported in 2021 were newly diagnosed, 3 332 (9.9%) had previously been treated for TB and 4 786 (14.3%) had an unknown previous treatment status (Table 4). The proportion of previously treated cases was above 10% in eight countries: Bulgaria, Estonia, Hungary, Latvia, Lithuania, Norway, Poland and Romania.

Of all 33 520 TB cases reported in 2021, 24 036 (71.7%) were diagnosed with pulmonary TB, 7 026 (21.0%) with extrapulmonary TB, 2 253 (6.7%) with a combination of both and 205 (0.6%) had no TB site reported (Table 5). The proportion of extrapulmonary TB was above 30% in six countries: Belgium (30.7%), Finland (31.2%), France (31.1%), the Netherlands (43.7%), Norway (45.2%) and Sweden (38.1%).

Of 32 040 new and relapse pulmonary TB cases reported in 2021, 21 710 (86.2%) were confirmed by culture and/or smear and nucleic acid amplification test (Table 6). In three countries, over 30% of reported new and relapse pulmonary TB cases were diagnosed clinically: Bulgaria (34.7%), France (32.8%) and Hungary (40.9%).

According to the EU case definition, 24 127 (72.0%) of 33 520 TB cases reported in 2021 are classified as confirmed, 3 676 (11.0%) as probable and 5 717 (17.1%) as possible cases (Table 7). The proportion of confirmed TB cases increased in 2021 (72.0%) compared to 2020 (67.3%) and 2019 (67.1%). Country-specific proportions of confirmed cases ranged from 38.7% in France to 100% in Liechtenstein, however over 75% of reported cases were laboratory-confirmed in 20 countries. Conversely, three countries reported over 40% of their TB cases as possible cases (that is, only clinically diagnosed): Bulgaria (41.6%), France

Fig. 3.2.1. TB notification rate per 100 000 population by year of reporting, EU/EEA, 1995–2021



Source: ECDC (3).

(42.4%) and Hungary (41.8%). The high proportion of clinically diagnosed cases may reflect under-reporting of laboratory results to the national surveillance systems in these countries, or alternatively it could indicate that TB may be over-diagnosed in these countries.

### 3.2.4 Age and sex

Of 32 040 new and relapse TB cases reported in 2021, 21 066 (65.8%) were aged between 25 and 64 years and 6 158 cases (19.2%) were in adults aged over 64 years (Table 8). Notification rates per 100 000 population were higher among the age groups 25–44 years (9.4 per 100 000 population) and 45–64 years (8.1 per 100 000 population) than for those aged 15–24 years (7.7 per 100 000 population) and those aged over 64 years (6.6 per 100 000 population).

There was variation in the age distribution of cases between countries. In most, cases were predominantly aged between 25 and 64 years, but cases were younger in Malta (37.0% were aged between 15 and 24 years) and older in Croatia, Finland and Slovenia (where over 30% of cases were aged over 64 years; Table 8).

In 2021, of 32 040 new and relapse TB cases in children, 32 017 had age reported. Of these cases, children under 15 years accounted for 1106 (3.5%) (Table 8). Children aged between five and 14 years had the lowest notification rate of all age groups at 1.4 per 100 000 population. Romania reported the highest notification rates among children under 15 years: 9.2 cases per 100 000 children aged between 0 and 4 years, and 9.3 cases per 100 000 children aged between five and 14 years (Table 8).

In 2021, the male-to-female ratio in new and relapse TB cases was 2.0 (Table 8), which was the same as the ratio reported in 2020. Only two countries, Norway and Cyprus, reported slightly more female than male cases (M/F ratio between 0.7 to 0.9). For children under 15 years, the male-to-female ratio among new and relapse cases was around 1.

### 3.2.5 Origin of cases

Of the 33 520 TB cases notified in 2021, 20 689 (61.7%) were born in, or were citizens of the reporting country (referred to as 'native'), 11 334 (33.8%) were of foreign origin and 1 497 (4.5%) were of unknown origin (Table 9). Of the 1 497 cases of unknown origin in 2021, 55.8% (1 274) were reported by only three countries (France, Ireland and Spain). Country-specific proportions of foreign-origin TB cases ranged from below 1% in four countries (Bulgaria, Croatia, Liechtenstein and Romania) to above 85% in four countries (Cyprus, Luxembourg, Malta and Sweden). The overall proportion of native TB cases decreased slightly from 63.3% in 2020 to 61.7% in 2021 (Table 9).

### 3.2.6 Drug resistance

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

Of 26 289 pulmonary TB cases notified in 2021, 21 392 were bacteriologically-confirmed and 16 895 (79.0%) had

drug susceptibility testing results reported for at least rifampicin (Table 10). The proportion of cases with DST results reported for at least rifampicin varied by country, ranging from 3.2% in France to 100% in two countries (Liechtenstein and Lithuania). Among the cases with rifampicin DST results, 630 (3.8%) were reported as MDR TB.

The proportion of MDR TB cases varied by country (Table 10). Four countries reported no MDR TB cases in 2021, and another six countries reported that the proportion of RR/MDR-TB cases (among cases with DST results) was below 2%. France reported 100% of cases with DST results as MDR-TB, however DST results are only reported for MDR-TB cases in France. The highest proportion of MDR-TB cases (among cases with DST results) was reported by Estonia and Lithuania (28.4 and 17.5% respectively).

The proportion of RR/MDR-TB among all bacteriologically confirmed pulmonary TB cases with DST results for rifampicin was 4.9% (742 of 13 891; Table 11 and Table 12). When the data were analysed by previous treatment history, the proportion of RR/MDR-TB was higher among previously treated cases (11.7%, 239 of 2 049) compared to new cases (3.3%, 456 of 13 891).

In 2021, 54.4% of RR/MDR-TB cases (404 of 742) had DST results for any fluoroquinolone (Table 12), and among these 115 (28.5%) met the definition for pre-XDR. Of all pre-XDR cases, the majority were reported by Lithuania (45.7%, n=21) and Romania (26.4%, n=24). The majority (68.7%, 79 of 115) of pre-XDR cases had DST results reported for at least one other Group A drug (Table 12). Among these cases, 43 (54.4%) met the new XDR-case definition. All XDR-TB cases were reported by thirteen EU/EEA countries: Czechia (4.6%, n=2), Denmark (2.3%, n=1), Estonia (20.9%, n=9), France (11.6%, n=5), Germany (9.3%, n=4), Latvia (4.6%, n=2), Lithuania (26.0%, n=11), the Netherlands (2.3%, n=1), Norway (4.6%, n=2), Romania (4.6%, n=2), Slovakia (4.6%, n=2), Spain (2.3%, n=1) and Sweden (2.3%, n=1).

### 3.2.7 TB/HIV coinfection

HIV status was reported for 12 837 (70.4%) of 18 242 TB cases reported from the 21 countries that reported HIV status of TB cases (Table IX). Of the cases with known HIV status, 510 (4.0%) were reported as HIV-positive. Among the 17 countries with at least 50% reporting completeness for HIV status, the proportion of coinfecting cases was highest in Hungary (14.3%), Latvia (12.8%) and Estonia (11.7%). There has been an increase in the proportion of HIV-coinfecting TB cases from 3.6% in 2020 to 4.0% in 2021, however in 2021 the proportion of co-infected cases was slightly lower when compared to 2017 (4.1%; Table IX).

### 3.2.8 TB in prisons

For 2021, 14 EU/EEA countries reported 332 new and relapse TB cases in prisons, resulting in a notification rate of 130 per 100 000 prison population and a relative risk of 8.9 compared to the general population in the same countries (Table 15). Overall, TB cases in prisons accounted for 1.2% of all new and relapse cases notified in the 14 EU/EEA

countries reporting, with the proportion being highest in Belgium (2.0%).

### 3.2.9 Treatment outcome

Of all 20 760 new and relapse TB cases notified in 2020 with a treatment outcome reported in 2021, 14 876 (71.7%) were treated successfully, 1 750 (8.4%) died, 160 (0.8%) experienced treatment failure, 678 (3.3%) were lost to follow up, 454 (2.2%) were still on treatment in 2021 and 2 842 cases (13.7%) were not evaluated (Table 16). Among the 24 countries that reported treatment outcome for the 2020 cohort, seven countries reported successful treatment for over 80.0% of cases: Liechtenstein (100%), Lithuania (85.5%), Malta (99.3%), the Netherlands (83.0%), Norway (88.7%), Romania (81.6%) and Slovakia (85.5%). In contrast, eight countries reported death as the outcome for over 10% of cases: Austria (10.5%), Croatia (18.6%), Czechia (15.6%), Estonia (18.8%), Hungary (10.4%), Lithuania (10.1%), Romania (11.2%) and Slovenia (21.6%); Table 16). There has been an decrease in the percentage of cases with a successful outcome after 12 months, 73.9% in 2019 to 71.7% in 2020, however this is still lower than in 2018 (74.2%; Table X).

Treatment success among the 1 090 previously treated TB cases notified in 2020 was 52.5% (Table 17), which was lower compared to new and relapse cases. A higher proportion of previously treated cases were reported to have treatment failure (5.7%) or to have died (8.4%) compared to new and relapse cases.

Treatment outcome at 12 months was reported for 426 HIV-positive TB cases notified in 2020 (Table 20). Of these HIV-positive TB cases, 228 (53.5%) were reported as successfully treated, 61 (14.3%) died, two (0.5%) experienced treatment failure, 34 (8.0%) were lost to follow up, 37 (8.7%) were still on treatment in 2021 and 64 (15.0%) were not evaluated (Table 20).

Of 781 RR/MDR-TB cases notified in 2019 with a treatment outcome reported in 2021, 404 (51.7%) were treated successfully, 111 (14.2%) died, 71 (9.1%) experienced treatment failure, 73 (9.3%) were lost to follow up, 73 (9.3%) were still on treatment in 2021 and 49 (6.3%) were not evaluated (Table 22). Of the 17 countries that had reported RR/MDR-TB cases in 2019 and treatment outcomes in 2021, only six had treatment success above the target of 75%: Austria (100%), Belgium (87.5%), Estonia (77.8%), the Netherlands (88.9%), Slovakia (80.0%) and Sweden (90.0%). Although the 24-month treatment success rate for RR/MDR-TB has remained below 50% for cases reported between 2015 and 2017, in recent years it has increased to over 50% (Table XI).

Among the 159 cases categorised as pre-XDR-TB and notified in 2019 with treatment outcome at 24 months reported in 2021, 27 were reported as having treatment success (17.0%) while 30 (18.9%) were reported to have died and 22 (13.8%) to have experienced treatment failure (Table 23). Treatment success among the pre-XDR-TB cohort during the previous five years (2015–2019) was below 35% each year (Table XII).

In 2021, treatment outcome at 36 months for XDR-TB cases notified in 2018 was reported by five countries for a total of 27 XDR-TB cases. Fifteen countries reported zero XDR-TB cases in 2018. Among the 27 XDR-TB cases: 18 (66.7%) were treated successfully, three (11.1%) died and three (11.1%) experienced treatment failure. There were no cases lost to follow up and 3 (11.1%) were not evaluated (Table 24).

### 3.2.10 WHO disease burden estimates

According to WHO, the estimated TB incidence in the EU/EEA overall (excluding Liechtenstein) was 8.4 per 100 000 population in 2021 (Table 1 and Table II). Of the 29 countries with estimates, 22 had an estimated incidence of less than 10.0 per 100 000 population (Table 1 and Table II). The overall number of estimated TB deaths, excluding HIV deaths in people who were HIV-positive, was 4 400 for the EU/EEA in 2021, an increase against 2020 (3 600) and a reduction of almost 12% compared with the 5 000 estimated for 2012 (Table 1).

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

In 2021, 29 of 30 EU/EEA countries reported TB notification data and a total of 33 520 TB cases. There was a further decline in the overall TB notification rate to 7.4 per 100 000 population, which continued the decreasing trend observed since 2002. As in previous years, a few countries reported a large proportion of the total number of cases, including Romania, which reported almost a quarter of all TB cases in 2021.

The decline in total case numbers and notification rates in 2021 should be interpreted with caution, due to the impact on TB clinical services and surveillance across the EU/EEA of measures to mitigate the COVID-19 pandemic, which continued throughout 2021. The analysis of data completeness (presented in Annex 3) indicated that in 2021 four of the 17 variables were less complete compared with 2020, most notably HIV status and outcome at 24 months.

During 2020, the diversion of TB resources, whether clinical, laboratory, or public health (including surveillance and contact tracing) to COVID-19 activities, and the difficulties experienced by patients in accessing clinical services, identified through the survey conducted alongside the 2020 data collection, may have resulted in delayed presentation and/or diagnosis of some TB cases. These factors may also have continued to have an impact on the Member States in 2021. Delayed diagnosis may have resulted in more severe illness at time of diagnosis for some cases. In addition, delayed treatment of pulmonary cases, along with decreased contact tracing resources for TB, may have led to more TB transmission. As such, it is hypothesised that there may be an increase in the number and clinical severity of cases in the coming years.

The observed decline in TB incidence does indicate ongoing progress towards reaching the United Nations Sustainable Development Goal 3 target of an 80% reduction in the TB incidence rate in 2030 compared to 2015. However, the extent to which the COVID-19 pandemic may have had an

impact on data reported for 2020 and 2021 is not yet fully apparent. The EU/EEA Sustainable Development Goal target for 2030 is a notification rate of 2.4 per 100 000 population (based on an 80% reduction of the 2015 TB notification rate of 11.9 per 100 000 population). Although the decline observed in 2021 would indicate progress is being made, at the current rate most EU/EEA countries are still not on track to achieve the 80% reduction target by 2030, or the TB elimination target by 2050 [4]. Despite the slow improvement in the treatment success rates in recent years, additional work is required to achieve the 90% target for treatment success [5] in EU/EEA. Additional resources may be required to accelerate progress towards achieving these goals, and to counteract any increase in TB cases resulting from the impact of the COVID-19 pandemic.

Reassuringly, the number of drug-resistant TB cases in the EU/EEA continued to decrease in 2021, despite the high number of drug-resistant TB cases in the European Region HPCs. Drug-susceptibility testing results for first-line drugs were reported for just over 70% of laboratory-confirmed TB cases in 2021. Although this represents a decline compared to almost 75% in 2019 and is similar to the figure for 2020 (71.4%), there is still considerable room for improvement here. The changes implemented to the definitions of drug resistant TB [6] in 2020, in particular the definition for XDR-TB<sup>14</sup> and the introduction of the 'pre XDR-TB' category, along with the updated WHO treatment guidelines for drug-resistant TB [7], emphasise the need for drug-susceptibility testing against second-line drugs, particularly fluoroquinolones, bedaquiline and linezolid.

Overall, it is reassuring that the TB incidence continued to decline across the EU/EEA in 2021, and that there was a low proportion of drug-resistant cases reported. However, there is still considerable work to be done to achieve the United Nations Sustainable Development Goals. With the disruption caused by the COVID-19 pandemic during 2020 and 2021, it is now critical that TB services are prioritised and appropriately resourced to support intensified public health measures against TB. As always, ECDC remains committed to supporting EU/EEA countries in their efforts to end the TB epidemic.

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- <sup>14</sup> Definition of XDR-TB - cases that meet the definition for pre XDR-TB, as well having resistance to any other Group A drug (levofloxacin, moxifloxacin, bedaquiline and linezolid).
- <sup>15</sup> All weblinks accessed on 16 February 2023.



## **4. Commentary – monitoring**



## 4. Commentary – monitoring

The Tuberculosis Action Plan for the WHO European Region 2016–2020 came to an end in 2020 and the progress made during 2016–2020 was assessed and reported to the 70th session of the Regional Committee for Europe [1]. The new Tuberculosis Action Plan for the WHO European Region 2023–2030, developed on the basis of consultations with Member States, partners, civil society organisations and affected communities, was submitted to the 72nd session of the Regional Committee for Europe and adopted by the Member States as resolution EUR/RC72/(2) [2–3].

The Regional Action Plan will operationalise the global End TB Strategy through Region-specific actions, placing people at the heart of the response, in line with the European Programme of Work, 2020–2025 – ‘United Action for Better Health in Europe’ [4]. By contributing to the European Programme of Work, moving towards attaining universal health coverage, promoting health and well-being and protecting against health emergencies, the Regional Action Plan strives for a better balance in providing support at the regional, sub-regional and country levels for greater impact at the population level.

The Tuberculosis Action Plan for the WHO European Region 2023–2030 is supported by a monitoring framework that facilitates a harmonised approach to monitoring both the progress towards the 2025–2030 targets at the national and regional levels and the actions taken to put the End TB Strategy into practice. Monitoring is not limited to tracking data on TB surveillance and implementation of activities, but also includes an evaluation of the effectiveness and impact of interventions, consequently providing the foundation for advocacy and policy development.

The framework consists of 30 indicators enabling the performance of the interventions areas in the TB Action Plan to be monitored. Ten indicators were selected as the core indicators for monitoring and reporting to the WHO Regional Committee for Europe. In addition, the selection of indicators was harmonised with the End TB Strategy’s recommended top 10 global indicators to focus on indicators that are collected regularly through routine recording and reporting. To prioritise the area of intervention, indicators will be measured according to the following layers: 18 HPCs for ending TB in the WHO European Region; EU/EEA countries; and WHO European Region countries.

The status of the core and additional indicators will be reported in the surveillance report every second year. The first update on progress will be presented in the TB surveillance and monitoring in Europe 2024 report.

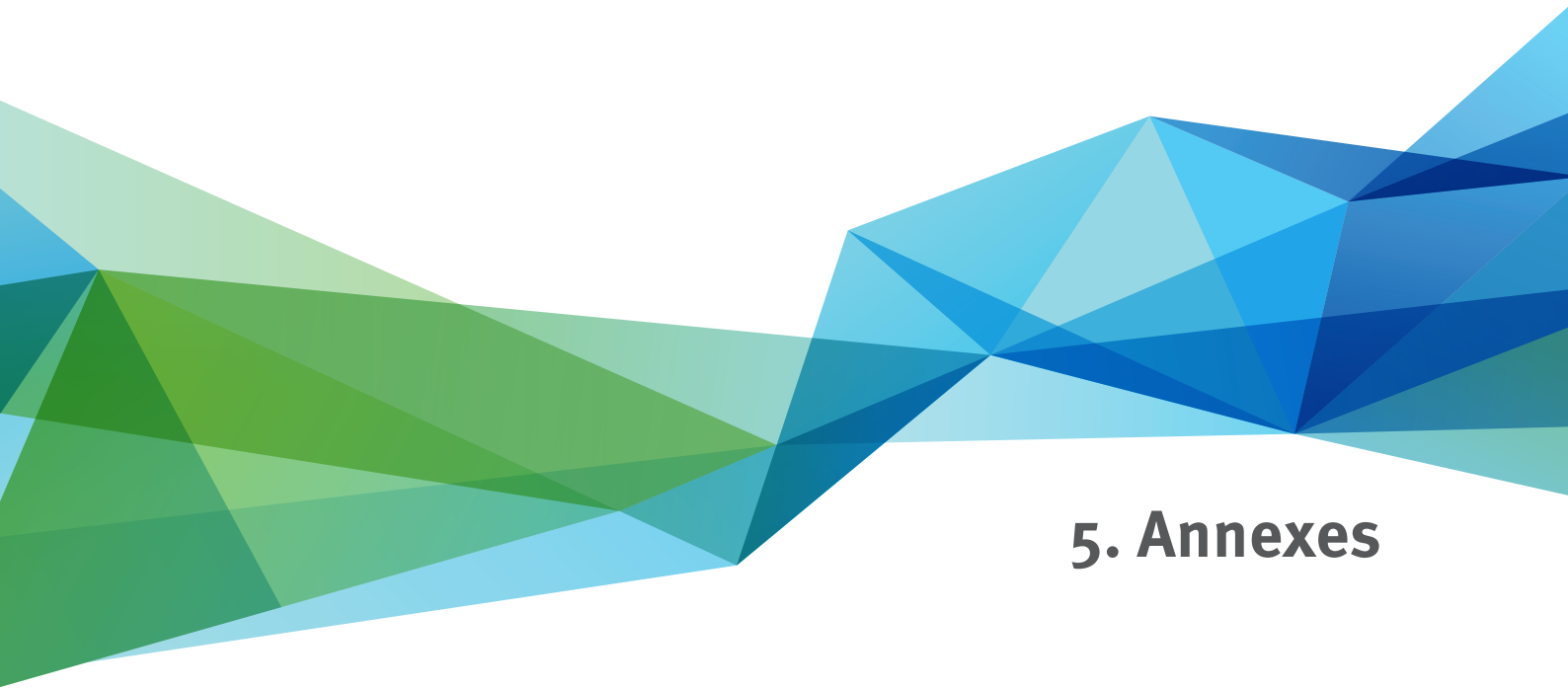
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<sup>16</sup> All weblinks accessed 16 February 2023.







## 5. Annexes



## Annex 1. Tuberculosis surveillance system overview, European Union/European Economic Area, 2021

Country	Data source	Legal character	Comprehensiveness	Type	National coverage	Data available	
						EuroTB aggregated data	TESSy case-based data <sup>a</sup>
Austria	AT-TUBERKULOSEGESETZ	Cp	Co	C	Y	–	1995–2021
Belgium	BE-TUBERCULOSIS	Cp	Co	C	Y	–	1995–2021
Bulgaria	BG-MOH	Cp	Co	C	Y	1995–2006	2007–2021
Croatia <sup>b</sup>	HR-CNIPH	Cp	Co	C	Y	1995–2007	2012–2021
Cyprus	CY-NOTIFIED_DISEASES	Cp	Co	C	Y	1995–2001	2002–2021
Czech Republic	CZ-TUBERCULOSIS	Cp	Co	C	Y	–	1995–2021
Denmark	DK-MIS	Cp	Co	C	Y	–	1995–2021
Estonia	EE-TBC	Cp	Co	C	Y	–	1995–2021
Finland	FI-NIDR	Cp	Co	C	Y	–	1995–2021
France	FR-MANDATORY_INFECTIOUS_DISEASES	Cp	Co	C	Y	–	1995–2021
Germany	DE-SURVNET@RKI-7.1/6	Cp	Co	C	Y	1995–2000	2001–2021
Greece	EL-NOTIFIABLE_DISEASES	Cp	Co	C	Y	1995–2001	2002–2021
Hungary	HU-TUBERCULOSIS	Cp	Co	C	Y	1995–1998	1999–2021
Iceland	IS-TUBERCULOSIS	Cp	Co	C	Y	–	1995–2020
Ireland	IE-CIDR	Cp	Co	C	Y	1995–1997	1998–2021
Italy	IT-NRS	Cp	Co	C	Y	–	1995–2021
Latvia <sup>c</sup>	LV-TB	Cp	Co	C	Y	1995–2000	2001–2021
Liechtenstein	CH-SFOPH-LI	Cp	Co	C	Y	–	1995–2021
Lithuania	LT-TB_REGISTER	Cp	Co	C	Y	1995–2002	2003–2021
Luxembourg	LU-SYSTEM <sub>1</sub>	Cp	Co	C	Y	–	1995–2021
Malta	MT-DISEASE_SURVEILLANCE	Cp	Co	C	Y	–	1995–2021
Netherlands	NL-NTR	Cp	Co	C	Y	–	1995–2021
Norway	NO-MSIS_A	Cp	Co	C	Y	–	1995–2021
Poland	PL_CR	Cp	Co	C	Y	1995–1999	2000–2021
Portugal	PT-TUBERCULOSIS	Cp	Co	C	Y	1995–1999	2000–2021
Romania	RO-NTBSy	Cp	Co	C	Y	–	1995–2021
Slovakia	SK-NRT	Cp	Co	C	Y	1995	1996–2021
Slovenia	SI-TUBERCULOSIS	Cp	Co	C	Y	–	1995–2021
Spain	ES-STATUTORY_DISEASES	Cp	Co	C	Y	1995–2006	2007–2021
Sweden	SE-SweTReg	Cp	Co	C	Y	–	1995–2021

Cp: compulsory reporting.

Co: comprehensive.

C: case-based.

TESSy: The European Surveillance System.

Y: yes.

<sup>a</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 data.

<sup>b</sup> Data reported since 2012 to TESSy, historical data extracted from WHO TB Monitoring and Evaluation data.

<sup>c</sup> Data from 2017–2020 is not available in this report.

Annex 2. List of variables for 2021 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 in the past
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 Mycobacterium tuberculosis complex
32 ResultMicroscopy	The result of the microscopy test performed
33 ResultOtherTest	Additional lab test results
34 Pathogen	Species and gene (M. tuberculosis 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_CFZ	Susceptibility to clofazimine
39 SIR_DLM	Susceptibility to delamanid
40 SIR_ETH	Susceptibility to ethambutol
41 SIR_ETO	Susceptibility to ethionamide
42 SIR_INH	Susceptibility to isoniazid
43 SIR_LZD	Susceptibility to linezolid
44 SIR_LVX	Susceptibility to levofloxacin
45 SIR_MFX	Susceptibility to moxifloxacin
46 SIR_PZA	Susceptibility to pyrazinamide
47 SIR_RIF	Susceptibility to rifampicin
48 SIR_STR	Susceptibility to streptomycin
49 IsolateID	Unique identifier for each isolate within the data source / lab system related to the case
50 ECDCIsolateID	Identifier for each isolate record that is guaranteed to be unique across countries/labs/pathogens and not contain additional encoded information
51 SpoligoCode <sup>b</sup>	Spoligo pattern code
52 MiruCode <sup>b</sup>	MIRU pattern code
53 BeijingGenotype <sup>b</sup>	Beijing genotype identification

<sup>a</sup> Notification of TB cases for 2021, treatment outcome data updated for cohort 2020 and MDR TB treatment outcome data updated for cohort 2019 and XDR TB treatment outcome data updated for cohort 2018.

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

Annex 3. Completeness of data reported for 2021, European Union/European Economic Area

Country	Age (%)	Gender (%)	Origin <sup>a</sup> (%)	Country of origin (%)	Site (%)	Previous treatment history <sup>b</sup> (%)	Diagnosed antenotem (%)	Result culture (%)	Result microscopy (%)	Result other test (%)	DST/FLD (%)	DST/SLD (%)	HIV status (%)	Enrolled in treatment (%)	Outcome 12 months <sup>c</sup> (%)	Outcome 24 months <sup>d</sup> (%)	Outcome 36 months <sup>e</sup> (%)
Austria	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(78.5)	(100.0)	(92.2)	(66.4)	(77.3)	(92.5)	(100.0)	(0.0)	(0.0)	(91.0)	(100.0)	–
Belgium	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(83.3)	(100.0)	(94.4)	(39.0)	(80.0)	(92.3)	(100.0)	(53.0)	(98.4)	(80.8)	(100.0)	–
Bulgaria	(100.0)	(100.0)	(100.0)	(100.0)	(99.9)	(100.0)	(100.0)	(84.1)	(86.6)	(5.1)	(51.3)	(100.0)	(69.4)	(100.0)	(0.0)	(0.0)	–
Croatia	(100.0)	(100.0)	(100.0)	(100.0)	(86.6)	(76.4)	(83.4)	(88.5)	(82.2)	(0.0)	(69.6)	–	(1.9)	(86.0)	(77.3)	(0.0)	–
Cyprus	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(97.9)	(100.0)	(77.1)	(93.8)	(52.1)	(100.0)	(100.0)	(72.9)	(100.0)	(66.7)	(0.0)	–
Czech Republic	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(98.3)	(97.6)	(86.3)	(93.3)	(100.0)	(59.4)	(100.0)	(100.0)	(100.0)	–
Denmark	(100.0)	(100.0)	(100.0)	(99.0)	(100.0)	(100.0)	(100.0)	(96.6)	(97.6)	(95.7)	(98.8)	(100.0)	(77.4)	(22.6)	(38.9)	–	(100.0)
Estonia	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(97.1)	(100.0)	(94.6)	(95.5)	(85.6)	(96.5)	(100.0)	(92.8)	(100.0)	(100.0)	(100.0)	–
Finland	(100.0)	(100.0)	(97.6)	(95.3)	(100.0)	(97.1)	(100.0)	(72.4)	(54.1)	(68.2)	(97.6)	(100.0)	(0.0)	(77.6)	(27.6)	(100.0)	–
France	(100.0)	(100.0)	(87.9)	(92.5)	(98.5)	(66.4)	(3.1)	(50.1)	(79.0)	(0.0)	(2.6)	(100.0)	(0.0)	(0.0)	(44.6)	(0.0)	–
Germany	(99.9)	(99.9)	(96.5)	(96.8)	(99.3)	(74.2)	(98.2)	(87.9)	(90.6)	(86.1)	(87.8)	(100.0)	(0.0)	(98.2)	(87.4)	(100.0)	–
Greece	(100.0)	(99.0)	(100.0)	(86.4)	(98.5)	(85.0)	(96.1)	(65.0)	(68.0)	(45.6)	(59.4)	(100.0)	(24.8)	(87.9)	(0.0)	–	–
Hungary	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(86.3)	(86.6)	(0.0)	(92.2)	(100.0)	(2.1)	(100.0)	(97.3)	(100.0)	–
Iceland	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ireland	(100.0)	(99.5)	(76.5)	(76.5)	(71.4)	(45.6)	(100.0)	(65.9)	(34.1)	(47.5)	(83.6)	(100.0)	(31.3)	(100.0)	(11.4)	–	–
Italy	(99.9)	(100.0)	(97.5)	(92.6)	(99.8)	(72.1)	(0.0)	(86.6)	(58.4)	(10.4)	(0.0)	–	(0.0)	(97.6)	(0.0)	–	–
Latvia	(100.0)	(100.0)	(96.2)	(99.2)	(100.0)	(95.4)	(100.0)	(46.4)	(70.9)	(83.1)	(85.4)	(100.0)	(72.0)	(81.2)	–	–	–
Liechtenstein	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(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)	(1.4)	(100.0)	(100.0)	(94.7)	(100.0)	(100.0)	(100.0)	(100.0)
Luxembourg	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(88.6)	(100.0)	(100.0)	(100.0)	(0.0)	(96.7)	–	(71.4)	(100.0)	(41.2)	(0.0)	–
Malta	(100.0)	(100.0)	(100.0)	(98.1)	(100.0)	(100.0)	(0.0)	(90.7)	(63.0)	(0.0)	(97.4)	–	(85.2)	(100.0)	(100.0)	–	–
Netherlands	(100.0)	(99.9)	(99.0)	(99.4)	(99.7)	(99.9)	(97.2)	(81.5)	(74.4)	(83.1)	(92.9)	(100.0)	(74.7)	(95.9)	(94.9)	(100.0)	–
Norway	(100.0)	(100.0)	(100.0)	(100.0)	(98.7)	(100.0)	(100.0)	(94.3)	(82.2)	(94.9)	(99.2)	(100.0)	(81.5)	(97.5)	(93.7)	(100.0)	–
Poland	(100.0)	(100.0)	(100.0)	(99.8)	(100.0)	(100.0)	(100.0)	(92.4)	(94.4)	(33.5)	(92.5)	(100.0)	(0.0)	(0.0)	(0.0)	–	–
Portugal	(99.6)	(100.0)	(99.9)	(78.9)	(98.8)	(100.0)	(100.0)	(67.6)	(73.7)	(44.5)	(60.3)	(100.0)	(73.7)	(100.0)	(100.0)	(83.3)	–
Romania	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(94.5)	(96.1)	(37.9)	(89.2)	(100.0)	(82.3)	(100.0)	(100.0)	(100.0)	–
Slovakia	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(95.6)	(100.0)	(89.1)	(86.9)	(40.9)	(98.7)	(100.0)	(58.4)	(100.0)	(95.6)	(100.0)	–
Slovenia	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(97.5)	(92.5)	(98.8)	(100.0)	(100.0)	(83.8)	(100.0)	(100.0)	–	–
Spain	(99.7)	(100.0)	(79.8)	(78.8)	(100.0)	(66.4)	(0.0)	(89.0)	(88.6)	(46.1)	(59.8)	(100.0)	(54.8)	(0.0)	(64.3)	–	–
Sweden	(100.0)	(100.0)	(100.0)	(99.7)	(100.0)	(92.2)	(100.0)	(100.0)	(60.8)	(84.6)	(99.7)	(100.0)	(0.0)	(100.0)	(77.5)	(100.0)	–
<b>Total EU/EEA</b>	<b>(99.9)</b>	<b>(100.0)</b>	<b>(95.5)</b>	<b>(94.7)</b>	<b>(99.4)</b>	<b>(85.7)</b>	<b>(69.3)</b>	<b>(84.2)</b>	<b>(84.3)</b>	<b>(40.3)</b>	<b>(71.4)</b>	<b>(100.0)</b>	<b>(38.3)</b>	<b>(63.1)</b>	<b>(63.9)</b>	<b>(97.0)</b>	<b>(100.0)</b>

Note: WHO European Region 48 tuberculosis high-priority countries presented in *italics*.  
DST/FLD: drug-susceptibility testing for first-line anti-tuberculosis drugs, calculated for confirmed tuberculosis cases. FLD included in calculation are isoniazid and rifampicin.  
DST/SLD: drug-susceptibility testing for second-line anti-tuberculosis drugs, calculated only for multidrug-resistant tuberculosis cases. SLD included in calculation are: bedaquiline, moxifloxacin and levofloxacin.  
<sup>a</sup> To determine the origin, two variables merged: Born/Reporting Country and Nationality/Reporting Country, depending on country preference.  
<sup>b</sup> History of previous treatment defined by previous diagnosis of tuberculosis for cases reported by Belgium, Denmark, Ireland, Norway and the United Kingdom.  
<sup>c</sup> Data for the 2019 cohort.  
<sup>d</sup> Data for the multidrug-resistant tuberculosis 2019 cohort cases that are reported as 'still on treatment' at 12 months.  
<sup>e</sup> Data for the extensively drug-resistant tuberculosis 2018 cohort cases that are reported as 'still on treatment' at 12 months and 24 months.

## Annex 4. Reporting completeness into Global TB Database, 2021

Country/area	Identification (%) (17 fields)	Notification (%) (67 fields)	Anti-tuberculosis drug resistance surveillance (%) (34 fields)	Treatment outcome of TB cases by risk categories (%) (74 fields)	Implementing End TB Strategy (%) (84 fields)	Budget and expenditure (%) (41 fields)
<b>EU/EEA</b>						
Austria	(0.0)	(73.1)	(100.0)	(48.6)	(0.0)	(0.0)
Belgium	(0.0)	(83.6)	(100.0)	(83.8)	(9.5)	(0.0)
<i>Bulgaria</i>	<i>(100.0)</i>	<i>(79.1)</i>	<i>(100.0)</i>	<i>(43.2)</i>	<i>(56.0)</i>	<i>(100.0)</i>
Croatia	(0.0)	(73.1)	(100.0)	(40.5)	(0.0)	(0.0)
Cyprus	(0.0)	(73.1)	(100.0)	(56.8)	(0.0)	(0.0)
Czech Republic	(100.0)	(86.6)	(100.0)	(91.9)	(45.2)	(0.0)
Denmark	(0.0)	(68.7)	(100.0)	(40.5)	(0.0)	(0.0)
<i>Estonia</i>	<i>(100.0)</i>	<i>(83.6)</i>	<i>(100.0)</i>	<i>(73.0)</i>	<i>(71.4)</i>	<i>(0.0)</i>
Finland	(70.6)	(86.6)	(100.0)	(48.6)	(34.5)	(0.0)
France	(94.1)	(77.6)	(100.0)	(50.0)	(35.7)	(0.0)
Germany	(70.6)	(73.1)	(100.0)	(50.0)	(17.9)	(0.0)
Greece	(0.0)	(73.1)	(100.0)	(0.0)	(0.0)	(0.0)
Hungary	(70.6)	(73.1)	(100.0)	(56.8)	(11.9)	(0.0)
Iceland	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Ireland	(76.5)	(83.6)	(100.0)	(83.8)	(54.8)	(0.0)
Italy	(35.3)	(67.2)	(100.0)	(0.0)	(21.4)	(0.0)
<i>Latvia</i>	<i>(100.0)</i>	<i>(73.1)</i>	<i>(100.0)</i>	<i>(0.0)</i>	<i>(0.0)</i>	<i>(0.0)</i>
Liechtenstein	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
<i>Lithuania</i>	<i>(52.9)</i>	<i>(85.1)</i>	<i>(100.0)</i>	<i>(91.9)</i>	<i>(64.3)</i>	<i>(0.0)</i>
Luxembourg	(94.1)	(79.1)	(100.0)	(67.6)	(38.1)	(0.0)
Malta	(88.2)	(85.1)	(100.0)	(67.6)	(41.7)	(0.0)
Netherlands	(100.0)	(83.6)	(100.0)	(91.9)	(44.0)	(0.0)
Norway	(0.0)	(68.7)	(100.0)	(56.8)	(0.0)	(0.0)
Poland	(100.0)	(73.1)	(100.0)	(0.0)	(27.4)	(0.0)
Portugal	(100.0)	(86.6)	(100.0)	(83.8)	(60.7)	(0.0)
<i>Romania</i>	<i>(94.1)</i>	<i>(86.6)</i>	<i>(100.0)</i>	<i>(91.9)</i>	<i>(71.4)</i>	<i>(0.0)</i>
Slovakia	(88.2)	(88.1)	(100.0)	(83.8)	(65.5)	(0.0)
Slovenia	(100.0)	(86.6)	(100.0)	(43.2)	(69.0)	(0.0)
Spain	(0.0)	(73.1)	(100.0)	(64.9)	(0.0)	(0.0)
Sweden	(70.6)	(85.1)	(100.0)	(50.0)	(39.3)	(0.0)
<b>Subtotal EU/EEA</b>	<b>(56.9)</b>	<b>(73.6)</b>	<b>(93.3)</b>	<b>(52.0)</b>	<b>(29.3)</b>	<b>(3.3)</b>
<b>Non-EU/EEA</b>						
Albania	(100.0)	(91.0)	(47.1)	(64.9)	(51.2)	(0.0)
Andorra	(70.6)	(38.8)	(32.4)	(82.4)	(64.3)	(0.0)
<i>Armenia</i>	<i>(100.0)</i>	<i>(94.0)</i>	<i>(55.9)</i>	<i>(91.9)</i>	<i>(60.7)</i>	<i>(56.1)</i>
<i>Azerbaijan</i>	<i>(52.9)</i>	<i>(77.6)</i>	<i>(61.8)</i>	<i>(59.5)</i>	<i>(46.4)</i>	<i>(0.0)</i>
<i>Belarus</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(73.5)</i>	<i>(91.9)</i>	<i>(70.2)</i>	<i>(0.0)</i>
Bosnia and Herzegovina	(94.1)	(77.6)	(100.0)	(12.2)	(25.0)	(7.3)
<i>Georgia</i>	<i>(100.0)</i>	<i>(92.5)</i>	<i>(100.0)</i>	<i>(83.8)</i>	<i>(83.3)</i>	<i>(100.0)</i>
Israel	(100.0)	(85.1)	(100.0)	(66.2)	(35.7)	(0.0)
<i>Kazakhstan</i>	<i>(100.0)</i>	<i>(97.0)</i>	<i>(73.5)</i>	<i>(100.0)</i>	<i>(75.0)</i>	<i>(100.0)</i>
<i>Kyrgyzstan</i>	<i>(100.0)</i>	<i>(88.1)</i>	<i>(100.0)</i>	<i>(83.8)</i>	<i>(86.9)</i>	<i>(92.7)</i>
<i>Republic of Moldova</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(92.9)</i>	<i>(100.0)</i>
Monaco	(35.3)	(35.8)	(100.0)	(66.2)	(35.7)	(0.0)
Montenegro	(94.1)	(71.6)	(100.0)	(66.2)	(51.2)	(0.0)
North Macedonia	(0.0)	(71.6)	(97.1)	(40.5)	(59.5)	(0.0)
<i>Russian Federation</i>	<i>(64.7)</i>	<i>(79.1)</i>	<i>(94.1)</i>	<i>(75.7)</i>	<i>(44.0)</i>	<i>(80.5)</i>
San Marino	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Serbia	(70.6)	(50.7)	(0.0)	(24.3)	(0.0)	(0.0)
Serbia excluding Kosovo <sup>1</sup>	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Kosovo <sup>1</sup>	(70.6)	(50.7)	(0.0)	(24.3)	(0.0)	(0.0)
Switzerland	(100.0)	(80.6)	(100.0)	(33.8)	(52.4)	(0.0)
<i>Tajikistan</i>	<i>(100.0)</i>	<i>(86.6)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(73.8)</i>	<i>(100.0)</i>
<i>Türkiye</i>	<i>(100.0)</i>	<i>(86.6)</i>	<i>(100.0)</i>	<i>(91.9)</i>	<i>(79.8)</i>	<i>(0.0)</i>
<i>Türkmenistan</i>	<i>(100.0)</i>	<i>(65.7)</i>	<i>(20.6)</i>	<i>(32.4)</i>	<i>(58.3)</i>	<i>(19.5)</i>
<i>Ukraine</i>	<i>(100.0)</i>	<i>(88.1)</i>	<i>(100.0)</i>	<i>(100.0)</i>	<i>(92.9)</i>	<i>(100.0)</i>
United Kingdom	(88.2)	(62.7)	(50.0)	(50.0)	(15.5)	(0.0)
<i>Uzbekistan</i>	<i>(100.0)</i>	<i>(86.6)</i>	<i>(85.3)</i>	<i>(41.9)</i>	<i>(78.6)</i>	<i>(0.0)</i>
<b>Subtotal non-EU/EEA</b>	<b>(82.1)</b>	<b>(75.3)</b>	<b>(74.6)</b>	<b>(65.0)</b>	<b>(55.6)</b>	<b>(31.5)</b>
<b>Total European Region</b>	<b>(68.1)</b>	<b>(74.4)</b>	<b>(85.0)</b>	<b>(57.8)</b>	<b>(41.0)</b>	<b>(15.9)</b>
<b>Subtotal 18 HPCs</b>	<b>(92.5)</b>	<b>(86.1)</b>	<b>(86.9)</b>	<b>(75.2)</b>	<b>(67.0)</b>	<b>(47.2)</b>

Note: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 tuberculosis HPCs presented in *italics*.

<sup>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

Annex 5. Laboratory network capacity, European Region, 2021<sup>a</sup>

Country/area	Country/area laboratory network										
	Microscopy		Culture	DST for isoniazid and rifampicin		Line probe assay (N)	Xpert MTB/RIF (N)	Year	International proficiency testing of national reference laboratory		Acceptable performance <sup>b</sup>
	Number of laboratories performing	EQA passed	Number of laboratories performing	Number of laboratories performing	EQA passed				isoniazid	rifampicin	
<b>EU/EEA</b>											
Austria	–	–	–	–	–	–	–	–	–	–	–
Belgium	–	–	–	–	–	–	–	–	–	–	–
Bulgaria	33	–	30	–	–	–	4	2017	100	100	Y
Croatia	–	–	–	–	–	–	1	–	–	–	–
Cyprus	–	–	–	–	–	–	–	–	–	–	–
Czech Republic	37	–	37	–	–	–	–	2021	100	100	Y
Denmark	–	–	–	–	–	–	–	–	–	–	–
Estonia	2	–	2	–	–	–	6	2021	100	100	Y
Finland	9	–	9	–	–	–	5	2021	100	100	Y
France	140	–	140	–	–	–	75	2021	100	100	Y
Germany	–	–	–	–	–	–	–	2021	100	100	–
Greece	–	–	–	–	–	–	–	–	–	–	–
Hungary	–	–	–	–	–	–	–	2021	–	–	–
Iceland	–	–	–	–	–	–	–	–	–	–	–
Ireland	11	–	10	–	–	–	6	2020	100	100	Y
Italy	42	–	42	–	–	–	45	2019	100	100	Y
Latvia	–	–	–	–	–	–	–	–	–	–	–
Liechtenstein	–	–	–	–	–	–	–	–	–	–	–
Lithuania	10	–	5	–	–	–	4	2021	100	100	Y
Luxembourg	1	–	1	–	–	–	0	2021	100	100	Y
Malta	1	–	1	–	–	–	1	–	–	–	–
Netherlands	–	–	30	–	–	–	–	2021	100	100	Y
Norway	–	–	–	–	–	–	–	–	–	–	–
Poland	60	–	60	–	–	–	25	2021	100	100	Y
Portugal	45	–	41	–	–	–	10	2021	100	100	Y
Romania	91	–	85	–	–	–	30	2021	100	100	Y
Slovakia	7	–	3	–	–	–	1	2020	100	100	Y
Slovenia	2	–	2	–	–	–	2	2020	100	100	–
Spain	–	–	–	–	–	–	–	–	–	–	–
Sweden	4	–	4	–	–	–	5	2021	100	100	Y
<b>Subtotal EU/EEA</b>	<b>495</b>	–	<b>502</b>	–	<b>105</b>	<b>109</b>	<b>220</b>	–	–	–	–
<b>Non-EU/EEA</b>											
Albania	12	–	1	–	0	1	1	2016	100	100	Y
Andorra	7	–	7	–	–	4	3	–	–	–	–
Armenia	16	–	1	–	0	1	8	2021	100	100	Y
Azerbaijan	23	–	7	–	3	2	16	2020	–	–	Y
Belarus	78	–	12	–	8	8	24	2021	100	100	Y
Bosnia and Herzegovina	18	–	18	–	0	3	0	–	–	–	–
Georgia	10	–	2	–	1	2	28	2021	100	100	Y
Israel	13	–	13	–	–	1	1	2021	100	100	Y
Kazakhstan	139	–	20	–	20	17	119	2021	95	100	Y
Kyrgyzstan	104	–	7	–	1	1	24	2021	100	100	Y
Republic of Moldova	57	–	4	–	4	4	4	2021	100	100	Y
Monaco	–	–	–	–	–	–	–	–	–	–	–
Montenegro	1	–	1	–	1	0	1	2021	100	100	Y
North Macedonia	7	–	2	–	0	0	1	2021	90	100	N
Russian Federation	5053	–	323	–	79	4	181	–	–	–	–
San Marino	–	–	–	–	–	–	–	–	–	–	–
Serbia	–	–	–	–	–	–	–	–	–	–	–
Serbia excluding Kosovo <sup>1</sup>	–	–	–	–	–	–	–	–	–	–	–
Kosovo <sup>1</sup>	–	–	–	–	–	–	–	–	–	–	–
Switzerland	30	–	21	–	9	5	55	2021	100	100	Y
Tajikistan	84	–	6	–	0	6	52	2021	100	100	Y
Türkiye	231	–	110	–	46	5	26	2020	100	100	Y
Turkmenistan	67	–	6	–	–	6	7	–	–	–	–
Ukraine	683	–	39	–	34	4	159	2021	100	100	Y
United Kingdom	–	–	–	–	–	–	–	–	–	–	–
Uzbekistan	289	–	8	–	8	12	52	2021	100	100	Y
<b>Subtotal non-EU/EEA</b>	<b>6922</b>	–	<b>608</b>	–	<b>214</b>	<b>86</b>	<b>762</b>	–	–	–	–
<b>Total European Region</b>	<b>7417</b>	–	<b>1110</b>	–	<b>319</b>	<b>195</b>	<b>982</b>	–	–	–	–
<b>Subtotal 18 HPCs</b>	<b>6970</b>	–	<b>667</b>	–	<b>204</b>	<b>72</b>	<b>744</b>	–	–	–	–

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

EQA: external quality assessment.

DST: drug-susceptibility testing.

Y: yes.

N: no.

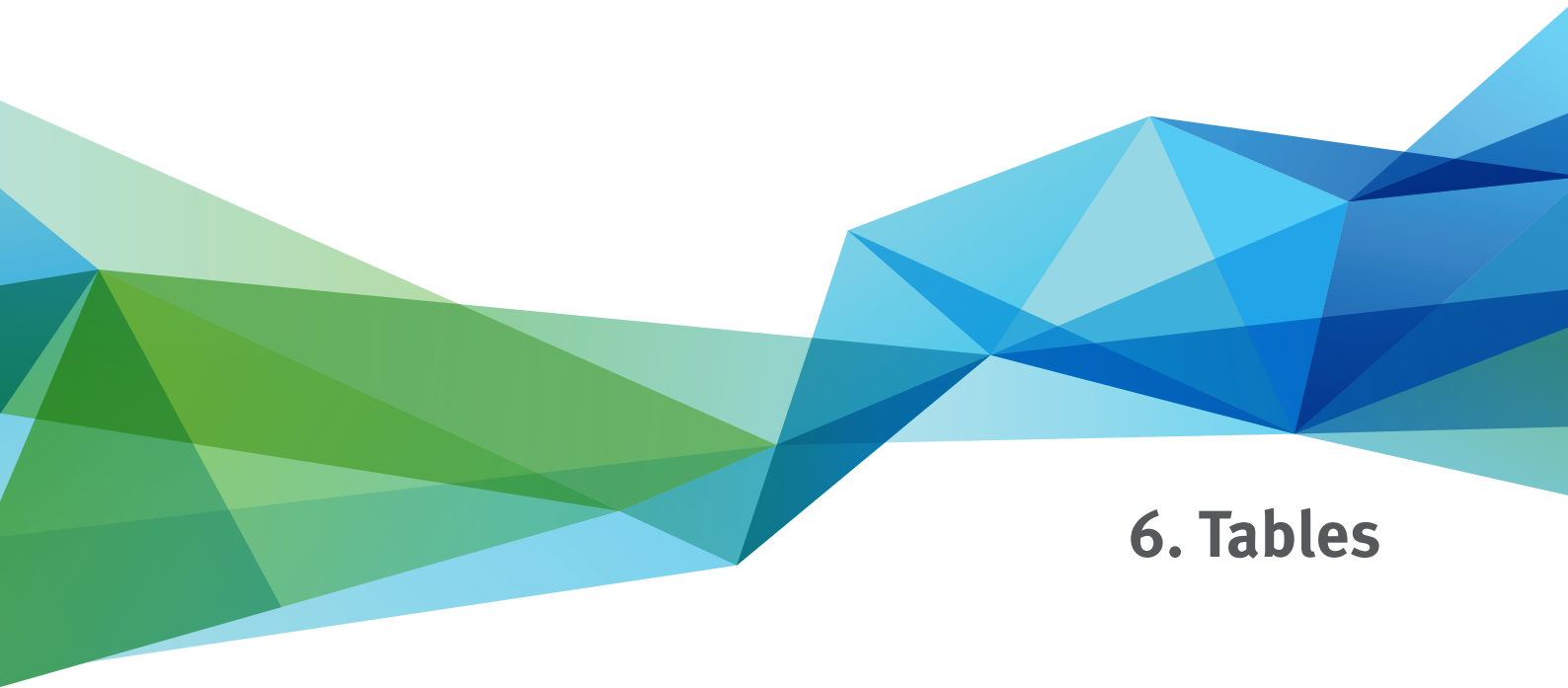
<sup>a</sup> Data obtained from WHO Tuberculosis Monitoring and Evaluation database (TME).

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

<sup>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).







## 6. Tables



**Summary table. TB surveillance data by region, European Region, 2021**

Data item	Table showing data by country/area	Region							
		EU/EEA		Non-EU/EEA		Total		18 high-priority countries <sup>a</sup>	
		Number of reporting countries/areas <sup>b</sup>	Value	Number of reporting countries/areas <sup>b</sup>	Value	Number of reporting countries/areas <sup>b</sup>	Value	Number of reporting countries/areas <sup>b</sup>	Value
<b>Total population (millions)</b>	<b>1</b>	<b>29</b>	<b>518.1</b>	<b>24</b>	<b>480.0</b>	<b>53</b>	<b>930.9</b>	<b>18</b>	<b>411.0</b>
<b>Estimates of TB disease burden, 2021<sup>c</sup></b>									
Estimated TB mortality rate (excluding HIV-related deaths) per 100 000 population	1	29	1.0	24	3.3	53	2.2	18	4.4
Estimated TB incidence rate per 100 000 population	1	29	8.4	24	40.2	53	24.7	18	47.7
Estimated RR-TB cases among notified bacteriologically confirmed pulmonary TB patients	2	29	1400	20	71000	49	73000	18	71000
Estimated percentage of HIV infection among incident TB cases (new and relapse)	2	29	3.7	20	14.5	49	13.0	18	14.3
<b>Notifications of TB cases, 2021</b>									
Total number of TB cases	3	29	33520	23	163664	52	197184	17	166666
All TB cases per 100 000 population	3	29	7.4	23	34.1	52	21.1	17	40.6
Mean annual percentage change of notification rate (2017–2021)	3	29	-10.0%	23	-8.9%	52	-9.0%	17	-9.6%
Number of new and relapse TB cases	III	29	32040	23	133986	52	166026	17	136576
New and relapse TB cases per 100 000 population	III	29	7.1	23	27.9	52	17.8	17	33.2
Mean annual percentage change of notification rate of new and relapse TB cases (2017–2021)	III	29	-9.9%	23	-8.9%	52	-9.0%	17	-9.2%
Percentage of new cases among all TB cases	4	29	75.8%	23	67.5%	52	68.9%	18	67.2%
Percentage of retreatment cases among all TB cases	4	29	24.2%	23	32.5%	52	31.1%	18	32.8%
Percentage of pulmonary TB among all TB cases	5	29	71.7%	–	–	–	–	–	–
Percentage of laboratory-confirmed TB cases among all TB cases	8	29	72.0%	–	–	–	–	–	–
Male-to-female ratio of new and relapse TB cases	8	28	2.0	23	1.9	51	1.9	18	2.0
Percentage of foreign TB cases among all TB cases	9	29	33.8%	21	4.8%	50	9.9%	16	2.3%
<b>TB case laboratory confirmation, RR/MDR and XDR, 2021</b>									
Percentage of laboratory-confirmed cases among new pulmonary TB cases <sup>d</sup>	11	29	80.0%	22	65.4%	51	68.0%	18	66.1%
Percentage of DST results reported among new bacteriologically-confirmed pulmonary TB cases	11	29	87.3%	22	95.3%	51	93.6%	18	95.1%
Percentage of RR/MDR-TB among new pulmonary TB cases	11	29	3.3%	22	27.4%	51	22.6%	18	26.5%
Percentage of RR/MDR-TB among previously treated pulmonary TB cases	11	29	11.9%	22	55.6%	51	53.0%	18	54.1%
Percentage of Pre-XDR-TB among all RR/MDR-TB cases with DST for FQ	12	29	28.5%	15	33.5%	44	33.4%	17	33.5%
Percentage of XDR-TB among all pre-XDR-TB cases with DST for any other Group A drugs	12	29	28.5%	12	10.4%	41	11.2%	15	33.5%
Percentage of XDR-TB among all MDR-TB cases with DST for SLD	14	29	22.4%	18	22.5%	47	22.5%	15	22.6%
<b>TB/HIV coinfection, 2021</b>									
Percentage of new and relapse TB cases with known HIV status	14	21	70.2%	17	95.8%	38	92.8%	17	94.9%
Percentage of HIV-positive cases among new and relapse TB cases with known HIV status	14	21	3.8%	17	15.9%	38	14.8%	17	15.2%
Percentage of HIV-positive new and relapse TB cases started on ART	14	9	79.2%	13	80.1%	22	80.1%	14	80.1%
<b>Treatment outcome</b>									
Treatment success of new and relapse TB cases notified in 2020	16	25	68.7%	23	73.7%	48	72.9%	18	73.5%
Treatment success rate among previously treated TB cases reported in 2020	17	24	50.6%	21	60.6%	45	59.9%	18	60.0%
Treatment success of childhood TB cases notified in 2020	18	26	77.5%	19	90.4%	45	87.5%	14	90.5%
Treatment success of TB/HIV cases notified in 2020	20	19	53.4%	15	47.2%	34	47.4%	14	47.3%
Treatment success of RR/MDR-TB cases enrolled in SLD treatment in 2019	22	19	51.3%	21	57.2%	40	57.2%	17	57.1%
Treatment success of all pre-XDR-TB cases notified in 2019	23	22	16.0%	19	66.3%	41	62.7%	17	63.2%
Treatment success rate among all XDR-TB cases notified in 2019	24	22	43.9%	–	–	–	–	–	–

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

ART: antiretroviral therapy.

DST: drug-susceptibility testing.

MDR: multidrug-resistant.

RR: rifampicin-resistant.

SLD: second-line anti-TB drugs.

XDR: extensively drug-resistant.

Pre-XDR: pre-extensive drug resistance.

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

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

<sup>c</sup> WHO estimates, as published in Global tuberculosis report 2021 (Geneva: World Health Organization; 2021 Available from: <https://www.who.int/publications/i/item/9789240037021>).

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



	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>
	15	13	17	1.2	1.0	1.3	140	110	160	3.1	2.4	3.5		Austria
	44	37	51	2.3	1.9	2.6	280	220	340	4.8	3.7	5.8		Belgium
	32	23	41	3.3	2.4	4.3	410	250	570	11.6	7.0	16.1		Bulgaria
	2	2	2	0.3	0.3	0.3	66	52	79	3.2	2.5	3.8		Croatia
	0	0	0	0.0	0.0	0.0	32	25	38	5.2	4.0	6.1		Cyprus
	14	12	16	0.8	0.7	1.0	110	90	130	2.1	1.7	2.4		Czechia
	7	6	8	0.7	0.6	0.8	92	73	110	3.1	2.5	3.7		Denmark
	0	0	0	0.0	0.0	0.0	47	37	57	6.7	5.3	8.2		Estonia
	5	4	5	0.6	0.5	0.6	70	56	85	2.5	2.0	3.0		Finland
	260	220	290	2.3	2.0	2.6	1900	1600	2200	5.7	4.8	6.6		France
	170	150	190	1.5	1.3	1.6	1500	1300	1700	3.5	3.1	4.0		Germany
	19	16	22	1.3	1.1	1.5	98	80	120	1.8	1.5	2.3		Greece
	5	4	5	0.4	0.3	0.4	110	90	140	2.2	1.8	2.8		Hungary
	2	1	2	2.9	1.4	2.9	5	4	7	2.8	2.2	3.9		Iceland
	1	1	1	0.1	0.1	0.1	89	71	110	3.5	2.8	4.4		Ireland
	130	110	160	1.7	1.5	2.1	1000	830	1200	3.3	2.7	4.0		Italy
	7	6	8	2.4	2.0	2.7	91	74	110	9.0	7.4	10.9		Latvia
	-	-	-	-	-	-	-	-	-	-	-	-		Liechtenstein
	15	13	17	3.5	3.1	4.0	220	170	260	14.9	11.5	17.6		Lithuania
	0	0	0	0.0	0.0	0.0	14	11	17	4.4	3.5	5.4		Luxembourg
	4	3	4	5.8	4.3	5.8	32	27	38	12.7	10.7	15.0		Malta
	30	25	35	1.1	0.9	1.3	300	230	360	3.4	2.6	4.1		Netherlands
	5	4	5	0.5	0.4	0.5	91	72	110	3.4	2.7	4.1		Norway
	42	36	49	0.7	0.6	0.8	1100	890	1300	5.6	4.5	6.6		Poland
	47	40	55	3.4	2.9	4.0	560	450	680	10.3	8.3	12.5		Portugal
	320	270	370	10.3	8.7	11.9	2500	2000	3000	25.0	20.0	30.0		Romania
	46	37	55	5.3	4.3	6.4	60	47	72	2.2	1.7	2.6		Slovakia
	2	2	3	0.6	0.6	0.9	38	30	46	3.6	2.8	4.4		Slovenia
	150	130	170	2.2	1.9	2.5	1300	1100	1600	5.4	4.5	6.6		Spain
	16	14	19	0.9	0.8	1.0	170	140	210	3.3	2.7	4.0		Sweden
	<b>1400</b>	<b>1300</b>	<b>1500</b>	<b>2.1</b>	<b>1.9</b>	<b>2.2</b>	<b>12000</b>	<b>11000</b>	<b>13000</b>	<b>5.2</b>	<b>4.8</b>	<b>5.6</b>		<b>Subtotal EU/EEA</b>
														<b>Non-EU/EEA</b>
	14	12	16	3.0	2.6	3.4	170	130	200	11.9	9.1	14.0		Albania
	0	0	0	0.0	0.0	0.0	1	1	1	2.6	2.6	2.6		Andorra
	35	24	45	6.1	4.2	7.9	170	110	230	11.1	7.2	15.0		Armenia
	360	270	440	14.6	10.9	17.8	2300	1600	3000	44.0	30.6	57.4		Azerbaijan
	110	83	150	6.8	5.1	9.3	800	520	1100	15.5	10.1	21.3		Belarus
	2	2	3	0.4	0.4	0.6	310	190	420	18.7	11.4	25.3		Bosnia and Herzegovina
	130	100	160	16.4	12.6	20.2	860	630	1100	43.2	31.6	55.2		Georgia
	13	11	16	0.5	0.4	0.6	110	87	130	2.5	1.9	2.9		Israel
	700	460	950	12.3	8.1	16.8	6400	3400	9400	64.2	34.1	94.3		Kazakhstan
	720	580	870	32.0	25.8	38.7	3600	2700	4600	108.4	81.3	138.5		Kyrgyzstan
	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0		Monaco
	0	0	0	0.0	0.0	0.0	43	34	53	13.4	10.6	16.5		Montenegro
	5	3	6	1.5	0.9	1.8	68	44	91	6.4	4.2	8.6		North Macedonia
	180	140	210	29.7	23.1	34.6	710	530	900	44.1	33.0	56.0		Republic of Moldova
	3700	3000	4400	14.4	11.7	17.1	21000	16000	26000	27.0	20.6	33.5		Russian Federation
	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0		San Marino
	24	20	28	2.3	1.9	2.7	460	350	570	12.1	9.2	15.0		Serbia
	8	7	9	0.6	0.5	0.7	180	140	220	4.1	3.2	5.0		Switzerland
	560	410	710	15.8	11.5	20.0	4100	2600	5500	84.6	53.7	113.5		Tajikistan
	970	780	1200	4.9	3.9	6.0	6500	4900	8100	15.4	11.6	19.2		Türkiye
	180	130	230	9.1	6.6	11.6	1300	810	1700	40.6	25.3	53.1		Turkmenistan
	1200	740	1700	18.1	11.2	25.7	9700	4900	15000	41.5	21.0	64.1		Ukraine
	160	140	170	1.3	1.2	1.4	1800	1500	2000	5.3	4.4	5.9		United Kingdom
	3000	1800	4200	29.3	17.6	41.0	9800	4900	15000	57.5	28.8	88.1		Uzbekistan
	<b>12000</b>	<b>11000</b>	<b>10000</b>	<b>12.0</b>	<b>11.0</b>	<b>10.0</b>	<b>70000</b>	<b>61000</b>	<b>79000</b>	<b>28.2</b>	<b>24.5</b>	<b>31.8</b>		<b>Subtotal non-EU/EEA</b>
	<b>13000</b>	<b>12000</b>	<b>11000</b>	<b>7.8</b>	<b>7.2</b>	<b>6.6</b>	<b>82000</b>	<b>73000</b>	<b>91000</b>	<b>17.1</b>	<b>15.2</b>	<b>19.0</b>		<b>Total European Region</b>
	<b>12000</b>	<b>11000</b>	<b>13000</b>	<b>13.8</b>	<b>12.6</b>	<b>14.9</b>	<b>71000</b>	<b>62000</b>	<b>80000</b>	<b>33.2</b>	<b>29.0</b>	<b>37.4</b>		<b>Subtotal 18 HPCs</b>



**Table 3. TB cases, notification rates per 100 000 population and mean annual change in rates, European Region, 2017–2021**

Country/area	2017		2018		2019		2020		2021		Mean annual % change in rate, 2017–2021
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	
<b>EU/EEA</b>											
Austria	569	6.5	482	5.5	474	5.4	388	4.4	396	4.4	-9.1%
Belgium	967	8.5	977	8.6	963	8.4	825	7.2	875	7.6	-2.9%
<i>Bulgaria</i>	1463	20.6	1358	19.3	1344	19.2	930	13.4	687	9.9	-16.7%
Croatia	378	9.1	372	9.1	302	7.4	194	4.8	157	3.9	-19.1%
Cyprus	53	6.2	52	6.0	69	7.9	36	4.1	48	5.4	-3.6%
Czechia	501	4.7	443	4.2	461	4.3	363	3.4	357	3.3	-8.4%
Denmark	275	4.8	291	5.0	284	4.9	221	3.8	208	3.6	-7.1%
<i>Estonia</i>	176	13.4	147	11.1	150	11.3	124	9.3	111	8.3	-11.1%
Finland	244	4.4	227	4.1	226	4.1	174	3.1	170	3.1	-8.8%
France	5006	7.5	5048	7.5	5183	7.7	4515	6.7	4274	6.3	-4.2%
Germany	5516	6.7	5496	6.6	4811	5.8	4159	5.0	3896	4.7	-8.5%
Greece	467	4.3	432	4.0	459	4.3	396	3.7	206	1.9	-18.3%
Hungary	685	7.0	640	6.5	552	5.6	406	4.2	335	3.4	-16.2%
Iceland	14	4.1	8	2.3	13	3.6	12	3.3	-	-	-100.0%
Ireland	300	6.3	310	6.4	257	5.2	236	4.8	217	4.3	-8.8%
Italy	3944	6.5	3912	6.5	3346	5.6	2287	3.8	2480	4.2	-10.4%
<i>Latvia</i>	552	28.3	-	-	-	-	-	-	261	13.8	-
Liechtenstein	1	2.6	1	2.6	0	0.0	2	5.2	1	2.6	-0.8%
<i>Lithuania</i>	1387	48.7	1142	40.7	1058	37.9	726	26.0	646	23.1	-17.0%
Luxembourg	32	5.4	42	7.0	50	8.1	34	5.4	35	5.5	0.4%
Malta	42	9.1	55	11.6	98	19.9	140	27.2	54	10.5	3.5%
Netherlands	783	4.6	795	4.6	754	4.4	622	3.6	680	3.9	-4.0%
Norway	261	5.0	208	3.9	166	3.1	159	3.0	157	2.9	-12.5%
Poland	5787	15.2	5487	14.4	5321	14.0	3388	8.9	3704	9.8	-10.5%
Portugal	1914	18.6	1926	18.7	1907	18.6	1519	14.8	1504	14.6	-5.8%
<i>Romania</i>	12997	66.2	12199	62.5	11618	59.8	7693	39.8	7979	41.6	-11.0%
Slovakia	249	4.6	281	5.2	214	3.9	158	2.9	137	2.5	-14.0%
Slovenia	112	5.4	99	4.8	101	4.9	77	3.7	80	3.8	-8.5%
Spain	5660	12.2	4766	10.2	4532	9.7	3697	7.8	3508	7.4	-11.7%
Sweden	519	5.2	488	4.8	479	4.7	324	3.1	357	3.4	-9.8%
<b>Subtotal EU/EEA</b>	<b>50 854</b>	<b>11.3</b>	<b>47 684</b>	<b>10.6</b>	<b>45 192</b>	<b>10.0</b>	<b>33 805</b>	<b>7.5</b>	<b>33 520</b>	<b>7.4</b>	<b>-10.0%</b>
<b>Non-EU/EEA</b>											
Albania	503	17.5	440	15.3	412	14.3	240	8.4	269	9.4	-14.3%
Andorra	1	1.4	2	2.7	5	6.5	2	2.6	2	2.5	16.9%
<i>Armenia</i>	926	32.5	796	28.1	670	23.8	444	15.8	426	15.3	-17.2%
<i>Azerbaijan</i>	7129	70.8	6896	67.9	6533	63.8	4991	48.5	4944	47.9	-9.3%
Belarus	3052	31.4	2542	26.2	2615	27.0	1778	18.5	1696	17.7	-13.4%
Bosnia and Herzegovina	768	22.3	669	19.7	580	17.3	357	10.8	363	11.1	-16.0%
<i>Georgia</i>	2927	77.6	2590	68.7	2451	65.0	1842	48.9	1645	43.8	-13.3%
Israel	234	2.8	292	3.5	217	2.5	158	1.8	213	2.4	-4.0%
<i>Kazakhstan</i>	12942	70.7	13361	72.1	12990	69.3	10020	52.8	10008	52.1	-7.3%
<i>Kyrgyzstan</i>	7695	125.7	7585	121.9	7039	111.3	4885	76.0	5209	79.8	-10.7%
Monaco	0	0.0	1	2.7	0	0.0	0	0.0	0	0.0	0.0%
Montenegro	77	12.2	84	13.3	82	13.0	40	6.4	83	13.2	2.1%
North Macedonia	219	10.4	217	10.3	199	9.4	148	7.0	146	6.9	-9.5%
<i>Republic of Moldova</i>	3858	121.3	3465	110.3	3255	104.7	1906	61.8	2248	73.4	-11.8%
<i>Russian Federation</i>	114187	78.5	106913	73.4	103979	71.3	84956	58.3	79686	54.9	-8.5%
San Marino	0	0.0	0	0.0	0	0.0	-	-	-	-	-
Serbia	1466	19.6	1358	18.3	1179	15.9	441	6.0	447	6.1	-25.3%
Serbia excluding Kosovo <sup>1</sup>	745	10.6	656	9.4	567	8.2	-	-	-	-	-
Kosovo <sup>1</sup>	721	40.4	702	39.2	612	34.4	441	24.8	447	34.4	-4.0%
Switzerland	555	6.6	516	6.1	435	5.1	387	4.5	364	4.2	-10.6%
<i>Tajikistan</i>	6279	70.3	5975	65.5	5976	64.0	4316	45.2	4299	44.1	-11.0%
<i>Türkiye</i>	12 046	14.7	11 786	14.2	11 401	13.7	8 925	10.6	9 156	10.8	-7.4%
<i>Turkmenistan</i>	2232	37.4	2 636	43.5	2 863	46.5	2 610	41.8	2 422	38.2	0.5%
<i>Ukraine</i>	31 584	70.7	30 378	68.3	28 539	64.6	19 521	44.5	19 793	45.5	-10.5%
United Kingdom	5567	8.4	5075	7.6	5132	7.7	4 458	6.6	4 795	7.1	-4.1%
<i>Uzbekistan</i>	19 329	60.5	18 496	57.0	18 774	56.9	14 127	42.1	15 450	45.3	-7.0%
<b>Subtotal non-EU/EEA</b>	<b>233 576</b>	<b>49.4</b>	<b>222 073</b>	<b>46.8</b>	<b>215 326</b>	<b>45.1</b>	<b>166 552</b>	<b>34.8</b>	<b>163 664</b>	<b>34.1</b>	<b>-8.9%</b>
<b>Total European Region</b>	<b>284 430</b>	<b>30.8</b>	<b>269 757</b>	<b>29.2</b>	<b>260 518</b>	<b>28.1</b>	<b>200 357</b>	<b>21.5</b>	<b>197 184</b>	<b>21.1</b>	<b>-9.0%</b>
<b>Subtotal 18 HPCs</b>	<b>246 328</b>	<b>60.7</b>	<b>228 265</b>	<b>56.3</b>	<b>221 255</b>	<b>54.3</b>	<b>169 794</b>	<b>41.6</b>	<b>166 666</b>	<b>40.6</b>	<b>-9.6%</b>

Note: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. 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 for this report in the joint database was 4 October 2021.

HPCs: high-priority countries.

<sup>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 4. TB cases by history of previous TB treatment, European Region, 2021**

Country/area	New <sup>a</sup>		Unknown previous TB history		Previously treated				All TB cases N
	N	(%) <sup>b</sup>	N	(%) <sup>b</sup>	Previous treatment completed		Other previously treated		
					N	(%) <sup>b</sup>	N	(%) <sup>b</sup>	
<b>EU/EEA</b>									
Austria	288	(72.7)	85	(21.5)	14	(3.5)	9	(2.3)	396
Belgium <sup>c</sup>	671	(76.7)	146	(16.7)	0	(0.0)	58	(6.6)	875
<i>Bulgaria</i>	616	(89.7)	0	(0.0)	57	(8.3)	14	(2.0)	687
Croatia	112	(71.3)	37	(23.6)	5	(3.2)	3	(1.9)	157
Cyprus	45	(93.8)	1	(2.1)	2	(4.2)	0	(0.0)	48
Czechia	332	(93.0)	0	(0.0)	20	(5.6)	5	(1.4)	357
Denmark <sup>c</sup>	191	(91.8)	0	(0.0)	0	(0.0)	17	(8.2)	208
<i>Estonia</i>	92	(82.9)	0	(0.0)	15	(13.5)	4	(3.6)	111
Finland	162	(95.3)	5	(2.9)	3	(1.8)	0	(0.0)	170
France	2608	(61.0)	1434	(33.6)	0	(0.0)	232	(5.4)	4274
Germany	2671	(68.6)	1007	(25.8)	114	(2.9)	104	(2.7)	3896
Greece	162	(78.6)	31	(15.0)	2	(1.0)	11	(5.3)	206
Hungary	293	(87.5)	0	(0.0)	21	(6.3)	21	(6.3)	335
Iceland	–	–	–	–	–	–	–	–	–
Ireland <sup>d</sup>	92	(42.4)	118	(54.4)	0	(0.0)	7	(3.2)	217
Italy	1686	(68.0)	692	(27.9)	0	(0.0)	102	(4.1)	2480
<i>Latvia</i>	220	(84.3)	12	(4.6)	23	(8.8)	6	(2.3)	261
Liechtenstein	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	1
<i>Lithuania</i>	550	(85.1)	0	(0.0)	78	(12.1)	18	(2.8)	646
Luxembourg	30	(85.7)	4	(11.4)	0	(0.0)	1	(2.9)	35
Malta	54	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	54
Netherlands	642	(94.4)	1	(0.1)	28	(4.1)	9	(1.3)	680
Norway <sup>c</sup>	140	(89.2)	0	(0.0)	0	(0.0)	17	(10.8)	157
Poland	3229	(87.2)	0	(0.0)	217	(5.9)	258	(7.0)	3704
Portugal	1412	(93.9)	0	(0.0)	51	(3.4)	41	(2.7)	1504
<i>Romania</i>	6402	(80.2)	0	(0.0)	1189	(14.9)	388	(4.9)	7979
Slovakia	124	(90.5)	6	(4.4)	4	(2.9)	3	(2.2)	137
Slovenia	74	(92.5)	0	(0.0)	5	(6.3)	1	(1.3)	80
Spain	2191	(62.5)	1179	(33.6)	0	(0.0)	138	(3.9)	3508
Sweden	312	(87.4)	28	(7.8)	4	(1.1)	13	(3.6)	357
<b>Subtotal EU/EEA</b>	<b>25402</b>	<b>(75.8)</b>	<b>4786</b>	<b>(14.3)</b>	<b>1852</b>	<b>(5.5)</b>	<b>1480</b>	<b>(4.4)</b>	<b>33520</b>
<b>Non-EU/EEA</b>									
Albania	261	(97.0)	–	–	8	(3.0)	0	(0.0)	269
Andorra	2	(100.0)	–	–	0	(0.0)	0	(0.0)	2
Armenia	369	(86.6)	–	–	29	(6.8)	28	(6.6)	426
Azerbaijan	2535	(51.3)	–	–	1128	(22.8)	1281	(25.9)	4944
Belarus	1176	(69.3)	–	–	308	(18.2)	212	(12.5)	1696
Bosnia and Herzegovina	330	(90.9)	–	–	32	(8.8)	1	(0.3)	363
Georgia	1298	(78.9)	–	–	203	(12.3)	144	(8.8)	1645
Israel	209	(98.1)	–	–	4	(1.9)	0	(0.0)	213
Kazakhstan	7066	(70.6)	–	–	2691	(26.9)	251	(2.5)	10008
Kyrgyzstan	3901	(74.9)	–	–	695	(13.3)	613	(11.8)	5209
Monaco	0	–	–	–	0	–	0	–	0
Montenegro	73	(88.0)	–	–	7	(8.4)	3	(3.6)	83
North Macedonia	129	(88.4)	–	–	14	(9.6)	3	(2.1)	146
Republic of Moldova	1616	(71.9)	–	–	451	(20.1)	181	(8.1)	2248
Russian Federation	45420	(57.0)	–	–	11502	(14.4)	22764	(28.6)	79686
San Marino	–	–	–	–	–	–	–	–	–
Serbia	424	(94.9)	–	–	21	(4.7)	2	(0.4)	447
Serbia excluding Kosovo <sup>1</sup>	–	–	–	–	–	–	–	–	–
Kosovo <sup>1</sup>	424	(94.9)	–	–	21	(4.7)	2	(0.4)	447
Switzerland	355	(97.5)	–	–	0	(0.0)	9	(2.5)	364
Tajikistan	3787	(88.1)	–	–	371	(8.6)	141	(3.3)	4299
Türkiye	8591	(93.8)	–	–	456	(5.0)	109	(1.2)	9156
Turkmenistan	1464	(60.4)	–	–	414	(17.1)	544	(22.5)	2422
Ukraine	14667	(74.1)	–	–	3640	(18.4)	1486	(7.5)	19793
United Kingdom <sup>c</sup>	4571	(95.3)	–	–	224	(4.7)	0	(0.0)	4795
Uzbekistan	12152	(78.7)	–	–	1392	(9.0)	1906	(12.3)	15450
<b>Subtotal non-EU/EEA</b>	<b>110396</b>	<b>(67.5)</b>	<b>0</b>	<b>(0.0)</b>	<b>23590</b>	<b>(14.4)</b>	<b>29678</b>	<b>(18.1)</b>	<b>163664</b>
<b>Total European Region</b>	<b>135798</b>	<b>(68.9)</b>	<b>4786</b>	<b>(2.4)</b>	<b>25442</b>	<b>(12.9)</b>	<b>31158</b>	<b>(15.8)</b>	<b>197184</b>
<b>Subtotal 18 HPCs</b>	<b>111922</b>	<b>(67.2)</b>	<b>12</b>	<b>(0.0)</b>	<b>24642</b>	<b>(14.8)</b>	<b>30090</b>	<b>(18.1)</b>	<b>166666</b>

Note: 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> For non-EU/EEA countries and areas, cases with unknown previous TB history are included among new TB cases.

<sup>b</sup> Proportion of all TB cases.

<sup>c</sup> Previous TB history is defined by previous diagnosis. Treatment completion is not analysed for these countries.

<sup>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).



**Table 5. TB cases by site of disease, EU/EEA, 2021**

Country	Pulmonary				Extrapulmonary		No site reported		Total N
	Pulmonary only		Pulmonary and extrapulmonary		N	(%)	N	(%)	
	N	(%)	N	(%)					
<b>EU/EEA</b>									
Austria	245	(61.9)	47	(11.9)	104	(26.3)	0	(0.0)	396
Belgium	460	(52.6)	146	(16.7)	269	(30.7)	0	(0.0)	875
<i>Bulgaria</i>	532	(77.4)	30	(4.4)	124	(18.0)	1	(0.1)	687
Croatia	121	(77.1)	9	(5.7)	6	(3.8)	21	(13.4)	157
Cyprus	35	(72.9)	3	(6.3)	10	(20.8)	0	(0.0)	48
Czechia	301	(84.3)	20	(5.6)	36	(10.1)	0	(0.0)	357
Denmark	150	(72.1)	6	(2.9)	52	(25.0)	0	(0.0)	208
<i>Estonia</i>	89	(80.2)	18	(16.2)	4	(3.6)	0	(0.0)	111
Finland	117	(68.8)	0	(0.0)	53	(31.2)	0	(0.0)	170
France	2879	(67.4)	0	(0.0)	1331	(31.1)	64	(1.5)	4 274
Germany	2263	(58.1)	497	(12.8)	1109	(28.5)	27	(0.7)	3 896
Greece	145	(70.4)	28	(13.6)	30	(14.6)	3	(1.5)	206
Hungary	306	(91.3)	15	(4.5)	14	(4.2)	0	(0.0)	335
Iceland	-	-	-	-	-	-	-	-	-
Ireland	86	(39.6)	12	(5.5)	57	(26.3)	62	(28.6)	217
Italy	1741	(70.2)	99	(4.0)	635	(25.6)	5	(0.2)	2 480
<i>Latvia</i>	223	(85.4)	23	(8.8)	15	(5.7)	0	(0.0)	261
Liechtenstein	0	(0.0)	1	(100.0)	0	(0.0)	0	(0.0)	1
<i>Lithuania</i>	591	(91.5)	3	(0.5)	52	(8.0)	0	(0.0)	646
Luxembourg	27	(77.1)	2	(5.7)	6	(17.1)	0	(0.0)	35
Malta	28	(51.9)	13	(24.1)	13	(24.1)	0	(0.0)	54
Netherlands	297	(43.7)	84	(12.4)	297	(43.7)	2	(0.3)	680
Norway	67	(42.7)	17	(10.8)	71	(45.2)	2	(1.3)	157
Poland	3536	(95.5)	17	(0.5)	151	(4.1)	0	(0.0)	3 704
Portugal	870	(57.8)	203	(13.5)	413	(27.5)	18	(1.2)	1 504
<i>Romania</i>	6 452	(80.9)	519	(6.5)	1 008	(12.6)	0	(0.0)	7 979
Slovakia	82	(59.9)	38	(27.7)	17	(12.4)	0	(0.0)	137
Slovenia	49	(61.3)	19	(23.8)	12	(15.0)	0	(0.0)	80
Spain	2 164	(61.7)	343	(9.8)	1 001	(28.5)	0	(0.0)	3 508
Sweden	180	(50.4)	41	(11.5)	136	(38.1)	0	(0.0)	357
<b>Total EU/EEA</b>	<b>24 036</b>	<b>(71.7)</b>	<b>2 253</b>	<b>(6.7)</b>	<b>7 026</b>	<b>(21.0)</b>	<b>205</b>	<b>(0.6)</b>	<b>33 520</b>

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



**Table 7. TB cases according to EU case definition, EU/EEA, 2021**

Country	All laboratory-confirmed cases <sup>a</sup>						Confirmed cases <sup>b</sup>	Probable cases	Possible cases	All TB cases			
	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>							
Austria	11	(3.6)	226	(73.6)	70	(22.8)	307	(77.5)	57	(14.4)	32	(8.1)	396
Belgium	16	(2.4)	380	(56.3)	279	(41.3)	675	(77.1)	129	(14.7)	71	(8.1)	875
<i>Bulgaria</i>	0	(0.0)	339	(100.0)	0	(0.0)	339	(49.3)	62	(9.0)	286	(41.6)	687
Croatia	0	(0.0)	135	(100.0)	0	(0.0)	135	(86.0)	5	(3.2)	17	(10.8)	157
Cyprus	0	(0.0)	25	(67.6)	12	(32.4)	37	(77.1)	7	(14.6)	4	(8.3)	48
Czechia	4	(1.3)	147	(49.3)	147	(49.3)	298	(83.5)	45	(12.6)	14	(3.9)	357
Denmark	1	(0.6)	90	(54.5)	74	(44.8)	165	(79.3)	7	(3.4)	36	(17.6)	208
<i>Estonia</i>	7	(1.2)	36	(42.4)	48	(56.5)	85	(76.6)	14	(12.6)	12	(10.8)	111
Finland	1	(0.8)	94	(75.8)	29	(23.4)	124	(72.9)	30	(17.6)	16	(9.4)	170
France	0	(0.0)	1652	(100.0)	0	(0.0)	1652	(38.7)	808	(18.9)	1814	(42.4)	4274
Germany	117	(3.8)	1611	(52.3)	1353	(43.9)	3081	(79.1)	382	(9.8)	433	(11.1)	3896
Greece	9	(6.5)	108	(78.3)	21	(15.2)	138	(67.0)	42	(20.4)	26	(12.6)	206
Hungary	0	(0.0)	179	(100.0)	0	(0.0)	179	(53.4)	16	(4.8)	140	(41.8)	335
Iceland	–	–	–	–	–	–	–	–	–	–	–	–	–
Ireland	5	(3.4)	118	(80.8)	23	(15.8)	146	(67.3)	25	(11.5)	46	(21.2)	217
Italy	0	(0.0)	2146	(100.0)	0	(0.0)	2146	(86.5)	269	(10.8)	65	(2.6)	2480
<i>Latvia</i>	103	(48.6)	96	(45.3)	13	(6.1)	212	(81.2)	27	(10.3)	22	(8.4)	261
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)	578	(100.0)	0	(0.0)	578	(89.5)	3	(0.5)	65	(10.1)	646
Luxembourg	0	(0.0)	30	(100.0)	0	(0.0)	30	(85.7)	0	(0.0)	5	(14.3)	35
Malta	0	(0.0)	38	(100.0)	0	(0.0)	38	(70.4)	1	(1.9)	15	(27.8)	54
Netherlands	10	(2.1)	307	(64.2)	161	(33.7)	478	(70.3)	79	(11.6)	123	(18.1)	680
Norway	0	(0.0)	85	(68.0)	40	(32.0)	125	(79.6)	17	(10.8)	15	(9.6)	157
Poland	0	(0.0)	2149	(70.2)	912	(29.8)	3061	(82.6)	74	(2.0)	569	(15.4)	3704
Portugal	40	(4.1)	758	(77.2)	184	(18.7)	982	(65.3)	250	(16.6)	272	(18.1)	1504
<i>Romania</i>	59	(1.0)	4410	(71.6)	1687	(27.4)	6156	(77.2)	779	(9.8)	1044	(13.1)	7979
Slovakia	1	(1.3)	56	(73.7)	19	(25.0)	76	(55.5)	19	(13.9)	42	(30.7)	137
Slovenia	0	(0.0)	47	(62.7)	28	(37.3)	75	(93.8)	4	(5.0)	1	(1.3)	80
Spain	64	(2.5)	1857	(73.7)	600	(23.8)	2521	(71.9)	510	(14.5)	477	(13.6)	3508
Sweden	0	(0.0)	196	(68.3)	91	(31.7)	287	(80.4)	15	(4.2)	55	(15.4)	357
<b>Total EU/EEA</b>	<b>442</b>	<b>(1.8)</b>	<b>17 893</b>	<b>(74.2)</b>	<b>5 792</b>	<b>(24.0)</b>	<b>24 127</b>	<b>(72.0)</b>	<b>3 676</b>	<b>(11.0)</b>	<b>5 717</b>	<b>(17.1)</b>	<b>33 520</b>

Note: WHO European Region 18 TB high-priority countries are presented in italics.

<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> Proportion of all laboratory-confirmed TB cases.

<sup>d</sup> Proportion of all TB cases.





Table 9. TB cases by origin, European Region, 2021

Country/area	Origin criterion	Native		Foreign		Unknown origin		All TB cases
		N	(%)	N	(%)	N	(%)	N
<b>EU/EEA</b>								
Austria	Citizenship	144	(36.4)	252	(63.6)	0	(0.0)	396
Belgium	Citizenship	326	(37.3)	549	(62.7)	0	(0.0)	875
<i>Bulgaria</i>	<i>Birthplace</i>	<i>686</i>	<i>(99.9)</i>	<i>7</i>	<i>(0.1)</i>	<i>0</i>	<i>(0.0)</i>	<i>687</i>
Croatia	Birthplace	157	(100.0)	0	(0.0)	0	(0.0)	157
Cyprus	Birthplace	2	(4.2)	46	(95.8)	0	(0.0)	48
Czechia	Birthplace	225	(63.0)	132	(37.0)	0	(0.0)	357
Denmark	Birthplace	61	(29.3)	147	(70.7)	0	(0.0)	208
<i>Estonia</i>	<i>Birthplace</i>	<i>92</i>	<i>(82.9)</i>	<i>19</i>	<i>(17.1)</i>	<i>0</i>	<i>(0.0)</i>	<i>111</i>
Finland	Birthplace	96	(56.5)	70	(41.2)	4	(2.4)	170
France	Birthplace	1148	(26.9)	2610	(61.1)	516	(12.1)	4274
Germany	Birthplace	976	(25.1)	2782	(71.4)	138	(3.5)	3896
Greece	Citizenship	58	(28.2)	148	(71.8)	0	(0.0)	206
Hungary	Citizenship	306	(91.3)	29	(8.7)	0	(0.0)	335
Iceland	–	–	–	–	–	–	–	–
Ireland	Birthplace	44	(20.3)	122	(56.2)	51	(23.5)	217
Italy	Birthplace	981	(39.6)	1437	(57.9)	62	(2.5)	2480
<i>Latvia</i>	<i>Birthplace</i>	<i>245</i>	<i>(93.9)</i>	<i>6</i>	<i>(2.3)</i>	<i>10</i>	<i>(3.8)</i>	<i>261</i>
Liechtenstein	Birthplace	1	(100.0)	0	(0.0)	0	(0.0)	1
<i>Lithuania</i>	<i>Birthplace</i>	<i>639</i>	<i>(98.9)</i>	<i>7</i>	<i>(1.1)</i>	<i>0</i>	<i>(0.0)</i>	<i>646</i>
Luxembourg	Birthplace	2	(5.7)	33	(94.3)	0	(0.0)	35
Malta	Birthplace	1	(1.9)	53	(98.1)	0	(0.0)	54
Netherlands	Birthplace	141	(20.7)	532	(78.2)	7	(1.0)	680
Norway	Birthplace	27	(17.2)	130	(82.8)	0	(0.0)	157
Poland	Citizenship	3572	(96.4)	132	(3.6)	0	(0.0)	3704
Portugal	Birthplace	1117	(74.3)	385	(25.6)	2	(0.1)	1504
<i>Romania</i>	<i>Birthplace</i>	<i>7933</i>	<i>(99.4)</i>	<i>46</i>	<i>(0.6)</i>	<i>0</i>	<i>(0.0)</i>	<i>7979</i>
Slovakia	Birthplace	130	(94.9)	7	(5.1)	0	(0.0)	137
Slovenia	Birthplace	42	(52.5)	38	(47.5)	0	(0.0)	80
Spain	Birthplace	1498	(42.7)	1303	(37.1)	707	(20.2)	3508
Sweden	Birthplace	39	(10.9)	318	(89.1)	0	(0.0)	357
<b>Subtotal EU/EEA</b>	–	<b>20689</b>	<b>(61.7)</b>	<b>11334</b>	<b>(33.8)</b>	<b>1497</b>	<b>(4.5)</b>	<b>33520</b>
<b>Non-EU/EEA</b>								
Albania	Citizenship	269	(100.0)	0	(0.0)	–	–	269
Andorra	Citizenship	2	(100.0)	0	(0.0)	–	–	2
Armenia	Citizenship	424	(99.5)	2	(0.5)	–	–	426
Azerbaijan	–	–	–	–	–	–	–	–
Belarus	Citizenship	1696	(100.0)	0	(0.0)	–	–	1696
Bosnia and Herzegovina	Birthplace	353	(97.2)	10	(2.8)	–	–	363
Georgia	–	–	–	–	–	–	–	–
<i>Israel</i>	<i>Birthplace</i>	<i>42</i>	<i>(19.7)</i>	<i>171</i>	<i>(80.3)</i>	<i>–</i>	<i>–</i>	<i>213</i>
<i>Kazakhstan</i>	<i>Citizenship</i>	<i>9852</i>	<i>(98.4)</i>	<i>156</i>	<i>(1.6)</i>	<i>–</i>	<i>–</i>	<i>10008</i>
Kyrgyzstan	Birthplace	5209	(100.0)	0	(0.0)	–	–	5209
Monaco	–	0	–	0	–	–	–	0
Montenegro	Citizenship	81	(97.6)	2	(2.4)	–	–	83
North Macedonia	Birthplace	143	(97.9)	3	(2.1)	–	–	146
Republic of Moldova	Citizenship	2228	(99.1)	20	(0.9)	–	–	2248
Russian Federation	Citizenship	77771	(97.6)	1915	(2.4)	–	–	79686
San Marino	Birthplace	0	–	0	–	–	–	0
Serbia	–	447	(100.0)	0	(0.0)	–	–	447
Serbia excluding Kosovo <sup>1</sup>	–	–	–	–	–	–	–	–
Kosovo <sup>1</sup>	Birthplace	447	(100.0)	0	(0.0)	–	–	447
Switzerland	Birthplace	107	(29.4)	257	(70.6)	–	–	364
Tajikistan	–	4288	(99.7)	11	(0.3)	–	–	4299
<i>Türkiye</i>	<i>Birthplace</i>	<i>7720</i>	<i>(84.3)</i>	<i>1436</i>	<i>(15.7)</i>	<i>–</i>	<i>–</i>	<i>9156</i>
Turkmenistan	Citizenship	2422	(100.0)	0	(0.0)	–	–	2422
Ukraine	Citizenship	19761	(99.8)	32	(0.2)	–	–	19793
United Kingdom	Birthplace	1195	(24.9)	3600	(75.1)	–	–	4795
Uzbekistan	Birthplace	15450	(100.0)	0	(0.0)	–	–	15450
<b>Subtotal non-EU/EEA</b>	–	<b>149460</b>	<b>(95.2)</b>	<b>7615</b>	<b>(4.8)</b>	<b>0</b>	<b>(0.0)</b>	<b>157075</b>
<b>Total European Region</b>	–	<b>170149</b>	<b>(89.3)</b>	<b>18949</b>	<b>(9.9)</b>	<b>1497</b>	<b>(0.8)</b>	<b>190595</b>
<b>Subtotal 18 HPCs</b>	–	<b>156416</b>	<b>(97.7)</b>	<b>3651</b>	<b>(2.3)</b>	<b>10</b>	<b>(0.0)</b>	<b>160077</b>

Note: 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>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 10. Drug-resistance surveillance of bacteriologically confirmed<sup>a</sup> pulmonary TB cases, European Region, 2021**

Country/area	Source of data	Coverage	Bacteriologically confirmed cases <sup>a</sup>		Cases with DST results at least for RIF		Cases resistant to RIF		MDR-TB cases <sup>b</sup>		All pulmonary TB cases N	Reporting completeness <sup>c</sup>
			N	(%)	N	(%)	N	(%)	N	(%)		
<b>EU/EEA</b>												
Austria	TESSy	National	266	(91.1)	226	(85.0)	8	(3.5)	8	(3.6)	292	Y
Belgium	TESSy	National	547	(90.3)	470	(85.9)	6	(1.3)	6	(1.3)	606	Y
Bulgaria	TESSy	National	339	(60.3)	174	(51.3)	4	(2.3)	4	(2.3)	562	Y
Croatia	TESSy	National	119	(91.5)	79	(66.4)	0	(0.0)	0	(0.0)	130	Y
Cyprus	TESSy	National	33	(86.8)	32	(97.0)	3	(9.4)	3	(9.4)	38	Y
Czechia	TESSy	National	287	(89.4)	254	(88.5)	9	(3.5)	9	(3.5)	321	Y
Denmark	TESSy	National	131	(84.0)	125	(95.4)	1	(0.8)	1	(0.8)	156	Y
Estonia	TESSy	National	90	(84.1)	87	(96.7)	25	(28.7)	23	(28.4)	107	Y
Finland	TESSy	National	106	(90.6)	91	(85.8)	3	(3.3)	3	(3.3)	117	Y
France	TESSy	National	1178	(40.9)	38	(3.2)	38	(100.0)	38	(100.0)	2879	Y
Germany	TESSy	National	2453	(88.9)	2048	(83.5)	85	(4.2)	67	(3.3)	2760	Y
Greece	TESSy	National	140	(80.9)	69	(49.3)	5	(7.2)	5	(7.4)	173	Y
Hungary	TESSy	National	178	(55.5)	165	(92.7)	12	(7.3)	10	(6.1)	321	Y
Iceland	–	–	–	–	–	–	–	–	–	–	–	N
Ireland	TESSy	National	81	(82.7)	66	(81.5)	4	(6.1)	3	(4.6)	98	Y
Italy <sup>d</sup>	NRL-TME <sup>d</sup>	Partial	1791	(97.3)	1406	(78.5)	44	(3.1)	40	(2.8)	1840	N
Latvia	TESSy	NATIONAL	220	(89.4)	188	(85.5)	19	(10.1)	17	(9.1)	246	Y
Liechtenstein	TESSy	National	1	(100.0)	1	(100.0)	0	(0.0)	0	(0.0)	1	Y
Lithuania	TESSy	National	561	(94.4)	561	(100.0)	105	(18.7)	98	(17.5)	594	Y
Luxembourg	TESSy	National	27	(93.1)	26	(96.3)	0	(0.0)	0	(0.0)	29	Y
Malta	TESSy	National	28	(68.3)	27	(96.4)	1	(3.7)	0	(0.0)	41	Y
Netherlands	TESSy	National	332	(87.1)	285	(85.8)	10	(3.5)	8	(2.8)	381	Y
Norway	TESSy	National	77	(91.7)	76	(98.7)	8	(10.5)	8	(10.7)	84	Y
Poland	TESSy	National	3011	(84.7)	2748	(91.3)	58	(2.1)	54	(2.0)	3553	Y
Portugal	TESSy	National	853	(79.5)	514	(60.3)	8	(1.6)	7	(1.4)	1073	Y
Romania	TESSy	National	6103	(87.5)	5611	(91.9)	257	(4.6)	190	(3.6)	6971	Y
Slovakia	TESSy	National	87	(72.5)	74	(85.1)	5	(6.8)	4	(5.4)	120	Y
Slovenia	TESSy	National	65	(95.6)	64	(98.5)	1	(1.6)	1	(1.6)	68	Y
Spain	TESSy	National	2089	(83.3)	1198	(57.3)	28	(2.3)	20	(1.7)	2507	Y
Sweden	TESSy	National	199	(90.0)	192	(96.5)	4	(2.1)	3	(1.6)	221	Y
<b>Subtotal EU/EEA</b>	–	–	<b>21392</b>	<b>(82.1)</b>	<b>16895</b>	<b>(79.0)</b>	<b>751</b>	<b>(4.4)</b>	<b>630</b>	<b>(3.8)</b>	<b>26289</b>	–
<b>Non-EU/EEA</b>												
Albania	NRL-TME	National	173	(79.0)	158	(91.3)	6	(3.8)	1	(1.0)	219	Y
Andorra	NRL-TME	National	2	(100.0)	2	(100.0)	0	(0.0)	0	(0.0)	2	Y
Armenia	NRL-TME	National	256	(81.3)	256	(100.0)	64	(25.0)	60	(23.4)	315	Y
Azerbaijan	NRL-TME	National	3634	(82.8)	3568	(98.2)	659	(18.5)	389	(10.9)	4390	Y
Belarus	NRL-TME	National	1531	(96.1)	1531	(100.0)	757	(49.4)	695	(45.4)	1593	Y
Bosnia and Herzegovina	NRL-TME	National	285	(83.6)	279	(97.9)	1	(0.4)	0	(0.0)	341	Y
Georgia	NRL-TME	National	1241	(94.7)	1220	(98.3)	180	(14.8)	146	(15.1)	1311	Y
Israel	NRL-TME	National	104	(75.9)	104	(100.0)	9	(8.7)	9	(8.7)	137	Y
Kazakhstan	NRL-TME	National	7536	(79.3)	7522	(99.8)	2943	(39.1)	2265	(30.1)	9498	Y
Kyrgyzstan	NRL-TME	National	2762	(66.5)	2601	(94.2)	839	(32.3)	685	(32.6)	4152	Y
Monaco	–	–	–	–	–	–	–	–	–	–	0	–
Montenegro	NRL-TME	National	61	(85.9)	61	(100.0)	0	(0.0)	0	(0.0)	71	Y
North Macedonia	NRL-TME	National	111	(84.7)	111	(100.0)	2	(1.8)	0	(0.0)	131	Y
Republic of Moldova	NRL-TME	–	1557	(73.7)	1503	(96.5)	459	(30.5)	454	(35.0)	2112	Y
Russian Federation	NRL-TME	National	42769	(57.2)	40222	(94.0)	20452	(50.8)	19246	(47.8)	74798	Y
San Marino	–	–	–	–	–	–	–	–	–	–	–	N
Serbia	–	–	0	–	0	–	0	–	0	–	0	N
Serbia excluding Kosovo <sup>1</sup>	–	–	0	–	0	–	0	–	0	–	0	N
Kosovo <sup>1</sup>	–	–	0	–	0	–	0	–	0	–	0	N
Switzerland	NRL-TME	Subnational	327	(90.8)	227	(69.4)	5	(2.2)	5	(2.2)	360	N
Tajikistan	NRL-TME	National	2190	(75.3)	2167	(98.9)	606	(28.0)	335	(18.1)	2907	Y
Türkiye	NRL-TME	National	4478	(77.6)	3902	(87.1)	120	(3.1)	102	(2.6)	5768	Y
Turkmenistan	–	–	836	(41.7)	836	(100.0)	416	(49.8)	0	–	2006	Y
Ukraine	NRL-TME	National	13571	(74.6)	13214	(97.4)	4025	(30.5)	3099	(23.5)	18199	Y
United Kingdom	TESSy	National	2073	(81.9)	1812	(87.4)	38	(2.1)	33	(1.8)	2532	Y
Uzbekistan	NRL-TME	National	6797	(69.2)	6797	(100.0)	1652	(24.3)	1510	(22.2)	9816	Y
<b>Subtotal non-EU/EEA</b>	–	–	<b>92294</b>	<b>(65.6)</b>	<b>88093</b>	<b>(95.4)</b>	<b>33233</b>	<b>(37.7)</b>	<b>29034</b>	<b>(33.8)</b>	<b>140658</b>	–
<b>Total European Region</b>	–	–	<b>113686</b>	<b>(68.1)</b>	<b>104988</b>	<b>(92.3)</b>	<b>33984</b>	<b>(32.4)</b>	<b>29664</b>	<b>(28.9)</b>	<b>166947</b>	–
<b>Subtotal 18 HPCs</b>	–	–	<b>96471</b>	<b>(66.4)</b>	<b>91960</b>	<b>(95.3)</b>	<b>33582</b>	<b>(36.5)</b>	<b>29318</b>	<b>(32.6)</b>	<b>145345</b>	–

Note: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. The resistance pattern at the initiation of treatment is reported to TESSy irrespective of the method used for drug-susceptibility testing or resistance prediction. DST: drug-susceptibility testing. HPCs: high-priority countries. MDR-TB: multidrug-resistant tuberculosis. N: no. NRL: national reference laboratory. RIF: rifampicin. TESSy: The European Surveillance System. TME: WHO global TB data-collection system. Y: yes.

<sup>a</sup> Bacteriologically confirmed cases – cases with positive identification for Mycobacterium 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 Mycobacterium tuberculosis complex confirmed by culture and/or line probe assay.

<sup>b</sup> Includes cases that are MDR but that also meet the pre-XDR or XDR case definitions (pre-XDR and XDR cases have not been excluded).

<sup>c</sup> Data are considered complete when national coverage is 100% OR culture results are available for 90% of all cases, and 50% of all cases are culture-positive, and 75% of them have DST results, and external quality-assessment results have been accurate in 95% of samples of reported year.

<sup>d</sup> Laboratory-related data from Italy are reported by the NRL and may differ from data shown elsewhere in this report.

<sup>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).





	Total cases with DST results to RIF		Total RR/MDR-TB cases		Total bacteriologically confirmed pulmonary TB cases		Total pulmonary TB cases		
	N	(%) <sup>h</sup>	N	(%) <sup>i</sup>	N	(%) <sup>g</sup>	N	(%) <sup>j</sup>	
									<b>EU/EEA</b>
	177	(94.7)	8	(4.5)	187	(82.0)	228	(57.6)	Austria
	401	(92.6)	5	(1.2)	433	(84.2)	514	(58.7)	Belgium <sup>k</sup>
	174	(51.6)	4	(2.3)	337	(60.0)	562	(81.8)	Bulgaria
	66	(63.5)	0	(0.0)	104	(90.4)	115	(73.2)	Croatia
	31	(100.0)	3	(9.7)	31	(83.8)	37	(77.1)	Cyprus
	254	(93.7)	9	(3.5)	271	(84.4)	321	(89.9)	Czechia
	125	(99.2)	1	(0.8)	126	(80.8)	156	(75.0)	Denmark <sup>k</sup>
	84	(100.0)	24	(28.6)	84	(78.5)	107	(96.4)	Estonia
	87	(97.8)	2	(2.3)	89	(78.8)	113	(66.5)	Finland
	23	(3.0)	23	(100.0)	771	(40.7)	1894	(44.3)	France
	1530	(89.1)	61	(4.0)	1717	(83.2)	2064	(53.0)	Germany
	57	(60.6)	5	(8.8)	94	(65.3)	144	(69.9)	Greece
	165	(92.7)	12	(7.3)	178	(55.5)	321	(95.8)	Hungary
	–	–	–	–	–	–	–	–	Iceland
	44	(88.0)	2	(4.5)	50	(83.3)	60	(27.6)	Ireland <sup>k</sup>
	1406	(108.9)	44	(3.1)	1291	(99.7)	1295	(52.2)	Italy
	177	(86.8)	18	(10.2)	204	(86.8)	235	(90.0)	Latvia
	1	(100.0)	0	(0.0)	1	(100.0)	1	(100.0)	Liechtenstein
	561	(100.0)	105	(18.7)	561	(94.4)	594	(92.0)	Lithuania
	22	(95.7)	0	(0.0)	23	(92.0)	25	(71.4)	Luxembourg
	27	(96.4)	1	(3.7)	28	(68.3)	41	(75.9)	Malta
	284	(93.1)	10	(3.5)	305	(80.3)	380	(55.9)	Netherlands
	75	(98.7)	8	(10.7)	76	(90.5)	84	(53.5)	Norway <sup>k</sup>
	2748	(92.5)	58	(2.1)	2970	(83.6)	3553	(95.9)	Poland
	514	(64.0)	8	(1.6)	803	(74.8)	1073	(71.3)	Portugal
	5492	(92.5)	249	(4.5)	5939	(85.2)	6971	(87.4)	Romania
	70	(98.6)	5	(7.1)	71	(62.3)	114	(83.2)	Slovakia
	64	(100.0)	1	(1.6)	64	(94.1)	68	(85.0)	Slovenia
	1100	(80.5)	25	(2.3)	1366	(82.9)	1647	(46.9)	Spain
	181	(100.0)	4	(2.2)	181	(88.3)	205	(57.4)	Sweden
	<b>15940</b>	<b>(86.8)</b>	<b>695</b>	<b>(4.4)</b>	<b>18355</b>	<b>(80.1)</b>	<b>22922</b>	<b>(69.0)</b>	<b>Subtotal EU/EEA</b>
									<b>Non-EU/EEA</b>
	158	(91.3)	6	(3.8)	173	(79.0)	219	(81.4)	Albania
	2	(100.0)	0	(0.0)	2	(100.0)	2	(100.0)	Andorra
	256	(100.0)	64	(25.0)	256	(81.3)	315	(73.9)	Armenia
	3568	(98.2)	659	(18.5)	3634	(82.8)	4390	(88.8)	Azerbaijan
	1531	(100.0)	757	(49.4)	1531	(96.1)	1593	(93.9)	Belarus
	279	(97.9)	1	(0.4)	285	(83.6)	341	(93.9)	Bosnia and Herzegovina
	1220	(98.3)	180	(14.8)	1241	(94.7)	1311	(79.7)	Georgia
	104	(100.0)	9	(8.7)	104	(75.9)	137	(64.3)	Israel
	7522	(99.8)	2943	(39.1)	7536	(79.3)	9498	(94.9)	Kazakhstan
	2601	(94.2)	839	(32.3)	2762	(66.5)	4152	(79.7)	Kyrgyzstan
	–	–	–	–	–	–	0	–	Monaco
	61	(100.0)	0	(0.0)	61	(85.9)	71	(85.5)	Montenegro
	111	(100.0)	2	(1.8)	111	(84.7)	131	(89.7)	North Macedonia
	1503	(96.5)	459	(30.5)	1557	(73.7)	2112	(94.0)	Republic of Moldova
	40222	(94.0)	20452	(50.8)	42769	(57.2)	74798	(93.9)	Russian Federation
	–	–	–	–	–	–	0	–	San Marino
	–	–	–	–	–	–	–	–	Serbia
	–	–	–	–	–	–	–	–	Serbia excluding Kosovo <sup>l</sup>
	–	–	–	–	–	–	–	–	Kosovo <sup>l</sup>
	227	(87.3)	5	(2.2)	260	(72.2)	360	(98.9)	Switzerland
	2167	(98.9)	606	(28.0)	2190	(75.3)	2907	(67.6)	Tajikistan
	3902	(87.1)	120	(3.1)	4478	(77.6)	5768	(63.0)	Turkey
	836	(100.0)	416	(49.8)	836	(41.7)	2006	(82.8)	Turkmenistan
	13214	(97.4)	4025	(30.5)	13571	(74.6)	18199	(91.9)	Ukraine
	1812	(87.4)	38	(2.1)	2073	(81.9)	2532	(52.8)	United Kingdom <sup>k</sup>
	6797	(100.0)	1652	(24.3)	6797	(69.2)	9816	(63.5)	Uzbekistan
	<b>88093</b>	<b>(95.5)</b>	<b>33233</b>	<b>(37.7)</b>	<b>92227</b>	<b>(65.6)</b>	<b>140658</b>	<b>(86.2)</b>	<b>Subtotal non-EU/EEA</b>
	<b>104033</b>	<b>(94.1)</b>	<b>33928</b>	<b>(32.6)</b>	<b>110582</b>	<b>(67.6)</b>	<b>163580</b>	<b>(83.1)</b>	<b>Total European Region</b>
	<b>91827</b>	<b>(95.4)</b>	<b>33572</b>	<b>(36.6)</b>	<b>96283</b>	<b>(66.2)</b>	<b>145334</b>	<b>(87.2)</b>	<b>Subtotal 18 HPCs</b>

<sup>c</sup> Pulmonary TB cases with unknown previous TB treatment history are excluded.

<sup>d</sup> Proportion of bacteriologically confirmed pulmonary TB cases with DST results with the respective previous TB treatment history.

<sup>e</sup> Proportion of bacteriologically confirmed pulmonary RR/MDR-TB cases with DST results and the respective previous TB treatment history.

<sup>f</sup> Proportion of all pulmonary TB cases with the respective previous TB treatment history.

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

<sup>h</sup> Proportion of all bacteriologically confirmed pulmonary TB cases with DST results. For EU/EEA, excluding the cases with unknown previous TB treatment history.

<sup>i</sup> Proportion of all bacteriologically confirmed pulmonary RR/MDR-TB cases with DST results. For EU/EEA, excluding the cases with unknown previous TB treatment history.

<sup>j</sup> Proportion of all TB cases.

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

<sup>l</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 12. Pre-XDR-TB and XDR-TB cases among bacteriologically confirmed<sup>a</sup> pulmonary RR/MDR-TB cases, European Region, 2021**

Country/area	Source of data	Coverage	Bacteriologically confirmed pulmonary RR/MDR-TB cases <sup>b</sup>		Cases with DST results for any fluoroquinolone		Pre-XDR-TB cases <sup>c</sup>	
			N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>								
Austria	TESSy	National	8	(3.6)	8	(100.0)	1	(12.5)
Belgium	TESSy	National	6	(1.3)	6	(100.0)	0	(0.0)
<i>Bulgaria</i>	TESSy	<i>National</i>	4	(2.3)	4	(100.0)	1	(25.0)
Croatia	TESSy	National	0	(0.0)	0	(0.0)	0	(0.0)
Cyprus	TESSy	National	3	(9.4)	3	(100.0)	0	(0.0)
Czechia	TESSy	National	9	(3.5)	7	(77.8)	2	(28.6)
Denmark	TESSy	National	1	(0.8)	1	(100.0)	1	(100.0)
<i>Estonia</i>	TESSy	<i>National</i>	24	(29.6)	23	(95.8)	9	(39.1)
Finland	TESSy	National	3	(3.3)	1	(33.3)	0	(0.0)
France	TESSy	National	38	(100.0)	35	(92.1)	11	(31.4)
Germany	TESSy	National	83	(4.1)	51	(61.4)	9	(17.6)
Greece	TESSy	National	5	(7.4)	0	(0.0)	0	(0.0)
Hungary	TESSy	National	12	(7.3)	11	(91.7)	6	(54.5)
Iceland	-	-	-	-	-	-	-	-
Ireland	TESSy	National	4	(6.2)	1	(25.0)	1	(100.0)
Italy	NRL-TME	Partial	44	(3.1)	37	(84.1)	10	(27.0)
<i>Latvia</i>	TESSy	<i>National</i>	18	(9.7)	11	(61.1)	3	(27.3)
Liechtenstein	TESSy	National	0	(0.0)	0	(0.0)	0	(0.0)
<i>Lithuania</i>	TESSy	<i>National</i>	105	(18.7)	46	(43.8)	21	(45.7)
Luxembourg	TESSy	National	0	(0.0)	0	(0.0)	0	(0.0)
Malta	TESSy	National	1	(3.7)	0	0	0	(0.0)
Netherlands	TESSy	National	10	(3.5)	10	(100.0)	1	(10.0)
Norway	TESSy	National	8	(10.7)	8	(100.0)	2	(25.0)
Poland	TESSy	National	58	(2.1)	30	(51.7)	9	(30.0)
Portugal	TESSy	National	8	(1.6)	6	(75.0)	0	(0.0)
<i>Romania</i>	TESSy	<i>National</i>	253	(4.8)	91	(36.0)	24	(26.4)
Slovakia	TESSy	National	5	(6.8)	4	(80.0)	2	(50.0)
Slovenia	TESSy	National	1	(1.6)	1	(100.0)	0	(0.0)
Spain	TESSy	National	27	(2.3)	5	(18.5)	1	(20.0)
Sweden	TESSy	National	4	(2.1)	4	(100.0)	1	(25.0)
<b>Subtotal EU/EEA</b>	-	-	<b>742</b>	<b>(4.9)</b>	<b>404</b>	<b>(54.4)</b>	<b>115</b>	<b>(28.5)</b>
<b>Non-EU/EEA</b>								
Albania	NRL-TME	National	6	(3.8)	0	(0.0)	-	-
Andorra	NRL-TME	National	0	(0.0)	0	-	-	-
<i>Armenia</i>	<i>NRL-TME</i>	<i>National</i>	64	(25.0)	57	(89.1)	17	(29.8)
<i>Azerbaijan</i>	<i>NRL-TME</i>	<i>National</i>	659	(18.5)	592	(89.8)	114	(19.3)
<i>Belarus</i>	<i>NRL-TME</i>	<i>National</i>	757	(49.4)	757	(100.0)	310	(41.0)
Bosnia and Herzegovina	-	-	1	(0.4)	0	-	-	-
<i>Georgia</i>	<i>NRL-TME</i>	<i>National</i>	180	(14.8)	148	(82.2)	37	(25.0)
Israel	NRL-TME	National	9	(8.7)	9	(100.0)	5	(55.6)
<i>Kazakhstan</i>	-	-	2943	(39.1)	2931	(99.6)	461	(15.7)
<i>Kyrgyzstan</i>	<i>NRL-TME</i>	<i>National</i>	839	(32.3)	665	(79.3)	116	(17.4)
Monaco	-	-	-	-	-	-	-	-
Montenegro	NRL-TME	National	0	(0.0)	-	-	-	-
North Macedonia	NRL-TME	National	2	(1.8)	0	(0.0)	-	-
<i>Republic of Moldova</i>	<i>NRL-TME</i>	<i>National</i>	459	(30.5)	459	(100.0)	124	(27.0)
<i>Russian Federation</i>	<i>NRL-TME</i>	<i>National</i>	20 452	(50.8)	18 843	(92.1)	7 346	(39.0)
San Marino	-	National	-	-	-	-	-	-
Serbia	-	-	-	-	-	-	-	-
Serbia excluding Kosovo <sup>d</sup>	-	-	-	-	-	-	-	-
Kosovo <sup>d</sup>	-	-	-	-	-	-	-	-
Switzerland	NRL-TME	National	5	(2.2)	4	(80.0)	1	(25.0)
<i>Tajikistan</i>	<i>NRL-TME</i>	<i>National</i>	606	(28.0)	551	(90.9)	129	(23.4)
<i>Türkiye</i>	<i>NRL-TME</i>	<i>National</i>	120	(3.1)	101	(84.2)	10	(9.9)
<i>Türkmenistan</i>	-	-	416	(49.8)	0	-	-	-
<i>Ukraine</i>	<i>NRL-TME</i>	<i>National</i>	4 025	(30.5)	3 266	(81.1)	994	(30.4)
United Kingdom	TESSy	National	38	(2.1)	36	(94.7)	13	(36.1)
<i>Uzbekistan</i>	<i>NRL-TME</i>	<i>National</i>	1 652	(24.3)	1 645	(99.6)	394	(24.0)
<b>Subtotal non-EU/EEA</b>	-	-	<b>33 233</b>	<b>(37.7)</b>	<b>30 064</b>	<b>(90.5)</b>	<b>10 071</b>	<b>(33.5)</b>
<b>Total European Region</b>	-	-	<b>33 975</b>	<b>(32.5)</b>	<b>30 468</b>	<b>(89.7)</b>	<b>10 186</b>	<b>(33.4)</b>
<b>Subtotal 18 HPCs</b>	-	-	<b>33 576</b>	<b>(36.5)</b>	<b>30 190</b>	<b>(90.0)</b>	<b>10 110</b>	<b>(33.5)</b>

Note: WHO European Region 18 TB HPCs are presented in italics.

The resistance pattern at the initiation of treatment is reported to TESSy irrespective of the method used for DST or resistance prediction.

DST: drug-susceptibility testing.

HPCs: high-priority countries.

MDR-TB: multidrug-resistant tuberculosis.

N: no.

NRL: national reference laboratory.

TESSy: The European surveillance system.

TME: WHO global TB data-collection system.

XDR-TB: extensively drug-resistant tuberculosis.

Y: yes.

<sup>d</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

	Cases with DST results for any other Group A drugs		XDR-TB cases <sup>a</sup>		Reporting completeness <sup>b</sup>	Country/area
	N	(%)	N	(%)		
	1	(100.0)	0	(0.0)	Y	Austria
	0	(0.0)	0	(0.0)	Y	Belgium
	1	(100.0)	0	(0.0)	Y	Bulgaria
	0	(0.0)	0	(0.0)	Y	Croatia
	0	(0.0)	0	(0.0)	Y	Cyprus
	2	(100.0)	2	(100.0)	Y	Czechia
	1	(100.0)	1	(100.0)	Y	Denmark
	9	(100.0)	9	(100.0)	Y	Estonia
	0	(0.0)	0	(0.0)	Y	Finland
	11	(100.0)	5	(45.5)	Y	France
	9	(100.0)	4	(44.4)	Y	Germany
	0	(0.0)	0	(0.0)	Y	Greece
	0	(0.0)	0	(0.0)	Y	Hungary
	-	-	-	-	N	Iceland
	1	(100.0)	0	(0.0)	Y	Ireland
	-	-	-	-	N	Italy
	3	(100.0)	2	(66.7)	Y	Latvia
	0	(0.0)	0	(0.0)	Y	Liechtenstein
	21	(100.0)	11	(52.4)	Y	Lithuania
	0	(0.0)	0	(0.0)	Y	Luxembourg
	0	(0.0)	0	(0.0)	Y	Malta
	1	(100.0)	1	(100.0)	Y	Netherlands
	2	(100.0)	2	(100.0)	Y	Norway
	9	(100.0)	0	(0.0)	Y	Poland
	0	(0.0)	0	(0.0)	Y	Portugal
	4	(16.7)	2	(50.0)	Y	Romania
	2	(100.0)	2	(100.0)	Y	Slovakia
	0	(0.0)	0	(0.0)	Y	Slovenia
	1	(100.0)	1	(100.0)	Y	Spain
	1	(100.0)	1	(100.0)	Y	Sweden
	<b>79</b>	<b>(68.7)</b>	<b>43</b>	<b>(54.4)</b>	-	<b>Subtotal EU/EEA</b>
						<b>Non-EU/EEA</b>
	-	-	-	-	Y	Albania
	-	-	-	-	Y	Andorra
	7	(41.2)	0	(0.0)	Y	Armenia
	98	(86.0)	31	(31.6)	Y	Azerbaijan
	-	-	-	-	Y	Belarus
	-	-	-	-	N	Bosnia and Herzegovina
	35	(94.6)	10	(28.6)	Y	Georgia
	0	(0.0)	-	-	Y	Israel
	-	-	-	-	N	Kazakhstan
	116	(100.0)	13	(11.2)	Y	Kyrgyzstan
	-	-	-	-	N	Monaco
	-	-	-	-	Y	Montenegro
	-	-	-	-	Y	North Macedonia
	124	(100.0)	24	(19.4)	Y	Republic of Moldova
	2311	(31.5)	203	(8.8)	Y	Russian Federation
	-	-	-	-	Y	San Marino
	-	-	-	-	-	Serbia
	-	-	-	-	N	Serbia excluding Kosovo <sup>c</sup>
	-	-	-	-	N	Kosovo <sup>c</sup>
	1	(100.0)	0	(0.0)	Y	Switzerland
	103	(79.8)	19	(18.4)	Y	Tajikistan
	9	(90.0)	0	(0.0)	Y	Turkey
	-	-	-	-	N	Turkmenistan
	951	(95.7)	41	(4.3)	Y	Ukraine
	-	-	-	-	Y	United Kingdom
	394	(100.0)	89	(22.6)	Y	Uzbekistan
	<b>4149</b>	<b>(41.2)</b>	<b>430</b>	<b>(10.4)</b>	-	<b>Subtotal non-EU/EEA</b>
	<b>4228</b>	<b>(41.5)</b>	<b>473</b>	<b>(11.2)</b>	-	<b>Total European Region</b>
	<b>4186</b>	<b>(41.4)</b>	<b>454</b>	<b>(10.8)</b>	-	<b>Subtotal 18 HPCs</b>

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

<sup>b</sup> RR/MDR-TB defined as resistance to at least rifampicin. Includes cases that are RR/MDR but that also meet the pre-XDR or XDR case definitions (pre-XDR and XDR cases have not been excluded).

<sup>c</sup> Pre-XDR-TB defined as RR/MDR-TB as well as resistance to any fluoroquinolone.

<sup>d</sup> XDR-TB defined as resistance to rifampicin and resistance to at least one fluoroquinolone (pre-XDR-TB) as well as resistance to at least one additional Group A drug. Group A drugs include: levofloxacin, moxifloxacin, bedaquiline and linezolid. For EU/EEA countries, linezolid resistance is not yet reported to TESSy, therefore XDR-TB is assessed on the basis of resistance to levofloxacin, moxifloxacin and/or bedaquiline.

<sup>e</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>f</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 13. RR/MDR-TB and pre-XDR/XDR-TB cases enrolled to treatment, European Region, 2021**

Country/area	Total number of RR/MDR-TB cases detected <sup>a</sup>		RR/MDR-TB cases enrolled to treatment <sup>b,c</sup>		Total number of pre-XDR <sup>d</sup> /XDR-TB <sup>e</sup> cases detected		Pre-XDR <sup>d</sup> /XDR-TB <sup>e</sup> cases enrolled to treatment <sup>b,c</sup>	
	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>								
Austria	7		7	(100.0)	2		2	(100.0)
Belgium	8		8	(100.0)	0		0	–
<i>Bulgaria</i>	3		3	(100.0)	1		1	(100.0)
Croatia	0		0	–	0		0	–
Cyprus	3		3	(100.0)	0		0	–
Czechia	8		8	(100.0)	2		2	(100.0)
Denmark	0		0	–	1		0	(0.0)
<i>Estonia</i>	15		12	(80.0)	9		7	(77.8)
Finland	3		3	(100.0)	0		0	–
France	32		32	(100.0)	11		11	(100.0)
Germany	81		79	(97.5)	11		10	(90.9)
Greece	5		5	(100.0)	0		0	–
Hungary	6		6	(100.0)	6		6	(100.0)
Iceland	–		–	–	–		–	–
Ireland	7		7	(100.0)	1		1	(100.0)
Italy	44		–	–	10		–	–
<i>Latvia</i>	15		15	(100.0)	3		2	(66.7)
Liechtenstein	0		0	–	0		0	–
<i>Lithuania</i>	84		84	(100.0)	21		21	(100.0)
Luxembourg	0		0	–	0		0	–
Malta	1		1	(100.0)	0		0	–
Netherlands	10		10	(100.0)	1		1	(100.0)
Norway	8		8	(100.0)	2		2	(100.0)
Poland	49		49	(100.0)	9		9	(100.0)
Portugal	8		8	(100.0)	2		2	(100.0)
<i>Romania</i>	234		234	(100.0)	25		24	(96.0)
Slovakia	3		3	(100.0)	2		2	(100.0)
Slovenia	1		1	(100.0)	0		0	–
Spain	32		32	(100.0)	1		1	(100.0)
Sweden	6		6	(100.0)	1		0	(0.0)
<b>Subtotal EU/EEA</b>	<b>673</b>		<b>624</b>	<b>(99.2)</b>	<b>121</b>		<b>104</b>	<b>(86.0)</b>
<b>Non-EU/EEA</b>								
Albania	6		5	(83.3)	0		0	–
Andorra	0		0	–	0		0	–
<i>Armenia</i>	47		47	(100.0)	17		17	(100.0)
<i>Azerbaijan</i>	869		798	(91.8)	171		164	(95.9)
<i>Belarus</i>	491		451	(91.9)	310		276	(89.0)
Bosnia and Herzegovina	1		1	(100.0)	0		0	–
<i>Georgia</i>	149		140	(94.0)	38		35	(92.1)
Israel	6		6	(100.0)	12		12	(100.0)
<i>Kazakhstan</i>	3294		3403	(103.3)	461		469	(101.7)
<i>Kyrgyzstan</i>	788		756	(95.9)	129		116	(89.9)
Monaco	0		0	–	0		0	–
Montenegro	0		0	–	0		0	–
North Macedonia	2		2	(100.0)	0		0	–
<i>Republic of Moldova</i>	469		500	(106.6)	124		124	(100.0)
<i>Russian Federation</i>	13106		18909	(144.3)	7346		6146	(83.7)
San Marino	–		–	–	–		–	–
Serbia	–		–	–	–		–	–
Serbia excluding Kosovo <sup>f</sup>	–		–	–	–		–	–
Kosovo <sup>f</sup>	–		–	–	–		–	–
Switzerland	4		4	(100.0)	1		1	(100.0)
<i>Tajikistan</i>	477		354	(74.2)	129		111	(86.0)
<i>Türkiye</i>	119		101	(84.9)	10		5	(50.0)
<i>Turkmenistan</i>	521		521	(100.0)	287		287	(100.0)
<i>Ukraine</i>	3031		3427	(113.1)	1015		1460	(143.8)
United Kingdom	38		37	(97.4)	37		15	(40.5)
<i>Uzbekistan</i>	1753		1753	(100.0)	394		394	(100.0)
<b>Subtotal non-EU/EEA</b>	<b>25171</b>		<b>31215</b>	<b>(124.0)</b>	<b>10481</b>		<b>9632</b>	<b>(91.9)</b>
<b>Total European Region</b>	<b>25844</b>		<b>31839</b>	<b>(123.2)</b>	<b>10602</b>		<b>9736</b>	<b>(91.8)</b>
<b>Subtotal 18 HPCs</b>	<b>25465</b>		<b>31508</b>	<b>(123.7)</b>	<b>10490</b>		<b>9659</b>	<b>(92.1)</b>

Note: European Region comprises the 53 countries of the WHO European Region and Liechtenstein. WHO European Region 18 TB HPCs are presented in italics. The resistance pattern at the initiation of treatment is reported to TESSy irrespective of the method used for drug-susceptibility testing or resistance prediction.

HPCs: high-priority countries.

RR/MDR-TB: rifampicin-resistant or multidrug-resistant tuberculosis.

TESSy: The European Surveillance System.

XDR-TB: extensively drug-resistant tuberculosis.

<sup>a</sup> Excluding pre-XDR and XDR-TB cases.

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

<sup>c</sup> For some non-EU/EEA countries and areas, patients who were diagnosed before 2018 but started treatment in 2018 are included, resulting in over 100% coverage.

<sup>d</sup> Pre-XDR-TB defined as resistance to rifampicin (RR/MDR-TB) as well as resistance to any fluoroquinolone.

<sup>e</sup> XDR-TB defined as resistance to rifampicin and to at least one fluoroquinolone (pre-XDR-TB) as well as resistance to at least one additional Group A drug.

Group A drugs include: levofloxacin, moxifloxacin, bedaquiline and linezolid. For EU/EEA countries, linezolid resistance is not yet reported to TESSy, therefore XDR-TB is assessed on the basis of resistance to levofloxacin, moxifloxacin and/or bedaquiline (in addition to meeting pre-XDR-TB criteria).

<sup>f</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 14. New and relapse<sup>a</sup> TB cases with HIV infection, European Region, 2021**

Country/area	New and relapse TB cases <sup>b</sup>		TB cases with known HIV status		HIV-positive TB cases		HIV-positive cases started ART <sup>c</sup>	
	N	N	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>								
Austria	–	–	–	–	–	–	–	–
Belgium <sup>d</sup>	817	428		(52.4)	24	(5.6)	–	–
Bulgaria	673	467		(69.4)	0	(0.0)	0	–
Croatia	154	3		(1.9)	0	(0.0)	–	–
Cyprus	48	35		(72.9)	1	(2.9)	–	–
Czechia	352	208		(59.1)	7	(3.4)	–	–
Denmark <sup>d</sup>	191	147		(77.0)	5	(3.4)	–	–
Estonia	107	99		(92.5)	12	(12.1)	10	(83.3)
Finland	–	–	–	–	–	–	–	–
France	–	–	–	–	–	–	–	–
Germany	–	–	–	–	–	–	–	–
Greece	195	51		(26.2)	2	(3.9)	–	–
Hungary	314	7		(2.2)	1	(14.3)	–	–
Iceland	–	–	–	–	–	–	–	–
Ireland <sup>d</sup>	210	65		(31.0)	1	(1.5)	1	(100.0)
Italy	–	–	–	–	–	–	–	–
Latvia	255	183		(71.8)	24	(13.1)	–	–
Liechtenstein	–	–	–	–	–	–	–	–
Lithuania	628	594		(94.6)	15	(2.5)	–	–
Luxembourg	34	24		(70.6)	0	(0.0)	0	–
Malta	54	46		(85.2)	1	(2.2)	1	(100.0)
Netherlands	671	502		(74.8)	13	(2.6)	10	(76.9)
Norway <sup>d</sup>	140	113		(80.7)	3	(2.7)	–	–
Poland	–	–	–	–	–	–	–	–
Portugal	1 463	1 076		(73.5)	88	(8.2)	–	–
Romania	7 591	6 237		(82.2)	132	(2.1)	102	(77.3)
Slovakia	134	78		(58.2)	2	(2.6)	2	(100.0)
Slovenia	79	66		(83.5)	0	(0.0)	0	–
Spain	3 370	1 848		(54.8)	141	(7.6)	–	–
Sweden	–	–	–	–	–	–	–	–
<b>Subtotal EU/EEA</b>	<b>17 480</b>	<b>12 277</b>		<b>(70.2)</b>	<b>472</b>	<b>(3.8)</b>	<b>126</b>	<b>(79.2)</b>
<b>Non-EU/EEA</b>								
Albania	269	244		(90.7)	1	(0.4)	1	(100.0)
Andorra	2	0		(0.0)	–	–	–	–
Armenia	398	335		(84.2)	36	(10.7)	0	(0.0)
Azerbaijan	4 944	4 448		(90.0)	92	(2.1)	90	(97.8)
Belarus	1 484	1 484		(100.0)	128	(8.6)	111	(86.7)
Bosnia and Herzegovina	–	–	–	–	–	–	–	–
Georgia	1 501	1 430		(95.3)	43	(3.0)	43	(100.0)
Israel	213	213		(100.0)	16	(7.5)	16	(100.0)
Kazakhstan	9 757	9 620		(98.6)	625	(6.5)	581	(93.0)
Kyrgyzstan	4 596	4 394		(95.6)	126	(2.9)	77	(61.1)
Monaco	0	–	–	–	–	–	–	–
Montenegro	80	80		(100.0)	0	(0.0)	–	–
North Macedonia	143	29		(20.3)	0	(0.0)	–	–
Republic of Moldova	2 067	2 008		(97.1)	214	(10.7)	169	(79.0)
Russian Federation	56 922	54 821		(96.3)	14 132	(25.8)	10 764	(76.2)
San Marino	–	–	–	–	–	–	–	–
Serbia	–	–	–	–	–	–	–	–
Serbia excluding Kosovo <sup>1</sup>	–	–	–	–	–	–	–	–
Kosovo <sup>1</sup>	–	–	–	–	–	–	–	–
Switzerland	–	–	–	–	–	–	–	–
Tajikistan	4 158	4 103		(98.7)	118	(2.9)	118	(100.0)
Türkiye	9 047	7 249		(80.1)	85	(1.2)	64	(75.3)
Turkmenistan	–	–	–	–	–	–	–	–
Ukraine	18 307	17 991		(98.3)	3 646	(20.3)	3 354	(92.0)
United Kingdom <sup>d</sup>	–	–	–	–	–	–	–	–
Uzbekistan <sup>e</sup>	15 450	15 450		(100.0)	441	(2.9)	395	(89.6)
<b>Subtotal non-EU/EEA</b>	<b>129 338</b>	<b>123 899</b>		<b>(95.8)</b>	<b>19 703</b>	<b>(15.9)</b>	<b>15 783</b>	<b>(80.1)</b>
<b>Total European Region</b>	<b>146 818</b>	<b>136 176</b>		<b>(92.8)</b>	<b>20 175</b>	<b>(14.8)</b>	<b>15 909</b>	<b>(80.1)</b>
<b>Subtotal 18 HPCs</b>	<b>137 885</b>	<b>130 913</b>		<b>(94.9)</b>	<b>19 869</b>	<b>(15.2)</b>	<b>15 878</b>	<b>(80.1)</b>

Note: 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.

HPCs: high-priority countries.

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

<sup>b</sup> Countries are only included in this analysis if 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 the WHO Global TB Database.

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

<sup>e</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

Table 15. TB in prisons, European Region, 2021<sup>a</sup>

Country/area	Prison population <sup>b</sup>	New and relapse TB cases (all forms) notified in prisons		Proportion of new and relapse TB cases in prisons out of the country total	TB relative risk in prisons <sup>c</sup>
	N	N	Rate per 100 000 prisoners	%	
<b>EU/EEA</b>					
Austria	–	–	–	–	–
Belgium	10 559	20	189	(2.0)	24.2
<i>Bulgaria</i>	<i>6 192</i>	<i>5</i>	<i>81</i>	<i>(0.3)</i>	<i>4.4</i>
Croatia	–	–	–	–	–
Cyprus	–	–	–	–	–
Czechia	18 748	3	16	(0.6)	3.7
Denmark	–	–	–	–	–
<i>Estonia</i>	<i>2 265</i>	<i>2</i>	<i>88</i>	<i>(1.1)</i>	<i>8.0</i>
Finland	–	–	–	–	–
France	64 405	41	64	(0.8)	8.8
Germany	–	–	–	–	–
Greece	–	–	–	–	–
Hungary	–	–	–	–	–
Iceland	–	–	–	–	–
Ireland	6 133	1	16	(0.3)	3.2
Italy	–	–	–	–	–
<i>Latvia</i>	<i>–</i>	<i>–</i>	<i>–</i>	<i>–</i>	<i>–</i>
Liechtenstein	–	–	–	–	–
<i>Lithuania</i>	<i>4 425</i>	<i>16</i>	<i>362</i>	<i>(1.2)</i>	<i>10.0</i>
Luxembourg	750	0	0	(0.0)	0.0
Malta	–	–	–	–	–
Netherlands	23 341	5	21	(0.6)	5.0
Norway	–	–	–	–	–
Poland	71 209	119	167	(1.9)	12.7
Portugal	11 388	20	176	(1.1)	10.5
<i>Romania</i>	<i>23 387</i>	<i>97</i>	<i>415</i>	<i>(0.8)</i>	<i>7.3</i>
Slovakia	8 750	3	34	(1.1)	8.7
Slovenia	3 277	0	0	(0.0)	0.0
Spain	–	–	–	–	–
Sweden	–	–	–	–	–
<b>Subtotal EU/EEA<sup>d</sup></b>	<b>254 829</b>	<b>332</b>	<b>130</b>	<b>(1.2)</b>	<b>8.9</b>
<b>Non EU/EEA</b>					
Albania	–	–	–	–	–
Andorra	–	–	–	–	–
Armenia	2 023	11	543.7	(2.8)	38.1
<i>Azerbaijan</i>	<i>21 839</i>	<i>147</i>	<i>673.1</i>	<i>(4.0)</i>	<i>19.0</i>
Belarus	–	–	–	–	–
Bosnia and Herzegovina	–	–	–	–	–
<i>Georgia</i>	<i>9 203</i>	<i>27</i>	<i>293.4</i>	<i>(1.8)</i>	<i>7.3</i>
Israel	–	–	–	–	–
<i>Kazakhstan</i>	<i>34 000</i>	<i>204</i>	<i>600.0</i>	<i>(2.1)</i>	<i>11.8</i>
<i>Kyrgyzstan</i>	<i>6 565</i>	<i>74</i>	<i>1 127</i>	<i>(1.6)</i>	<i>16.0</i>
Monaco	0	0	–	–	–
Montenegro	–	–	–	–	–
North Macedonia	2 600	4	153.8	(2.8)	22.6
<i>Republic of Moldova</i>	<i>6 396</i>	<i>79</i>	<i>1 235</i>	<i>(3.8)</i>	<i>18.3</i>
<i>Russian Federation</i>	<i>473 129</i>	<i>4 832</i>	<i>1 021</i>	<i>(8.5)</i>	<i>26.0</i>
San Marino	–	–	–	–	–
Serbia	–	–	–	–	–
Serbia excluding Kosovo <sup>e</sup>	–	–	–	–	–
Kosovo <sup>e</sup>	–	–	–	–	–
Switzerland	–	–	–	–	–
<i>Tajikistan</i>	<i>12 000</i>	<i>50</i>	<i>416.7</i>	<i>(1.2)</i>	<i>9.8</i>
<i>Türkiye</i>	<i>297 726</i>	<i>95</i>	<i>31.9</i>	<i>(1.1)</i>	<i>3.0</i>
<i>Turkmenistan</i>	<i>–</i>	<i>–</i>	<i>–</i>	<i>–</i>	<i>–</i>
<i>Ukraine</i>	<i>47 848</i>	<i>547</i>	<i>1 143</i>	<i>(3.0)</i>	<i>27.2</i>
United Kingdom	–	–	–	–	–
<i>Uzbekistan</i>	<i>–</i>	<i>–</i>	<i>–</i>	<i>–</i>	<i>–</i>
<b>Subtotal non-EU/EEA</b>	<b>913 329</b>	<b>6 070</b>	<b>664.6</b>	<b>(5.5)</b>	<b>19.9</b>
<b>Total European Region</b>	<b>1 168 158</b>	<b>6 402</b>	<b>548.0</b>	<b>(4.9)</b>	<b>22.1</b>
<b>Subtotal 18 HPCs</b>	<b>946 998</b>	<b>6 186</b>	<b>653.2</b>	<b>(5.2)</b>	<b>19.6</b>

Note: 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> Belarus, Kazakhstan, Montenegro and Kosovo<sup>e</sup> prison population data are from prisonstudies.org.

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

<sup>d</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).



Table 17. Treatment outcome of previously treated TB cases notified in 2020, European Region, 2021

Country/area	New and relapse TB cases notified in 2020 <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	6	2	(33.3)	1	(16.7)	0	(0.0)	0	(0.0)	1	(16.7)	2	(33.3)
Belgium	49	35	(71.4)	2	(4.1)	0	(0.0)	5	(10.2)	0	(0.0)	7	(14.3)
<i>Bulgaria</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
Croatia	5	2	(40.0)	2	(40.0)	0	(0.0)	1	(20.0)	0	(0.0)	0	(0.0)
Cyprus	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Czechia	5	3	(60.0)	1	(20.0)	0	(0.0)	1	(20.0)	0	(0.0)	0	(0.0)
Denmark	13	5	(38.5)	0	(0.0)	0	(0.0)	1	(7.7)	0	(0.0)	7	(53.8)
<i>Estonia</i>	2	0	(0.0)	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Finland	0	0	-	0	-	0	-	0	-	0	-	0	-
France	187	63	(33.7)	6	(3.2)	0	(0.0)	7	(3.7)	1	(0.5)	110	(58.8)
Germany	111	73	(65.8)	4	(3.6)	0	(0.0)	7	(6.3)	1	(0.9)	26	(23.4)
<i>Greece</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	19	12	(63.2)	2	(10.5)	0	(0.0)	3	(15.8)	2	(10.5)	0	(0.0)
Iceland	0	0	-	0	-	0	-	0	-	0	-	0	-
Ireland	12	1	(8.3)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	11	(91.7)
<i>Italy</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Latvia</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Lithuania</i>	20	18	(90.0)	0	(0.0)	1	(5.0)	1	(5.0)	0	(0.0)	0	(0.0)
Luxembourg	2	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(50.0)
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	9	6	(66.7)	1	(11.1)	0	(0.0)	1	(11.1)	0	(0.0)	1	(11.1)
Norway	16	11	(68.8)	1	(6.3)	0	(0.0)	0	(0.0)	0	(0.0)	4	(25.0)
<i>Poland</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	43	21	(48.8)	5	(11.6)	0	(0.0)	8	(18.6)	7	(16.3)	2	(4.7)
<i>Romania</i>	414	203	(49.0)	49	(11.8)	60	(14.5)	96	(23.2)	6	(1.4)	0	(0.0)
Slovakia	5	2	(40.0)	1	(20.0)	0	(0.0)	2	(40.0)	0	(0.0)	0	(0.0)
Slovenia	2	1	(50.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Spain	168	111	(66.1)	14	(8.3)	1	(0.6)	6	(3.6)	5	(3.0)	31	(18.5)
Sweden	0	0	-	0	-	0	-	0	-	0	-	0	-
<b>Subtotal EU/EEA</b>	<b>1090</b>	<b>572</b>	<b>(52.5)</b>	<b>92</b>	<b>(8.4)</b>	<b>62</b>	<b>(5.7)</b>	<b>139</b>	<b>(12.8)</b>	<b>23</b>	<b>(2.1)</b>	<b>202</b>	<b>(18.5)</b>
<b>Non-EU/EEA</b>													
Albania	0	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	0	-	-	-	-	-	-	-	-	-	-	-	-
Armenia	10	5	(50.0)	1	(10.0)	1	(10.0)	3	(30.0)	-	-	0	(0.0)
Azerbaijan	1880	1361	(72.4)	135	(7.2)	138	(7.3)	198	(10.5)	-	-	48	(2.6)
Belarus	65	42	(64.6)	8	(12.3)	4	(6.2)	5	(7.7)	-	-	6	(9.2)
Bosnia and Herzegovina	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	129	87	(67.4)	5	(3.9)	5	(3.9)	29	(22.5)	-	-	3	(2.3)
Israel	0	-	-	-	-	-	-	-	-	-	-	-	-
Kazakhstan	53	36	(67.9)	7	(13.2)	6	(11.3)	3	(5.7)	-	-	1	(1.9)
Kyrgyzstan	400	282	(70.5)	37	(9.3)	15	(3.8)	62	(15.5)	-	-	4	(1.0)
Monaco	0	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	0	-	-	-	-	-	-	-	-	-	-	-	-
North Macedonia	-	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Moldova	115	67	(58.3)	15	(13.0)	9	(7.8)	18	(15.7)	-	-	6	(5.2)
Russian Federation	7409	3603	(48.6)	675	(9.1)	1486	(20.1)	826	(11.1)	-	-	819	(11.1)
San Marino	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Serbia excluding Kosovo <sup>d</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Kosovo <sup>d</sup>	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Switzerland	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Tajikistan</i>	98	78	(79.6)	10	(10.2)	0	(0.0)	10	(10.2)	-	-	0	(0.0)
<i>Türkiye</i>	95	45	(47.4)	6	(6.3)	1	(1.1)	14	(14.7)	-	-	29	(30.5)
<i>Turkmenistan</i>	692	560	(80.9)	39	(5.6)	36	(5.2)	35	(5.1)	-	-	22	(3.2)
<i>Ukraine</i>	1635	1104	(67.5)	155	(9.5)	167	(10.2)	208	(12.7)	-	-	1	(0.1)
United Kingdom	219	155	(70.8)	29	(13.2)	16	(7.3)	5	(2.3)	-	-	14	(6.4)
<i>Uzbekistan</i>	1415	1190	(84.1)	116	(8.2)	28	(2.0)	34	(2.4)	-	-	47	(3.3)
<b>Subtotal non-EU/EEA</b>	<b>14 216</b>	<b>8 616</b>	<b>(60.6)</b>	<b>1238</b>	<b>(8.7)</b>	<b>1912</b>	<b>(13.4)</b>	<b>1450</b>	<b>(10.2)</b>	<b>0</b>	<b>(0.0)</b>	<b>1000</b>	<b>(7.0)</b>
<b>Total European Region</b>	<b>15 306</b>	<b>9 188</b>	<b>(60.0)</b>	<b>1330</b>	<b>(8.7)</b>	<b>1974</b>	<b>(12.9)</b>	<b>1589</b>	<b>(10.4)</b>	<b>23</b>	<b>(0.2)</b>	<b>1202</b>	<b>(7.9)</b>
<b>Subtotal 18 HPCs</b>	<b>14 432</b>	<b>8 681</b>	<b>(60.2)</b>	<b>1260</b>	<b>(8.7)</b>	<b>1957</b>	<b>(13.6)</b>	<b>1542</b>	<b>(10.7)</b>	<b>6</b>	<b>(0.0)</b>	<b>986</b>	<b>(6.8)</b>

Note: 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> Excluding relapsed TB cases

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

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

<sup>d</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).



**Table 18. Treatment outcome of new and relapse<sup>a</sup> TB cases in children (0–14 years) notified in 2020, European Region, 2021**

Country/area	New and relapse TB cases reported in 2020 <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	12	10	(83.3)	1	(8.3)	0	(0.0)	0	(0.0)	1	(8.3)	0	(0.0)
Belgium <sup>e</sup>	48	39	(81.3)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	9	(18.8)
<i>Bulgaria</i>	–	–	–	–	–	–	–	–	–	–	–	–	–
Croatia	2	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(50.0)	1	(50.0)
Cyprus	0	0	–	0	–	0	–	0	–	0	–	0	–
Czechia	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Denmark <sup>e</sup>	10	3	(30.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	7	(70.0)
<i>Estonia</i>	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Finland	5	2	(40.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(60.0)
France	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	168	142	(84.5)	0	(0.0)	0	(0.0)	1	(0.6)	5	(3.0)	20	(11.9)
Greece	–	–	–	–	–	–	–	–	–	–	–	–	–
Hungary	5	4	(80.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(20.0)	0	(0.0)
Iceland	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Ireland <sup>e</sup>	–	–	–	–	–	–	–	–	–	–	–	–	–
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	–	–	–	0	–	0	–	0	–	0	–	0	–
Liechtenstein	0	0	–	0	–	0	–	0	–	0	–	0	–
<i>Lithuania</i>	13	13	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Luxembourg	0	0	–	0	–	0	–	0	–	0	–	0	–
Malta	7	7	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Netherlands	19	17	(89.5)	2	(10.5)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Norway <sup>e</sup>	10	10	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Poland	–	–	–	–	–	–	–	–	–	–	–	–	–
Portugal	42	37	(88.1)	0	(0.0)	0	(0.0)	1	(2.4)	3	(7.1)	1	(2.4)
<i>Romania</i>	258	245	(95.0)	6	(2.3)	0	(0.0)	6	(2.3)	1	(0.4)	0	(0.0)
Slovakia	35	34	(97.1)	0	(0.0)	0	(0.0)	1	(2.9)	0	(0.0)	0	(0.0)
Slovenia	0	0	–	0	–	0	–	0	–	0	–	0	–
Spain	185	123	(66.5)	1	(0.5)	0	(0.0)	0	(0.0)	2	(1.1)	59	(31.9)
Sweden	16	12	(75.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	4	(25.0)
<b>Subtotal EU/EEA</b>	<b>840</b>	<b>703</b>	<b>(83.7)</b>	<b>10</b>	<b>(1.2)</b>	<b>0</b>	<b>(0.0)</b>	<b>9</b>	<b>(1.1)</b>	<b>14</b>	<b>(1.7)</b>	<b>104</b>	<b>(12.4)</b>
<b>Non-EU/EEA</b>													
Albania	3	3	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
Andorra	0	–	–	–	–	–	–	–	–	–	–	–	–
Armenia	21	20	(95.2)	1	(4.8)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
<i>Azerbaijan</i>	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Belarus</i>	3	3	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
Bosnia and Herzegovina	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	1	(100.0)
<i>Georgia</i>	47	45	(95.7)	1	(2.1)	0	(0.0)	0	(0.0)	–	–	1	(2.1)
Israel	4	4	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
<i>Kazakhstan</i>	227	224	(98.7)	0	(0.0)	3	(1.3)	0	(0.0)	–	–	0	(0.0)
<i>Kyrgyzstan</i>	182	130	(71.4)	5	(2.7)	2	(1.1)	4	(2.2)	–	–	41	(22.5)
Monaco	0	–	–	–	–	–	–	–	–	–	–	–	–
Montenegro	0	–	–	–	–	–	–	–	–	–	–	–	–
North Macedonia	10	8	(80.0)	0	(0.0)	0	(0.0)	2	(20.0)	–	–	0	(0.0)
<i>Republic of Moldova</i>	56	56	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
<i>Russian Federation</i>	1432	1365	(95.3)	4	(0.3)	26	(1.8)	8	(0.6)	–	–	29	(2.0)
San Marino	–	–	–	–	–	–	–	–	–	–	–	–	–
Serbia	–	–	–	–	–	–	–	–	–	–	–	–	–
Serbia excluding Kosovo <sup>1</sup>	–	–	–	–	–	–	–	–	–	–	–	–	–
Kosovo <sup>1</sup>	–	–	–	–	–	–	–	–	–	–	–	–	–
Switzerland	18	17	(94.4)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	1	(5.6)
<i>Tajikistan</i>	240	188	(78.3)	5	(2.1)	0	(0.0)	7	(2.9)	–	–	40	(16.7)
<i>Türkiye</i>	390	314	(80.5)	12	(3.1)	2	(0.5)	4	(1.0)	–	–	58	(14.9)
<i>Turkmenistan</i>	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Ukraine</i>	289	277	(95.8)	5	(1.7)	6	(2.1)	1	(0.3)	–	–	0	(0.0)
United Kingdom <sup>e</sup>	156	129	(82.7)	3	(1.9)	14	(9.0)	0	(0.0)	–	–	10	(6.4)
<i>Uzbekistan</i>	–	–	–	–	–	–	–	–	–	–	–	–	–
<b>Subtotal non-EU/EEA</b>	<b>3079</b>	<b>2783</b>	<b>(90.4)</b>	<b>36</b>	<b>(1.2)</b>	<b>53</b>	<b>(1.7)</b>	<b>26</b>	<b>(0.8)</b>	<b>0</b>	<b>(0.0)</b>	<b>181</b>	<b>(5.9)</b>
<b>Total European Region</b>	<b>3919</b>	<b>3486</b>	<b>(89.0)</b>	<b>46</b>	<b>(1.2)</b>	<b>53</b>	<b>(1.4)</b>	<b>35</b>	<b>(0.9)</b>	<b>14</b>	<b>(0.4)</b>	<b>285</b>	<b>(7.3)</b>
<b>Subtotal 18 HPCs</b>	<b>3159</b>	<b>2881</b>	<b>(91.2)</b>	<b>39</b>	<b>(1.2)</b>	<b>39</b>	<b>(1.2)</b>	<b>30</b>	<b>(0.9)</b>	<b>1</b>	<b>(0.0)</b>	<b>169</b>	<b>(5.3)</b>

Note: 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 and areas: 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>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 19. Treatment outcome of new and relapse<sup>a</sup> TB cases of foreign origin notified in 2020, European Region, 2021**

Country/area	New and relapse TB cases of foreign origin notified in 2020 <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 <sup>e</sup>	208	146	(70.2)	10	(4.8)	0	(0.0)	3	(1.4)	18	(8.7)	31	(14.9)
Belgium <sup>f</sup>	431	296	(68.7)	20	(4.6)	0	(0.0)	28	(6.5)	12	(2.8)	75	(17.4)
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-
Croatia	2	1	(50.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Cyprus	29	13	(44.8)	0	(0.0)	0	(0.0)	4	(13.8)	2	(6.9)	10	(34.5)
Czechia	113	73	(64.6)	9	(8.0)	1	(0.9)	21	(18.6)	2	(1.8)	7	(6.2)
Denmark <sup>g</sup>	148	45	(30.4)	1	(0.7)	1	(0.7)	2	(1.4)	1	(0.7)	98	(66.2)
Estonia	30	17	(56.7)	9	(30.0)	0	(0.0)	1	(3.3)	0	(0.0)	3	(10.0)
Finland	66	19	(28.8)	0	(0.0)	1	(1.5)	1	(1.5)	0	(0.0)	45	(68.2)
France	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	2707	2098	(77.5)	132	(4.9)	0	(0.0)	42	(1.6)	32	(1.2)	403	(14.9)
Greece <sup>e</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary <sup>e</sup>	16	7	(43.8)	0	(0.0)	1	(6.3)	3	(18.8)	2	(12.5)	3	(18.8)
Iceland	11	2	(18.2)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	9	(81.8)
Ireland <sup>h</sup>	116	10	(8.6)	1	(0.9)	0	(0.0)	4	(3.4)	0	(0.0)	101	(87.1)
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	-	-	-	-	-	-	-	-	-	-	-	-	-
Liechtenstein	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Lithuania	8	7	(87.5)	1	(12.5)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Luxembourg	27	8	(29.6)	1	(3.7)	0	(0.0)	0	(0.0)	0	(0.0)	18	(66.7)
Malta	134	133	(99.3)	0	(0.0)	0	(0.0)	1	(0.7)	0	(0.0)	0	(0.0)
Netherlands	439	369	(84.1)	11	(2.5)	0	(0.0)	18	(4.1)	11	(2.5)	30	(6.8)
Norway <sup>i</sup>	114	102	(89.5)	1	(0.9)	1	(0.9)	0	(0.0)	0	(0.0)	10	(8.8)
Poland <sup>e</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	398	273	(68.6)	7	(1.8)	0	(0.0)	29	(7.3)	61	(15.3)	28	(7.0)
Romania	31	25	(80.6)	2	(6.5)	0	(0.0)	2	(6.5)	2	(6.5)	0	(0.0)
Slovakia	6	6	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Slovenia	23	16	(69.6)	4	(17.4)	0	(0.0)	0	(0.0)	2	(8.7)	1	(4.3)
Spain	1201	626	(52.1)	26	(2.2)	0	(0.0)	30	(2.5)	14	(1.2)	505	(42.0)
Sweden	266	191	(71.8)	5	(1.9)	0	(0.0)	0	(0.0)	0	(0.0)	70	(26.3)
<b>Subtotal EU/EEA</b>	<b>6526</b>	<b>4485</b>	<b>(68.7)</b>	<b>241</b>	<b>(3.7)</b>	<b>5</b>	<b>(0.1)</b>	<b>189</b>	<b>(2.9)</b>	<b>159</b>	<b>(2.4)</b>	<b>1447</b>	<b>(22.2)</b>
<b>Non-EU/EEA</b>													
Albania	0	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Armenia	3	1	(33.3)	0	(0.0)	0	(0.0)	2	(66.7)	-	-	0	(0.0)
Azerbaijan	-	-	-	-	-	-	-	-	-	-	-	-	-
Belarus	-	-	-	-	-	-	-	-	-	-	-	-	-
Bosnia and Herzegovina	5	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	5	(100.0)
Georgia	-	-	-	-	-	-	-	-	-	-	-	-	-
Israel	133	104	(78.2)	13	(9.8)	6	(4.5)	7	(5.3)	-	-	3	(2.3)
Kazakhstan	102	80	(78.4)	15	(14.7)	3	(2.9)	4	(3.9)	-	-	0	(0.0)
Kyrgyzstan	-	-	-	-	-	-	-	-	-	-	-	-	-
Monaco	0	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	3	0	(0.0)	1	(33.3)	0	(0.0)	2	(66.7)	-	-	0	(0.0)
North Macedonia	5	5	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Republic of Moldova	6	5	(83.3)	1	(16.7)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Russian Federation	-	-	-	-	-	-	-	-	-	-	-	-	-
San Marino	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia excluding Kosovo <sup>j</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Kosovo <sup>j</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	279	189	(67.7)	1	(0.4)	0	(0.0)	17	(6.1)	-	-	72	(25.8)
Tajikistan	0	-	-	-	-	-	-	-	-	-	-	-	-
Türkiye	1407	1027	(73.0)	87	(6.2)	5	(0.4)	68	(4.8)	-	-	220	(15.6)
Turkmenistan	-	-	-	-	-	-	-	-	-	-	-	-	-
Ukraine	27	19	(70.4)	1	(3.7)	1	(3.7)	4	(14.8)	-	-	2	(7.4)
United Kingdom <sup>f</sup>	3122	2490	(79.8)	167	(5.3)	211	(6.8)	104	(3.3)	-	-	150	(4.8)
Uzbekistan	0	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal non-EU/EEA</b>	<b>5094</b>	<b>3922</b>	<b>(77.0)</b>	<b>286</b>	<b>(5.6)</b>	<b>226</b>	<b>(4.4)</b>	<b>208</b>	<b>(4.1)</b>	<b>0</b>	<b>(0.0)</b>	<b>452</b>	<b>(8.9)</b>
<b>Total European Region</b>	<b>11620</b>	<b>8407</b>	<b>(72.3)</b>	<b>527</b>	<b>(4.5)</b>	<b>231</b>	<b>(2.0)</b>	<b>397</b>	<b>(3.4)</b>	<b>159</b>	<b>(1.4)</b>	<b>1899</b>	<b>(16.3)</b>
<b>Subtotal 18 HPCs</b>	<b>1614</b>	<b>1181</b>	<b>(73.2)</b>	<b>116</b>	<b>(7.2)</b>	<b>9</b>	<b>(0.6)</b>	<b>81</b>	<b>(5.0)</b>	<b>2</b>	<b>(0.1)</b>	<b>225</b>	<b>(13.9)</b>

Note: 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 and areas: 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> Origin is based on nationality.

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

<sup>j</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 20. Treatment outcome of HIV-positive new and relapse<sup>a</sup> TB cases notified in 2020, European Region, 2021**

Country/area	HIV-positive TB cases notified in 2020 <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>	29	19	(65.5)	1	(3.4)	0	(0.0)	4	(13.8)	1	(3.4)	4	(13.8)
Bulgaria	–	–	–	–	–	–	–	–	–	–	–	–	–
Croatia	0	0	–	0	–	0	–	0	–	0	–	0	–
Cyprus	2	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(100.0)
Czechia	6	3	(50.0)	1	(16.7)	0	(0.0)	2	(33.3)	0	(0.0)	0	(0.0)
Denmark <sup>e</sup>	4	2	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(50.0)
Estonia	9	7	(77.8)	1	(11.1)	0	(0.0)	1	(11.1)	0	(0.0)	0	(0.0)
Finland	–	–	–	–	–	–	–	–	–	–	–	–	–
France	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	–	–	–	–	–	–	–	–	–	–	–	–	–
Greece	–	–	–	–	–	–	–	–	–	–	–	–	–
Hungary	2	0	(0.0)	0	(0.0)	0	(0.0)	2	(100.0)	0	(0.0)	0	(0.0)
Iceland	–	–	–	–	–	–	–	–	–	–	–	–	–
Ireland <sup>d</sup>	5	1	(20.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	4	(80.0)
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–
Latvia	–	–	–	–	–	–	–	–	–	–	–	–	–
Liechtenstein	–	–	–	–	–	–	–	–	–	–	–	–	–
Lithuania	10	7	(70.0)	2	(20.0)	0	(0.0)	1	(10.0)	0	(0.0)	0	(0.0)
Luxembourg	0	0	–	0	–	0	–	0	–	0	–	0	–
Malta	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Netherlands	14	13	(92.9)	0	(0.0)	0	(0.0)	0	(0.0)	1	(7.1)	0	(0.0)
Norway <sup>e</sup>	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Poland	–	–	–	–	–	–	–	–	–	–	–	–	–
Portugal	111	59	(53.2)	6	(5.4)	0	(0.0)	9	(8.1)	27	(24.3)	10	(9.0)
Romania	128	75	(58.6)	36	(28.1)	2	(1.6)	11	(8.6)	4	(3.1)	0	(0.0)
Slovakia	2	1	(50.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Slovenia	0	0	–	0	–	0	–	0	–	0	–	0	–
Spain	100	37	(37.0)	13	(13.0)	0	(0.0)	4	(4.0)	4	(4.0)	42	(42.0)
Sweden	–	–	–	–	–	–	–	–	–	–	–	–	–
<b>Subtotal EU/EEA</b>	<b>426</b>	<b>228</b>	<b>(53.5)</b>	<b>61</b>	<b>(14.3)</b>	<b>2</b>	<b>(0.5)</b>	<b>34</b>	<b>(8.0)</b>	<b>37</b>	<b>(8.7)</b>	<b>64</b>	<b>(15.0)</b>
<b>Non-EU/EEA</b>													
Albania	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
Andorra	0	–	–	–	–	–	–	–	–	–	–	–	–
Armenia	30	22	(73.3)	6	(20.0)	0	(0.0)	1	(3.3)	–	–	1	(3.3)
Azerbaijan	–	–	–	–	–	–	–	–	–	–	–	–	–
Belarus	61	51	(83.6)	6	(9.8)	0	(0.0)	3	(4.9)	–	–	1	(1.6)
Bosnia and Herzegovina	–	–	–	–	–	–	–	–	–	–	–	–	–
Georgia	23	19	(82.6)	1	(4.3)	0	(0.0)	3	(13.0)	–	–	0	(0.0)
Israel	14	12	(85.7)	0	(0.0)	2	(14.3)	0	(0.0)	–	–	0	(0.0)
Kazakhstan	242	167	(69.0)	55	(22.7)	10	(4.1)	7	(2.9)	–	–	3	(1.2)
Kyrgyzstan	99	52	(52.5)	29	(29.3)	5	(5.1)	13	(13.1)	–	–	0	(0.0)
Monaco	0	–	–	–	–	–	–	–	–	–	–	–	–
Montenegro	0	–	–	–	–	–	–	–	–	–	–	–	–
North Macedonia	1	0	(0.0)	1	(100.0)	0	(0.0)	0	(0.0)	–	–	0	(0.0)
Republic of Moldova	162	99	(61.1)	50	(30.9)	7	(4.3)	4	(2.5)	–	–	2	(1.2)
Russian Federation	11120	4538	(40.8)	2261	(20.3)	2557	(23.0)	909	(8.2)	–	–	855	(7.7)
San Marino	–	–	–	–	–	–	–	–	–	–	–	–	–
Serbia	0	–	–	–	–	–	–	–	–	–	–	–	–
Serbia excluding Kosovo <sup>f</sup>	–	–	–	–	–	–	–	–	–	–	–	–	–
Kosovo <sup>f</sup>	0	–	–	–	–	–	–	–	–	–	–	–	–
Switzerland	–	–	–	–	–	–	–	–	–	–	–	–	–
Tajikistan	93	72	(77.4)	17	(18.3)	2	(2.2)	2	(2.2)	–	–	0	(0.0)
Türkiye	83	53	(63.9)	15	(18.1)	0	(0.0)	1	(1.2)	–	–	14	(16.9)
Turkmenistan	–	–	–	–	–	–	–	–	–	–	–	–	–
Ukraine	2720	1831	(67.3)	538	(19.8)	132	(4.9)	217	(8.0)	–	–	2	(0.1)
United Kingdom <sup>e</sup>	–	–	–	–	–	–	–	–	–	–	–	–	–
Uzbekistan	–	–	–	–	–	–	–	–	–	–	–	–	–
<b>Subtotal non-EU/EEA</b>	<b>14 650</b>	<b>6 918</b>	<b>(47.2)</b>	<b>2 979</b>	<b>(20.3)</b>	<b>2 715</b>	<b>(18.5)</b>	<b>1 160</b>	<b>(7.9)</b>	<b>0</b>	<b>(0.0)</b>	<b>878</b>	<b>(6.0)</b>
<b>Total European Region</b>	<b>15 076</b>	<b>7 146</b>	<b>(47.4)</b>	<b>3 040</b>	<b>(20.2)</b>	<b>2 717</b>	<b>(18.0)</b>	<b>1 194</b>	<b>(7.9)</b>	<b>37</b>	<b>(0.2)</b>	<b>942</b>	<b>(6.2)</b>
<b>Subtotal 18 HPCs</b>	<b>14 780</b>	<b>6 993</b>	<b>(47.3)</b>	<b>3 017</b>	<b>(20.4)</b>	<b>2 715</b>	<b>(18.4)</b>	<b>1 173</b>	<b>(7.9)</b>	<b>4</b>	<b>(0.0)</b>	<b>878</b>	<b>(5.9)</b>

Note: 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> Rifampicin-resistant (RR) 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> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 21. Treatment outcome among new and relapse<sup>a</sup> TB cases in prisons notified in 2020, European Region, 2021**

Country/area	New and relapse TB cases in prisons notified in 2020 <sup>b</sup>	Success		Died		Failed		Lost to follow-up <sup>c</sup>		Not evaluated <sup>d</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>											
Austria	-	-	-	-	-	-	-	-	-	-	-
Belgium	11	8	(72.7)	0	(0.0)	0	(0.0)	2	(18.2)	1	(9.1)
<i>Bulgaria</i>	6	6	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Croatia	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-
Czechia	3	2	(66.7)	1	(33.3)	0	(0.0)	0	(0.0)	0	(0.0)
Denmark	-	-	-	-	-	-	-	-	-	-	-
Estonia	3	3	(100.0)	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-	-	-
Ireland	0	0	-	0	-	0	-	0	-	0	-
Italy	-	-	-	-	-	-	-	-	-	-	-
Latvia	-	-	-	-	-	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-
Lithuania	22	13	(59.1)	1	(4.5)	0	(0.0)	5	(22.7)	3	(13.6)
Luxembourg	0	-	-	0	-	0	-	0	-	0	-
Malta	0	-	-	-	-	-	-	-	-	-	-
Netherlands	5	3	(60.0)	0	(0.0)	0	(0.0)	2	(40.0)	0	(0.0)
Norway	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-
Portugal	22	15	(68.2)	3	(13.6)	0	(0.0)	1	(4.5)	3	(13.6)
Romania	73	64	(87.7)	2	(2.7)	0	(0.0)	4	(5.5)	3	(4.1)
Slovakia	2	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Slovenia	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal EU/EEA</b>	<b>147</b>	<b>116</b>	<b>(78.9)</b>	<b>7</b>	<b>(4.8)</b>	<b>0</b>	<b>(0.0)</b>	<b>14</b>	<b>(9.5)</b>	<b>10</b>	<b>(6.8)</b>
<b>Non-EU/EEA</b>											
Albania	-	-	-	-	-	-	-	-	-	-	-
Andorra	0	-	-	-	-	-	-	-	-	-	-
Armenia	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Azerbaijan	86	83	(96.5)	1	(1.2)	0	(0.0)	2	(2.3)	0	(0.0)
Belarus	7	7	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Bosnia and Herzegovina	-	-	-	-	-	-	-	-	-	-	-
Georgia	25	21	(84.0)	0	(0.0)	0	(0.0)	4	(16.0)	0	(0.0)
Israel	-	-	-	-	-	-	-	-	-	-	-
Kazakhstan	62	52	(83.9)	1	(1.6)	3	(4.8)	0	(0.0)	6	(9.7)
Kyrgyzstan	53	39	(73.6)	1	(1.9)	0	(0.0)	3	(5.7)	10	(18.9)
Monaco	-	-	-	-	-	-	-	-	-	-	-
Montenegro	-	-	-	-	-	-	-	-	-	-	-
North Macedonia	3	3	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Republic of Moldova	33	24	(72.7)	3	(9.1)	3	(9.1)	0	(0.0)	3	(9.1)
Russian Federation	4 630	2 638	(57.0)	140	(3.0)	423	(9.1)	200	(4.3)	1 229	(26.5)
San Marino	-	-	-	-	-	-	-	-	-	-	-
Serbia	-	-	-	-	-	-	-	-	-	-	-
Serbia excluding Kosovo <sup>e</sup>	-	-	-	-	-	-	-	-	-	-	-
Kosovo <sup>f</sup>	-	-	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-	-	-
Tajikistan	68	52	(76.5)	1	(1.5)	1	(1.5)	0	(0.0)	14	(20.6)
Türkiye	118	97	(82.2)	4	(3.4)	1	(0.8)	7	(5.9)	9	(7.6)
Turkmenistan	-	-	-	-	-	-	-	-	-	-	-
Ukraine	339	269	(79.4)	12	(3.5)	26	(7.7)	32	(9.4)	0	(0.0)
United Kingdom	-	-	-	-	-	-	-	-	-	-	-
Uzbekistan	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal non-EU/EEA</b>	<b>5 425</b>	<b>3 286</b>	<b>(60.6)</b>	<b>163</b>	<b>(3.0)</b>	<b>457</b>	<b>(8.4)</b>	<b>248</b>	<b>(4.6)</b>	<b>1 271</b>	<b>(23.4)</b>
<b>Total European Region</b>	<b>5 572</b>	<b>3 402</b>	<b>(61.1)</b>	<b>170</b>	<b>(3.1)</b>	<b>457</b>	<b>(8.2)</b>	<b>262</b>	<b>(4.7)</b>	<b>1 281</b>	<b>(23.0)</b>
<b>Subtotal 18 HPCs</b>	<b>5 526</b>	<b>3 369</b>	<b>(61.0)</b>	<b>166</b>	<b>(3.0)</b>	<b>457</b>	<b>(8.3)</b>	<b>257</b>	<b>(4.7)</b>	<b>1 277</b>	<b>(23.1)</b>

Note: 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> Rifampicin-resistant (RR) 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> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 22. Treatment outcome after 24 months of RR/MDR-TB cases started on second-line treatment in 2019, European Region, 2021**

Country/area	RR/MDR-TB <sup>a</sup> cases started on second-line treatment <sup>b</sup> in 2019	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	6	6	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Belgium	16	14	(87.5)	0	(0.0)	0	(0.0)	1	(6.3)	0	(0.0)	1	(6.3)
Bulgaria	13	6	(46.2)	3	(23.1)	1	(7.7)	2	(15.4)	0	(0.0)	1	(7.7)
Croatia	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-
Czechia	6	4	(66.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(33.3)
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	27	21	(77.8)	2	(7.4)	1	(3.7)	2	(7.4)	1	(3.7)	0	(0.0)
Finland	3	2	(66.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(33.3)
France	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	101	56	(55.4)	4	(4.0)	0	(0.0)	3	(3.0)	8	(7.9)	30	(29.7)
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	13	3	(23.1)	1	(7.7)	1	(7.7)	2	(15.4)	3	(23.1)	3	(23.1)
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	6	2	(33.3)	1	(16.7)	0	(0.0)	0	(0.0)	0	(0.0)	3	(50.0)
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	-	-	-	-	-	-	-	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	173	78	(45.1)	29	(16.8)	5	(2.9)	10	(5.8)	50	(28.9)	1	(0.6)
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	9	8	(88.9)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(11.1)
Norway	2	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(50.0)
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	14	6	(42.9)	0	(0.0)	0	(0.0)	2	(14.3)	2	(14.3)	4	(28.6)
Romania	377	184	(48.8)	70	(18.6)	63	(16.7)	51	(13.5)	9	(2.4)	0	(0.0)
Slovakia	5	4	(80.0)	1	(20.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Slovenia	0	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	10	9	(90.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(10.0)
<b>Subtotal EU/EEA</b>	<b>781</b>	<b>404</b>	<b>(51.7)</b>	<b>111</b>	<b>(14.2)</b>	<b>71</b>	<b>(9.1)</b>	<b>73</b>	<b>(9.3)</b>	<b>73</b>	<b>(9.3)</b>	<b>49</b>	<b>(6.3)</b>
<b>Non-EU/EEA</b>													
Albania	2	1	(50.0)	1	(50.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
Andorra	0	-	-	-	-	-	-	-	-	-	-	-	-
Armenia	65	35	(53.8)	12	(18.5)	7	(10.8)	10	(15.4)	-	-	1	(1.5)
Azerbaijan	815	486	(59.6)	87	(10.7)	99	(12.1)	143	(17.5)	-	-	0	(0.0)
Belarus	772	640	(82.9)	64	(8.3)	13	(1.7)	47	(6.1)	-	-	8	(1.0)
Bosnia and Herzegovina	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	218	171	(78.4)	13	(6.0)	4	(1.8)	28	(12.8)	-	-	2	(0.9)
Israel	9	5	(55.6)	1	(11.1)	1	(11.1)	2	(22.2)	-	-	0	(0.0)
Kazakhstan	5892	4486	(76.1)	600	(10.2)	196	(3.3)	289	(4.9)	-	-	321	(5.4)
Kyrgyzstan	1173	841	(71.7)	79	(6.7)	42	(3.6)	208	(17.7)	-	-	3	(0.3)
Monaco	0	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	0	-	-	-	-	-	-	-	-	-	-	-	-
North Macedonia	2	0	(0.0)	0	(0.0)	0	(0.0)	2	(100.0)	-	-	0	(0.0)
Republic of Moldova	559	387	(69.2)	76	(13.6)	35	(6.3)	13	(2.3)	-	-	48	(8.6)
Russian Federation	32574	16447	(50.5)	5070	(15.6)	5187	(15.9)	3572	(11.0)	-	-	2298	(7.1)
San Marino	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia excluding Kosovo <sup>e</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Kosovo <sup>f</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	12	11	(91.7)	0	(0.0)	0	(0.0)	1	(8.3)	-	-	0	(0.0)
Tajikistan	588	454	(77.2)	66	(11.2)	14	(2.4)	54	(9.2)	-	-	0	(0.0)
Türkiye	155	7	(4.5)	16	(10.3)	0	(0.0)	11	(7.1)	-	-	121	(78.1)
Turkmenistan	649	358	(55.2)	106	(16.3)	106	(16.3)	71	(10.9)	-	-	8	(1.2)
Ukraine	7259	4460	(61.4)	969	(13.3)	907	(12.5)	918	(12.6)	-	-	5	(0.1)
United Kingdom	47	31	(66.0)	4	(8.5)	3	(6.4)	5	(10.6)	-	-	4	(8.5)
Uzbekistan	2040	1422	(69.7)	223	(10.9)	113	(5.5)	162	(7.9)	-	-	120	(5.9)
<b>Subtotal non-EU/EEA</b>	<b>52831</b>	<b>30242</b>	<b>(57.2)</b>	<b>7387</b>	<b>(14.0)</b>	<b>6727</b>	<b>(12.7)</b>	<b>5536</b>	<b>(10.5)</b>	<b>0</b>	<b>(0.0)</b>	<b>2939</b>	<b>(5.6)</b>
<b>Total European Region</b>	<b>53612</b>	<b>30646</b>	<b>(57.2)</b>	<b>7498</b>	<b>(14.0)</b>	<b>6798</b>	<b>(12.7)</b>	<b>5609</b>	<b>(10.5)</b>	<b>73</b>	<b>(0.1)</b>	<b>2988</b>	<b>(5.6)</b>
<b>Subtotal 18 HPCs</b>	<b>53349</b>	<b>30483</b>	<b>(57.1)</b>	<b>7485</b>	<b>(14.0)</b>	<b>6793</b>	<b>(12.7)</b>	<b>5591</b>	<b>(10.5)</b>	<b>60</b>	<b>(0.1)</b>	<b>2937</b>	<b>(5.5)</b>

Note: 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.

RR/MDR-TB: rifampicin-resistant or multidrug-resistant tuberculosis.

<sup>a</sup> Includes cases that are RR/MDR but that also meet the pre-XDR or XDR case definitions (pre-XDR and XDR cases have not been excluded).

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

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

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

<sup>e</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 23. Treatment outcome after 24 months of pre-XDR-TB cases started on second-line treatment in 2019, European Region, 2021**

Country/area	Pre-XDR-TB <sup>a</sup> cases started on second-line treatment in 2019 <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	2	2	(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	0	(0.0)	2	(50.0)	0	(0.0)	1	(25.0)	0	(0.0)	1	(25.0)
Croatia	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	0	0	-	0	-	0	-	0	-	0	-	0	-
Czechia	0	0	-	0	-	0	-	0	-	0	-	0	-
Denmark	0	0	-	0	-	0	-	0	-	0	-	0	-
<i>Estonia</i>	5	3	(60.0)	0	(0.0)	0	(0.0)	1	(20.0)	1	(20.0)	0	(0.0)
Finland	0	0	-	0	-	0	-	0	-	0	-	0	-
France	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	14	5	(35.7)	0	(0.0)	0	(0.0)	1	(7.1)	3	(21.4)	5	(35.7)
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	6	0	(0.0)	1	(16.7)	1	(16.7)	1	(16.7)	1	(16.7)	2	(33.3)
Iceland	0	0	-	0	-	0	-	0	-	0	-	0	-
Ireland	0	0	-	0	-	0	-	0	-	0	-	0	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Latvia</i>	-	-	-	-	-	-	-	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Lithuania</i>	76	4	(5.3)	14	(18.4)	4	(5.3)	4	(5.3)	50	(65.8)	0	(0.0)
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	0	0	-	0	-	0	-	0	-	0	-	0	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	0	0	-	0	-	0	-	0	-	0	-	0	-
<i>Romania</i>	50	11	(22.0)	13	(26.0)	17	(34.0)	6	(12.0)	3	(6.0)	0	(0.0)
Slovakia	0	0	-	0	-	0	-	0	-	0	-	0	-
Slovenia	0	0	-	0	-	0	-	0	-	0	-	0	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	0	0	-	0	-	0	-	0	-	0	-	0	-
<b>Subtotal EU/EEA</b>	<b>159</b>	<b>27</b>	<b>(17.0)</b>	<b>30</b>	<b>(18.9)</b>	<b>22</b>	<b>(13.8)</b>	<b>14</b>	<b>(8.8)</b>	<b>58</b>	<b>(36.5)</b>	<b>8</b>	<b>(5.0)</b>
<b>Non-EU/EEA</b>													
Albania	0	-	-	-	-	-	-	-	-	-	-	-	-
Andorra	0	-	-	-	-	-	-	-	-	-	-	-	-
Armenia	12	6	(50.0)	4	(33.3)	1	(8.3)	0	(0.0)	-	-	1	(8.3)
Azerbaijan	186	113	(60.8)	13	(7.0)	32	(17.2)	28	(15.1)	-	-	0	(0.0)
Belarus	287	206	(71.8)	24	(8.4)	19	(6.6)	36	(12.5)	-	-	2	(0.7)
Bosnia and Herzegovina	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	53	30	(56.6)	4	(7.5)	5	(9.4)	10	(18.9)	-	-	4	(7.5)
Israel	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	-	-	0	(0.0)
<i>Kazakhstan</i>	655	476	(72.7)	82	(12.5)	55	(8.4)	22	(3.4)	-	-	20	(3.1)
<i>Kyrgyzstan</i>	97	60	(61.9)	8	(8.2)	10	(10.3)	19	(19.6)	-	-	0	(0.0)
Monaco	0	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	0	-	-	-	-	-	-	-	-	-	-	-	-
North Macedonia	0	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Moldova	37	21	(56.8)	4	(10.8)	7	(18.9)	3	(8.1)	-	-	2	(5.4)
<i>Russian Federation</i>	39	11	(28.2)	5	(12.8)	15	(38.5)	5	(12.8)	-	-	3	(7.7)
San Marino	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia excluding Kosovo <sup>1</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Kosovo <sup>1</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Tajikistan</i>	68	53	(77.9)	9	(13.2)	4	(5.9)	2	(2.9)	-	-	0	(0.0)
<i>Türkiye</i>	8	0	(0.0)	0	(0.0)	0	(0.0)	1	(12.5)	-	-	7	(87.5)
<i>Turkmenistan</i>	113	59	(52.2)	30	(26.5)	15	(13.3)	8	(7.1)	-	-	1	(0.9)
Ukraine	0	-	-	-	-	-	-	-	-	-	-	-	-
United Kingdom	8	6	(75.0)	1	(12.5)	1	(12.5)	0	(0.0)	-	-	0	(0.0)
<i>Uzbekistan</i>	627	411	(65.6)	108	(17.2)	32	(5.1)	34	(5.4)	-	-	42	(6.7)
<b>Subtotal non-EU/EEA</b>	<b>2191</b>	<b>1453</b>	<b>(66.3)</b>	<b>292</b>	<b>(13.3)</b>	<b>196</b>	<b>(8.9)</b>	<b>168</b>	<b>(7.7)</b>	<b>0</b>	<b>(0.0)</b>	<b>82</b>	<b>(3.7)</b>
<b>Total European Region</b>	<b>2350</b>	<b>1480</b>	<b>(63.0)</b>	<b>322</b>	<b>(13.7)</b>	<b>218</b>	<b>(9.3)</b>	<b>182</b>	<b>(7.7)</b>	<b>58</b>	<b>(2.5)</b>	<b>90</b>	<b>(3.8)</b>
<b>Subtotal 18 HPCs</b>	<b>2317</b>	<b>1464</b>	<b>(63.2)</b>	<b>320</b>	<b>(13.8)</b>	<b>216</b>	<b>(9.3)</b>	<b>180</b>	<b>(7.8)</b>	<b>54</b>	<b>(2.3)</b>	<b>83</b>	<b>(3.6)</b>

Note: 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.

Pre-XDR-TB: pre-extensively drug-resistant tuberculosis.

<sup>a</sup> Pre-XDR-TB defined as resistance to rifampicin (RR/MDR-TB) as well as resistance to any fluoroquinolone. Includes cases that are pre-XDR but that also meet the XDR case definitions (XDR cases have not been excluded).

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

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

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

<sup>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

**Table 24. Treatment outcome after 36 months of XDR-TB notified in 2018, EU/EEA, 2021**

Country	XDR-TB <sup>a</sup> cases reported in 2018	Success		Died		Failed		Lost to follow-up <sup>b</sup>		Not evaluated <sup>c</sup>	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
<b>EU/EEA</b>											
<i>Austria</i>	4	3	(75.0)	1	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)
<i>Belgium</i>	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
<i>Bulgaria</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Croatia</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Cyprus</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Czechia</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Denmark</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Estonia</i>	5	4	(80.0)	0	(0.0)	1	(20.0)	0	(0.0)	0	(0.0)
<i>Finland</i>	0	0	–	0	–	0	–	0	–	0	–
<i>France</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Germany</i>	14	8	(57.1)	2	(14.3)	1	(7.1)	0	(0.0)	3	(21.4)
<i>Greece</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Hungary</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Iceland</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Ireland</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Italy</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Liechtenstein</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Lithuania</i>	3	2	(66.7)	0	(0.0)	1	(33.3)	0	(0.0)	0	(0.0)
<i>Luxembourg</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Malta</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Netherlands</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Norway</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Poland</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Portugal</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Romania</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Slovakia</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Slovenia</i>	0	0	–	0	–	0	–	0	–	0	–
<i>Spain</i>	–	–	–	–	–	–	–	–	–	–	–
<i>Sweden</i>	0	0	–	0	–	0	–	0	–	0	–
<b>Total EU/EEA</b>	<b>27</b>	<b>18</b>	<b>(66.7)</b>	<b>3</b>	<b>(11.1)</b>	<b>3</b>	<b>(11.1)</b>	<b>0</b>	<b>(0.0)</b>	<b>3</b>	<b>(11.1)</b>

Note: WHO European Region 18 TB high-priority countries 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.

TESSy: The European Surveillance System.

XDR-TB: extensively drug-resistant tuberculosis.

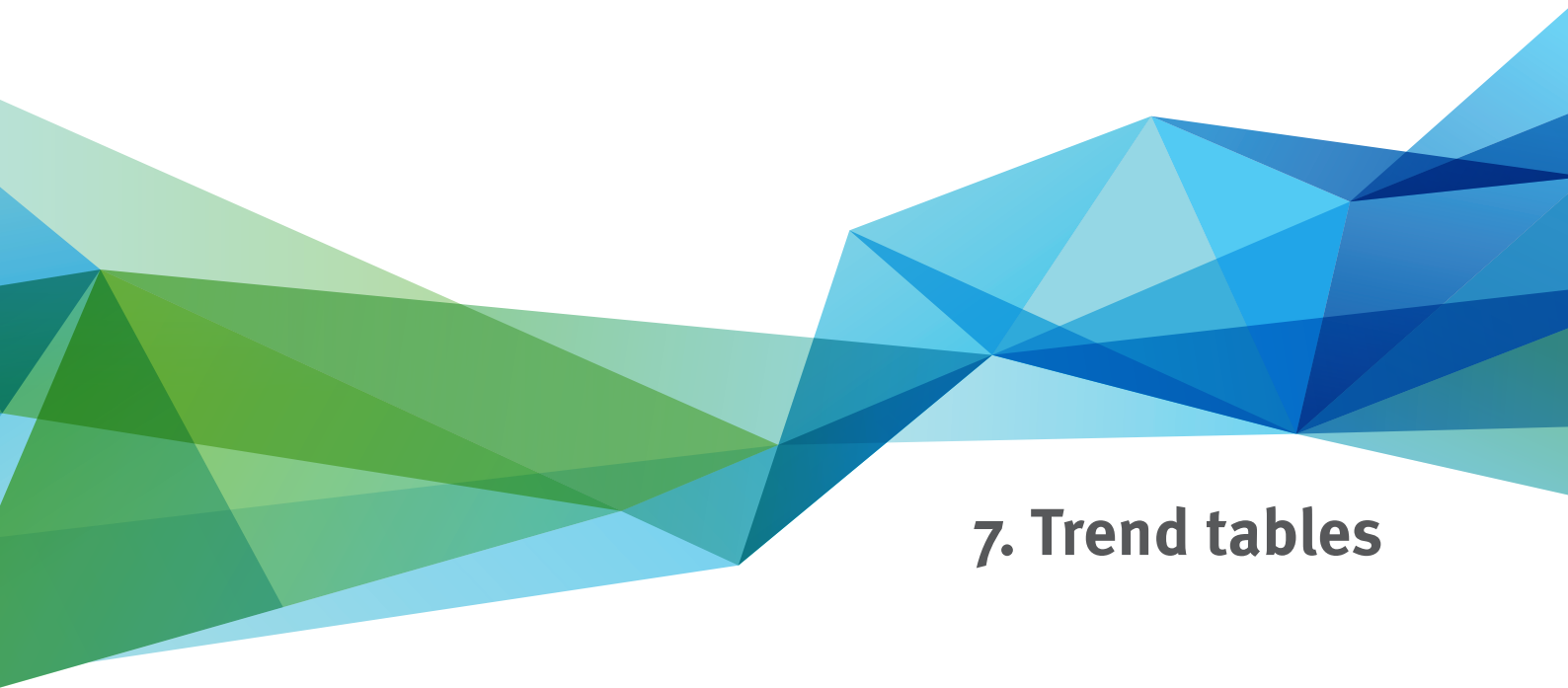
<sup>a</sup> XDR-TB defined as resistance to rifampicin and to at least one fluoroquinolone (pre-XDR-TB) as well as resistance to at least one additional Group A drug. Group A drugs include: levofloxacin, moxifloxacin, bedaquiline and linezolid. For EU/EEA countries, linezolid resistance is not yet reported to TESSy, therefore XDR-TB is assessed on the basis of resistance to levofloxacin, moxifloxacin and/or bedaquiline (in addition to meeting pre-XDR-TB criteria).

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

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







## 7. Trend tables

Table I. Estimated tuberculosis (TB) mortality per 100 000 population, European Region, 2012–2021<sup>a</sup>

Country	2012		2013		2014		2015		2016		2017	
	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	43	(0.5)	70	(0.8)	72	(0.8)	65	(0.8)	39	(0.4)	36	(0.4)
Belgium	61	(0.6)	57	(0.5)	42	(0.4)	61	(0.5)	32	(0.3)	33	(0.3)
<i>Bulgaria</i>	170	(2.3)	160	(2.2)	130	(1.8)	120	(1.6)	120	(1.7)	98	(1.4)
Croatia	60	(1.4)	54	(1.3)	40	(0.9)	46	(1.1)	58	(1.4)	61	(1.5)
Cyprus	5	(0.4)	1	(0.1)	5	(0.4)	2	(0.2)	3	(0.3)	3	(0.2)
Czechia	31	(0.3)	68	(0.6)	40	(0.4)	57	(0.5)	43	(0.4)	38	(0.4)
Denmark	23	(0.4)	17	(0.3)	13	(0.2)	17	(0.3)	23	(0.4)	14	(0.2)
<i>Estonia</i>	36	(2.7)	26	(2.0)	29	(2.2)	22	(1.7)	28	(2.1)	23	(1.7)
Finland	50	(0.9)	32	(0.6)	41	(0.8)	33	(0.6)	26	(0.5)	35	(0.6)
France	560	(0.9)	560	(0.9)	480	(0.8)	470	(0.7)	440	(0.7)	430	(0.7)
Germany	360	(0.4)	380	(0.5)	320	(0.4)	320	(0.4)	300	(0.4)	300	(0.4)
Greece	110	(1.0)	78	(0.7)	55	(0.5)	45	(0.4)	48	(0.4)	58	(0.5)
Hungary	130	(1.3)	95	(1.0)	84	(0.9)	100	(1.0)	64	(0.7)	63	(0.6)
Iceland	3	(0.9)	2	(0.6)	2	(0.6)	2	(0.6)	2	(0.6)	2	(0.6)
Ireland	26	(0.6)	22	(0.5)	24	(0.5)	17	(0.4)	17	(0.4)	18	(0.4)
Italy	340	(0.6)	270	(0.4)	290	(0.5)	340	(0.6)	310	(0.5)	310	(0.5)
<i>Latvia</i>	64	(3.1)	110	(5.4)	69	(3.4)	99	(5.0)	80	(4.1)	75	(3.8)
Liechtenstein	–	–	–	–	–	–	–	–	–	–	–	–
<i>Lithuania</i>	260	(8.5)	210	(6.9)	230	(7.7)	190	(6.4)	180	(6.1)	160	(5.5)
Luxembourg	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)	3	(0.5)
Malta	1	(0.2)	3	(0.7)	1	(0.2)	2	(0.4)	3	(0.6)	1	(0.2)
Netherlands	35	(0.2)	40	(0.2)	35	(0.2)	37	(0.2)	30	(0.2)	24	(0.1)
Norway	22	(0.4)	21	(0.4)	13	(0.3)	12	(0.2)	18	(0.3)	18	(0.3)
Poland	680	(1.8)	580	(1.5)	580	(1.5)	580	(1.5)	600	(1.6)	560	(1.5)
Portugal	230	(2.2)	230	(2.2)	220	(2.1)	220	(2.1)	210	(2.0)	200	(1.9)
<i>Romania</i>	1300	(6.5)	1200	(6.0)	1100	(5.5)	1100	(5.5)	990	(5.0)	950	(4.8)
Slovakia	18	(0.3)	20	(0.4)	35	(0.6)	35	(0.6)	25	(0.5)	27	(0.5)
Slovenia	11	(0.5)	9	(0.4)	22	(1.1)	11	(0.5)	7	(0.3)	7	(0.3)
Spain	330	(0.7)	300	(0.6)	290	(0.6)	250	(0.5)	260	(0.6)	250	(0.5)
Sweden	40	(0.4)	44	(0.5)	30	(0.3)	25	(0.3)	26	(0.3)	23	(0.2)
<b>Subtotal EU/EEA</b>	<b>5 000</b>	<b>(1.1)</b>	<b>4 700</b>	<b>(1.1)</b>	<b>4 300</b>	<b>(1.0)</b>	<b>4 300</b>	<b>(1.0)</b>	<b>4 000</b>	<b>(0.9)</b>	<b>3 800</b>	<b>(0.8)</b>
<b>Non-EU/EEA</b>												
Albania	8	(0.3)	8	(0.3)	8	(0.3)	8	(0.3)	8	(0.3)	8	(0.3)
Andorra	1	(1.4)	0	(0.0)	1	(1.4)	0	(0.0)	0	(0.0)	0	(0.0)
Armenia	140	(4.8)	110	(3.8)	81	(2.8)	68	(2.4)	56	(2.0)	45	(1.6)
<i>Azerbaijan</i>	430	(4.5)	450	(4.7)	440	(4.5)	580	(5.9)	590	(5.9)	600	(6.0)
<i>Belarus</i>	770	(7.9)	650	(6.7)	510	(5.3)	460	(4.7)	400	(4.1)	330	(3.4)
Bosnia and Herzegovina	170	(4.6)	150	(4.1)	140	(3.9)	130	(3.7)	120	(3.4)	110	(3.2)
<i>Georgia</i>	220	(5.8)	190	(5.0)	170	(4.5)	150	(4.0)	170	(4.5)	160	(4.2)
Israel	22	(0.3)	15	(0.2)	15	(0.2)	15	(0.2)	15	(0.2)	13	(0.2)
<i>Kazakhstan</i>	1 600	(9.4)	1 100	(6.3)	930	(5.3)	720	(4.0)	610	(3.4)	580	(3.2)
<i>Kyrgyzstan</i>	630	(11.2)	630	(11.0)	520	(8.9)	460	(7.8)	420	(7.0)	380	(6.2)
Monaco	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Montenegro	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)
North Macedonia	28	(1.3)	25	(1.2)	25	(1.2)	21	(1.0)	25	(1.2)	13	(0.6)
<i>Republic of Moldova</i>	440	(12.5)	310	(9.1)	300	(9.0)	250	(7.6)	220	(6.8)	170	(5.3)
<i>Russian Federation</i>	19 000	(13.2)	18 000	(12.5)	16 000	(11.1)	14 000	(9.7)	12 000	(8.3)	10 000	(6.9)
San Marino	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Serbia	140	(1.8)	120	(1.6)	100	(1.3)	75	(1.0)	86	(1.1)	80	(1.1)
Switzerland	23	(0.3)	20	(0.2)	13	(0.2)	17	(0.2)	25	(0.3)	17	(0.2)
<i>Tajikistan</i>	800	(10.1)	790	(9.7)	790	(9.5)	770	(9.0)	770	(8.8)	760	(8.5)
<i>Türkiye</i>	740	(1.0)	630	(0.8)	590	(0.8)	550	(0.7)	550	(0.7)	510	(0.6)
<i>Turkmenistan</i>	590	(10.8)	530	(9.5)	640	(11.3)	570	(9.9)	600	(10.2)	610	(10.2)
<i>Ukraine</i>	7 100	(15.6)	6 400	(14.1)	5 800	(12.8)	5 000	(11.1)	4 500	(10.0)	4 000	(9.0)
United Kingdom	340	(0.5)	360	(0.6)	370	(0.6)	350	(0.5)	310	(0.5)	260	(0.4)
<i>Uzbekistan</i>	2 200	(7.5)	2 200	(7.3)	2 200	(7.2)	2 000	(6.5)	1 900	(6.0)	1 600	(5.0)
<b>Subtotal non-EU/EEA</b>	<b>35 000</b>	<b>(7.7)</b>	<b>33 000</b>	<b>(7.2)</b>	<b>30 000</b>	<b>(6.5)</b>	<b>26 000</b>	<b>(5.6)</b>	<b>23 000</b>	<b>(4.9)</b>	<b>20 000</b>	<b>(4.2)</b>
<b>Total European Region</b>	<b>40 000</b>	<b>(4.4)</b>	<b>41 000</b>	<b>(4.5)</b>	<b>34 000</b>	<b>(3.7)</b>	<b>30 000</b>	<b>(3.8)</b>	<b>27 000</b>	<b>(2.9)</b>	<b>24 000</b>	<b>(2.6)</b>
<b>Subtotal 18 HPCs</b>	<b>36 000</b>	<b>(9.2)</b>	<b>34 000</b>	<b>(8.6)</b>	<b>31 000</b>	<b>(7.8)</b>	<b>27 000</b>	<b>(6.7)</b>	<b>24 000</b>	<b>(5.9)</b>	<b>21 000</b>	<b>(5.2)</b>

Note: 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> Excludes HIV coinfecting cases.

	2018		2019		2020		2021		Mean annual % change in rate, 2017–2021	Mean annual % change in rate, 2012–2021	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>
	49	(0.6)	41	(0.5)	41	(0.5)	41	(0.5)	2.9%	-1.2%	Austria
	33	(0.3)	33	(0.3)	33	(0.3)	33	(0.3)	-0.5%	-7.1%	Belgium
	98	(1.4)	98	(1.4)	97	(1.4)	96	(1.4)	0.5%	-5.3%	Bulgaria
	60	(1.4)	36	(0.9)	36	(0.9)	36	(0.9)	-11.6%	-4.8%	Croatia
	5	(0.4)	5	(0.4)	5	(0.4)	5	(0.4)	12.8%	-0.8%	Cyprus
	39	(0.4)	23	(0.2)	23	(0.2)	23	(0.2)	-11.8%	-3.3%	Czechia
	10	(0.2)	10	(0.2)	10	(0.2)	10	(0.2)	-8.5%	-9.3%	Denmark
	13	(1.0)	16	(1.2)	16	(1.2)	16	(1.2)	-8.9%	-8.7%	Estonia
	30	(0.5)	30	(0.5)	30	(0.5)	30	(0.5)	-3.9%	-5.8%	Finland
	430	(0.7)	440	(0.7)	440	(0.7)	440	(0.7)	0.4%	-2.9%	France
	310	(0.4)	270	(0.3)	270	(0.3)	270	(0.3)	-2.8%	-3.4%	Germany
	52	(0.5)	44	(0.4)	44	(0.4)	43	(0.4)	-6.7%	-2.3%	Greece
	84	(0.9)	62	(0.6)	62	(0.6)	62	(0.6)	-0.2%	-7.7%	Hungary
	2	(0.6)	2	(0.6)	2	(0.5)	2	(0.5)	-1.9%	-5.9%	Iceland
	18	(0.4)	18	(0.4)	18	(0.4)	18	(0.4)	-1.1%	-4.9%	Ireland
	300	(0.5)	300	(0.5)	300	(0.5)	300	(0.5)	-0.5%	-1.2%	Italy
	65	(3.4)	65	(3.4)	64	(3.4)	63	(3.4)	-3.2%	0.8%	Latvia
	–	–	–	–	–	–	–	–	–	–	Liechtenstein
	120	(4.2)	120	(4.2)	120	(4.3)	120	(4.3)	-6.0%	-7.3%	Lithuania
	2	(0.3)	2	(0.3)	2	(0.3)	2	(0.3)	-11.2%	5.8%	Luxembourg
	1	(0.2)	1	(0.2)	1	(0.2)	1	(0.2)	-2.3%	-2.2%	Malta
	28	(0.2)	21	(0.1)	21	(0.1)	21	(0.1)	-3.7%	-6.0%	Netherlands
	18	(0.3)	18	(0.3)	18	(0.3)	19	(0.4)	0.8%	-2.4%	Norway
	570	(1.5)	510	(1.3)	510	(1.3)	510	(1.3)	-2.2%	-3.1%	Poland
	240	(2.3)	240	(2.3)	240	(2.3)	240	(2.3)	4.7%	0.7%	Portugal
	930	(4.7)	930	(4.8)	930	(4.8)	1700	(8.8)	16.2%	3.5%	Romania
	25	(0.5)	14	(0.3)	14	(0.3)	14	(0.3)	-15.2%	-2.8%	Slovakia
	6	(0.3)	14	(0.7)	14	(0.7)	14	(0.7)	18.6%	2.4%	Slovenia
	250	(0.5)	230	(0.5)	230	(0.5)	230	(0.5)	-2.5%	-4.1%	Spain
	22	(0.2)	22	(0.2)	23	(0.2)	23	(0.2)	-1.0%	-6.9%	Sweden
	<b>3800</b>	<b>(0.8)</b>	<b>3600</b>	<b>(0.8)</b>	<b>3600</b>	<b>(0.8)</b>	<b>4400</b>	<b>(1.0)</b>	<b>3.6%</b>	<b>-1.5%</b>	<b>Subtotal EU/EEA</b>
											<b>Non-EU/EEA</b>
	8	(0.3)	8	(0.3)	9	(0.3)	13	(0.5)	13.1%	5.7%	Albania
	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0.0%	-100.0%	Andorra
	30	(1.1)	35	(1.2)	28	(1.0)	33	(1.2)	-7.0%	-14.4%	Armenia
	600	(5.9)	600	(5.9)	650	(6.3)	890	(8.6)	9.7%	7.4%	Azerbaijan
	260	(2.7)	270	(2.8)	270	(2.8)	370	(3.9)	3.2%	-7.7%	Belarus
	100	(2.9)	95	(2.8)	94	(2.8)	92	(2.8)	-3.2%	-5.4%	Bosnia and Herzegovina
	150	(4.0)	140	(3.7)	140	(3.7)	130	(3.5)	-5.0%	-5.5%	Georgia
	20	(0.2)	21	(0.2)	21	(0.2)	21	(0.2)	10.8%	-2.3%	Israel
	500	(2.7)	440	(2.3)	330	(1.7)	1100	(5.7)	16.0%	-5.3%	Kazakhstan
	360	(5.8)	290	(4.6)	290	(4.5)	550	(8.4)	7.9%	-3.1%	Kyrgyzstan
	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0.0%	0.0%	Monaco
	1	(0.2)	1	(0.2)	1	(0.2)	2	(0.3)	19.1%	8.1%	Montenegro
	25	(1.2)	9	(0.4)	9	(0.4)	9	(0.4)	-8.7%	-11.9%	North Macedonia
	170	(5.4)	160	(5.1)	160	(5.2)	180	(5.9)	2.4%	-8.1%	Republic of Moldova
	9200	(6.3)	8000	(5.5)	7300	(5.0)	4900	(3.4)	-16.3%	-14.1%	Russian Federation
	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0.0%	0.0%	San Marino
	79	(1.1)	54	(0.7)	46	(0.6)	120	(1.6)	11.3%	-1.3%	Serbia
	17	(0.2)	17	(0.2)	17	(0.2)	17	(0.2)	-0.7%	-4.2%	Switzerland
	750	(8.2)	730	(7.8)	830	(8.7)	1200	(12.3)	9.6%	2.3%	Tajikistan
	460	(0.6)	420	(0.5)	420	(0.5)	970	(1.1)	16.5%	1.7%	Türkiye
	620	(10.2)	630	(10.2)	640	(10.2)	650	(10.2)	0.1%	-0.6%	Turkmenistan
	4000	(9.0)	3700	(8.4)	3600	(8.2)	3600	(8.3)	-2.0%	-6.8%	Ukraine
	260	(0.4)	230	(0.3)	230	(0.3)	230	(0.3)	-3.5%	-4.8%	United Kingdom
	1300	(4.0)	1000	(3.0)	1100	(3.3)	1100	(3.2)	-10.4%	-8.9%	Uzbekistan
	<b>19000</b>	<b>(4.0)</b>	<b>17000</b>	<b>(3.6)</b>	<b>16000</b>	<b>(3.3)</b>	<b>16000</b>	<b>(3.3)</b>	<b>-5.8%</b>	<b>-8.9%</b>	<b>Subtotal non-EU/EEA</b>
	<b>27000</b>	<b>(2.9)</b>	<b>24000</b>	<b>(2.6)</b>	<b>20000</b>	<b>(2.2)</b>	<b>20000</b>	<b>(2.1)</b>	<b>-4.7%</b>	<b>-7.7%</b>	<b>Total European Region</b>
	<b>20000</b>	<b>(4.9)</b>	<b>18000</b>	<b>(4.4)</b>	<b>17000</b>	<b>(4.1)</b>	<b>18000</b>	<b>(4.4)</b>	<b>-4.1%</b>	<b>-7.9%</b>	<b>Subtotal 18 HPCs</b>

Table II. Estimated TB incidence per 100 000 population, European Region, 2012–2021

Country	2012		2013		2014		2015		2016		2017	
	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	710	(8.4)	720	(8.5)	650	(7.6)	650	(7.5)	710	(8.1)	650	(7.4)
Belgium	1000	(9.1)	1000	(9.0)	1000	(8.9)	1100	(9.8)	1100	(9.7)	1100	(9.7)
<i>Bulgaria</i>	2700	(36.1)	2500	(33.6)	2300	(31.2)	2100	(28.7)	1900	(26.2)	1800	(25.1)
Croatia	620	(14.3)	590	(13.7)	570	(13.3)	560	(13.2)	520	(12.3)	420	(10.0)
Cyprus	72	(6.2)	47	(4.0)	45	(3.8)	72	(6.1)	66	(5.5)	60	(5.0)
Czechia	650	(6.2)	540	(5.1)	550	(5.2)	580	(5.5)	590	(5.6)	570	(5.4)
Denmark	390	(7.0)	380	(6.8)	340	(6.0)	370	(6.5)	340	(6.0)	290	(5.1)
<i>Estonia</i>	300	(22.7)	300	(22.8)	270	(20.5)	240	(18.3)	220	(16.7)	200	(15.2)
Finland	300	(5.5)	310	(5.7)	290	(5.3)	310	(5.7)	260	(4.7)	270	(4.9)
France	5700	(9.0)	5700	(9.0)	5500	(8.6)	5400	(8.5)	5700	(8.9)	5900	(9.2)
Germany	4400	(5.4)	4600	(5.6)	4800	(5.9)	6200	(7.6)	6300	(7.7)	5900	(7.1)
Greece	600	(5.5)	570	(5.2)	560	(5.2)	500	(4.6)	470	(4.4)	500	(4.7)
Hungary	1300	(13.1)	1200	(12.1)	920	(9.3)	990	(10.1)	850	(8.7)	750	(7.7)
Iceland	12	(3.7)	13	(4.0)	9	(2.7)	8	(2.4)	7	(2.1)	15	(4.4)
Ireland	390	(8.5)	410	(8.9)	340	(7.4)	340	(7.3)	340	(7.2)	350	(7.3)
Italy	3600	(6.0)	3500	(5.8)	3900	(6.5)	4000	(6.6)	4300	(7.2)	4400	(7.3)
<i>Latvia</i>	1100	(53.6)	1000	(49.2)	850	(42.3)	800	(40.2)	740	(37.5)	620	(31.7)
Liechtenstein	–	–	–	–	–	–	–	–	–	–	–	–
<i>Lithuania</i>	1900	(62.0)	1800	(59.4)	1700	(56.8)	1600	(54.0)	1500	(51.1)	1500	(51.6)
Luxembourg	52	(9.8)	44	(8.1)	28	(5.0)	34	(6.0)	33	(5.7)	37	(6.2)
Malta	48	(11.2)	58	(13.3)	52	(11.6)	37	(8.1)	58	(12.4)	48	(10.0)
Netherlands	1100	(6.6)	960	(5.7)	940	(5.5)	980	(5.8)	1000	(5.8)	890	(5.2)
Norway	390	(7.8)	420	(8.3)	350	(6.8)	330	(6.4)	320	(6.1)	270	(5.1)
Poland	8100	(21.0)	8100	(21.0)	7500	(19.4)	7200	(18.7)	7100	(18.4)	6400	(16.6)
Portugal	2900	(27.6)	2700	(25.8)	2500	(24.0)	2400	(23.2)	2100	(20.3)	2000	(19.4)
<i>Romania</i>	19000	(94.4)	18000	(89.7)	17000	(85.0)	16000	(80.4)	15000	(75.8)	14000	(71.1)
Slovakia	370	(6.8)	460	(8.5)	370	(6.8)	350	(6.5)	320	(5.9)	260	(4.8)
Slovenia	150	(7.2)	160	(7.7)	160	(7.7)	150	(7.2)	140	(6.7)	130	(6.2)
Spain	6500	(13.9)	6000	(12.9)	5500	(11.8)	4600	(9.9)	5400	(11.6)	5000	(10.7)
Sweden	680	(7.1)	700	(7.3)	730	(7.5)	900	(9.1)	810	(8.1)	560	(5.6)
<b>Subtotal EU/EEA</b>	<b>65 000</b>	<b>(14.5)</b>	<b>63 000</b>	<b>(14.1)</b>	<b>60 000</b>	<b>(13.4)</b>	<b>59 000</b>	<b>(13.2)</b>	<b>58 000</b>	<b>(12.9)</b>	<b>55 000</b>	<b>(12.2)</b>
<b>Non-EU/EEA</b>												
Albania	470	(16.3)	540	(18.7)	470	(16.3)	480	(16.7)	480	(16.7)	580	(20.1)
Andorra	10	(14.1)	6	(8.4)	7	(9.8)	5	(7.0)	5	(6.9)	1	(1.4)
<i>Armenia</i>	1500	(51.5)	1700	(58.6)	1600	(55.4)	1400	(48.6)	1300	(45.4)	1000	(35.1)
<i>Azerbaijan</i>	8100	(85.4)	7500	(78.0)	7400	(76.0)	7000	(71.0)	6600	(66.2)	6700	(66.5)
<i>Belarus</i>	6200	(64.0)	5700	(58.8)	5000	(51.6)	4800	(49.5)	4100	(42.2)	3600	(37.1)
Bosnia and Herzegovina	1800	(49.0)	1600	(44.2)	1500	(42.0)	1400	(39.7)	1200	(34.5)	980	(28.5)
<i>Georgia</i>	4500	(118.3)	4400	(116.2)	4000	(106.0)	3700	(98.1)	3500	(92.8)	3200	(84.8)
Israel	580	(7.6)	350	(4.5)	420	(5.3)	320	(4.0)	290	(3.6)	270	(3.2)
<i>Kazakhstan</i>	21000	(122.8)	18000	(103.8)	16000	(90.9)	14000	(78.5)	13000	(71.9)	13000	(71.0)
<i>Kyrgyzstan</i>	7100	(126.1)	8100	(141.6)	7300	(125.5)	8000	(135.2)	8000	(132.9)	7600	(124.2)
Monaco	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(5.4)	0	(0.0)
Montenegro	110	(17.4)	140	(22.1)	130	(20.5)	93	(14.7)	100	(15.8)	87	(13.8)
North Macedonia	440	(21.0)	400	(19.0)	360	(17.1)	360	(17.1)	330	(15.6)	270	(12.8)
<i>Republic of Moldova</i>	4400	(125.5)	4300	(125.9)	3800	(113.8)	3300	(100.7)	3300	(102.3)	3000	(94.3)
<i>Russian Federation</i>	110 000	(76.6)	106 000	(73.6)	101 000	(70.0)	96 000	(66.4)	91 000	(62.7)	86 000	(59.1)
San Marino	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Serbia	1800	(23.7)	2100	(27.8)	1800	(23.9)	1600	(21.3)	1400	(18.7)	1400	(18.8)
Switzerland	480	(6.0)	540	(6.7)	490	(6.0)	610	(7.4)	660	(7.9)	610	(7.2)
<i>Tajikistan</i>	8600	(108.1)	8100	(99.6)	7600	(91.3)	7300	(85.6)	7400	(84.8)	7500	(84.0)
<i>Türkiye</i>	16 000	(21.3)	15 000	(19.6)	15 000	(19.2)	15 000	(18.8)	14 000	(17.3)	14 000	(17.1)
<i>Turkmenistan</i>	3800	(69.6)	3900	(70.1)	3300	(58.3)	2800	(48.6)	2700	(46.0)	2600	(43.6)
<i>Ukraine</i>	46 000	(101.3)	44 000	(97.1)	43 000	(95.2)	41 000	(91.1)	39 000	(87.0)	37 000	(82.9)
United Kingdom	9300	(14.6)	8300	(12.9)	7400	(11.4)	6600	(10.1)	6500	(9.9)	5900	(8.9)
<i>Uzbekistan</i>	26 000	(88.1)	26 000	(86.8)	25 000	(82.1)	25 000	(80.8)	24 000	(76.3)	23 000	(72.0)
<b>Subtotal non-EU/EEA</b>	<b>278 000</b>	<b>(61.0)</b>	<b>267 000</b>	<b>(58.2)</b>	<b>253 000</b>	<b>(54.7)</b>	<b>241 000</b>	<b>(51.7)</b>	<b>229 000</b>	<b>(48.8)</b>	<b>218 000</b>	<b>(46.1)</b>
<b>Total European Region</b>	<b>343 000</b>	<b>(38.0)</b>	<b>330 000</b>	<b>(36.4)</b>	<b>313 000</b>	<b>(34.4)</b>	<b>300 000</b>	<b>(32.8)</b>	<b>287 000</b>	<b>(31.3)</b>	<b>273 000</b>	<b>(29.6)</b>
<b>Subtotal 18 HPCs</b>	<b>288 000</b>	<b>(73.2)</b>	<b>276 000</b>	<b>(69.7)</b>	<b>262 000</b>	<b>(65.7)</b>	<b>250 000</b>	<b>(62.3)</b>	<b>237 000</b>	<b>(58.7)</b>	<b>226 000</b>	<b>(55.6)</b>

Note: 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.

	2018		2019		2012		2021		Mean annual % change in rate, 2017–2021	Mean annual % change in rate, 2012–2021	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>
	540	(6.1)	530	(6.0)	440	(4.9)	450	(5.0)	-9.1%	-5.5%	Austria
	1000	(8.7)	1000	(8.7)	890	(7.7)	940	(8.1)	-4.3%	-1.2%	Belgium
	1600	(22.5)	1400	(19.9)	1300	(18.6)	1200	(17.4)	-8.7%	-7.8%	Bulgaria
	420	(10.1)	340	(8.2)	200	(4.9)	160	(3.9)	-20.8%	-13.4%	Croatia
	59	(4.8)	76	(6.2)	39	(3.2)	55	(4.4)	-2.9%	-3.7%	Cyprus
	500	(4.7)	530	(5.0)	410	(3.9)	400	(3.8)	-8.4%	-5.3%	Czechia
	310	(5.4)	300	(5.2)	240	(4.1)	220	(3.8)	-7.1%	-6.6%	Denmark
	170	(12.9)	170	(12.8)	140	(10.5)	120	(9.0)	-12.2%	-9.7%	Estonia
	260	(4.7)	260	(4.7)	200	(3.6)	200	(3.6)	-7.3%	-4.6%	Finland
	5800	(9.0)	5900	(9.2)	5300	(8.2)	4900	(7.6)	-4.7%	-1.9%	France
	5800	(7.0)	5100	(6.1)	4400	(5.3)	4200	(5.0)	-8.4%	-0.8%	Germany
	470	(4.4)	500	(4.7)	440	(4.2)	430	(4.1)	-3.1%	-3.1%	Greece
	690	(7.1)	610	(6.2)	440	(4.5)	360	(3.7)	-16.6%	-13.1%	Hungary
	9	(2.5)	15	(4.2)	14	(3.8)	11	(3.0)	-9.2%	-2.5%	Iceland
	340	(7.0)	280	(5.7)	260	(5.3)	240	(4.8)	-10.0%	-6.2%	Ireland
	4300	(7.2)	3700	(6.2)	2500	(4.2)	2900	(4.9)	-9.6%	-2.2%	Italy
	540	(27.9)	460	(24.0)	370	(19.5)	290	(15.5)	-16.4%	-12.9%	Latvia
	-	-	-	-	-	-	-	-	-	-	Liechtenstein
	1200	(41.7)	1200	(42.1)	790	(28.0)	720	(25.8)	-15.9%	-9.3%	Lithuania
	48	(7.9)	55	(8.9)	37	(5.9)	39	(6.1)	-0.4%	-5.1%	Luxembourg
	63	(12.8)	110	(21.8)	160	(31.0)	62	(11.8)	4.1%	0.6%	Malta
	910	(5.3)	860	(5.0)	710	(4.1)	770	(4.4)	-4.0%	-4.3%	Netherlands
	220	(4.1)	180	(3.4)	170	(3.2)	160	(3.0)	-12.8%	-10.2%	Norway
	6000	(15.6)	5700	(14.8)	3600	(9.4)	4000	(10.4)	-11.0%	-7.5%	Poland
	2100	(20.4)	2000	(19.4)	1600	(15.5)	1700	(16.5)	-3.9%	-5.5%	Portugal
	13000	(66.3)	13000	(66.6)	8300	(42.7)	8700	(45.0)	-10.8%	-7.9%	Romania
	310	(5.7)	250	(4.6)	180	(3.3)	150	(2.8)	-12.9%	-9.6%	Slovakia
	110	(5.2)	110	(5.2)	86	(4.1)	91	(4.3)	-8.8%	-5.7%	Slovenia
	5200	(11.1)	4700	(10.0)	3400	(7.2)	3900	(8.2)	-6.5%	-5.7%	Spain
	550	(5.4)	550	(5.4)	360	(3.5)	400	(3.8)	-9.0%	-6.7%	Sweden
	<b>53000</b>	<b>(11.8)</b>	<b>50000</b>	<b>(11.1)</b>	<b>37000</b>	<b>(8.2)</b>	<b>38000</b>	<b>(8.4)</b>	<b>-8.9%</b>	<b>-5.9%</b>	<b>Subtotal EU/EEA</b>
											<b>Non-EU/EEA</b>
	500	(17.4)	470	(16.4)	450	(15.7)	480	(16.8)	-4.4%	0.4%	Albania
	2	(2.7)	6	(7.9)	2	(2.6)	2	(2.5)	16.9%	-17.4%	Andorra
	880	(31.0)	740	(26.2)	710	(25.3)	770	(27.6)	-5.8%	-6.7%	Armenia
	6400	(63.0)	6100	(59.6)	6000	(58.3)	6400	(62.1)	-1.7%	-3.5%	Azerbaijan
	3000	(30.9)	2800	(28.9)	2700	(28.0)	2900	(30.3)	-4.9%	-8.0%	Belarus
	850	(25.0)	910	(27.1)	850	(25.6)	810	(24.8)	-3.4%	-7.3%	Bosnia and Herzegovina
	3000	(79.5)	2800	(74.3)	2600	(69.0)	2400	(63.9)	-6.9%	-6.6%	Georgia
	340	(4.0)	250	(2.9)	180	(2.1)	240	(2.7)	-4.6%	-10.9%	Israel
	12000	(64.7)	13000	(69.3)	13000	(68.5)	14000	(72.9)	0.7%	-5.6%	Kazakhstan
	7200	(115.7)	7000	(110.7)	6900	(107.4)	8500	(130.2)	1.2%	0.4%	Kyrgyzstan
	1	(2.7)	0	(0.0)	0	(0.0)	0	(0.0)	0.0%	0.0%	Monaco
	97	(15.4)	92	(14.6)	91	(14.5)	98	(15.6)	3.2%	-1.2%	Montenegro
	280	(13.2)	250	(11.8)	250	(11.8)	240	(11.4)	-2.8%	-6.5%	North Macedonia
	2700	(85.9)	2500	(80.4)	2400	(77.8)	2600	(84.9)	-2.6%	-4.2%	Republic of Moldova
	79000	(54.2)	73000	(50.1)	71000	(48.8)	69000	(47.6)	-5.3%	-5.2%	Russian Federation
	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0.0%	0.0%	San Marino
	1300	(17.5)	1100	(14.9)	1000	(13.6)	1100	(15.1)	-5.3%	-4.9%	Serbia
	540	(6.3)	460	(5.4)	400	(4.6)	410	(4.7)	-10.1%	-2.6%	Switzerland
	7600	(83.3)	7700	(82.5)	7600	(79.6)	8600	(88.2)	1.2%	-2.2%	Tajikistan
	13000	(15.7)	13000	(15.6)	13000	(15.5)	15000	(17.7)	0.9%	-2.0%	Türkiye
	2800	(46.2)	2700	(43.8)	2900	(46.4)	3000	(47.3)	2.1%	-4.2%	Turkmenistan
	36000	(81.0)	34000	(76.9)	32000	(72.9)	31000	(71.2)	-3.7%	-3.8%	Ukraine
	5400	(8.1)	5400	(8.1)	4700	(7.0)	4300	(6.4)	-8.0%	-8.8%	United Kingdom
	23000	(70.9)	22000	(66.7)	22000	(65.6)	21000	(61.6)	-3.8%	-3.9%	Uzbekistan
	<b>206000</b>	<b>(43.4)</b>	<b>196000</b>	<b>(41.1)</b>	<b>191000</b>	<b>(39.9)</b>	<b>193000</b>	<b>(40.2)</b>	<b>-3.4%</b>	<b>-4.5%</b>	<b>Subtotal non-EU/EEA</b>
	<b>259000</b>	<b>(28.0)</b>	<b>246000</b>	<b>(26.5)</b>	<b>228000</b>	<b>(24.5)</b>	<b>231000</b>	<b>(24.8)</b>	<b>-4.3%</b>	<b>-4.6%</b>	<b>Total European Region</b>
	<b>213000</b>	<b>(52.2)</b>	<b>204000</b>	<b>(49.8)</b>	<b>194000</b>	<b>(47.3)</b>	<b>196000</b>	<b>(47.7)</b>	<b>-3.8%</b>	<b>-4.7%</b>	<b>Subtotal 18 HPCs</b>



	2018		2019		2020		2021		Mean annual % change in rate, 2017–2021	Mean annual % change in rate, 2012–2021	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>
	470	5.3	464	5.2	382	4.3	387	4.3	-9.3%	-5.8%	Austria
	910	8.0	890	7.8	774	6.7	817	7.1	-3.1%	-1.5%	Belgium
	1290	18.3	1288	18.4	887	12.8	673	9.7	-16.3%	-11.8%	Bulgaria
	364	8.9	295	7.2	188	4.6	154	3.8	-19.2%	-	Croatia
	51	5.9	66	7.5	34	3.8	48	5.4	-3.1%	-3.7%	Cyprus
	434	4.1	455	4.3	356	3.3	352	3.3	-8.4%	-5.2%	Czechia
	270	4.7	263	4.5	207	3.6	191	3.3	-7.2%	-6.7%	Denmark
	145	11.0	147	11.1	120	9.0	107	8.0	-11.4%	-9.8%	Estonia
	226	4.1	225	4.1	174	3.1	170	3.1	-8.5%	-5.2%	Finland
	4760	7.1	4924	7.3	4313	6.4	4042	6.0	-5.5%	-2.7%	France
	5332	6.4	4651	5.6	4042	4.9	3792	4.6	-8.5%	-1.1%	Germany
	406	3.8	434	4.0	380	3.5	195	1.8	-18.0%	-10.0%	Greece
	602	6.2	528	5.4	384	3.9	314	3.2	-16.5%	-13.5%	Hungary
	8	2.3	13	3.6	12	3.3	-	-	-100.0%	-100.0%	Iceland
	290	6.0	238	4.9	224	4.5	210	4.2	-8.2%	-5.9%	Ireland
	3777	6.2	3185	5.3	2163	3.6	2378	4.0	-10.7%	-4.2%	Italy
	0	0.0	-	-	-	-	255	13.6	-	-	Latvia
	1	2.6	0	0.0	-	-	1	2.6	-0.8%	-8.1%	Liechtenstein
	1063	37.8	1006	36.0	688	24.6	628	22.5	-15.7%	-9.4%	Lithuania
	42	7.0	48	7.8	32	5.1	34	5.4	-0.3%	-5.1%	Luxembourg
	55	11.6	98	19.9	140	27.2	54	10.5	3.5%	0.7%	Malta
	780	4.5	739	4.3	613	3.5	671	3.8	-4.0%	-4.1%	Netherlands
	188	3.6	154	2.9	143	2.7	140	2.6	-12.9%	-10.2%	Norway
	5196	13.7	4983	13.1	3150	8.3	3446	9.1	-11.1%	-7.9%	Poland
	1877	18.2	1849	18.0	1475	14.3	1463	14.2	-5.9%	-5.8%	Portugal
	11581	59.3	11070	57.0	7189	37.2	7591	39.5	-10.9%	-8.0%	Romania
	273	5.0	214	3.9	153	2.8	134	2.5	-12.5%	-10.0%	Slovakia
	98	4.7	98	4.7	75	3.6	79	3.7	-8.8%	-6.3%	Slovenia
	4614	9.9	4395	9.4	3526	7.4	3370	7.1	-7.5%	-5.9%	Spain
	474	4.7	478	4.7	312	3.0	344	3.3	-9.2%	-6.8%	Sweden
	<b>45577</b>	<b>10.1</b>	<b>43198</b>	<b>9.6</b>	<b>32136</b>	<b>7.1</b>	<b>32040</b>	<b>7.0</b>	<b>-9.9%</b>	<b>-6.6%</b>	<b>Subtotal EU/EEA</b>
											<b>Non-EU/EEA</b>
	440	(15.3)	412	(14.3)	240	(8.4)	269	(9.4)	-14.3%	-4.4%	Albania
	2	(2.7)	5	(6.5)	2	(2.6)	2	(2.5)	16.9%	-16.4%	Andorra
	734	(25.9)	621	(22.0)	394	(14.0)	398	(14.3)	-16.6%	-11.2%	Armenia
	5038	(49.6)	4823	(47.1)	3683	(35.8)	3663	(35.5)	-9.1%	-6.8%	Azerbaijan
	2359	(24.3)	2207	(22.8)	1514	(15.7)	1484	(15.5)	-14.2%	-12.1%	Belarus
	666	(19.6)	580	(17.3)	357	(10.8)	362	(11.1)	-16.0%	-12.9%	Bosnia and Herzegovina
	2316	(61.4)	2169	(57.5)	1671	(44.4)	1501	(39.9)	-12.7%	-10.0%	Georgia
	292	(3.5)	217	(2.5)	158	(1.8)	213	(2.4)	-4.0%	-10.8%	Israel
	12832	(69.2)	12501	(66.7)	9603	(50.6)	9757	(50.8)	-7.0%	-7.8%	Kazakhstan
	6338	(101.8)	6138	(97.1)	4241	(66.0)	4596	(70.4)	-10.4%	-4.8%	Kyrgyzstan
	1	(2.7)	0	-	0	(0.0)	0	(0.0)	0.0%	0.0%	Monaco
	84	(13.3)	80	(12.7)	40	(6.4)	80	(12.7)	1.8%	-2.1%	Montenegro
	217	(10.3)	199	(9.4)	143	(6.8)	143	(6.8)	-9.7%	-9.4%	North Macedonia
	3022	(96.2)	2809	(90.3)	1767	(57.3)	2067	(67.5)	-10.6%	-6.7%	Republic of Moldova
	78258	(53.7)	73328	(50.3)	58723	(40.3)	56922	(39.2)	-9.4%	-6.8%	Russian Federation
	0	(0.0)	0	(0.0)	0	-	0	-	-	-	San Marino
	1330	(17.9)	1106	(14.9)	439	(6.0)	445	(6.1)	-25.1%	-14.4%	Serbia
	641	(9.1)	501	(7.2)	0	-	0	-	-	-	Serbia excluding Kosovo <sup>1</sup>
	689	(38.5)	605	(33.8)	439	(23.4)	445	(24.6)	-11.4%	-4.9%	Kosovo <sup>1</sup>
	473	(5.6)	402	(4.7)	351	(4.1)	355	(4.1)	-10.1%	-2.7%	Switzerland
	5726	(62.7)	5755	(61.6)	4148	(43.5)	4158	(42.6)	-10.4%	-7.0%	Tajikistan
	11576	(14.0)	11247	(13.5)	8830	(10.5)	9047	(10.7)	-7.2%	-6.1%	Türkiye
	2157	(35.6)	2117	(34.4)	1918	(30.7)	1878	(29.6)	-2.7%	-6.4%	Turkmenistan
	26512	(59.6)	25379	(57.4)	17533	(39.9)	18307	(42.1)	-8.9%	-8.1%	Ukraine
	4775	(7.2)	4803	(7.2)	4185	(6.2)	4795	(7.1)	-2.7%	-6.4%	United Kingdom
	16413	(50.6)	16272	(49.3)	12111	(36.1)	13544	(39.7)	-6.8%	-2.6%	Uzbekistan
	<b>181561</b>	<b>(38.2)</b>	<b>173170</b>	<b>(36.3)</b>	<b>132051</b>	<b>(27.6)</b>	<b>133986</b>	<b>(27.9)</b>	<b>-8.9%</b>	<b>-7.0%</b>	<b>Subtotal non-EU/EEA</b>
	<b>227138</b>	<b>(24.6)</b>	<b>216368</b>	<b>(23.3)</b>	<b>164187</b>	<b>(17.7)</b>	<b>166026</b>	<b>(17.8)</b>	<b>-8.9%</b>	<b>-6.7%</b>	<b>Total European Region</b>
	<b>187360</b>	<b>(45.9)</b>	<b>178877</b>	<b>(43.7)</b>	<b>135020</b>	<b>(32.9)</b>	<b>136576</b>	<b>(33.2)</b>	<b>-9.1%</b>	<b>-7.0%</b>	<b>Subtotal 18 HPCs</b>









**Table VII. RR/MDR-TB<sup>a</sup> notification among all bacteriologically confirmed<sup>b</sup> TB cases with available DST results in EU/EEA, 2017–2021**

Country	2017			2018			2019			2020			2021			Mean annual % change in rate 2017–2021
	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	19	4	0.2	18	5	0.2	6	2	0.1	2	1	0.0	9	3	0.1	-17.4%
Belgium	8	1	0.1	9	1	0.1	17	2	0.1	17	3	0.1	8	1	0.1	-0.5%
<i>Bulgaria</i>	29	5	0.4	28	5	0.4	14	3	0.2	10	4	0.1	4	2	0.1	-38.7%
Croatia	0	0	0.0	2	1	0.0	2	1	0.0	1	1	0.0	0	0	0.0	–
Cyprus	1	3	0.1	0	0	0.0	1	2	0.1	0	0	0.0	3	8	0.3	30.1%
Czechia	8	2	0.1	12	4	0.1	8	2	0.1	11	4	0.1	10	4	0.1	5.4%
Denmark	2	1	0.0	4	2	0.1	4	2	0.1	2	1	0.0	1	1	0.0	-16.2%
<i>Estonia</i>	37	26	2.8	32	26	2.4	27	21	2.0	19	18	1.4	23	28	1.7	-11.4%
Finland	6	3	0.1	4	2	0.1	3	2	0.1	1	1	0.0	3	2	0.1	-16.0%
France	81	3	0.1	82	3	0.1	95	3	0.1	65	2	0.1	43	2	0.1	5.9%
Germany	134	3	0.2	128	3	0.2	100	3	0.1	99	3	0.1	92	3	0.1	-9.1%
Greece	9	5	0.1	6	4	0.1	7	3	0.1	12	3	0.1	5	6	0.0	-13.5%
Hungary	13	4	0.1	13	4	0.1	13	5	0.1	11	6	0.1	12	7	0.1	-1.8%
Iceland	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	–	–	–	–
Ireland	6	3	0.1	7	3	0.1	6	3	0.1	1	1	0.0	8	7	0.2	6.2%
Italy	73	4	0.1	49	3	0.1	45	3	0.1	39	3	0.1	44	3	0.1	4.7%
<i>Latvia</i>	48	11	2.5	–	–	–	–	–	–	–	–	–	16	9	0.8	-23.5%
Liechtenstein	0	0	0.0	0	0	0.0	–	–	–	0	0	0.0	0	0	0.0	–
<i>Lithuania</i>	264	23	9.3	189	19	6.7	173	19	6.2	105	17	3.8	105	18	3.8	-20.2%
Luxembourg	1	4	0.2	1	3	0.2	1	3	0.2	0	0	0.0	0	0	0.0	-100.0%
Malta	0	0	0.0	0	0	0.0	0	0	0.0	2	5	0.4	1	3	0.2	–
Netherlands	10	2	0.1	6	1	0.0	9	2	0.1	12	3	0.1	11	2	0.1	1.8%
Norway	9	4	0.2	6	4	0.1	2	1	0.0	2	2	0.0	10	8	0.2	2.0%
Poland	52	1	0.1	58	2	0.2	45	1	0.1	42	2	0.1	58	2	0.2	2.9%
Portugal	13	1	0.1	11	1	0.1	15	2	0.1	15	2	0.1	10	2	0.1	-6.3%
<i>Romania</i>	454	5	2.3	442	5	2.3	381	5	2.0	262	5	1.4	251	5	1.3	-13.3%
Slovakia	7	5	0.1	3	2	0.1	5	4	0.1	1	2	0.0	5	7	0.1	-8.2%
Slovenia	1	1	0.0	0	0	0.0	0	0	0.0	1	1	0.0	1	1	0.0	-0.5%
Spain	35	2	0.1	23	2	0.0	19	1	0.0	30	2	0.1	30	2	0.1	-4.2%
Sweden	12	3	0.1	13	3	0.1	10	3	0.1	6	2	0.1	7	2	0.1	-13.4%
<b>Total EU/EEA</b>	<b>1332</b>	<b>(4.4)</b>	<b>0.3</b>	<b>1146</b>	<b>(3.8)</b>	<b>0.3</b>	<b>1008</b>	<b>(4.1)</b>	<b>0.2</b>	<b>768</b>	<b>(4.2)</b>	<b>0.2</b>	<b>770</b>	<b>(4.1)</b>	<b>0.2</b>	<b>-12.9%</b>

Note: 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.

The resistance pattern at the initiation of treatment is reported to TESSy irrespective of the method used for DST or resistance prediction.

DST: drug-susceptibility testing.

RR/MDR-TB: rifampicin-resistant or multidrug-resistant tuberculosis.

TESSy: the European Surveillance System.

<sup>a</sup> Includes cases that are RR/MDR but that also meet the pre-XDR or XDR case definitions (pre-XDR and XDR cases have not been excluded).

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







	2020					2021					Country/area
	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>b</sup>		N	%	N	% <sup>b</sup>	
											<b>EU/EEA</b>
	–	–	–	–	–	–	–	–	–	–	Austria
	825	387	(46.9)	32	(8.3)	875	464	(53.0)	28	(6.0)	Belgium
	930	781	(84.0)	1	(0.1)	687	477	(69.4)	0	(0.0)	Bulgaria
	194	6	(3.1)	0	(0.0)	157	3	(1.9)	0	(0.0)	Croatia
	36	30	(83.3)	2	(6.7)	48	35	(72.9)	1	(2.9)	Cyprus
	363	199	(54.8)	7	(3.5)	357	212	(59.4)	7	(3.3)	Czechia
	221	168	(76.0)	4	(2.4)	208	161	(77.4)	6	(3.7)	Denmark
	124	116	(93.5)	13	(11.2)	111	103	(92.8)	12	(11.7)	Estonia
	–	–	–	–	–	–	–	–	–	–	Finland
	–	–	–	–	–	–	–	–	–	–	France
	–	–	–	–	–	–	–	–	–	–	Germany
	396	396	(100.0)	17	(4.3)	206	51	(24.8)	2	(3.9)	Greece
	406	18	(4.4)	2	(11.1)	335	7	(2.1)	1	(14.3)	Hungary
	–	–	–	–	–	–	–	–	–	–	Iceland
	236	100	(42.4)	5	(5.0)	217	68	(31.3)	2	(2.9)	Ireland
	–	–	–	–	–	–	–	–	–	–	Italy
	–	–	–	–	–	261	188	(72.0)	24	(12.8)	Latvia
	–	–	–	–	–	–	–	–	–	–	Liechtenstein
	726	714	(98.3)	20	(2.8)	646	612	(94.7)	15	(2.5)	Lithuania
	34	28	(82.4)	0	(0.0)	35	25	(71.4)	0	(0.0)	Luxembourg
	140	119	(85.0)	2	(1.7)	54	46	(85.2)	1	(2.2)	Malta
	622	496	(79.7)	14	(2.8)	680	508	(74.7)	13	(2.6)	Netherlands
	159	124	(78.0)	3	(2.4)	157	128	(81.5)	4	(3.1)	Norway
	–	–	–	–	–	–	–	–	–	–	Poland
	1519	1315	(86.6)	121	(9.2)	1504	1109	(73.7)	96	(8.7)	Portugal
	7 693	6 580	(85.5)	151	(2.3)	7 979	6 569	(82.3)	144	(2.2)	Romania
	158	82	(51.9)	2	(2.4)	137	80	(58.4)	2	(2.5)	Slovakia
	77	58	(75.3)	0	(0.0)	80	67	(83.8)	0	(0.0)	Slovenia
	3 697	2 121	(57.4)	107	(5.0)	3 508	1 924	(54.8)	152	(7.9)	Spain
	–	–	–	–	–	–	–	–	–	–	Sweden
	<b>18 556</b>	<b>13 838</b>	<b>(74.6)</b>	<b>503</b>	<b>(3.6)</b>	<b>18 242</b>	<b>12 837</b>	<b>(70.4)</b>	<b>510</b>	<b>(4.0)</b>	<b>Subtotal EU/EEA</b>
											<b>Non-EU/EEA</b>
	240	199	(82.9)	2	(1.0)	269	244	(90.7)	1	(0.4)	Albania
	2	0	(0.0)	–	–	2	0	(0.0)	0	–	Andorra
	394	369	(93.7)	39	(10.6)	398	335	(84.2)	36	(10.7)	Armenia
	4 991	4 454	(89.2)	83	(1.9)	4 944	4 448	(90.0)	92	(2.1)	Azerbaijan
	1 514	1 514	(100.0)	135	(8.9)	1 484	1 484	(100.0)	128	(8.6)	Belarus
	–	–	–	–	–	–	–	–	–	–	Bosnia and Herzegovina
	1 671	1 494	(89.4)	29	(1.9)	1 501	1 430	(95.3)	43	(3.0)	Georgia
	158	158	(100.0)	15	(9.5)	213	213	(100.0)	16	(7.5)	Israel
	9 603	9 440	(98.3)	614	(6.5)	9 757	9 620	(98.6)	625	(6.5)	Kazakhstan
	4 241	4 007	(94.5)	131	(3.3)	4 596	4 394	(95.6)	126	(2.9)	Kyrgyzstan
	0	0	–	0	–	0	0	–	0	–	Monaco
	40	35	(87.5)	0	(0.0)	80	80	(100.0)	0	(0.0)	Montenegro
	143	69	(48.3)	1	(1.4)	143	29	(20.3)	0	(0.0)	North Macedonia
	1 767	1 693	(95.8)	219	(12.9)	2 067	2 008	(97.1)	214	(10.7)	Republic of Moldova
	58 723	55 838	(95.1)	13 506	(24.2)	56 922	54 821	(96.3)	14 132	(25.8)	Russian Federation
	0	0	–	0	–	0	0	–	0	–	San Marino
	0	0	–	0	–	0	0	–	0	–	Serbia
	0	0	–	0	–	0	0	–	0	–	Serbia excluding Kosovo <sup>1</sup>
	0	0	–	0	–	0	0	–	0	–	Kosovo <sup>1</sup>
	0	0	–	0	–	0	0	–	0	–	Switzerland
	4 148	4 043	(97.5)	118	(2.9)	4 158	4 103	(98.7)	118	(2.9)	Tajikistan
	8 830	7 062	(80.0)	83	(1.2)	9 047	7 249	(80.1)	85	(1.2)	Türkiye
	–	0	–	0	–	0	0	–	0	–	Turkmenistan
	17 533	17 375	(99.1)	3 799	(21.9)	18 307	17 991	(98.3)	3 646	(20.3)	Ukraine
	0	0	–	0	–	0	0	–	0	–	United Kingdom
	12 111	12 111	(100.0)	379	(3.1)	13 544	15 450	(114.1)	441	(2.9)	Uzbekistan
	<b>126 109</b>	<b>119 861</b>	<b>(95.0)</b>	<b>19 153</b>	<b>(16.0)</b>	<b>127 432</b>	<b>123 899</b>	<b>(97.2)</b>	<b>19 703</b>	<b>(15.9)</b>	<b>Subtotal non-EU/EEA</b>
	<b>144 665</b>	<b>133 699</b>	<b>(92.4)</b>	<b>19 656</b>	<b>(14.7)</b>	<b>145 674</b>	<b>136 736</b>	<b>(93.9)</b>	<b>20 213</b>	<b>(14.8)</b>	<b>Total European Region</b>
	<b>134 999</b>	<b>127 591</b>	<b>(94.5)</b>	<b>19 320</b>	<b>(15.1)</b>	<b>136 409</b>	<b>131 282</b>	<b>(96.2)</b>	<b>19 881</b>	<b>(15.1)</b>	<b>Subtotal 18 HPCs</b>





**Table XI. Treatment success after 24 months of RR/MDR-TB<sup>a</sup> cases started on treatment<sup>b</sup>, European Region, 2015–2019**

Country/area	2015			2016			2017			2018			2019		
	Cases reported	Success		Cases reported	Success		Cases reported	Success		Cases reported	Success		Cases reported	Success	
		N	(%)		N	(%)		N	(%)		N	(%)		N	(%)
<b>EU/EEA</b>															
Austria	13	12	(92.3)	17	11	(64.7)	19	10	(52.6)	18	15	(83.3)	6	6	(100.0)
Belgium	16	16	(100.0)	12	10	(83.3)	8	6	(75.0)	9	7	(77.8)	16	14	(87.5)
<i>Bulgaria</i>	28	17	(60.7)	22	12	(54.5)	29	18	(62.1)	28	17	(60.7)	13	6	(46.2)
Croatia	1	1	(100.0)	0	–	–	0	–	–	2	0	(0.0)	–	–	–
Cyprus	0	–	–	–	–	–	–	–	–	0	–	–	–	–	–
Czechia	9	3	(33.3)	5	2	(40.0)	8	3	(37.5)	12	4	(33.3)	6	4	(66.7)
Denmark	7	0	(0.0)	5	3	(60.0)	2	1	(50.0)	4	0	(0.0)	–	–	–
<i>Estonia</i>	40	25	(62.5)	25	18	(72.0)	35	28	(80.0)	31	23	(74.2)	27	21	(77.8)
Finland	9	4	(44.4)	6	4	(66.7)	5	2	(40.0)	3	2	(66.7)	3	2	(66.7)
France	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	131	54	(41.2)	121	45	(37.2)	138	75	(54.3)	129	79	(61.2)	101	56	(55.4)
Greece	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hungary	9	2	(22.2)	20	8	(40.0)	13	6	(46.2)	13	6	(46.2)	13	3	(23.1)
Iceland	0	–	–	0	–	–	0	–	–	0	–	–	–	–	–
Ireland	1	0	(0.0)	7	5	(71.4)	6	2	(33.3)	8	1	(12.5)	6	2	(33.3)
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	63	39	(61.9)	–	–	–	–	0	–	–	–	–	–	–	–
Liechtenstein	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
<i>Lithuania</i>	248	99	(39.9)	255	110	(43.1)	264	111	(42.0)	189	103	(54.5)	173	78	(45.1)
Luxembourg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Malta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Netherlands	10	6	(60.0)	15	11	(73.3)	10	8	(80.0)	6	5	(83.3)	9	8	(88.9)
Norway	6	6	(100.0)	11	10	(90.9)	9	8	(88.9)	6	5	(83.3)	2	1	(50.0)
Poland	45	16	(35.6)	–	–	–	–	0	–	–	0	–	–	0	–
Portugal	26	9	(34.6)	19	5	(26.3)	13	10	(76.9)	11	7	(63.6)	14	6	(42.9)
<i>Romania</i>	589	259	(44.0)	547	271	(49.5)	455	183	(40.2)	439	192	(43.7)	377	184	(48.8)
Slovakia	3	1	(33.3)	3	0	(0.0)	7	2	(28.6)	3	2	(66.7)	5	4	(80.0)
Slovenia	0	–	–	0	–	–	1	0	(0.0)	0	–	–	0	–	–
Spain	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sweden	26	24	(92.3)	25	23	(92.0)	12	10	(83.3)	14	14	(100.0)	10	9	(90.0)
<b>Subtotal EU/EEA</b>	<b>1280</b>	<b>593</b>	<b>(46.3)</b>	<b>1115</b>	<b>548</b>	<b>(49.1)</b>	<b>1034</b>	<b>483</b>	<b>(46.7)</b>	<b>925</b>	<b>482</b>	<b>(52.1)</b>	<b>781</b>	<b>404</b>	<b>(51.7)</b>
<b>Non-EU/EEA</b>															
Albania	3	3	(100.0)	1	1	(100.0)	0	–	–	4	3	(75.0)	2	1	–
Andorra	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Armenia	95	40	(42.1)	118	58	(49.2)	104	52	(50.0)	85	39	(45.9)	65	35	(53.8)
Azerbaijan	800	473	(59.1)	798	480	(60.2)	858	509	(59.3)	821	471	(57.4)	815	486	(59.6)
Belarus	1400	899	(64.2)	1180	796	(67.5)	1067	752	(70.5)	919	670	(72.9)	772	640	(82.9)
Bosnia and Herzegovina	1	1	(100.0)	0	–	–	–	–	–	–	–	–	–	–	–
<i>Georgia</i>	412	231	(56.1)	339	222	(65.5)	316	203	(64.2)	230	155	(67.4)	218	171	(78.4)
Israel	10	8	(80.0)	9	6	(66.7)	7	5	(71.4)	14	9	(64.3)	9	5	(55.6)
<i>Kazakhstan</i>	6482	5063	(78.1)	6260	4979	(79.5)	5338	4340	(81.3)	4336	3499	(80.7)	5892	4486	(76.1)
<i>Kyrgyzstan</i>	1162	624	(53.7)	1232	655	(53.2)	1166	643	(55.1)	1244	775	(62.3)	1173	841	(71.7)
Monaco	–	–	–	–	–	–	–	–	–	–	–	–	0	–	–
Montenegro	1	1	(100.0)	0	–	–	0	–	–	1	1	(100.0)	0	–	–
North Macedonia	5	2	(40.0)	2	1	(50.0)	1	0	(0.0)	2	1	(50.0)	2	0	(0.0)
<i>Republic of Moldova</i>	996	487	(48.9)	979	518	(52.9)	962	537	(55.8)	921	541	(58.7)	559	387	(69.2)
<i>Russian Federation</i>	22 607	12 117	(53.6)	22 593	12 141	(53.7)	22 901	12 629	(55.1)	28 706	14 757	(51.4)	32 574	16 447	(50.5)
San Marino	0	–	–	0	–	–	0	–	–	–	–	–	–	–	–
Serbia	10	9	(90.0)	12	9	(75.0)	10	7	(70.0)	–	–	–	0	–	–
Serbia excluding Kosovo <sup>1</sup>	5	4	(80.0)	10	7	(70.0)	6	4	(66.7)	–	–	–	–	–	–
Kosovo <sup>1</sup>	5	5	(100.0)	2	2	(100.0)	4	3	(75.0)	–	–	–	0	–	–
Switzerland	16	7	–	17	8	(47.1)	12	10	(83.3)	9	6	(66.7)	12	11	(91.7)
<i>Tajikistan</i>	682	398	(58.4)	681	440	(64.6)	546	352	(64.5)	727	510	(70.2)	588	454	(77.2)
Türkiye	230	156	(67.8)	211	131	(62.1)	202	139	(68.8)	180	99	(55.0)	155	7	(4.5)
<i>Turkmenistan</i>	210	142	(67.6)	557	303	(54.4)	343	226	(65.9)	549	248	(45.2)	649	358	(55.2)
<i>Ukraine</i>	7592	3855	(50.8)	7277	3590	(49.3)	6685	3407	(51.0)	5953	3006	(50.5)	7259	4460	(61.4)
United Kingdom	45	32	(71.1)	59	39	(66.1)	56	35	(62.5)	40	30	(75.0)	47	31	(66.0)
<i>Uzbekistan</i>	2149	1259	(58.6)	1986	1140	(57.4)	2265	1372	(60.6)	2039	1375	(67.4)	2040	1422	(69.7)
<b>Subtotal non-EU/EEA</b>	<b>44 908</b>	<b>25 807</b>	<b>(57.5)</b>	<b>44 311</b>	<b>25 517</b>	<b>(57.6)</b>	<b>42 839</b>	<b>25 218</b>	<b>(58.9)</b>	<b>46 780</b>	<b>26 195</b>	<b>(56.0)</b>	<b>52 831</b>	<b>30 242</b>	<b>(57.2)</b>
<b>Total European Region</b>	<b>46 188</b>	<b>26 400</b>	<b>(57.2)</b>	<b>45 426</b>	<b>26 065</b>	<b>(57.4)</b>	<b>43 873</b>	<b>25 701</b>	<b>(58.6)</b>	<b>47 705</b>	<b>26 677</b>	<b>(55.9)</b>	<b>53 612</b>	<b>30 646</b>	<b>(57.2)</b>
<b>Subtotal 18 HPCs</b>	<b>45 785</b>	<b>26 183</b>	<b>(57.2)</b>	<b>45 060</b>	<b>25 864</b>	<b>(57.4)</b>	<b>43 536</b>	<b>25 501</b>	<b>(58.6)</b>	<b>47 397</b>	<b>26 480</b>	<b>(55.9)</b>	<b>53 349</b>	<b>30 483</b>	<b>(57.1)</b>

Note: 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/multidrug-resistant tuberculosis.

<sup>a</sup> Includes cases that are RR/MDR but that also meet the pre-XDR or XDR case definitions (pre-XDR and XDR cases have not been excluded).

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

<sup>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

Table XII. Treatment success after 24 months of pre-XDR-TB<sup>a</sup> cases started on treatment,<sup>b</sup> European Region, 2015–2019

Country/area	2015			2016			2017			2018			2019		
	Pre-XDR TB cases (N)	Success		Pre-XDR TB cases (N)	Success		Pre-XDR TB cases (N)	Success		Pre-XDR TB cases (N)	Success		Pre-XDR TB cases (N)	Success	
		N	(%)		N	(%)		N	(%)		N	(%)		N	(%)
<b>EU/EEA</b>															
Austria	2	1	(50.0)	5	4	(80.0)	6	3	(50.0)	5	3	(60.0)	2	2	(100.0)
Belgium	4	4	(100.0)	0	–	–	0	–	–	5	4	(80.0)	2	2	(100.0)
Bulgaria	6	3	(50.0)	3	0	(0.0)	4	2	(50.0)	5	2	(40.0)	4	0	(0.0)
Croatia	1	1	(100.0)	0	–	–	0	–	–	0	–	–	–	–	–
Cyprus	0	–	–	–	–	–	–	–	–	0	–	–	0	–	–
Czech Republic	5	1	(20.0)	0	–	–	2	1	(50.0)	3	0	(0.0)	0	–	–
Denmark	2	0	(0.0)	0	–	–	0	–	–	0	–	–	0	–	–
Estonia	14	7	(50.0)	6	3	(50.0)	11	6	(54.5)	10	9	(90.0)	5	3	(60.0)
Finland	1	0	(0.0)	2	1	(50.0)	0	–	–	0	–	–	0	–	–
France	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	24	8	(33.3)	24	8	(33.3)	15	7	(46.7)	25	14	(56.0)	14	5	(35.7)
Greece	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hungary	3	1	(33.3)	10	5	(50.0)	5	2	(40.0)	6	1	(16.7)	6	0	(0.0)
Iceland	0	–	–	0	–	–	0	–	–	0	–	–	–	–	–
Ireland	0	–	–	2	1	(50.0)	1	1	(100.0)	0	–	–	0	–	–
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Latvia	18	10	(55.6)	–	–	–	–	–	–	–	–	–	–	–	–
Liechtenstein	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Lithuania	100	19	(19.0)	88	11	(12.5)	108	12	(11.1)	76	23	(30.3)	76	4	(5.3)
Luxembourg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Malta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Netherlands	0	–	–	0	–	–	1	0	(0.0)	2	2	(100.0)	0	–	–
Norway	0	–	–	0	–	–	2	2	(100.0)	1	1	(100.0)	–	–	–
Poland	9	4	(44.4)	–	–	–	–	–	–	–	–	–	–	–	–
Portugal	6	1	(16.7)	4	0	(0.0)	2	2	(100.0)	0	–	–	0	–	–
Romania	123	48	(39.0)	96	34	(35.4)	76	8	(10.5)	69	10	(14.5)	50	11	(22.0)
Slovakia	0	–	–	1	0	(0.0)	2	0	(0.0)	1	0	(0.0)	0	–	–
Slovenia	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Spain	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sweden	2	1	(50.0)	6	4	(66.7)	1	0	(0.0)	0	–	–	0	–	–
<b>Subtotal EU/EEA</b>	<b>320</b>	<b>109</b>	<b>(34.1)</b>	<b>247</b>	<b>71</b>	<b>(28.7)</b>	<b>247</b>	<b>46</b>	<b>(18.6)</b>	<b>227</b>	<b>69</b>	<b>(30.4)</b>	<b>159</b>	<b>27</b>	<b>(17.0)</b>
<b>Non-EU/EEA</b>															
Albania	–	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Andorra	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Armenia	8	4	(50.0)	10	3	(30.0)	16	7	(43.8)	14	3	(21.4)	12	6	(50.0)
Azerbaijan	–	–	–	–	–	–	182	115	(63.2)	189	116	(61.4)	186	113	(60.8)
Belarus	508	268	(52.8)	393	207	(52.7)	419	256	(61.1)	383	293	(76.5)	287	206	(71.8)
Bosnia and Herzegovina	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Georgia	62	35	(56.5)	55	31	(56.4)	47	28	(59.6)	54	29	(53.7)	53	30	(56.6)
Israel	1	1	(100.0)	2	2	(100.0)	1	0	(0.0)	2	1	(50.0)	1	1	(100.0)
Kazakhstan	391	126	(32.2)	435	207	(47.6)	300	145	(48.3)	386	293	(75.9)	655	476	(72.7)
Kyrgyzstan	51	9	(17.6)	68	10	(14.7)	157	91	(58.0)	105	55	(52.4)	97	60	(61.9)
Monaco	–	–	–	–	–	–	–	–	–	–	–	–	0	–	–
Montenegro	0	–	–	1	1	(100.0)	1	1	(100.0)	0	–	–	0	–	–
North Macedonia	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Republic of Moldova	32	5	(15.6)	65	17	(26.2)	62	20	(32.3)	62	32	(51.6)	37	21	(56.8)
Russian Federation	2882	960	(33.3)	2909	1094	(37.6)	4140	1710	(41.3)	27	11	(40.7)	39	11	(28.2)
San Marino	0	–	–	0	–	–	0	–	–	–	–	–	–	–	–
Serbia	0	–	–	1	0	(0.0)	0	–	–	–	–	–	–	–	–
Serbia excluding Kosovo <sup>1</sup>	0	–	–	1	0	(0.0)	0	–	–	–	–	–	–	–	–
Kosovo <sup>1</sup>	0	–	–	0	–	–	0	–	–	–	–	–	–	–	–
Switzerland	0	–	–	0	–	–	0	–	–	1	1	(100.0)	–	–	–
Tajikistan	–	–	–	43	20	(46.5)	250	155	(62.0)	63	42	(66.7)	68	53	(77.9)
Türkiye	3	2	(66.7)	9	5	(55.6)	2	0	(0.0)	8	1	(12.5)	8	0	(0.0)
Turkmenistan	–	–	–	–	–	–	5	2	(40.0)	28	8	(28.6)	113	59	(52.2)
Ukraine	1206	424	(35.2)	1353	501	(37.0)	1376	473	(34.4)	1479	505	(34.1)	0	–	–
United Kingdom	8	2	(25.0)	7	3	(42.9)	3	1	(33.3)	5	2	(40.0)	8	6	(75.0)
Uzbekistan	147	34	(23.1)	184	91	(49.5)	258	162	(62.8)	404	280	(69.3)	627	411	(65.6)
<b>Subtotal non-EU/EEA</b>	<b>5299</b>	<b>1870</b>	<b>(35.3)</b>	<b>5535</b>	<b>2192</b>	<b>(39.6)</b>	<b>7219</b>	<b>3166</b>	<b>(43.9)</b>	<b>3210</b>	<b>1672</b>	<b>(52.1)</b>	<b>2191</b>	<b>1453</b>	<b>(66.3)</b>
<b>Total European Region</b>	<b>5619</b>	<b>1979</b>	<b>(35.2)</b>	<b>5782</b>	<b>2263</b>	<b>(39.1)</b>	<b>7466</b>	<b>3212</b>	<b>(43.0)</b>	<b>3437</b>	<b>1741</b>	<b>(50.7)</b>	<b>2350</b>	<b>1480</b>	<b>(63.0)</b>
<b>Subtotal 18 HPCs</b>	<b>5551</b>	<b>1954</b>	<b>(35.2)</b>	<b>5717</b>	<b>2234</b>	<b>(39.1)</b>	<b>7413</b>	<b>3192</b>	<b>(43.1)</b>	<b>3362</b>	<b>1712</b>	<b>(50.9)</b>	<b>2317</b>	<b>1464</b>	<b>(63.2)</b>

Note: 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.

Pre-XDR-TB: pre-extensively drug-resistant tuberculosis.

<sup>a</sup> Pre-XDR-TB defined as resistance to rifampicin (RR/MDR-TB) as well as resistance to any fluoroquinolone. Includes cases that are pre-XDR-TB but that also meet the XDR case definition (XDR cases have not been excluded).

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

<sup>1</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

Table XIII. Treatment success after 36 months of XDR-TB<sup>a</sup> cases notified in EU/EEA, 2014–2018

Country/area	2014			2015			2016			2017			2018		
	XDR-TB cases (N)	Success		XDR-TB cases (N)	Success		XDR-TB cases (N)	Success		XDR-TB cases (N)	Success		XDR-TB cases (N)	Success	
		N	(%)		N	(%)		N	(%)		N	(%)		N	(%)
<b>EU/EEA</b>															
Austria	2	2	(100.0)	1	1	(100.0)	2	2	(100.0)	2	0	(0.0)	4	3	(75.0)
Belgium	3	3	(100.0)	4	4	(100.0)	0	–	–	0	–	–	1	1	(100.0)
<i>Bulgaria</i>	5	2	(40.0)	1	1	(100.0)	1	0	(0.0)	4	2	(50.0)	–	–	–
Croatia	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Cyprus	0	–	–	0	–	–	–	–	–	0	–	–	0	–	–
Czechia	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Denmark	0	–	–	2	0	(0.0)	0	–	–	0	–	–	0	–	–
<i>Estonia</i>	6	3	(50.0)	6	3	(50.0)	0	–	–	3	1	(33.3)	5	4	(80.0)
Finland	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
France	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Germany	11	3	(27.3)	16	6	(37.5)	19	6	(31.6)	13	5	(38.5)	14	8	(57.1)
Greece	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hungary	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Iceland	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Ireland	0	–	–	0	–	–	–	–	–	–	–	–	0	–	–
Italy	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<i>Latvia</i>	8	7	(87.5)	–	–	–	–	–	–	–	–	–	–	–	–
Liechtenstein	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
<i>Lithuania</i>	0	–	–	0	–	–	0	–	–	1	0	(0.0)	3	2	(66.7)
Luxembourg	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Malta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Netherlands	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Norway	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Poland	0	–	–	0	–	–	0	–	–	0	–	–	–	–	–
Portugal	1	0	(0.0)	2	0	(0.0)	2	0	(0.0)	2	2	(100.0)	0	–	–
<i>Romania</i>	0	–	–	0	–	–	0	–	–	1	0	(0.0)	0	–	–
Slovakia	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Slovenia	0	–	–	0	–	–	0	–	–	0	–	–	0	–	–
Spain	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sweden	1	0	(0.0)	1	1	(100.0)	3	1	(33.3)	0	–	–	0	–	–
<b>Total EU/EEA</b>	<b>37</b>	<b>20</b>	<b>(54.1)</b>	<b>33</b>	<b>16</b>	<b>(48.5)</b>	<b>27</b>	<b>9</b>	<b>(33.3)</b>	<b>26</b>	<b>10</b>	<b>(38.5)</b>	<b>27</b>	<b>18</b>	<b>(66.7)</b>

Note: WHO European Region 18 TB high-priority countries 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.

TESSy: the European Surveillance System.

XDR TB: extensively drug-resistant tuberculosis.

<sup>a</sup> XDR-TB defined as resistance to rifampicin and to at least one fluoroquinolone (pre-XDR-TB) as well as resistance to at least one additional Group A drug. Group A drugs include levofloxacin, moxifloxacin, bedaquiline and linezolid. For EU/EEA countries, linezolid resistance is not yet reported to TESSy, therefore XDR-TB is assessed on resistance to levofloxacin, moxifloxacin and/or bedaquiline (in addition to meeting pre-XDR-TB criteria).

**Table XIV. New and relapsed TB cases tested using WHO-recommended rapid diagnostics such as Xpert MTB/RIF,<sup>a</sup> European Region, 2017–2021**

Country/area	2017			2018			2019			2020			2021			
	New and relapse TB cases <sup>b</sup>	Cases tested using WHO recommended rapid diagnostics <sup>c</sup>		New and relapse TB cases <sup>b</sup>	Cases tested using WHO recommended rapid diagnostics <sup>c</sup>		New and relapse TB cases <sup>b</sup>	Cases tested using WHO recommended rapid diagnostics <sup>c</sup>		New and relapse TB cases <sup>b</sup>	Cases tested using WHO recommended rapid diagnostics <sup>c</sup>		New and relapse TB cases <sup>b</sup>	Cases tested using WHO recommended rapid diagnostics <sup>c</sup>		
		N	N		(%)	N		N	(%)		N	N		(%)	N	N
<b>EU/EEA</b>																
Austria	561	444	(79.1)	470	376	(80.0)	464	366	(78.9)	382	263	(68.8)	387	281	(72.6)	
Belgium <sup>d</sup>	911	484	(53.1)	910	522	(57.4)	890	613	(68.9)	774	531	(68.6)	817	586	(71.7)	
<i>Bulgaria</i>	1408	5	(0.4)	1290	7	(0.5)	1288	17	(1.3)	887	2	(0.2)	673	2	(0.3)	
Croatia	372	0	(0.0)	364	0	(0.0)	295	0	(0.0)	188	0	(0.0)	154	0	(0.0)	
Cyprus	52	14	(26.9)	51	17	(33.3)	66	30	(45.5)	34	12	(35.3)	48	21	(43.8)	
Czechia	495	334	(67.5)	434	274	(63.1)	455	313	(68.8)	356	255	(71.6)	352	264	(75.0)	
Denmark <sup>d</sup>	253	198	(78.3)	270	262	(97.0)	263	241	(91.6)	207	199	(96.1)	191	183	(95.8)	
<i>Estonia</i>	172	138	(80.2)	145	127	(87.6)	147	132	(89.8)	120	106	(88.3)	107	87	(81.3)	
Finland	241	90	(37.3)	226	106	(46.9)	225	130	(57.8)	174	107	(61.5)	170	105	(61.8)	
France	5006	0	(0.0)	4760	0	(0.0)	4924	0	(0.0)	4313	0	(0.0)	4042	0	(0.0)	
Germany	5369	4327	(80.6)	5332	4506	(84.5)	4651	4025	(86.5)	4042	3541	(87.6)	3792	3267	(86.2)	
Greece	434	204	(47.0)	406	181	(44.6)	434	219	(50.5)	380	96	(25.3)	195	91	(46.7)	
Hungary	650	0	(0.0)	602	0	(0.0)	528	0	(0.0)	384	0	(0.0)	314	0	(0.0)	
Iceland	13	12	(92.3)	8	8	(100.0)	13	12	(92.3)	12	5	(41.7)	–	–	–	
Ireland <sup>d</sup>	283	124	(43.8)	290	140	(48.3)	238	115	(48.3)	224	105	(46.9)	210	91	(43.3)	
Italy	3828	0	(0.0)	3777	0	(0.0)	3185	0	(0.0)	2163	0	(0.0)	2378	235	(9.9)	
<i>Latvia</i>	543	178	(32.8)	–	–	–	–	–	–	–	–	–	255	203	(79.6)	
Liechtenstein	1	1	(100.0)	1	1	(100.0)	–	–	–	2	2	(100.0)	1	1	(100.0)	
<i>Lithuania</i>	1268	0	(0.0)	1063	0	(0.0)	1006	0	(0.0)	688	0	(0.0)	628	0	(0.0)	
Luxembourg	32	0	(0.0)	42	0	(0.0)	48	0	(0.0)	32	0	(0.0)	34	0	(0.0)	
Malta	42	13	(31.0)	55	0	(0.0)	98	0	(0.0)	140	0	(0.0)	54	0	(0.0)	
Netherlands	772	576	(74.6)	780	582	(74.6)	739	573	(77.5)	613	499	(81.4)	671	523	(77.9)	
Norway <sup>d</sup>	237	183	(77.2)	188	150	(79.8)	154	129	(83.8)	143	121	(84.6)	140	117	(83.6)	
Poland	5535	1037	(18.7)	5196	1054	(20.3)	4983	1094	(22.0)	3150	876	(27.8)	3446	1164	(33.8)	
Portugal	1870	403	(21.6)	1877	474	(25.3)	1849	546	(29.5)	1475	459	(31.1)	1463	522	(35.7)	
<i>Romania</i>	12303	3214	(26.1)	11581	2757	(23.8)	11070	2840	(25.7)	7189	2231	(31.0)	7591	2456	(32.4)	
Slovakia	228	56	(24.6)	273	66	(24.2)	214	60	(28.0)	153	45	(29.4)	134	48	(35.8)	
Slovenia	112	95	(84.8)	98	81	(82.7)	98	84	(85.7)	75	62	(82.7)	79	68	(86.1)	
Spain	4522	1228	(27.2)	4614	1181	(25.6)	4395	1260	(28.7)	3526	1253	(35.5)	3370	1324	(39.3)	
Sweden	487	412	(84.6)	474	326	(68.8)	478	386	(80.8)	312	273	(87.5)	344	290	(84.3)	
<b>Subtotal EU/EEA</b>	<b>48 000</b>	<b>13 770</b>	<b>(28.7)</b>	<b>45 577</b>	<b>13 198</b>	<b>(29.0)</b>	<b>43 198</b>	<b>13 185</b>	<b>(30.5)</b>	<b>32 138</b>	<b>11 043</b>	<b>(34.4)</b>	<b>32 040</b>	<b>11 929</b>	<b>(37.2)</b>	
<b>Non-EU/EEA</b>																
Albania	503	0	–	440	0	–	412	135	(32.8)	240	138	(57.5)	269	158	(58.7)	
Andorra	1	1	(100.0)	2	2	(100.0)	5	5	(100.0)	2	2	(100.0)	2	0	(0.0)	
<i>Armenia</i>	841	631	(75.0)	734	619	(84.3)	621	512	(82.4)	394	326	(82.7)	398	326	(81.9)	
<i>Azerbaijan</i>	5231	2869	(54.8)	5038	3472	(68.9)	4823	4096	(84.9)	3683	3033	(82.4)	3663	3125	(85.3)	
<i>Belarus</i>	2781	2452	(88.2)	2359	2201	(93.3)	2207	2035	(92.2)	1514	1426	(94.2)	1484	1401	(94.4)	
Bosnia and Herzegovina	766	0	(0.0)	666	0	(0.0)	580	0	–	357	0	–	362	1	–	
<i>Georgia</i>	2597	2099	(80.8)	2316	1940	(83.8)	2169	1824	(84.1)	1671	1468	(87.9)	1501	1403	(93.5)	
Israel	234	0	–	292	0	–	217	0	–	158	0	–	213	0	–	
<i>Kazakhstan</i>	12 449	10 226	(82.1)	12 832	11 454	(89.3)	12 501	11 513	(92.1)	9 603	9 219	(96.0)	9 757	9 630	(98.7)	
<i>Kyrgyzstan</i>	6 687	4 330	(64.8)	6 338	3 910	(61.7)	6 138	4 575	(74.5)	4 241	2 495	(58.8)	4 596	2 080	(45.3)	
Monaco	0	0	–	1	0	–	0	0	–	0	0	–	0	0	–	
Montenegro	75	48	(64.0)	84	64	(76.2)	80	57	(71.3)	40	35	(87.5)	80	68	(85.0)	
North Macedonia	216	152	(70.4)	217	147	(67.7)	199	0	(0.0)	143	0	(0.0)	143	112	(78.3)	
<i>Republic of Moldova</i>	3 358	3 129	(93.2)	3 022	2 857	(94.5)	2 809	2 809	(100.0)	1 767	1 664	(94.2)	2 067	1 912	(92.5)	
<i>Russian Federation</i>	84 510	65 843	(77.9)	78 258	57 344	(73.3)	73 328	58 300	(79.5)	58 723	47 901	(81.6)	56 922	48 208	(84.7)	
San Marino	0	0	–	0	0	–	0	0	–	0	0	–	0	0	–	
Serbia	712	275	(38.6)	689	399	(57.9)	605	414	(68.4)	439	438	(99.8)	445	101	(22.7)	
Serbia excluding Kosovo <sup>e</sup>	0	0	–	0	0	–	0	0	–	0	0	–	0	0	–	
Kosovo <sup>e</sup>	712	275	(38.6)	689	399	(57.9)	605	414	(68.4)	439	438	(99.8)	445	101	(22.7)	
Switzerland	529	354	(66.9)	0	0	–	402	304	(75.6)	0	0	–	355	243	(68.5)	
<i>Tajikistan</i>	5 895	3 075	(52.2)	5 726	4 235	(74.0)	5 755	4 915	(85.4)	4 148	3 502	(84.4)	4 158	3 544	(85.2)	
<i>Türkiye</i>	0	0	–	0	0	–	0	0	–	0	0	–	9 047	318	(3.5)	
<i>Turkmenistan</i>	1 968	1 488	(75.6)	2 157	1 611	(74.7)	2 117	1 650	(77.9)	1 918	711	(37.1)	1 878	889	(47.3)	
<i>Ukraine</i>	0	0	–	26 512	23 093	(87.1)	25 379	22 537	(88.8)	17 533	16 774	(95.7)	18 307	17 451	(95.3)	
United Kingdom	5 248	397	(7.6)	4 775	367	(7.7)	4 803	492	(10.2)	4 185	475	(11.4)	4 795	807	(16.8)	
<i>Uzbekistan</i>	16 842	11 368	(67.5)	16 413	14 390	(87.7)	16 272	12 074	(74.2)	12 111	11 062	(91.3)	13 544	13 273	(98.0)	
<b>Subtotal non-EU/EEA</b>	<b>151 443</b>	<b>108 737</b>	<b>(71.8)</b>	<b>168 871</b>	<b>128 105</b>	<b>(75.9)</b>	<b>161 422</b>	<b>128 247</b>	<b>(79.4)</b>	<b>122 870</b>	<b>100 669</b>	<b>(81.9)</b>	<b>133 986</b>	<b>105 050</b>	<b>(78.4)</b>	
<b>Total European Region</b>	<b>199 443</b>	<b>122 507</b>	<b>(61.4)</b>	<b>214 448</b>	<b>141 303</b>	<b>(65.9)</b>	<b>204 620</b>	<b>141 432</b>	<b>(69.1)</b>	<b>155 008</b>	<b>111 712</b>	<b>(72.1)</b>	<b>166 026</b>	<b>116 979</b>	<b>(70.5)</b>	
<b>Subtotal 18 HPCs</b>	<b>158 853</b>	<b>111 045</b>	<b>(69.9)</b>	<b>175 784</b>	<b>130 017</b>	<b>(74.0)</b>	<b>167 630</b>	<b>129 829</b>	<b>(77.4)</b>	<b>126 190</b>	<b>101 920</b>	<b>(80.8)</b>	<b>136 576</b>	<b>106 308</b>	<b>(77.8)</b>	

Note: 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> See: WHO (2013). Automated real-time nucleic acid amplification technology for rapid and simultaneous detection of tuberculosis and rifampicin resistance.

<sup>b</sup> Policy update. Geneva: World Health Organization (WHO/HTM/TB/2013.16; World Health Organization (WHO). 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, WHO, 2013. Available at: <https://apps.who.int/iris/handle/10665/112472>

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

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

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

<sup>f</sup> All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).



## 8. Country profiles

**Abbreviations used in country profiles**

ART	antiretroviral therapy
C+	culture-positive
DR-TB	drug-resistant tuberculosis
DRS	drug-resistance surveillance
DST	drug-susceptibility testing
MDR-TB	multidrug-resistant tuberculosis
EQA	external quality assessment
pre-XDR-TB	pre-extensively drug-resistant tuberculosis
RR/MDR-TB	rifampicin-resistant or multidrug-resistant tuberculosis
RR-TB	rifampicin-resistant tuberculosis
TB	tuberculosis

# Albania

Total population estimate 2021 by United Nations Statistical Database: 2 854 710

## TB cases, 2021

### Notifications

Total number of cases	269
Notification rate per 100 000	9.4
New <sup>a</sup> and relapse	269
New <sup>a</sup> and relapse notification rate per 100 000	9.4
Pulmonary	219 (81.4%)
of which microscopy-positive	-
of which laboratory-confirmed	173 (79.0%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	43.8 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	261 (97.0%)

### Estimates

Estimated new and relapse cases N, best [low-high]	480 [410-550]
--	---------------

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

## Drug-resistance surveillance and TB/HIV coinfection, 2020

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	158 (91.3%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary cases N, best [low-high]	4 [2-6]
Pulmonary RR/MDR-TB cases notified	6 (3.8%)
of which pre-XDR-TB cases	0 (0.0%)
Notified RR/MDR-TB of which pre-XDR-TB cases	0 (0.0%)
TB cases tested for HIV	244 (90.7%)
HIV-positive TB cases of these on ART	1 (0.4%) 1 (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.

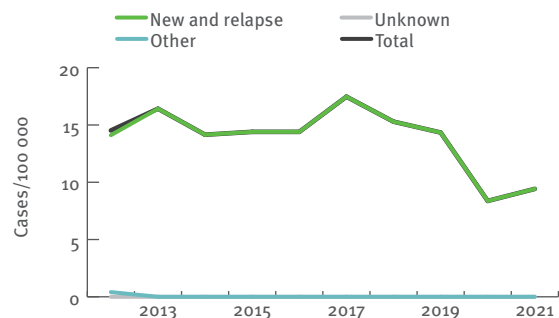
## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	240	4
Success	213 (88.8%)	1 (50.0%)
Died	14 (5.8%)	1 (50.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	12 (5.0%)	0 (0.0%)
Not evaluated	1 (0.4%)	0 (0.0%)

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

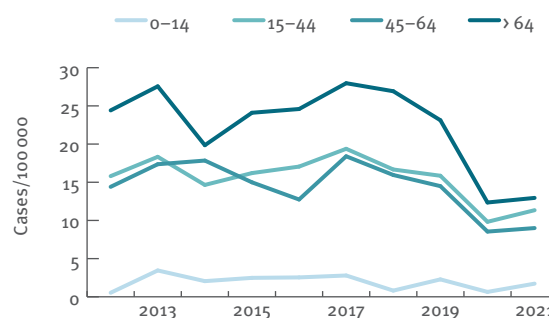
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012-2021



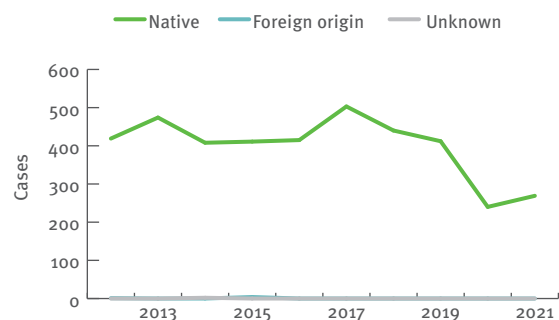
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012-2021

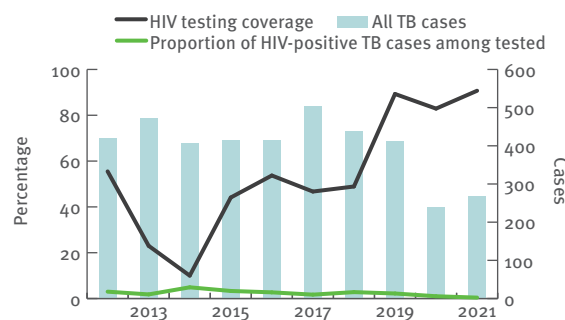


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012-2021

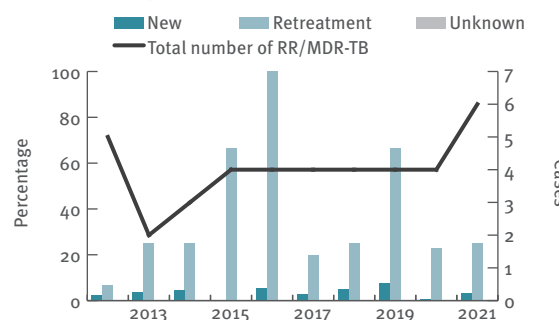


## TB/HIV coinfection, 2012-2021



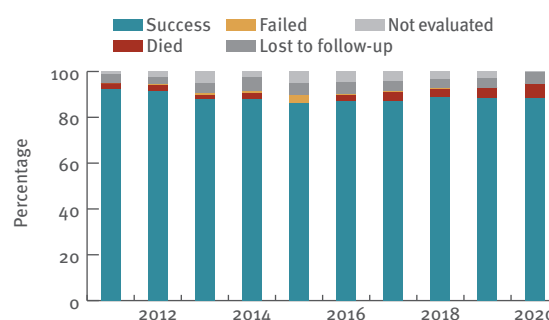
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011-2020



Note: 2011 cohort includes new cases only.

# Andorra

Total population estimate 2021 by United Nations Statistical Database: 79 034

## TB cases, 2021

### Notifications

Total number of cases	2
Notification rate per 100 000	2.5
New <sup>a</sup> and relapse	2
New <sup>a</sup> and relapse notification rate per 100 000	2.5
Pulmonary	2 (100.0%)
of which microscopy-positive	- -
of which laboratory-confirmed	2 (100.0%)
Laboratory-confirmed TB cases	- -
Mean age of new native TB cases	45.0 years
Mean age of new foreign TB cases	- -
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	2 (100.0%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	2 [2-3]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	2 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	0 [0-0]
Pulmonary RR/MDR-TB cases notified	0 (0.0%)
of which pre-XDR-TB cases	- -
Notified RR/MDR-TB	0 (0.0%)
of which pre-XDR-TB cases	- -
TB cases tested for HIV	0 (0.0%)
HIV-positive TB cases	- -
of these on ART	- -

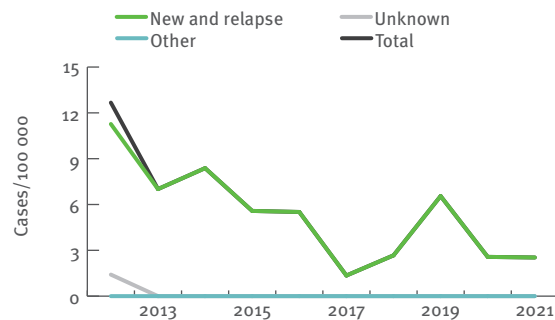
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	2	0
Success	2 (100.0%)	- -
Died	0 (0.0%)	- -
Failed	0 (0.0%)	- -
Lost to follow-up	0 (0.0%)	- -
Not evaluated	0 (0.0%)	- -

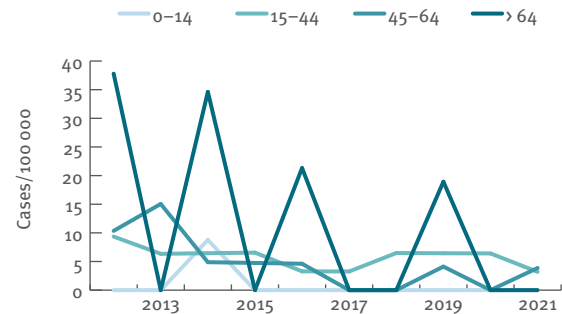
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



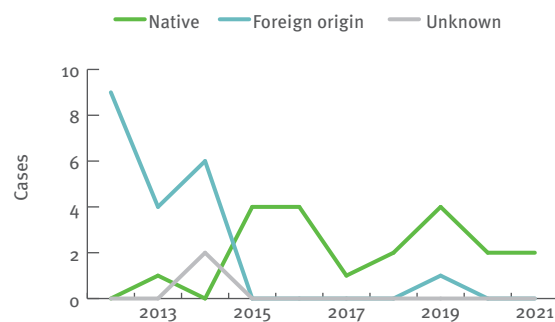
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012–2021

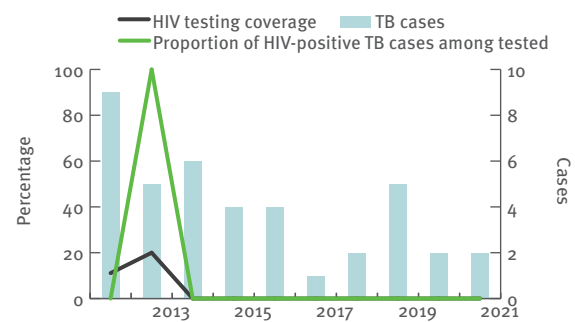


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

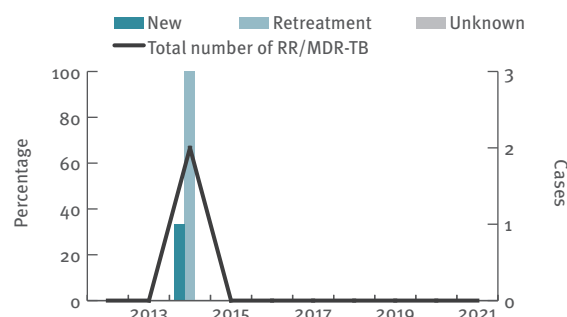


## TB/HIV coinfection, 2012–2021



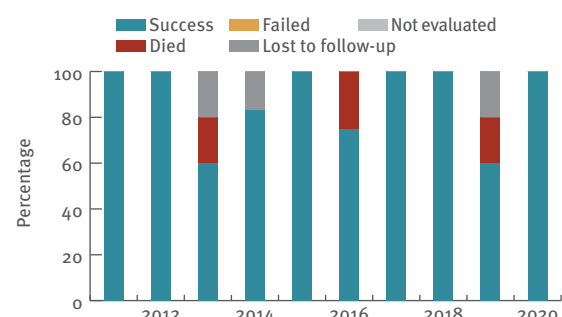
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort includes new cases only.



# Armenia

Total population estimate 2021 by United Nations Statistical Database: 2 790 973

## TB cases, 2021

### Notifications

Total number of cases	426
Notification rate per 100 000	15.3
New <sup>a</sup> and relapse	398
New <sup>a</sup> and relapse notification rate per 100 000	14.3
Pulmonary	315 (73.9%)
of which microscopy-positive of which laboratory-confirmed	256 (81.3%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	44.8 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	2 (0.5%)
New (not previously treated)	369 (86.6%)

### Estimates

Estimated new and relapse cases N, best [low-high]	770 [560-1000]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	256 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	63 [56-70]
Pulmonary RR/MDR-TB cases notified	64 (25.0%)
of which pre-XDR-TB cases	17 (29.8%)
Notified RR/MDR-TB	64 -
of which pre-XDR-TB cases	17 (26.6%)
TB cases tested for HIV	335 (84.2%)
HIV-positive TB cases of these on ART	36 (10.7%)

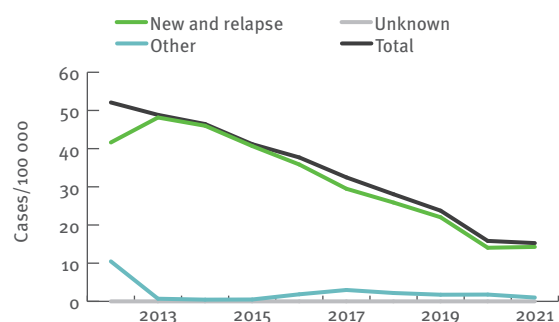
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	303	65
Success	244 (80.5%)	35 (53.8%)
Died	24 (7.9%)	12 (18.5%)
Failed	14 (4.6%)	7 (10.8%)
Lost to follow-up	19 (6.3%)	10 (15.4%)
Not evaluated	2 (0.7%)	1 (1.5%)

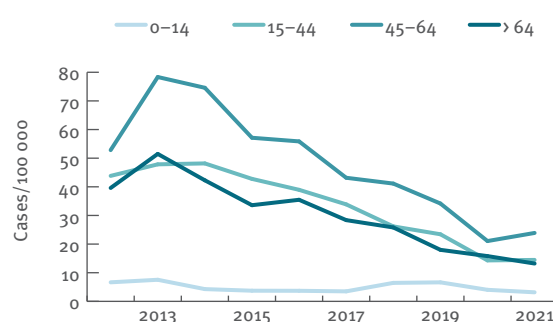
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012-2021



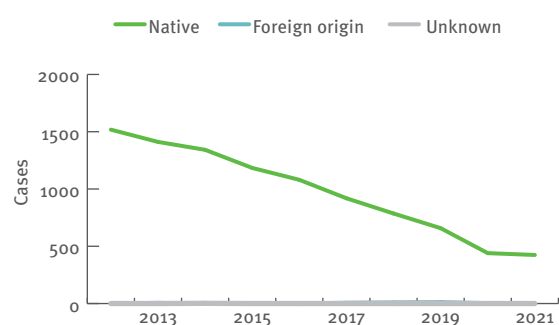
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012-2021

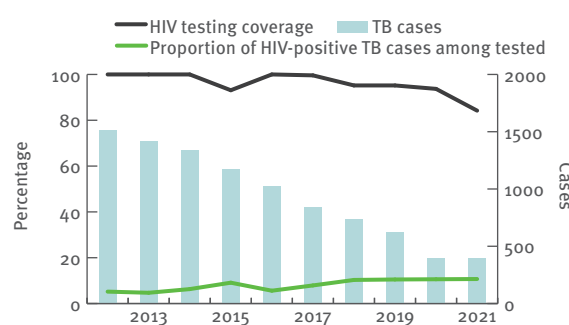


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012-2021

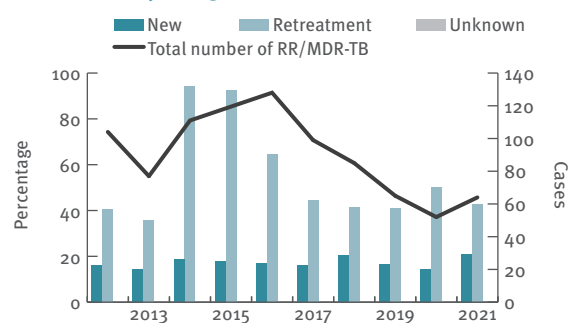


## TB/HIV coinfection, 2012-2021



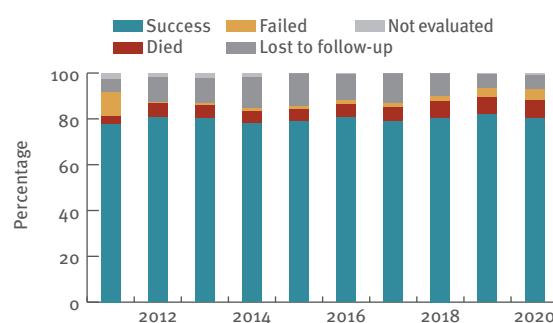
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011-2020



Note: 2011 cohort includes new cases only.

# Austria

Total population at 23 April 2022 by EUROSTAT: 8 932 664

## TB cases, 2021

### Notifications

Total number of cases	396
Notification rate per 100 000	4.4
New <sup>a</sup> and relapse	387
New <sup>a</sup> and relapse notification rate per 100 000	4.3
Pulmonary	292 (73.7%)
of which microscopy-positive	91 (31.2%)
of which laboratory-confirmed	242 (82.9%)
Laboratory-confirmed TB cases	307 (77.5%)
Mean age of new native TB cases	58.5 years
Mean age of new foreign TB cases	37.2 years
Foreign origin of all TB cases	252 (63.6%)
New (not previously treated)	288 (72.7%)

### Estimates

Estimated new and relapse cases N, best [low-high]	450 [380-510]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data-reporting	Yes
Cases with DST results	284 (92.5%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	22 [15-29]
Pulmonary RR/MDR-TB cases notified	8 (3.6%)
of which pre-XDR-TB cases	1 (12.5%)
Notified RR/MDR-TB	9 (3.2%)
of which pre-XDR-TB cases	2 (22.2%)
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.

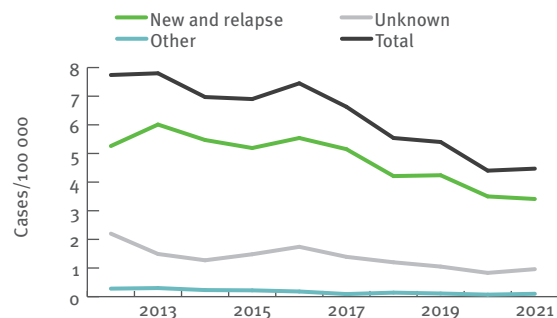
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	176	6
Success	134 (76.1%)	6 (100.0%)
Died	14 (8.0%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	0 (0.0%)	0 (0.0%)
Still on treatment	12 (6.8%)	0 (0.0%)
Not evaluated	16 (9.1%)	0 (0.0%)

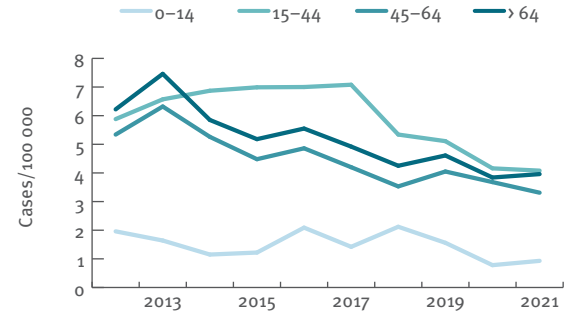
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

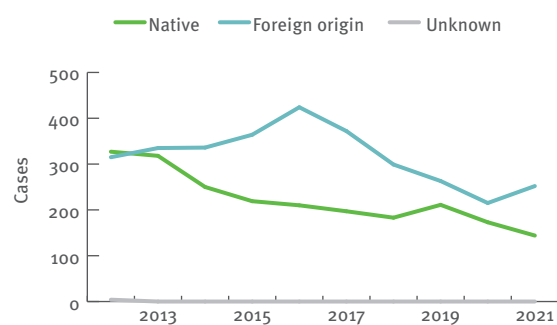
## TB notification rates by previous treatment history, 2012-2021



## New and relapse TB cases – notification rates by age group, 2012-2021



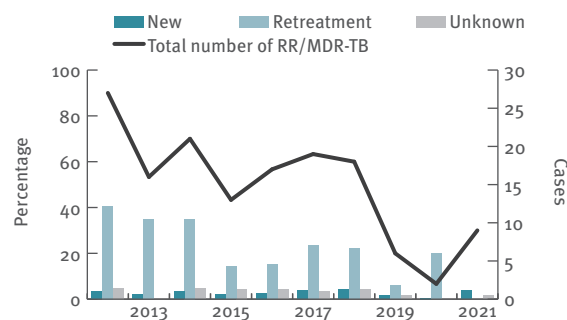
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

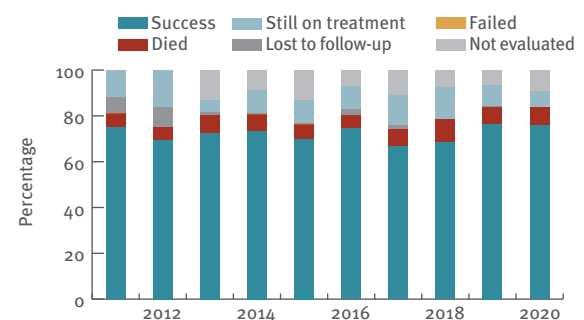
Data not reported

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# Azerbaijan

Total population estimate 2021 by United Nations Statistical Database: 10 312 992

## TB cases, 2021

### Notifications

Total number of cases	4944
Notification rate per 100 000	47.9
New <sup>a</sup> and relapse	3663
New <sup>a</sup> and relapse notification rate per 100 000	35.5
Pulmonary	4390 (88.8%)
of which microscopy-positive	-
of which laboratory-confirmed	3634 (82.8%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	28 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	(0.0%) (0.0%)
New (not previously treated)	2535 (51.3%)

### Estimates

Estimated new and relapse cases N, best [low-high]	6400 (5100-8000)
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	3568 (98.2%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	600 [560-630]
Pulmonary RR/MDR-TB cases notified	659 (18.5%)
of which pre-XDR-TB cases	114 (19.3%)
Notified RR/MDR-TB	1040 -
of which pre-XDR-TB cases	171 (16.4%)
TB cases tested for HIV	4448 (90.0%)
HIV-positive TB cases	92 (2.1%)
of these on ART	90 (97.8%)

<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.

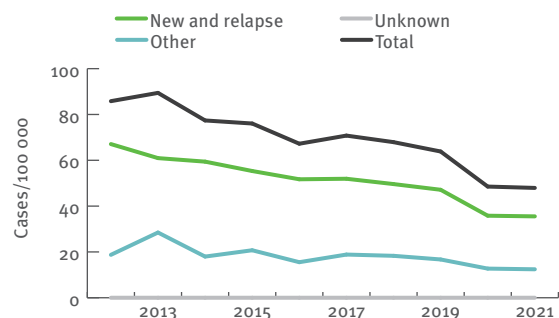
## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	1180	815
Success	973 (82.5%)	486 (59.6%)
Died	62 (5.3%)	87 (10.7%)
Failed	51 (4.3%)	99 (12.1%)
Lost to follow-up	86 (7.3%)	143 (17.5%)
Not evaluated	8 (0.7%)	0 (0.0%)

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

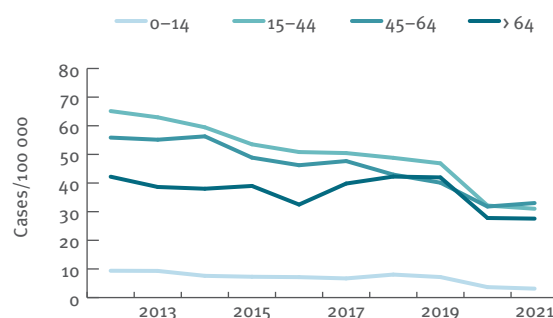
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012-2021



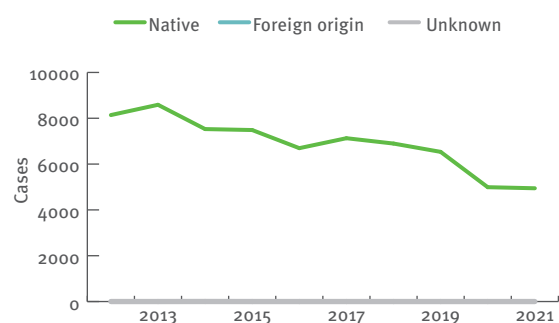
Note: starting from 2013, cases with unknown history are included in new and relapse.

## New and relapse TB cases – notification rates by age group, 2012-2021

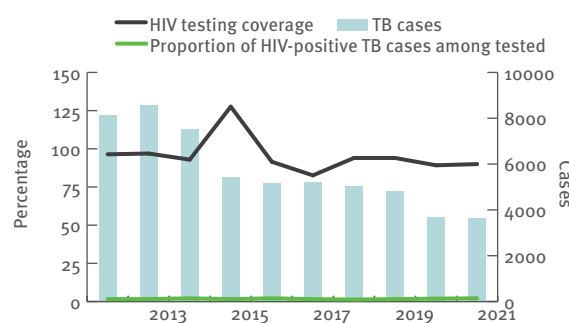


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012-2021

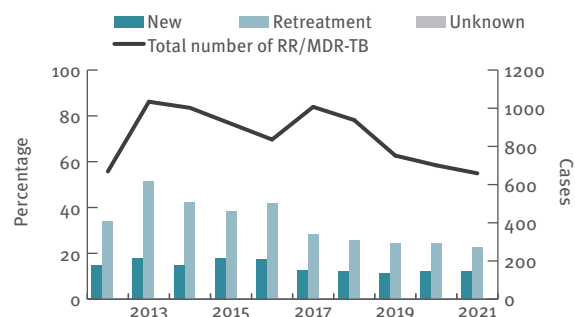


## TB/HIV coinfection, 2012-2021



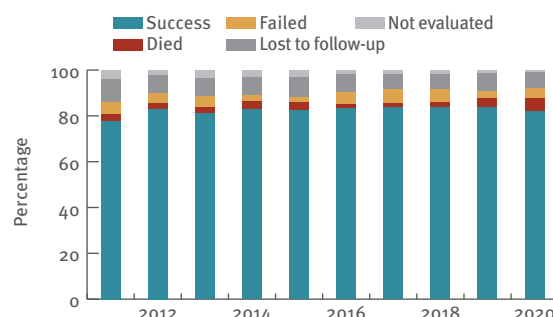
Note: data up to 2018 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011-2020



Note: 2011 cohort includes new cases only.

# Belarus

Total population estimate 2021 by United Nations Statistical Database: 9 578 168

## TB cases, 2021

### Notifications

Total number of cases	1696
Notification rate per 100 000	17.7
New <sup>a</sup> and relapse	1484
New <sup>a</sup> and relapse notification rate per 100 000	15.5
Pulmonary	1593 (93.9%)
of which microscopy-positive	-
of which laboratory-confirmed	1531 (96.1%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	49 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	1176 (69.3%)

### Estimates

Estimated new and relapse cases N, best [low-high]	2900 [2200-3700]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug-resistance surveillance and TB/HIV coinfection, 2020

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	1531 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	760 [730-780]
Pulmonary RR/MDR-TB cases notified	757 (49.4%)
of which pre-XDR-TB cases	310 (41.0%)
Notified RR/MDR-TB	801 -
of which pre-XDR-TB cases	310 (38.7%)
TB cases tested for HIV	1484 (100.0%)
HIV-positive TB cases	128 (8.6%)
of these on ART	111 (86.7%)

<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.

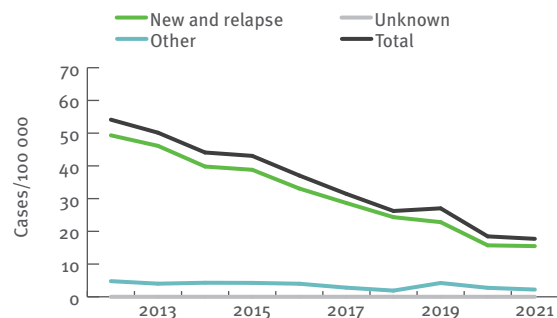
## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	833	772
Success	710 (85.2%)	640 (82.9%)
Died	84 (10.1%)	64 (8.3%)
Failed	10 (1.2%)	13 (1.7%)
Lost to follow-up	23 (2.8%)	47 (6.1%)
Not evaluated	6 (0.7%)	8 (1.0%)

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

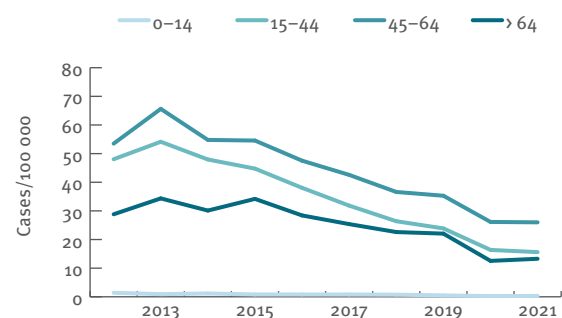
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012-2021



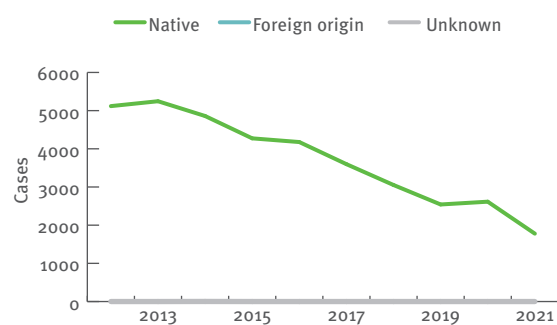
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012-2021

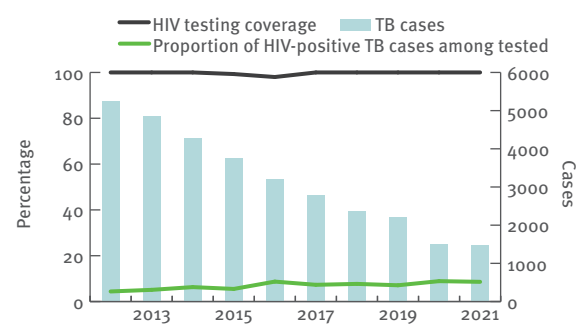


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012-2021

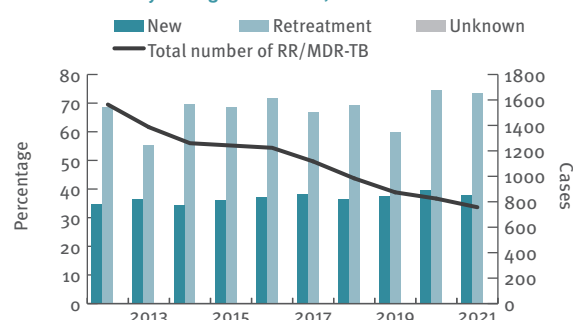


## TB/HIV coinfection, 2012-2021



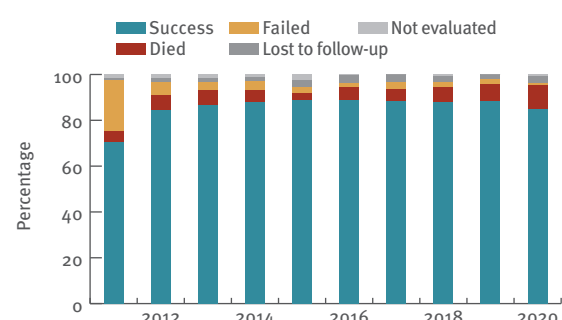
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011-2020<sup>a</sup>



Note: 2011 cohort includes new cases only.

# Belgium

Total population at 23 April 2022 by EUROSTAT: 11 566 041

## TB cases, 2021

### Notifications

Total number of cases	875
Notification rate per 100 000	8
New <sup>a</sup> and relapse	817
New <sup>a</sup> and relapse notification rate per 100 000	7.1
Pulmonary	606 (69.3%)
of which microscopy-positive	288 (47.5%)
of which laboratory-confirmed	504 (83.2%)
Laboratory-confirmed TB cases	675 (77.1%)
Mean age of new native TB cases	46 years
Mean age of new foreign TB cases	34 years
Foreign origin of all TB cases	549 (62.7%)
New (not previously treated)	671 (76.7%)

### Estimates

Estimated new and relapse cases N, best [low–high]	940 [800–1100]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	623 (92.3%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low–high]	14 [9–19]
Pulmonary RR/MDR-TB cases notified	6 (1.3%)
of which pre-XDR-TB cases	0 (0.0%)
Notified RR/MDR-TB	8 (1.3%)
of which pre-XDR-TB cases	0 (0.0%)
TB cases tested for HIV	464 (53.0%)
HIV-positive TB cases of these on ART	28 (6.0%)

<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.

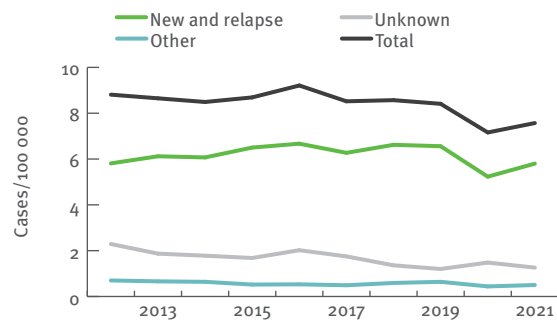
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	–
Cases notified	328	17
Success	223 (68.0%)	14 (82.4%)
Died	24 (7.3%)	1 (5.9%)
Failed	1 (0.3%)	0 (0.0%)
Lost to follow-up	12 (3.7%)	1 (5.9%)
Still on treatment	10 (3.0%)	0 (0.0%)
Not evaluated	58 (17.7%)	1 (5.9%)

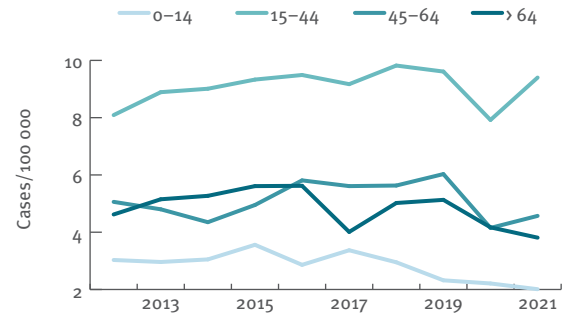
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

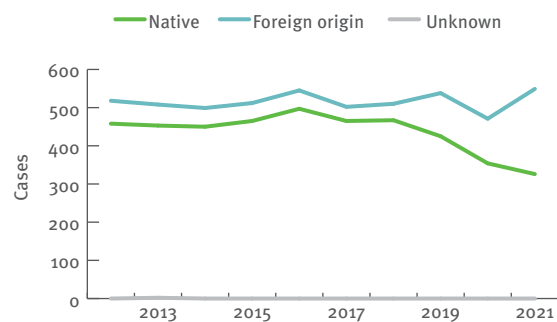
## TB notification rates by previous treatment history, 2012–2021



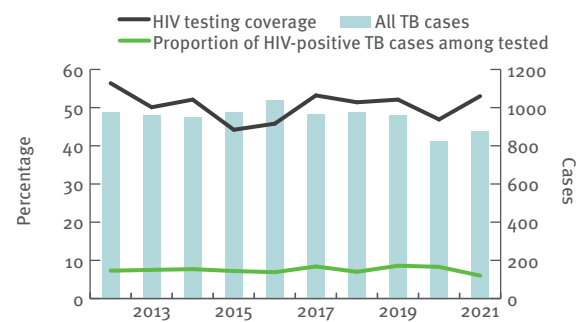
## New and relapse TB cases – notification rates by age group, 2012–2021



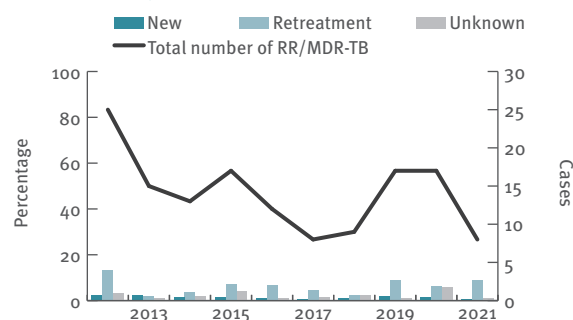
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

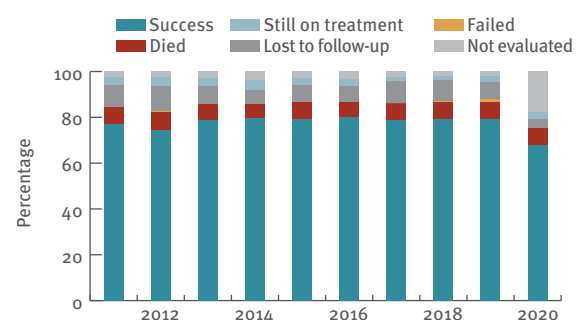


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Bosnia and Herzegovina

Total population estimate 2021 by United Nations Statistical Database: 3 270 943

## TB cases, 2021

### Notifications

Total number of cases	363
Notification rate per 100 000	11.1
New <sup>a</sup> and relapse	362
New <sup>a</sup> and relapse notification rate per 100 000	11.1
Pulmonary	341 (93.9%)
of which microscopy-positive of which laboratory-confirmed	285 (83.6%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	49.9 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	10 (2.8%)
New (not previously treated)	330 (90.9%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	810 [610-1000]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	279 (97.9%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary cases N, best [low-high]	1 [1-2]
Pulmonary RR/MDR-TB cases notified	1 (0.4%)
of which pre-XDR-TB cases	0 (0.0%)
Notified RR/MDR-TB of which pre-XDR-TB cases	1 (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.

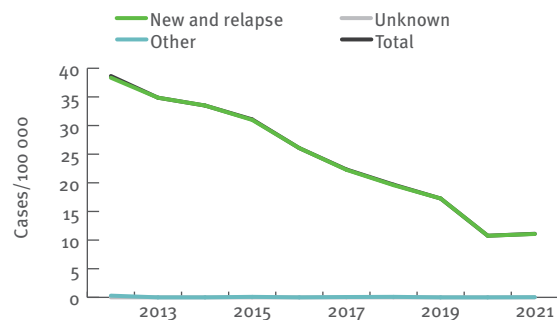
## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	357	0
Success	183 (51.3%)	-
Died	21 (5.9%)	-
Failed	0 (0.0%)	-
Lost to follow-up	14 (3.9%)	-
Not evaluated	139 (38.9%)	-

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

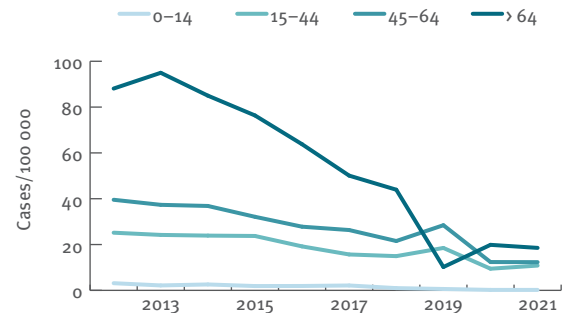
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



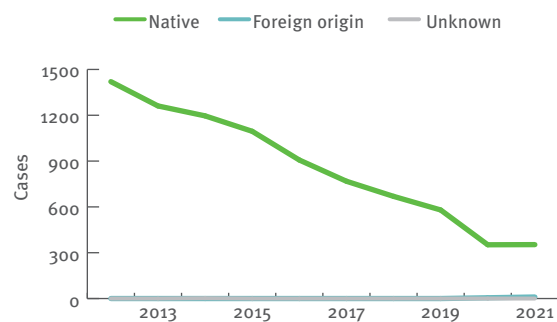
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012–2021

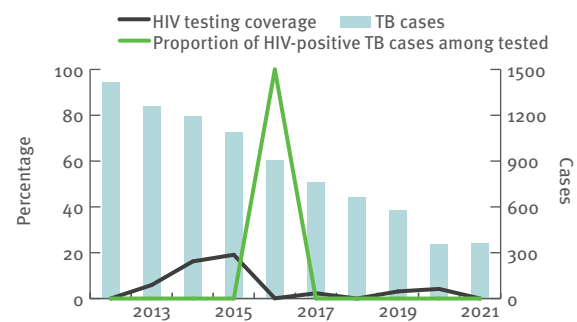


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

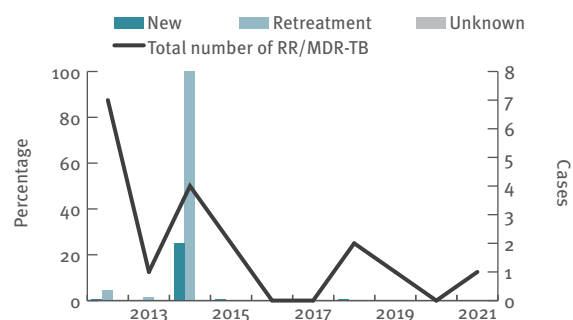


## TB/HIV coinfection, 2012–2021



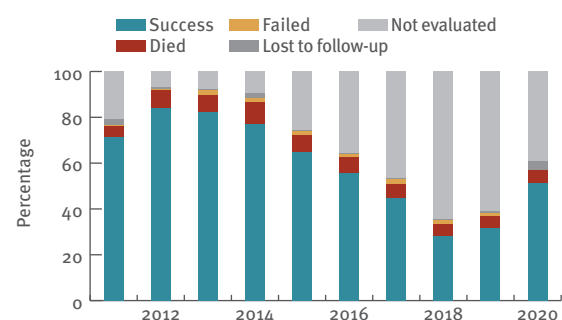
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort includes new cases only.

# Bulgaria

Total population at 23 April 2022 by EUROSTAT: 6 916 548

## TB cases, 2021

### Notifications

Total number of cases	687
Notification rate per 100 000	9.9
New <sup>a</sup> and relapse	673
New <sup>a</sup> and relapse notification rate per 100 000	9.7
Pulmonary	562 (81.8%)
of which microscopy-positive	309 (55.0%)
of which laboratory-confirmed	337 (60.0%)
Laboratory-confirmed TB cases	339 (49.3%)
Mean age of new native TB cases	48.8 years
Mean age of new foreign TB cases	42.0 years
Foreign origin of all TB cases	1 (0.1%)
New (not previously treated)	616 (89.7%)

### Estimates

Estimated new and relapse cases N, best [low–high]	1,200 [870–1500]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	174 (51.3%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low–high]	13 [8–18]
Pulmonary RR/MDR-TB cases notified	4 (2.3%)
of which pre-XDR-TB cases	1 (25.0%)
Notified RR/MDR-TB	4 (2.3%)
of which pre-XDR-TB cases	1 (25.0%)
TB cases tested for HIV	477 (69.4%)
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%.

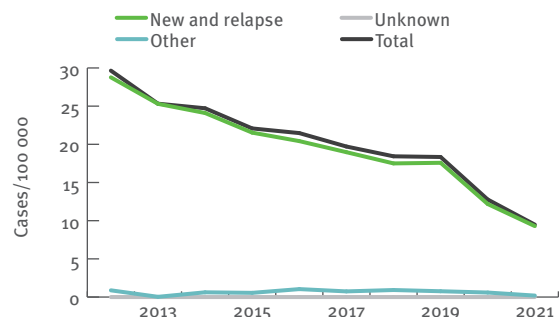
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

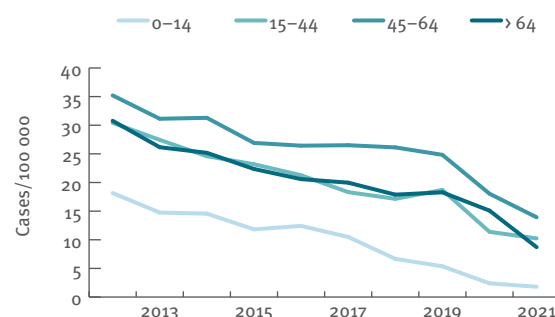
Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	368	14
Success	0 (0.0%)	6 (42.9%)
Died	0 (0.0%)	4 (28.6%)
Failed	0 (0.0%)	1 (7.1%)
Lost to follow-up	0 (0.0%)	2 (14.3%)
Still on treatment	0 (0.0%)	0 (0.0%)
Not evaluated	368 (100.0%)	1 (7.1%)

<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.

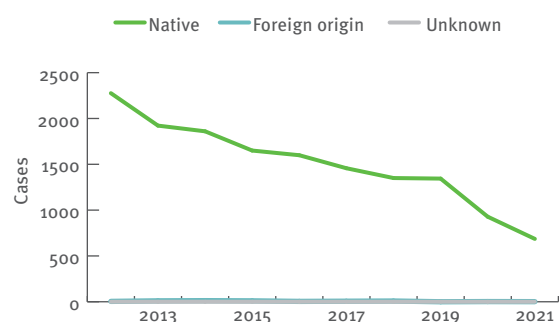
## TB notification rates by previous treatment history, 2012–2021



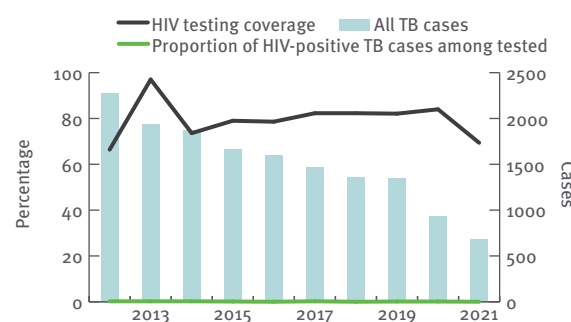
## New and relapse TB cases – notification rates by age group, 2012–2021



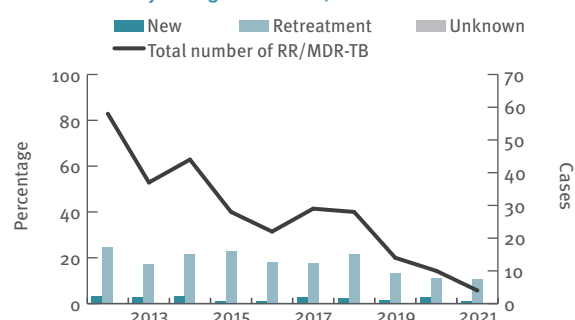
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

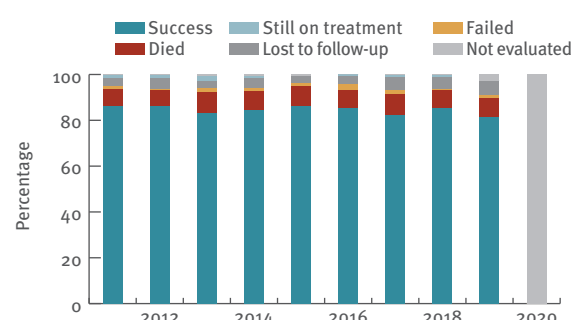


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Croatia

Total population at 23 April 2022 by EUROSTAT: 4 036 355

## TB cases, 2021

### Notifications

Total number of cases	157
Notification rate per 100 000	3.9
New <sup>a</sup> and relapse	154
New <sup>a</sup> and relapse notification rate per 100 000	3.8
Pulmonary	130 (82.8%)
of which microscopy-positive	89 (68.5%)
of which laboratory-confirmed	119 (91.5%)
Laboratory-confirmed TB cases	135 (86.0%)
Mean age of new native TB cases	56.9 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	112 (71.3%)

### Estimates

Estimated new and relapse cases N, best [low-high]	160 [140-190]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	94 (69.6%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	1 [0-2]
Pulmonary RR/MDR-TB cases notified	0 (0.0%)
of which pre-XDR-TB cases	0 -
Notified RR/MDR-TB	0 (0.0%)
of which pre-XDR-TB cases	0 -
TB cases tested for HIV	3 (1.9%)
HIV-positive TB cases	0 (0.0%)
of these on ART	- -

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

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

## Treatment outcome monitoring

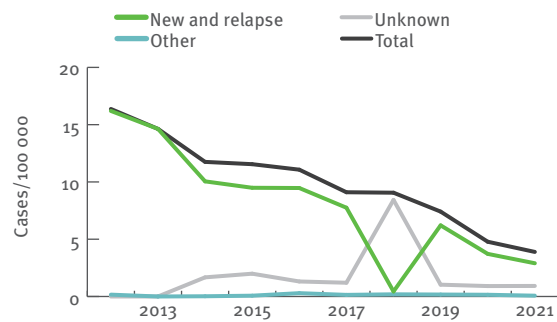
Geographical coverage	National	
	New <sup>a</sup> culture-positive pulmonary TB cases notified in 2020 <sup>b</sup>	All RR/MDR-TB cases notified in 2019 <sup>c</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	134	2
Success	72 (53.7%)	0 (0.0%)
Died	24 (17.9%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	5 (3.7%)	0 (0.0%)
Still on treatment	6 (4.5%)	0 (0.0%)
Not evaluated	27 (20.1%)	2 (100.0%)

<sup>a</sup> For 2019, cases with unknown treatment history included in new cases.

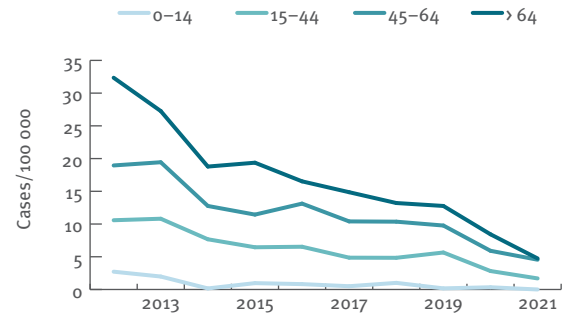
<sup>b</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

## TB notification rates by previous treatment history, 2012-2021

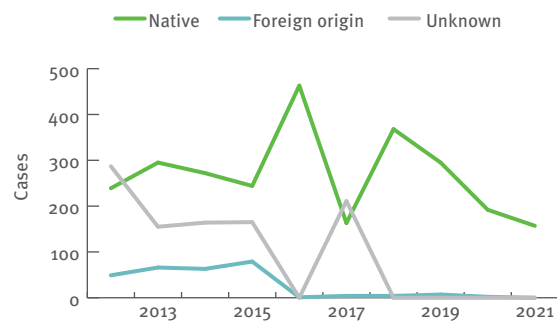


## New and relapse TB cases – notification rates by age group, 2012-2021

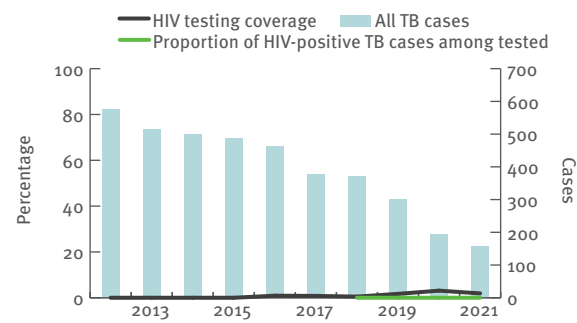


Note: for 2019, cases with unknown treatment history included in new cases.

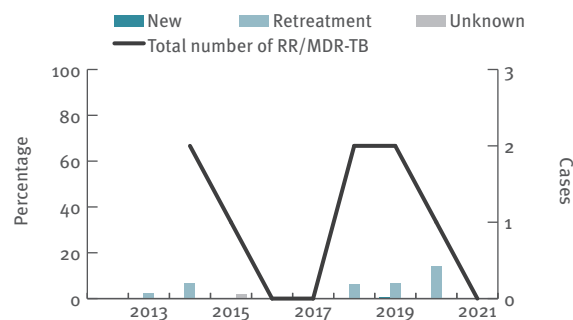
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

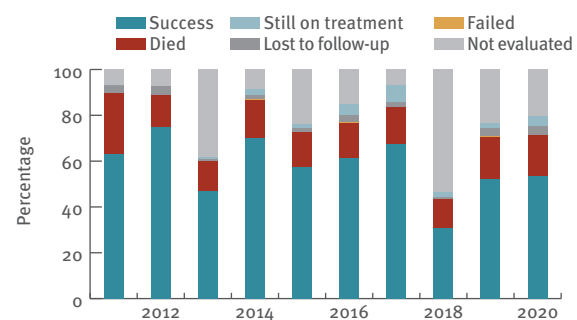


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020





# Cyprus

Total population at 23 April 2022 by EUROSTAT: 896 007

## TB cases, 2021

### Notifications

Total number of cases	48
Notification rate per 100 000	5.4
New <sup>a</sup> and relapse	48
New <sup>a</sup> and relapse notification rate per 100 000	5.4
Pulmonary	38 (79.2%)
of which microscopy-positive	21 (55.3%)
of which laboratory-confirmed	32 (84.2%)
Laboratory-confirmed TB cases	37 (77.1%)
Mean age of new native TB cases	45.5 years
Mean age of new foreign TB cases	33.9 years
Foreign origin of all TB cases	46 (95.8%)
New (not previously treated)	45 (93.8%)

### Estimates

Estimated new and relapse cases N, best [low-high]	55 [47-64]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	37 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	1 [0-2]
Pulmonary RR/MDR-TB cases notified	3 (9.4%)
of which pre-XDR-TB cases	0 (0.0%)
Notified RR/MDR-TB of which pre-XDR-TB cases	3 (8.1%)
of which pre-XDR-TB cases	0 (0.0%)
TB cases tested for HIV	35 (72.9%)
HIV-positive TB cases of these on ART	1 (2.9%)

<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.

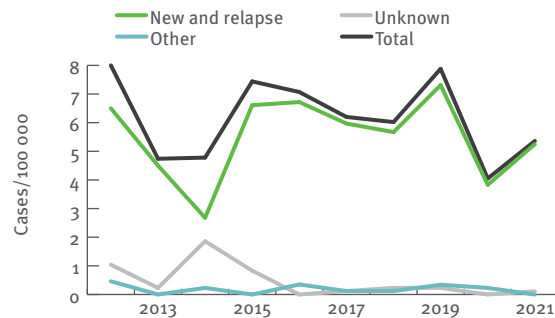
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	25	1
Success	9 (36.0%)	0 -
Died	1 (4.0%)	0 -
Failed	0 (0.0%)	0 -
Lost to follow-up	3 (12.0%)	0 -
Still on treatment	2 (8.0%)	0 -
Not evaluated	10 (40.0%)	1 (100.0%)

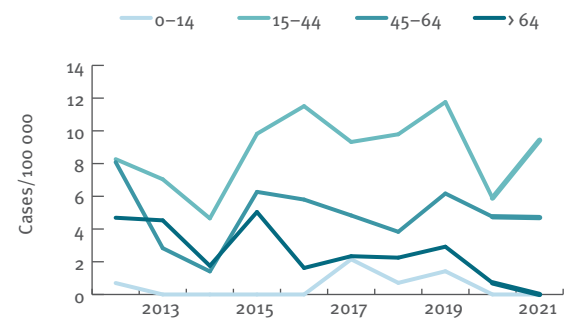
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

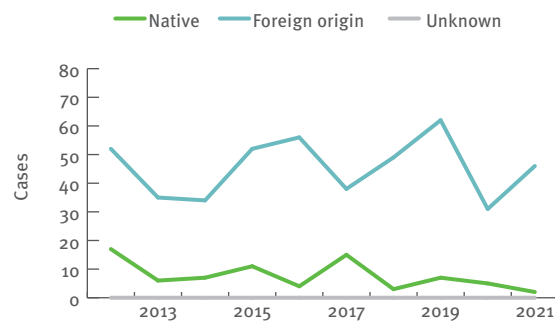
## TB notification rates by previous treatment history, 2012-2021



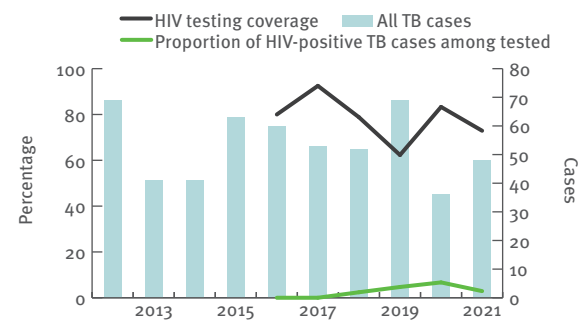
## New and relapse TB cases – notification rates by age group, 2012-2021



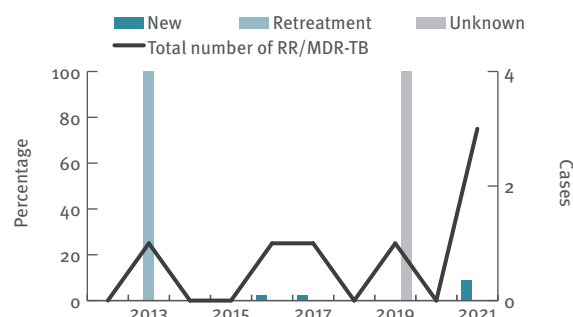
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

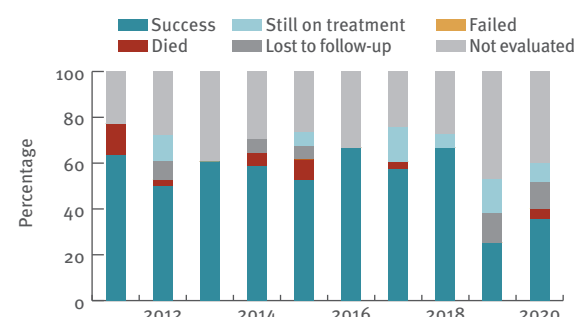


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# Czechia

Total population at 23 April 2022 by EUROSTAT: 10 701 777

## TB cases, 2021

### Notifications

Total number of cases	357
Notification rate per 100 000	3.3
New <sup>a</sup> and relapse	352
New <sup>a</sup> and relapse notification rate per 100 000	3.3
Pulmonary	321 (89.9%)
of which microscopy-positive	171 (53.3%)
of which laboratory-confirmed	271 (84.4%)
Laboratory-confirmed TB cases	298 (83.5%)
Mean age of new native TB cases	52.8 years
Mean age of new foreign TB cases	40.1 years
Foreign origin of all TB cases	132 (37.0%)
New (not previously treated)	332 (93.0%)

### Estimates

Estimated new and relapse cases N, best [low–high]	400 [350–470]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	278 (93.3%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low–high]	11 [7–14]
Pulmonary RR/MDR-TB cases notified	9 (3.5%)
of which pre-XDR-TB cases	2 (22.2%)
Notified RR/MDR-TB	10 (3.6%)
of which pre-XDR-TB cases	2 (20.0%)
TB cases tested for HIV	212 (59.4%)
HIV-positive TB cases of these on ART	7 (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.

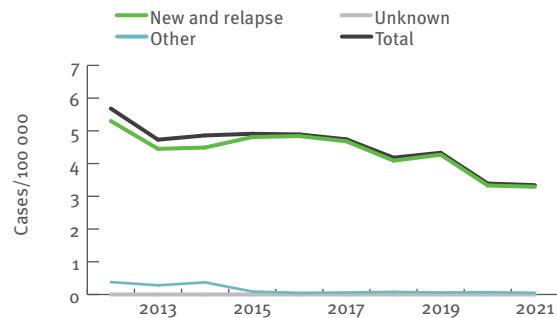
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	–
Cases notified	239	8
Success	152 (63.6%)	4 (50.0%)
Died	41 (17.2%)	1 (12.5%)
Failed	1 (0.4%)	0 (0.0%)
Lost to follow-up	31 (13.0%)	1 (12.5%)
Still on treatment	9 (3.8%)	0 (0.0%)
Not evaluated	5 (2.1%)	2 (25.0%)

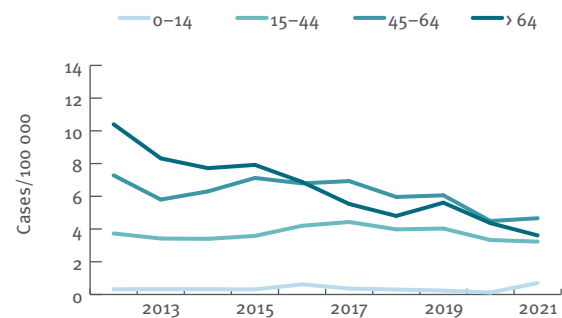
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

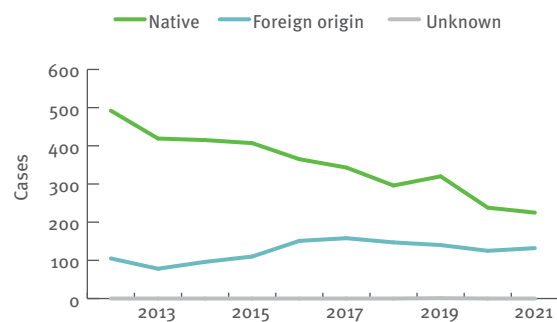
## TB notification rates by previous treatment history, 2012–2021



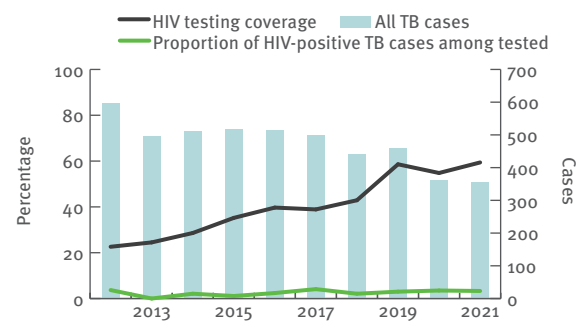
## New and relapse TB cases – notification rates by age group, 2012–2021



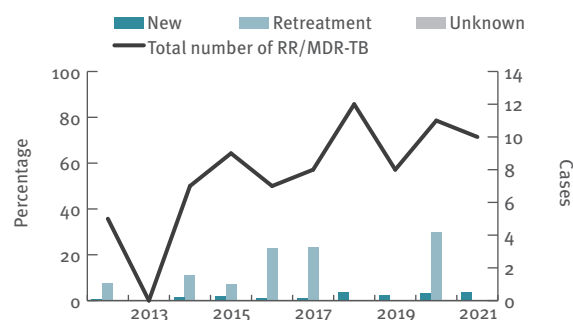
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

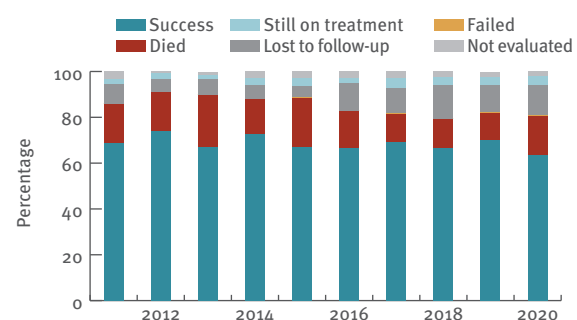


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Denmark

Total population at 23 April 2022 by EUROSTAT: 5 840 045

## TB cases, 2021

### Notifications

Total number of cases	208
Notification rate per 100 000	3.6
New <sup>a</sup> and relapse	191
New <sup>a</sup> and relapse notification rate per 100 000	3.3
Pulmonary	156 (75.0%)
of which microscopy-positive	74 (47.4%)
of which laboratory-confirmed	126 (80.8%)
Laboratory-confirmed TB cases	165 (79.3%)
Mean age of new native TB cases	46.3 years
Mean age of new foreign TB cases	44.3 years
Foreign origin of all TB cases	147 (70.7%)
New (not previously treated)	191 (91.8%)

### Estimates

Estimated new and relapse cases N, best [low-high]	220 [190-250]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	163 (98.8%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	3 [1-4]
Pulmonary RR/MDR-TB cases notified	1 (0.8%)
of which pre-XDR-TB cases	1 (100.0%)
Notified RR/MDR-TB	1 (0.6%)
of which pre-XDR-TB cases	1 (100.0%)
TB cases tested for HIV	161 (77.4%)
HIV-positive TB cases	6 (3.7%)
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.

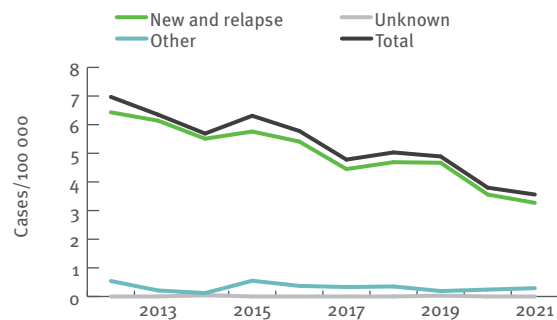
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	127	4
Success	43 (33.9%)	0 (0.0%)
Died	1 (0.8%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	1 (0.8%)	0 (0.0%)
Still on treatment	1 (0.8%)	0 (0.0%)
Not evaluated	81 (63.8%)	4 (100.0%)

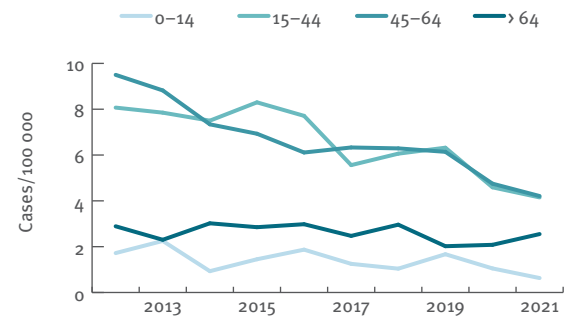
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

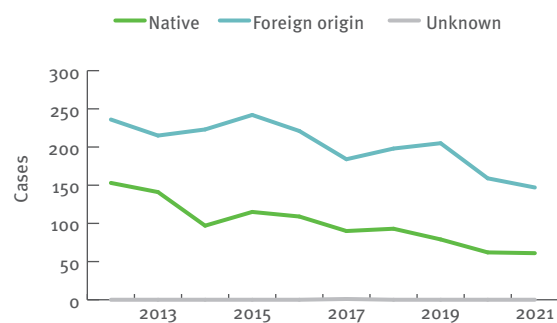
## TB notification rates by previous treatment history, 2012-2021



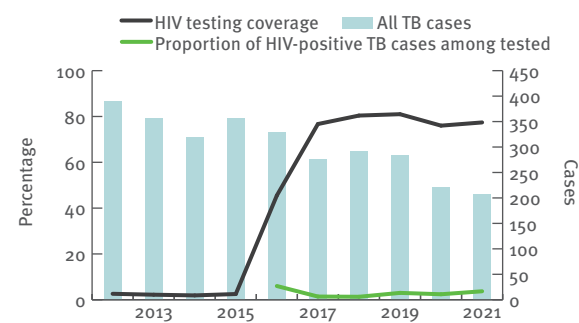
## New and relapse TB cases – notification rates by age group, 2012-2021



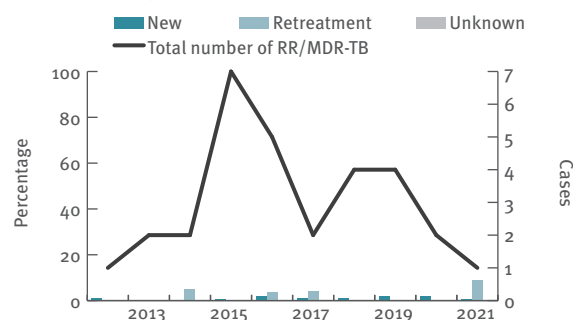
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

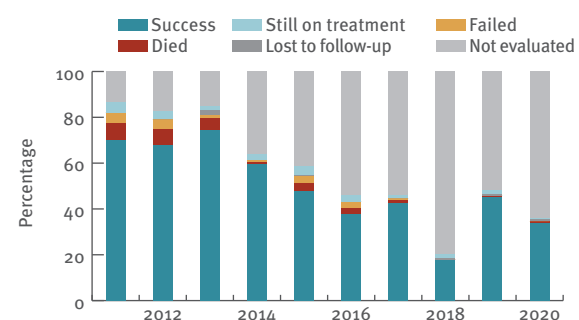


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# Estonia

Total population at 23 April 2022 by EUROSTAT: 1 330 068

## TB cases, 2021

### Notifications

Total number of cases	111
Notification rate per 100 000	8.3
New <sup>a</sup> and relapse	107
New <sup>a</sup> and relapse notification rate per 100 000	8
Pulmonary	107 (96.4%)
of which microscopy-positive	52 (48.6%)
of which laboratory-confirmed	84 (78.5%)
Laboratory-confirmed TB cases	85 (76.6%)
Mean age of new native TB cases	51.9 years
Mean age of new foreign TB cases	58.8 years
Foreign origin of all TB cases	19 (17.1%)
New (not previously treated)	92 (82.9%)

### Estimates

Estimated new and relapse cases N, best [low-high]	120 [110-140]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	82 (96.5%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	25 [22-28]
Pulmonary RR/MDR-TB cases notified	24 (29.6%)
of which pre-XDR-TB cases	9 (37.5%)
Notified RR/MDR-TB	24 (29.3%)
of which pre-XDR-TB cases	9 (37.5%)
TB cases tested for HIV	103 (92.8%)
HIV-positive TB cases	12 (11.7%)
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.

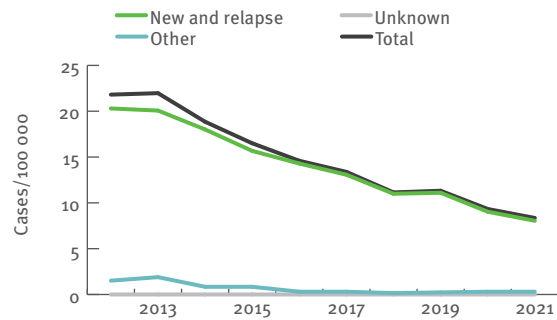
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	89	29
Success	57 (64.0%)	21 (72.4%)
Died	15 (16.9%)	4 (13.8%)
Failed	1 (1.1%)	1 (3.4%)
Lost to follow-up	3 (3.4%)	2 (6.9%)
Still on treatment	11 (12.4%)	1 (3.4%)
Not evaluated	2 (2.2%)	0 (0.0%)

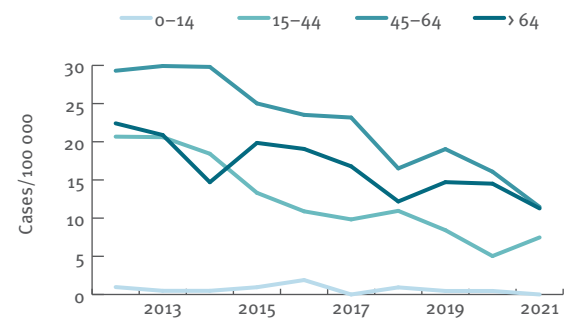
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

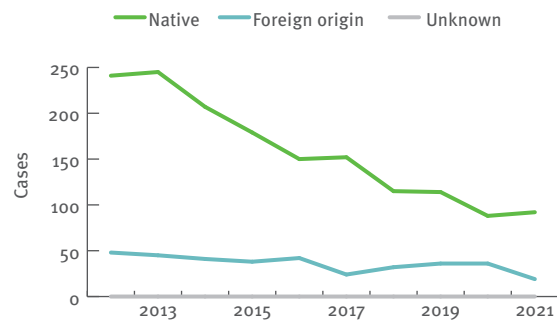
## TB notification rates by previous treatment history, 2012-2021



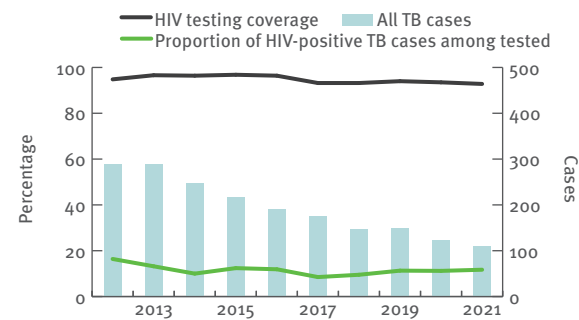
## New and relapse TB cases – notification rates by age group, 2012-2021



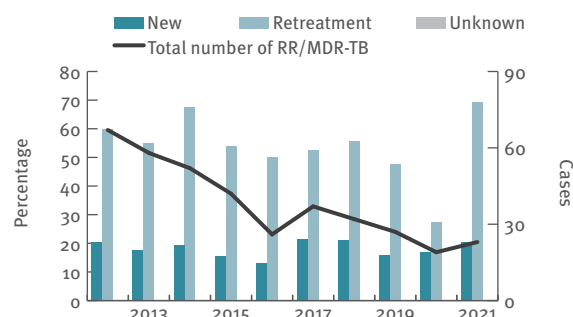
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

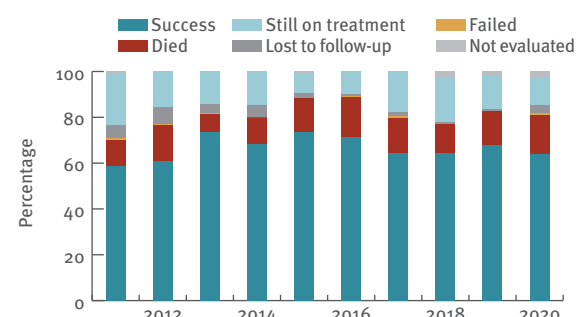


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# Finland

Total population at 23 April 2022 by EUROSTAT: 5 533 793

## TB cases, 2021

### Notifications

Total number of cases	170
Notification rate per 100 000	3.1
New <sup>a</sup> and relapse	170
New <sup>a</sup> and relapse notification rate per 100 000	3.1
Pulmonary	117 (68.8%)
of which microscopy-positive	40 (34.2%)
of which laboratory-confirmed	93 (79.5%)
Laboratory-confirmed TB cases	124 (72.9%)
Mean age of new native TB cases	68.7 years
Mean age of new foreign TB cases	36.2 years
Foreign origin of all TB cases	70 (41.2%)
New (not previously treated)	162 (95.3%)

### Estimates

Estimated new and relapse cases N, best [low-high]	200 [170-230]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data-reporting	Yes
Cases with DST results	121 (97.6%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	4 [2-6]
Pulmonary RR/MDR-TB cases notified	3 (3.3%)
of which pre-XDR-TB cases	0 (0.0%)
Notified RR/MDR-TB	3 (2.5%)
of which pre-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.

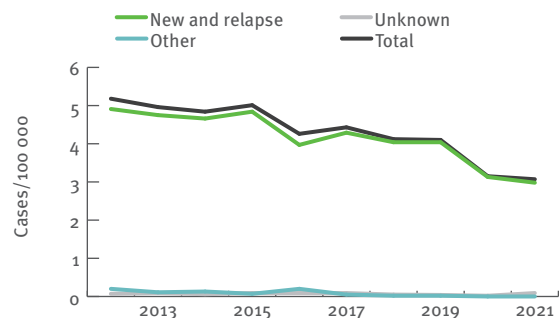
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	101	3
Success	42 (41.6%)	2 (66.7%)
Died	1 (1.0%)	0 (0.0%)
Failed	2 (2.0%)	0 (0.0%)
Lost to follow-up	0 (0.0%)	0 (0.0%)
Still on treatment	0 (0.0%)	0 (0.0%)
Not evaluated	56 (55.4%)	1 (33.3%)

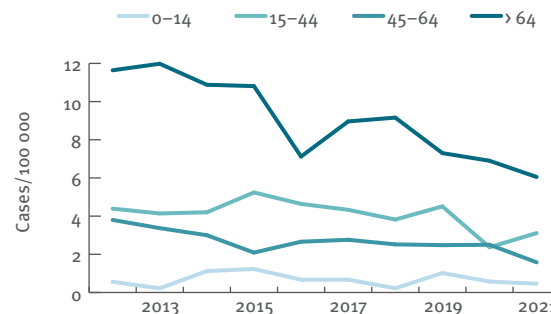
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

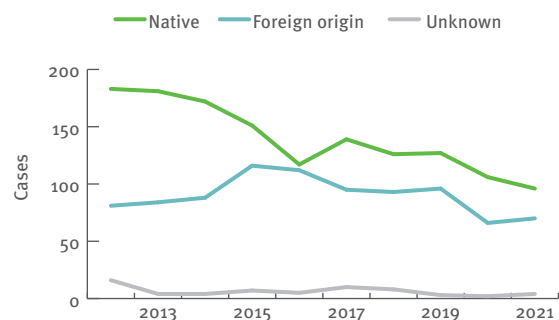
## TB notification rates by previous treatment history, 2012-2021



## New and relapse TB cases – notification rates by age group, 2012-2021



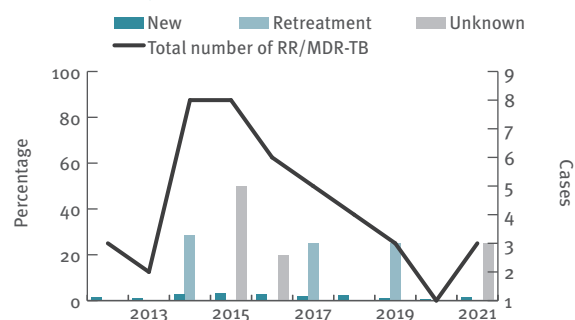
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

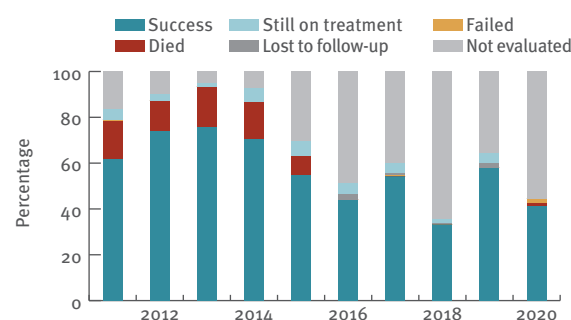
Data not reported

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# France

Total population at 23 April 2022 by EUROSTAT: 67 656 682

## TB cases, 2021

### Notifications

Total number of cases	4 274
Notification rate per 100 000	6.3
New <sup>a</sup> and relapse	4 042
New <sup>a</sup> and relapse notification rate per 100 000	6
Pulmonary	2 879 (67.4%)
of which microscopy-positive	1 310
of which laboratory-confirmed	1 178 (40.9%)
Laboratory-confirmed TB cases	1 652 (38.7%)
Mean age of new native TB cases	48.5 years
Mean age of new foreign TB cases	38.4 years
Foreign origin of all TB cases	2 610 (61.1%)
New (not previously treated)	2 608 (61.0%)

### Estimates

Estimated new and relapse cases N, best [low-high]	4 900 [4 300-5 600]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data-reporting	No
Cases with DST results	43 (1.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	31 [11-52]
Pulmonary RR/MDR-TB cases notified	38 (100.0%)
of which pre-XDR-TB cases	11 (28.9%)
Notified RR/MDR-TB of which pre-XDR-TB cases	43 (100.0%)
of which pre-XDR-TB cases	11 (25.6%)
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.

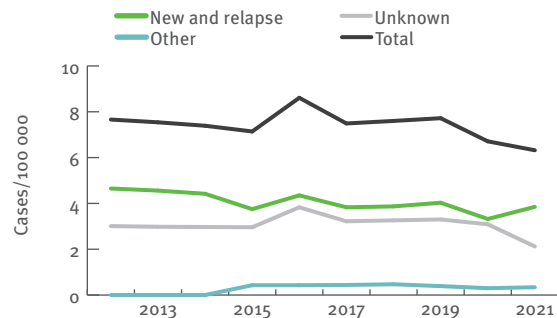
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	674	95
Success	329 (48.8%)	7 (7.4%)
Died	22 (3.3%)	1 (1.1%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	15 (2.2%)	3 (3.2%)
Still on treatment	11 (1.6%)	0 (0.0%)
Not evaluated	297 (44.1%)	84 (88.4%)

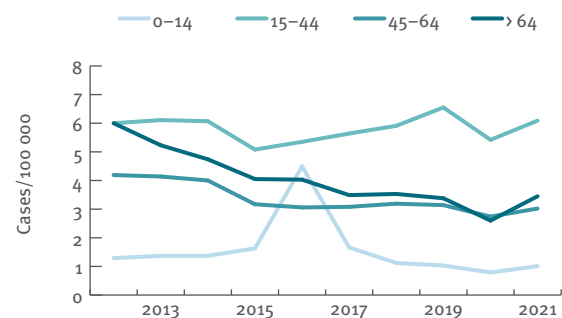
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

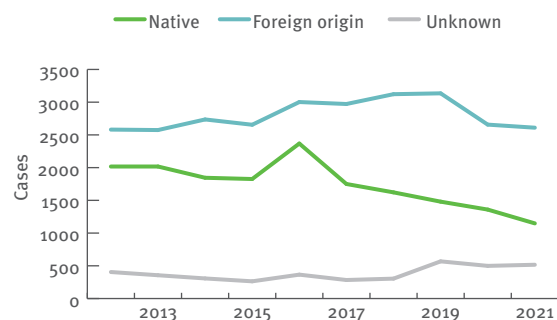
## TB notification rates by previous treatment history, 2012-2021



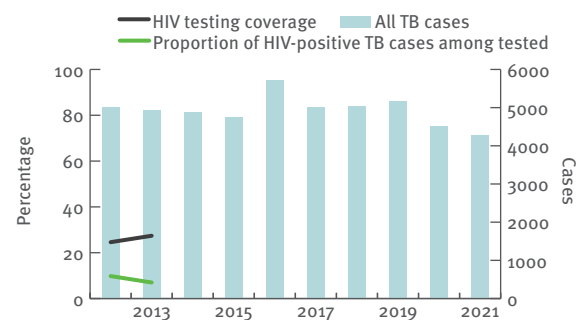
## New and relapse TB cases – notification rates by age group, 2012-2021



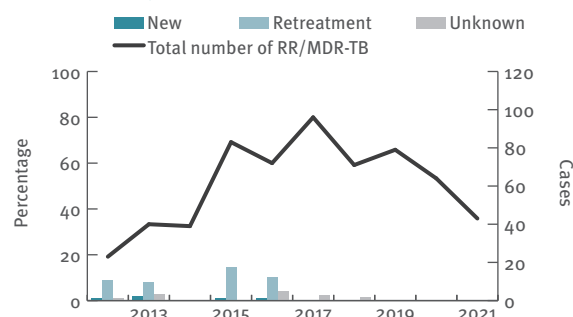
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021



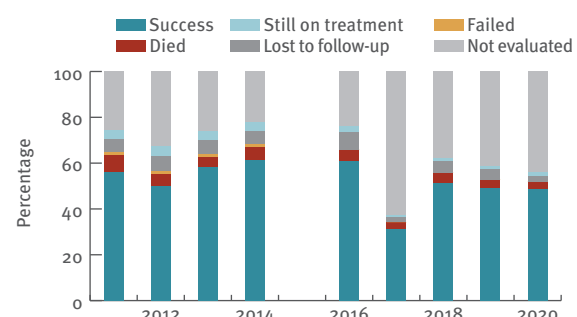
## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Data for France 2018-2021 only included drug susceptibility testing for RR/MDR-TB cases and was therefore not included in this graph.

Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



Note: No data was reported for treatment outcome in 2015.

# Georgia

Total population estimate 2021 by United Nations Statistical Database: 3 757 980

## TB cases, 2021

### Notifications

Total number of cases	1645
Notification rate per 100 000	43.8
New <sup>a</sup> and relapse	1501
New <sup>a</sup> and relapse notification rate per 100 000	39.9
Pulmonary	1311 (79.7%)
of which microscopy-positive of which laboratory-confirmed	1241 (94.7%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	43.3 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	1298 (78.9%)

### Estimates

Estimated new and relapse cases N, best [low-high]	2400 [2000-2900]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	1220 (98.3%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	200 [190-210]
Pulmonary RR/MDR-TB cases notified	180 (14.8%)
of which pre-XDR-TB cases	37 (25.0%)
Notified RR/MDR-TB	187
of which pre-XDR-TB cases	38 (20.3%)
TB cases tested for HIV	1430 (95.3%)
HIV-positive TB cases	43 (3.0%)
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.

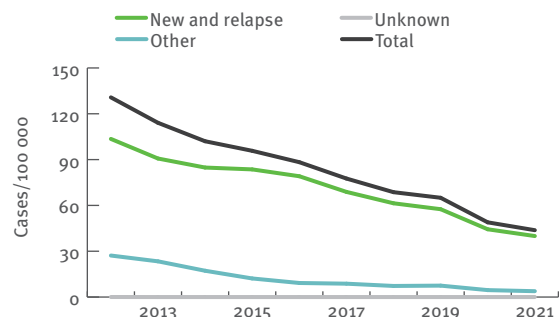
## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	1513	218
Success	1314 (86.8%)	171 (78.4%)
Died	66 (4.4%)	13 (6.0%)
Failed	35 (2.3%)	4 (1.8%)
Lost to follow-up	80 (5.3%)	28 (12.8%)
Not evaluated	18 (1.2%)	2 (0.9%)

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

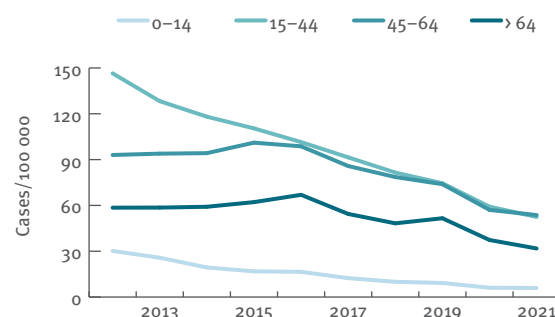
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



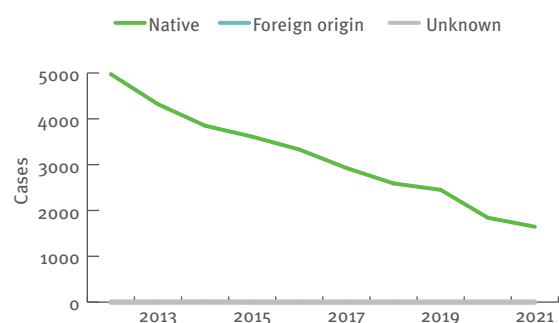
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012–2021

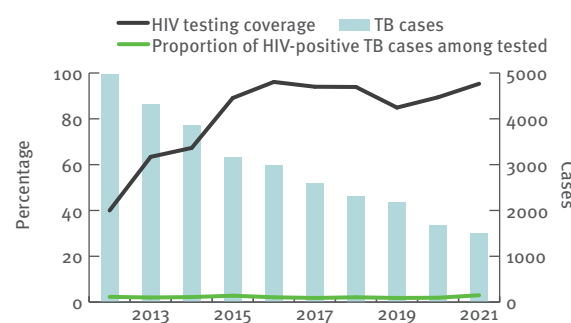


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

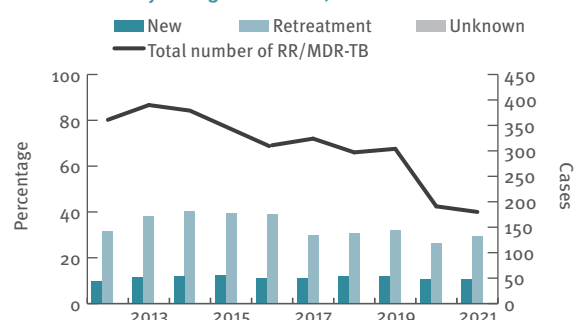


## TB/HIV coinfection, 2012–2021



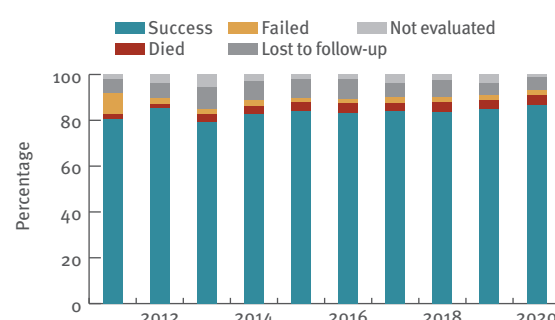
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort includes new cases only.

# Germany

Total population at 23 April 2022 by EUROSTAT: 83 155 031

## TB cases, 2021

### Notifications

Total number of cases	3896
Notification rate per 100 000	4.6
New <sup>a</sup> and relapse	3792
New <sup>a</sup> and relapse notification rate per 100 000	4.7
Pulmonary	2760 (70.8%)
of which microscopy-positive	1472 (53.3%)
of which laboratory-confirmed	2298 (83.3%)
Laboratory-confirmed TB cases	3081 (79.1%)
Mean age of new native TB cases	53.1 years
Mean age of new foreign TB cases	37.6 years
Foreign origin of all TB cases	2782 (71.4%)
New (not previously treated)	2671 (68.6%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low–high]	4 200 [3800–4600]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	–
Case-linked data-reporting	Yes
Cases with DST results	2 705 –
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low–high]	87 [67–110]
Pulmonary RR/MDR-TB cases notified	83 (4.1%)
of which pre-XDR-TB cases	9 (10.8%)
Notified RR/MDR-TB	92 (3.4%)
of which pre-XDR-TB cases	11 (12.0%)
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.

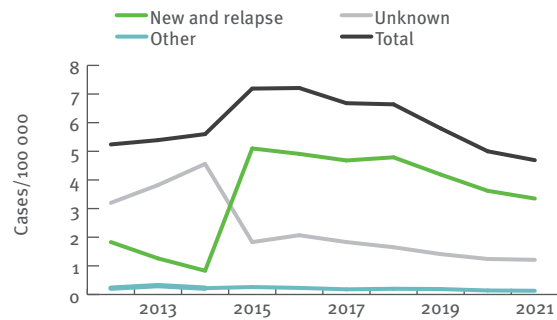
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	–
Cases notified	1780	102
Success	1204 (67.6%)	56 (54.9%)
Died	183 (10.3%)	4 (3.9%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	32 (1.8%)	3 (2.9%)
Still on treatment	45 (2.5%)	8 (7.8%)
Not evaluated	316 (17.8%)	31 (30.4%)

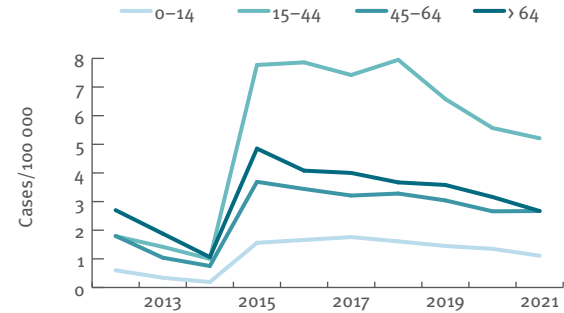
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

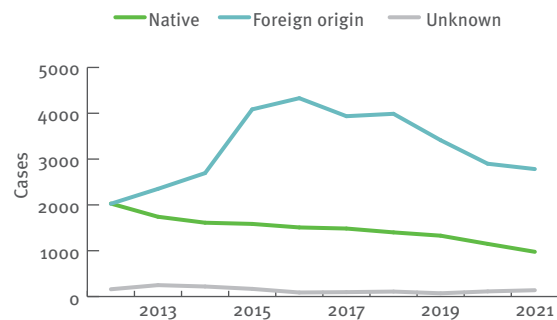
## TB notification rates by previous treatment history, 2012–2021



## New and relapse TB cases – notification rates by age group, 2012–2021



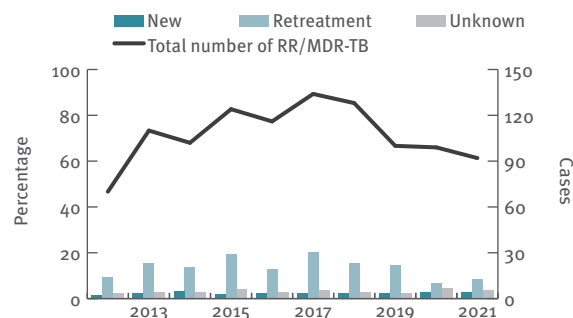
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

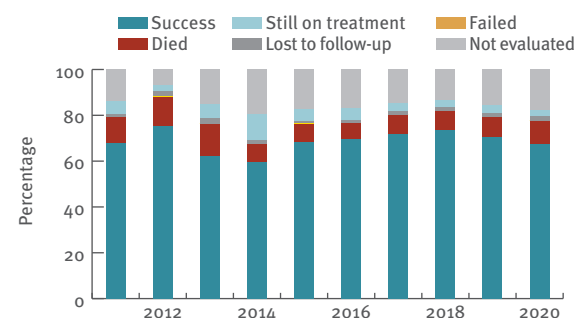
Data not reported

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020





# Greece

Total population at 23 April 2022 by EUROSTAT: 10 678 632

## TB cases, 2021

### Notifications

Total number of cases	206	
Notification rate per 100 000	1.9	
New <sup>a</sup> and relapse	195	
New <sup>a</sup> and relapse notification rate per 100 000	1.8	
Pulmonary	173	(84.0%)
of which microscopy-positive	86	(49.7%)
of which laboratory-confirmed	115	(66.5%)
Laboratory-confirmed TB cases	138	(67.0%)
Mean age of new native TB cases	56.1 years	
Mean age of new foreign TB cases	31.5 years	
Foreign origin of all TB cases	148	(71.8%)
New (not previously treated)	162	(78.6%)

### Estimates

Estimated new and relapse cases N, best [low-high]	430	[370-490]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	82	(59.4%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	4	[2-7]
Pulmonary RR/MDR-TB cases notified	5	(7.4%)
of which pre-XDR-TB cases	0	-
Notified RR/MDR-TB of which pre-XDR-TB cases	5	(6.1%)
of which pre-XDR-TB cases	0	-
TB cases tested for HIV	51	(24.8%)
HIV-positive TB cases of these on ART	2	(3.9%)
	-	-

<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.

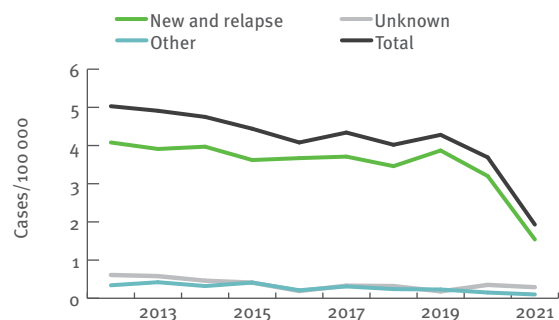
## Treatment outcome monitoring

Geographical coverage	National			
	Outcome cohort	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>	
Case-linked data-reporting	Yes	-		
Cases notified	259	7		
Success	0	(0.0%)	0	(0.0%)
Died	0	(0.0%)	0	(0.0%)
Failed	0	(0.0%)	0	(0.0%)
Lost to follow-up	0	(0.0%)	0	(0.0%)
Still on treatment	0	(0.0%)	0	(0.0%)
Not evaluated	259	(100.0%)	7	(100.0%)

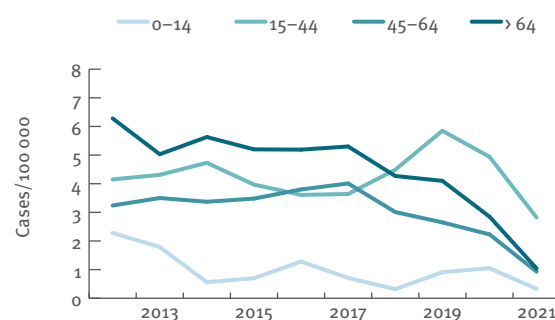
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

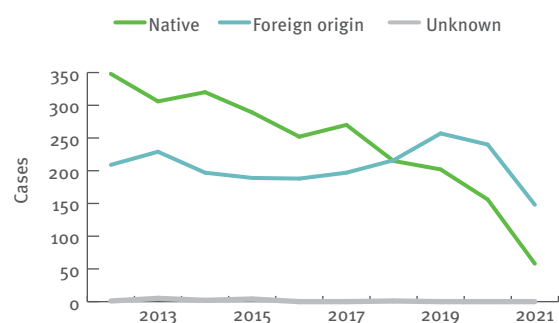
## TB notification rates by previous treatment history, 2012-2021



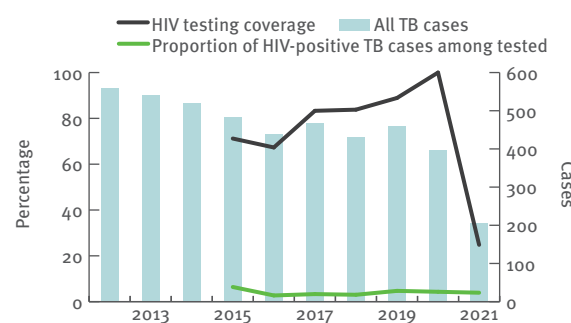
## New and relapse TB cases – notification rates by age group, 2012-2021



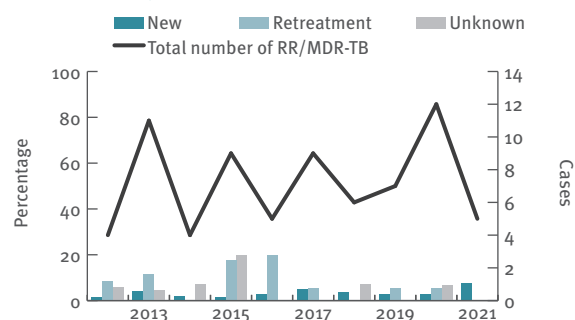
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021



## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020

Data not reported

# Hungary

Total population at 23 April 2022 by EUROSTAT: 9 730 772

## TB cases, 2021

### Notifications

Total number of cases	335
Notification rate per 100 000	3.4
New <sup>a</sup> and relapse	314
New <sup>a</sup> and relapse notification rate per 100 000	3.2
Pulmonary	321 (95.8%)
of which microscopy-positive	122 (38.0%)
of which laboratory-confirmed	178 (55.5%)
Laboratory-confirmed TB cases	179 (53.4%)
Mean age of new native TB cases	53.5 years
Mean age of new foreign TB cases	34.6 years
Foreign origin of all TB cases	29 (8.7%)
New (not previously treated)	293 (87.5%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low–high]	360 [310–410]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	165 (92.2%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low–high]	10 [7–14]
Pulmonary RR/MDR-TB cases notified	12 (7.3%)
of which pre-XDR-TB cases	6 (50.0%)
Notified RR/MDR-TB	12 (7.3%)
of which pre-XDR-TB cases	6 (50.0%)
TB cases tested for HIV	7 (2.1%)
HIV-positive TB cases of these on ART	1 (14.3%)

<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.

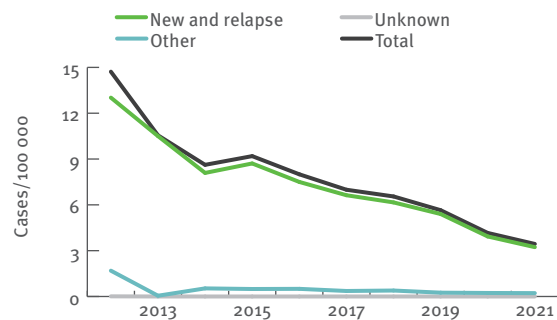
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	–
Cases notified	172	13
Success	103 (59.9%)	3 (23.1%)
Died	26 (15.1%)	1 (7.7%)
Failed	4 (2.3%)	1 (7.7%)
Lost to follow-up	21 (12.2%)	2 (15.4%)
Still on treatment	8 (4.7%)	3 (23.1%)
Not evaluated	10 (5.8%)	3 (23.1%)

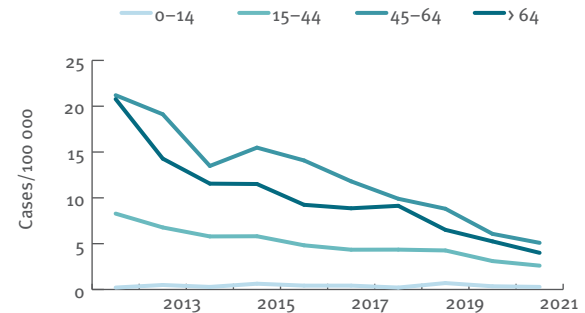
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

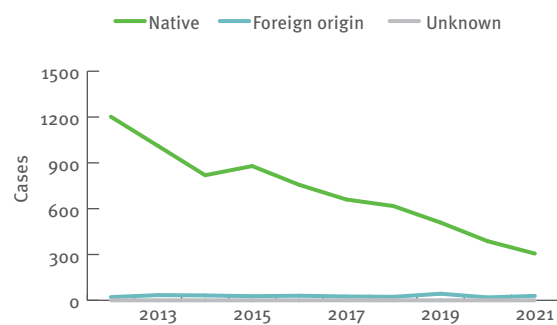
## TB notification rates by previous treatment history, 2012–2021



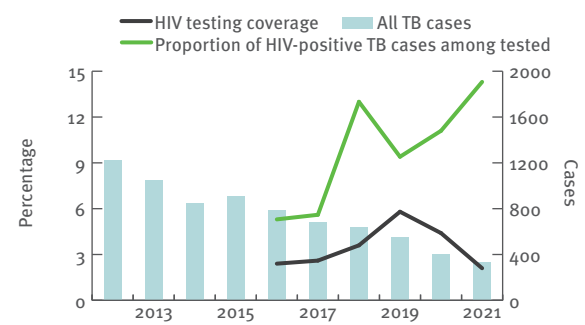
## New and relapse TB cases – notification rates by age group, 2012–2021



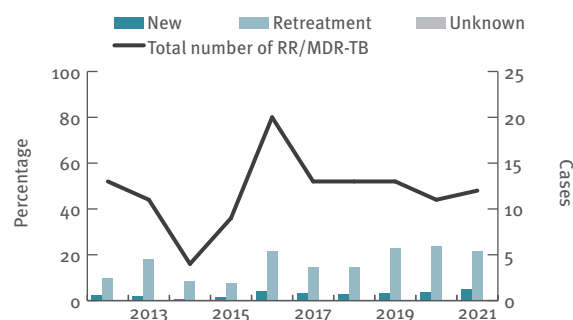
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

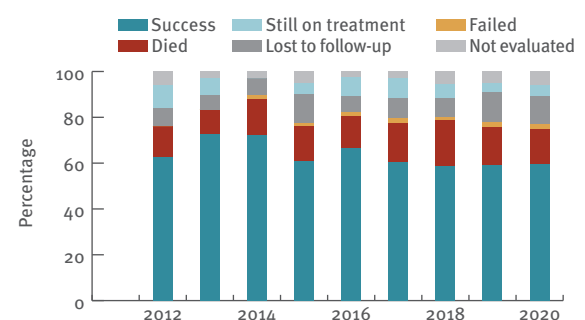


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Iceland

Total population at 23 April 2022 by EUROSTAT: 368 792

## TB cases, 2021

### Notifications

Total number of cases	-
Notification rate per 100 000	-
New <sup>a</sup> and relapse	-
New <sup>a</sup> and relapse notification rate per 100 000	-
Pulmonary	-
of which microscopy-positive	-
of which laboratory-confirmed	-
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	-
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	-
New (not previously treated)	-
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	11 [9-13]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	No
Case-linked data-reporting	No
Cases with DST results	-
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	-
Pulmonary RR/MDR-TB cases notified	-
of which pre-XDR-TB cases	-
Notified RR/MDR-TB	-
of which pre-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%.

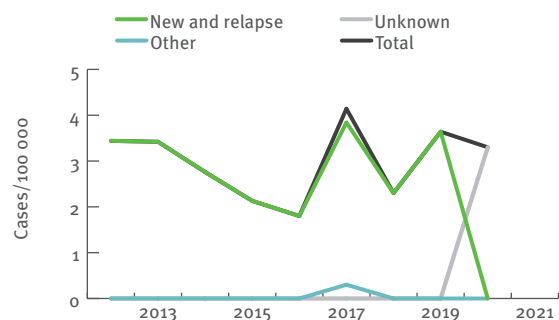
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

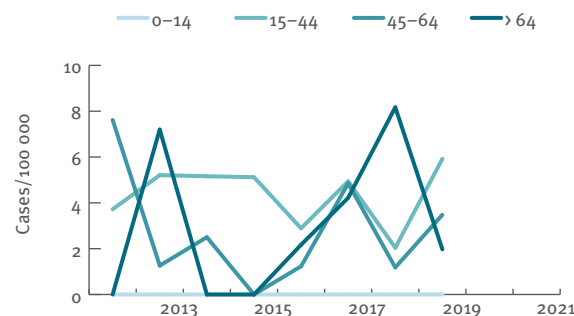
Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	No	-
Cases notified	0	0
Success	-	-
Died	-	-
Failed	-	-
Lost to follow-up	-	-
Still on treatment	-	-
Not evaluated	-	-

<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.

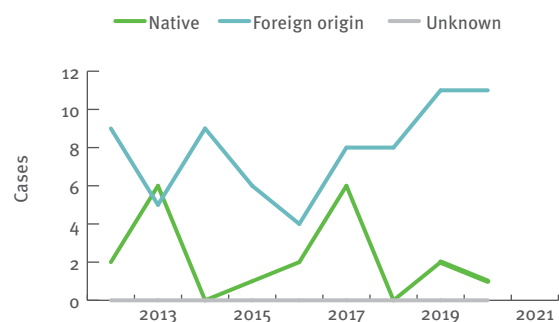
## TB notification rates by previous treatment history, 2012–2021



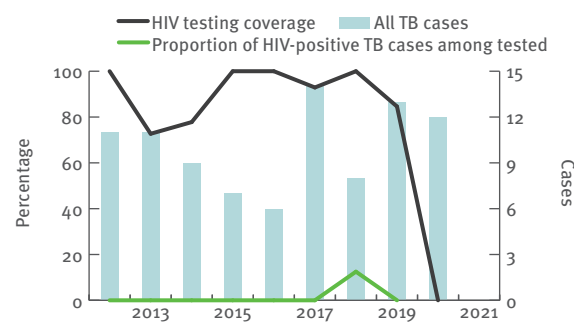
## New and relapse TB cases – notification rates by age group, 2012–2021



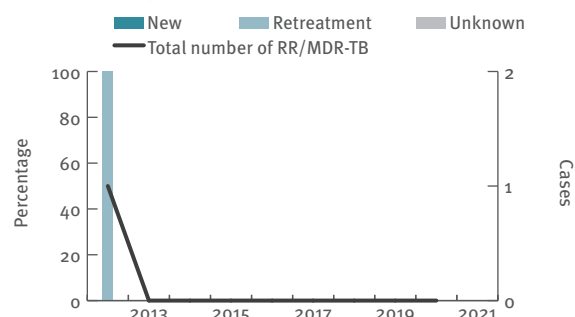
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

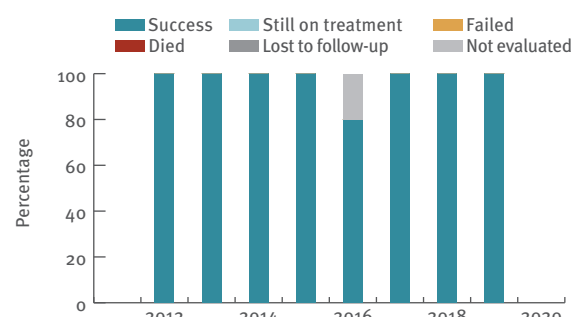


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Ireland

Total population at 23 April 2022 by EUROSTAT: 5 006 324

## TB cases, 2021

### Notifications

Total number of cases	217
Notification rate per 100 000	4.3
New <sup>a</sup> and relapse	210
New <sup>a</sup> and relapse notification rate per 100 000	4.2
Pulmonary	98 (45.2%)
of which microscopy-positive	46 (46.9%)
of which laboratory-confirmed	78 (79.6%)
Laboratory-confirmed TB cases	146 (67.3%)
Mean age of new native TB cases	54.2 years
Mean age of new foreign TB cases	36.6 years
Foreign origin of all TB cases	122 (56.2%)
New (not previously treated)	92 (42.4%)

### Estimates

Estimated new and relapse cases N, best [low-high]	240 [210-280]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	122 (83.6%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	2 [1-4]
Pulmonary RR/MDR-TB cases notified	4 (6.2%)
of which pre-XDR-TB cases	1 (25.0%)
Notified RR/MDR-TB	8 (6.6%)
of which pre-XDR-TB cases	1 (12.5%)
TB cases tested for HIV	68 (31.3%)
HIV-positive TB cases	2 (2.9%)
of these on ART	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.

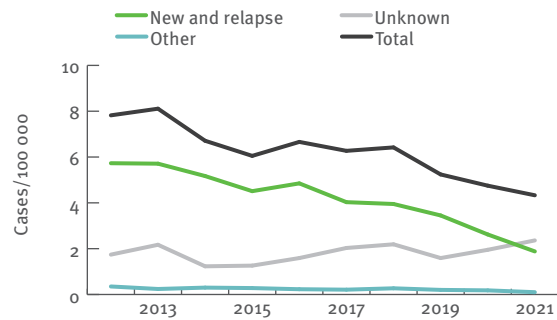
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	42	6
Success	8 (19.0%)	2 (33.3%)
Died	1 (2.4%)	1 (16.7%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	1 (2.4%)	0 (0.0%)
Still on treatment	0 (0.0%)	0 (0.0%)
Not evaluated	32 (76.2%)	3 (50.0%)

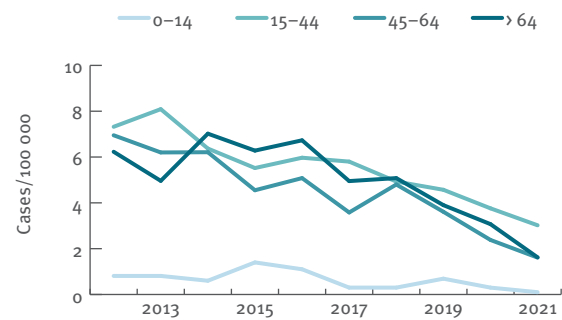
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

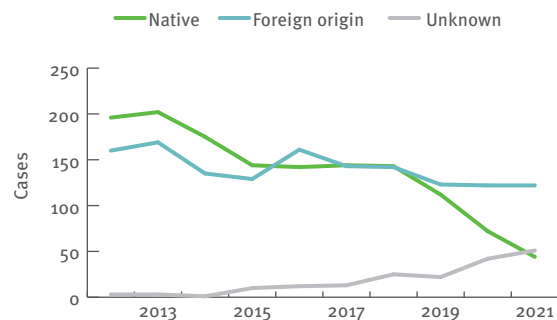
## TB notification rates by previous treatment history, 2012–2021



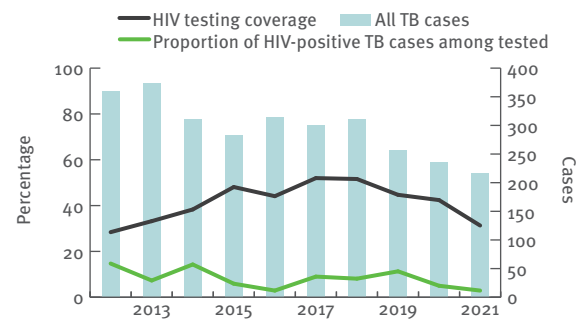
## New and relapse TB cases – notification rates by age group, 2012–2021



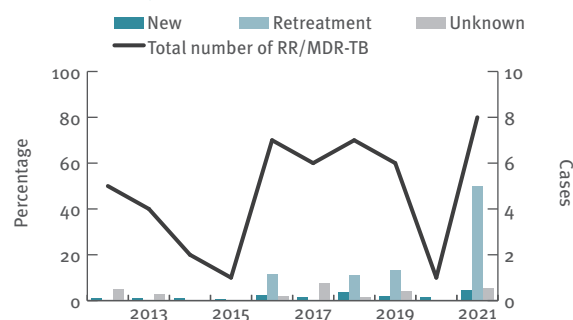
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

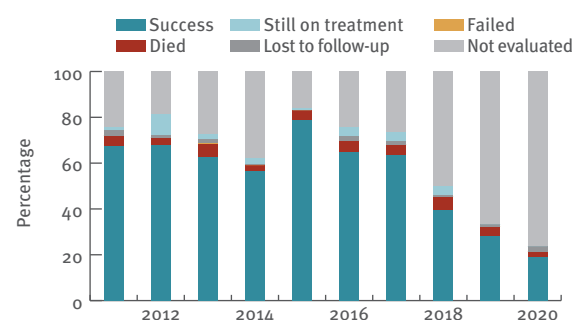


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Israel

Total population estimate 2021 by United Nations Statistical Database: 8 900 059

## TB cases, 2021

### Notifications

Total number of cases	213
Notification rate per 100 000	2.4
New <sup>a</sup> and relapse	213
New <sup>a</sup> and relapse notification rate per 100 000	2.4
Pulmonary	137 (64.3%)
of which microscopy-positive of which laboratory-confirmed	104 (75.9%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	39.8 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	171 (80.3%)
New (not previously treated)	209 (98.1%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	240 [210-280]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	104 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	8 [5-11]
Pulmonary RR/MDR-TB cases notified	9 (8.7%)
of which pre-XDR-TB cases	5 (55.6%)
Notified RR/MDR-TB	18
of which pre-XDR-TB cases	12 (66.7%)
TB cases tested for HIV	213 (100.0%)
HIV-positive TB cases	16 (7.5%)
of these on ART	16 (100.0%)

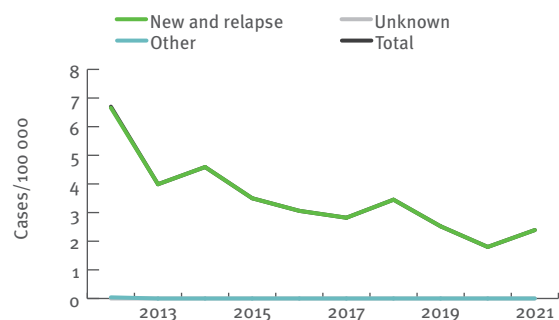
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	152	9
Success	123 (80.9%)	5 (55.6%)
Died	13 (8.6%)	1 (11.1%)
Failed	7 (4.6%)	1 (11.1%)
Lost to follow-up	9 (5.9%)	2 (22.2%)
Not evaluated	0 (0.0%)	0 (0.0%)

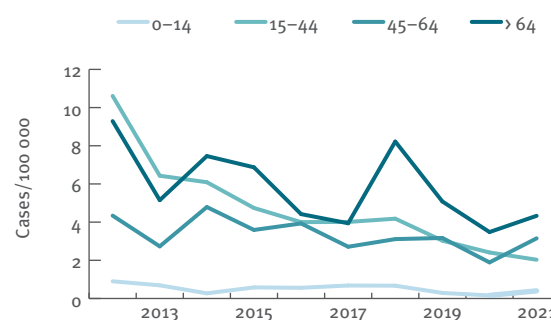
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



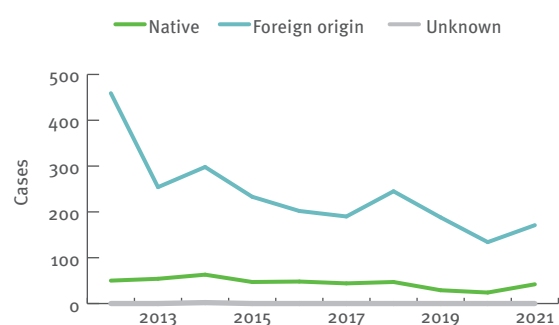
Note: cases with unknown previous treatment included with new and relapse cases.

## New and relapse TB cases – notification rates by age group, 2012–2021

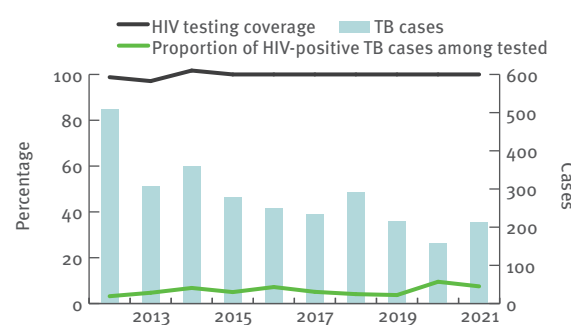


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

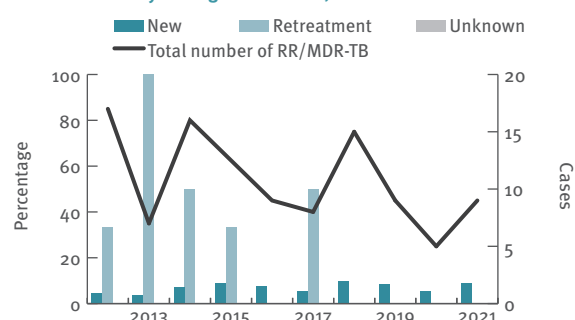


## TB/HIV coinfection, 2012–2021



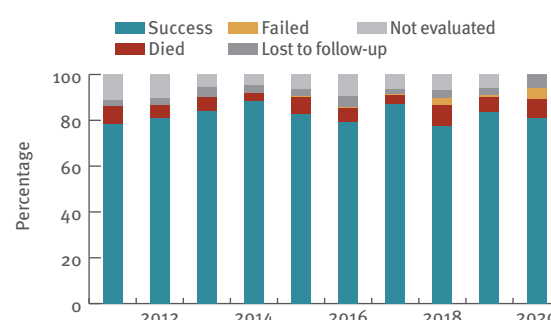
Note: data up to 2014 includes all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort includes new cases only.

# Italy

Total population at 23 April 2022 by EUROSTAT: 59 236 213

## TB cases, 2021

### Notifications

Total number of cases	2480
Notification rate per 100 000	4
New <sup>a</sup> and relapse	2378
New <sup>a</sup> and relapse notification rate per 100 000	4
Pulmonary	1840 (74.2%)
of which microscopy-positive	689 (37.4%)
of which laboratory-confirmed	1390 (75.5%)
Laboratory-confirmed TB cases	2146 (86.5%)
Mean age of new native TB cases	54.0 years
Mean age of new foreign TB cases	38.0 years
Foreign origin of all TB cases	1437 (57.9%)
New (not previously treated)	1686 (68.0%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	2900 [2500-3400]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	-
Case-linked data-reporting	No
Cases with DST results	1406 (65.5%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	50 [37-64]
Pulmonary RR/MDR-TB cases notified	40 (3.4%)
of which pre-XDR-TB cases	10 (25.6%)
Notified RR/MDR-TB of which pre-XDR-TB cases	44 (3.1%) 10 (22.7%)
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.

<sup>c</sup> Cases with unknown previous TB treatment history included in new cases.

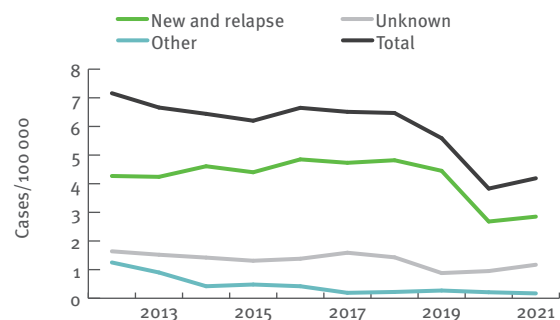
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	773	49
Success	-	-
Died	-	-
Failed	-	-
Lost to follow-up	-	-
Still on treatment	-	-
Not evaluated	-	-

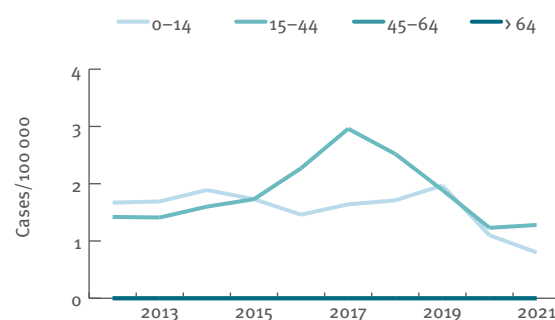
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

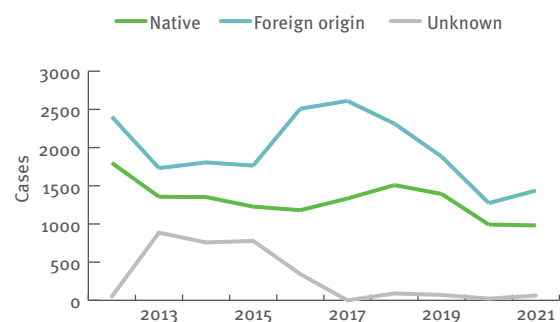
## TB notification rates by previous treatment history, 2012–2021



## New and relapse TB cases – notification rates by age group, 2012–2021



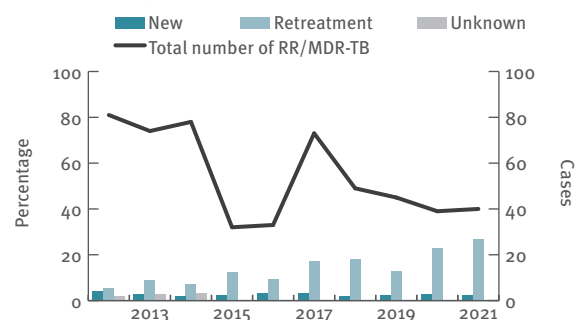
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

Data not reported

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020

Data not reported

# Kazakhstan

Total population estimate 2021 by United Nations Statistical Database: 19 196 466

## TB cases, 2021

### Notifications

Total number of cases	10 008
Notification rate per 100 000	52.1
New <sup>a</sup> and relapse	9 757
New <sup>a</sup> and relapse notification rate per 100 000	50.8
Pulmonary	9 498 (94.9%)
of which microscopy-positive of which laboratory-confirmed	7 536 (79.3%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	43.7 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	156 (1.6%)
New (not previously treated)	7 066 (70.6%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	14 000 [9 900-19 000]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	7 522 (99.8%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	2 900 [2 900-3 000]
Pulmonary RR/MDR-TB cases notified	2 943 (39.1%)
of which pre-XDR-TB cases	461 (15.7%)
Notified RR/MDR-TB	3 755
of which pre-XDR-TB cases	461 (12.3%)
TB cases tested for HIV	9 620 (98.6%)
HIV-positive TB cases	625 (6.5%)
of these on ART	581 (93.0%)

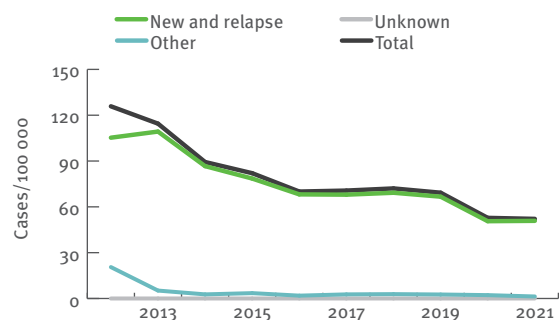
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	5 742	5 892
Success	5 043 (87.8%)	4 486 (76.1%)
Died	461 (8.0%)	600 (10.2%)
Failed	171 (3.0%)	196 (3.3%)
Lost to follow-up	54 (0.9%)	289 (4.9%)
Not evaluated	13 (0.2%)	321 (5.4%)

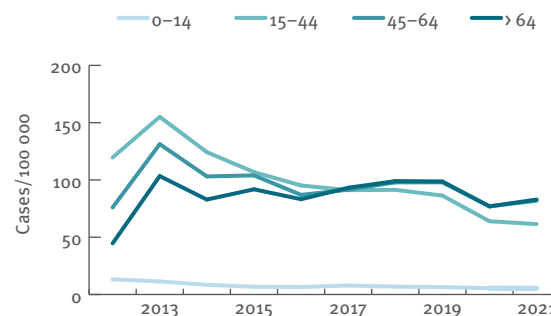
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



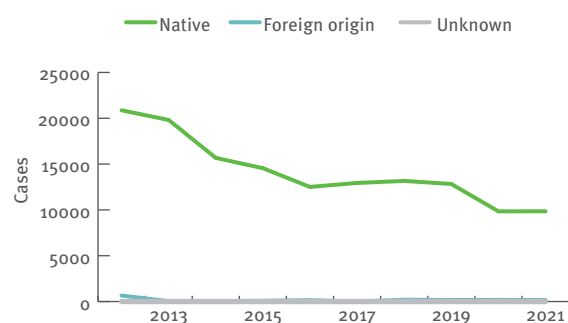
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012–2021

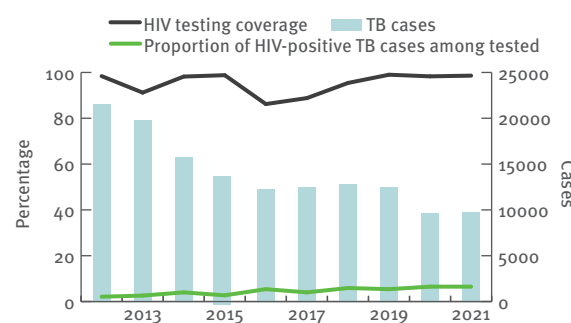


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

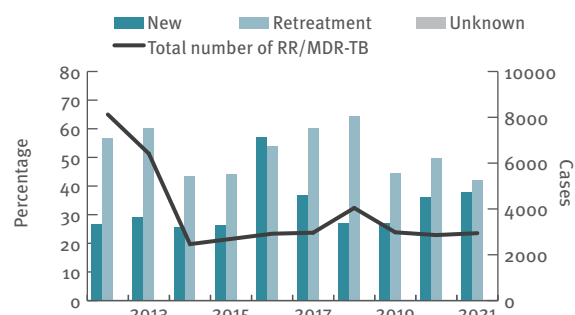


## TB/HIV coinfection, 2012–2021



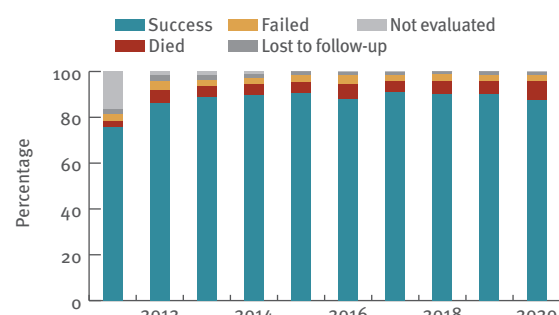
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases 2011–2020



Note: 2011 cohort includes new cases only.

# Kyrgyzstan

Total population estimate 2021 by United Nations Statistical Database: 6 527 743

## TB cases, 2021

Notifications		
Total number of cases	5 209	
Notification rate per 100 000	79.8	
New <sup>a</sup> and relapse	4 596	
New <sup>a</sup> and relapse notification rate per 100 000	70.4	
Pulmonary	4 152	(79.7%)
of which microscopy-positive	-	-
of which laboratory-confirmed	2 762	(66.5%)
Laboratory-confirmed TB cases	-	-
Mean age of new native TB cases	41.0 years	
Mean age of new foreign TB cases	-	
Foreign origin of all TB cases	0	(0.0%)
New (not previously treated)	3 901	(74.9%)
Estimates		
Estimated new and relapse cases N, best [low-high]	8 500	[7 000-10 000]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	2 601	(94.2%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	980	[940-1000]
Pulmonary RR/MDR-TB cases notified	839	(32.3%)
of which pre-XDR-TB cases	116	(17.4%)
Notified RR/MDR-TB	917	
of which pre-XDR-TB cases	129	(14.1%)
TB cases tested for HIV	4 394	(95.6%)
HIV-positive TB cases	126	(2.9%)
of these on ART	77	(61.1%)

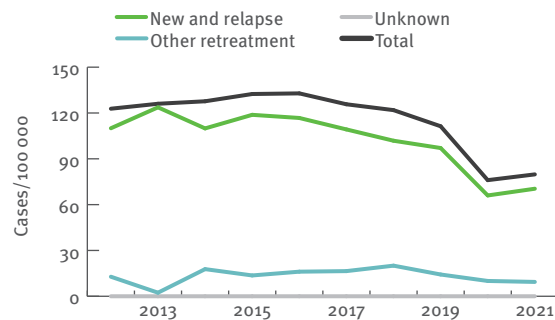
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	3 472	1 173
Success	2 839 (81.8%)	841 (71.7%)
Died	271 (7.8%)	79 (6.7%)
Failed	92 (2.6%)	42 (3.6%)
Lost to follow-up	254 (7.3%)	208 (17.7%)
Not evaluated	16 (0.5%)	3 (0.3%)

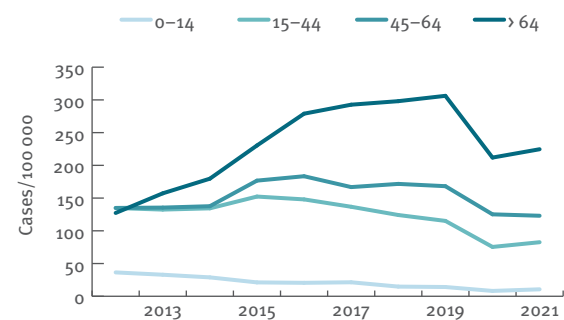
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



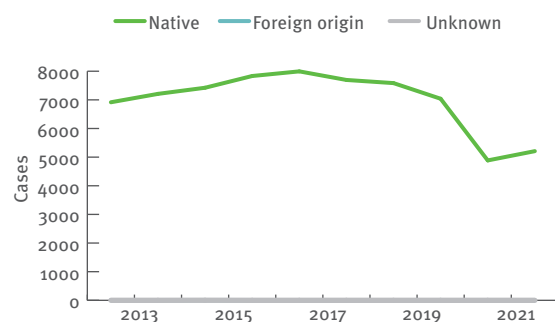
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases - notification rates by age group, 2012–2021

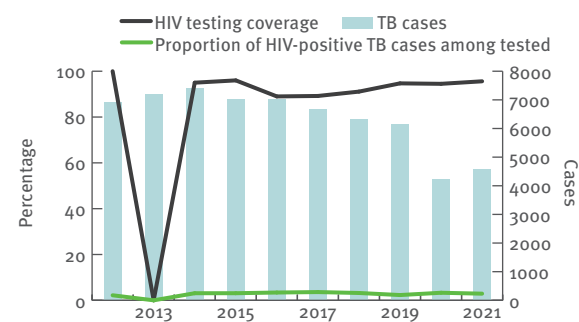


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

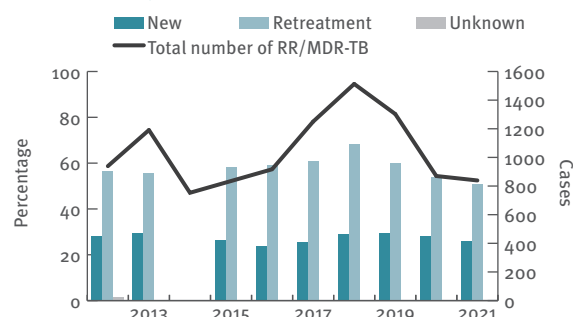


## TB/HIV coinfection, 2012–2021



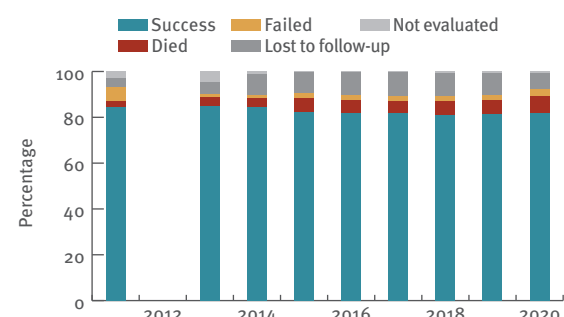
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort includes new cases only.



# Latvia

Total population at 23 April 2022 by EUROSTAT: 1893 223

## TB cases, 2021

### Notifications

Total number of cases	261
Notification rate per 100 000	14
New <sup>a</sup> and relapse	255
New <sup>a</sup> and relapse notification rate per 100 000	13
Pulmonary	246 (94.3%)
of which microscopy-positive	118 (48.0%)
of which laboratory-confirmed	207 (84.1%)
Laboratory-confirmed TB cases	212 (81.2%)
Mean age of new native TB cases	47.3 years
Mean age of new foreign TB cases	40.6 years
Foreign origin of all TB cases	6 (2.3%)
New (not previously treated)	220 (84.3%)

### Estimates

Estimated new and relapse cases N, best [low-high]	290 [250-340]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	No
Completeness of HIV data <sup>b</sup>	Yes
Case-linked data-reporting	No
Cases with DST results	181 (85.4%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	25 [21-28]
Pulmonary RR/MDR-TB cases notified	18 (9.7%)
of which pre-XDR-TB cases	3 (16.7%)
Notified RR/MDR-TB of which pre-XDR-TB cases	18 (9.9%)
of which pre-XDR-TB cases	3 (16.7%)
TB cases tested for HIV	188 (72.0%)
HIV-positive TB cases of these on ART	24 (12.8%)

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

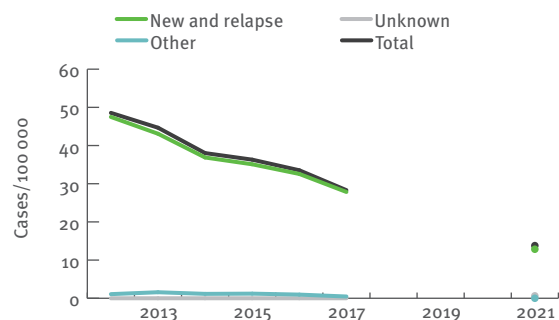
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

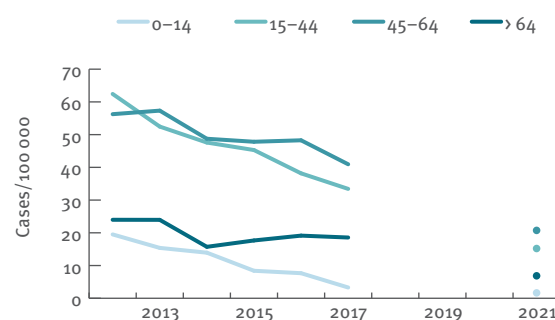
Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	No	-
Cases notified	-	-
Success	-	-
Died	-	-
Failed	-	-
Lost to follow-up	-	-
Still on treatment	-	-
Not evaluated	-	-

<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.

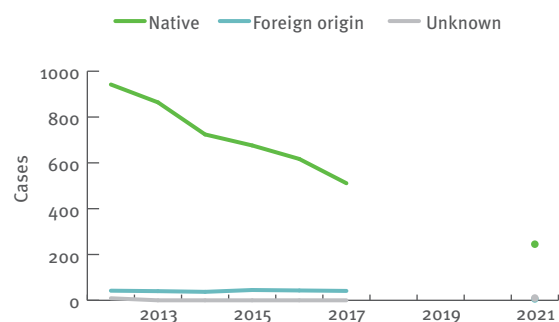
## TB notification rates by previous treatment history, 2012–2021



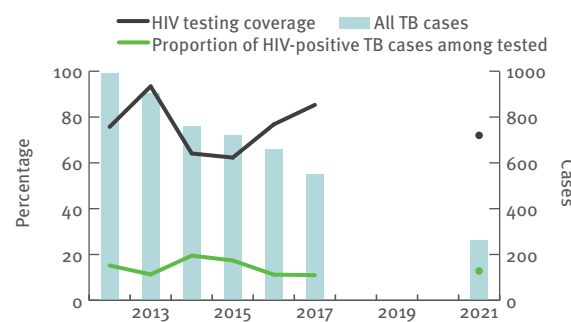
## New and relapse TB cases – notification rates by age group, 2012–2021



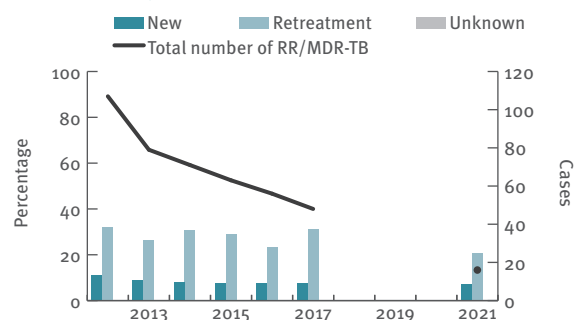
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

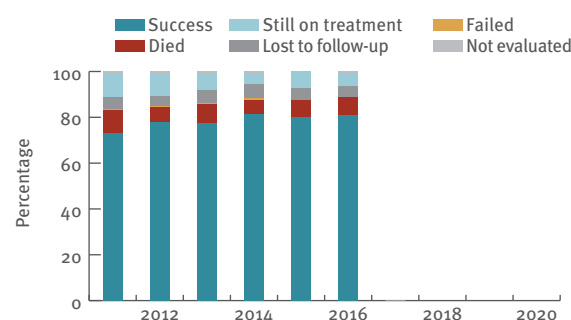


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Liechtenstein

Total population at 23 April 2022 by EUROSTAT: 39 055

## TB cases, 2021

### Notifications

Total number of cases	1
Notification rate per 100 000	2.6
New <sup>a</sup> and relapse	1
New <sup>a</sup> and relapse notification rate per 100 000	2.6
Pulmonary	1 (100.0%)
of which microscopy-positive	1 -
of which laboratory-confirmed	1 -
Laboratory-confirmed TB cases	1 (100.0%)
Mean age of new native TB cases	58.0 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	1 (100.0%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	- -

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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 bacteriologically confirmed pulmonary TB cases N, best [low-high]	- -
Pulmonary RR/MDR-TB cases notified	0 -
of which pre-XDR-TB cases	0 -
Notified RR/MDR-TB	0 -
of which pre-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.

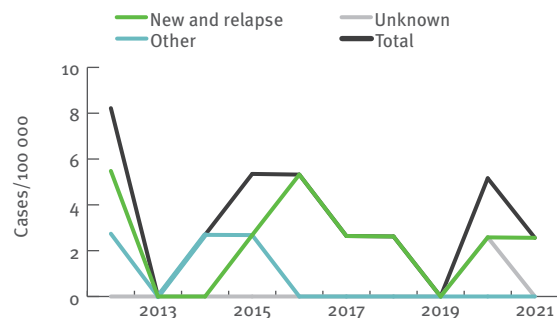
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	0	0
Success	-	-
Died	-	-
Failed	-	-
Lost to follow-up	-	-
Still on treatment	-	-
Not evaluated	-	-

<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.

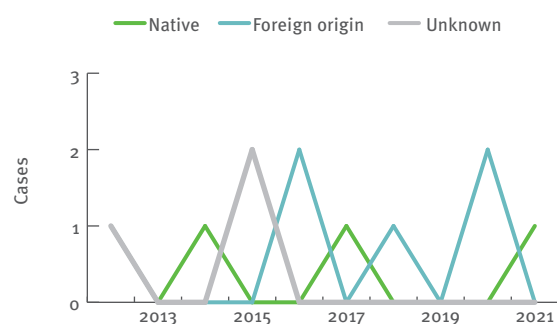
## TB notification rates by previous treatment history, 2012–2021



## New and relapse TB cases – notification rates by age group, 2012–2021



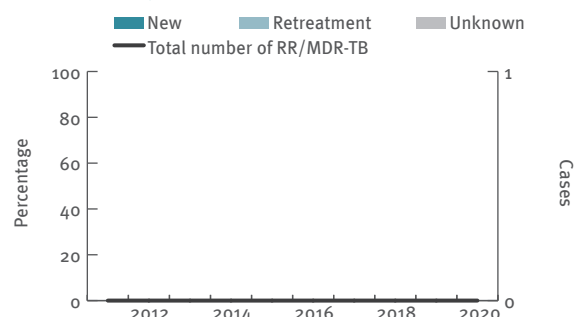
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

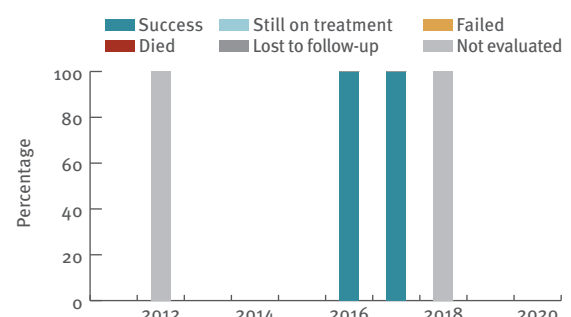
Data not reported

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Lithuania

Total population at 23 April 2022 by EUROSTAT: 2 795 680

## TB cases, 2021

### Notifications

Total number of cases	646
Notification rate per 100 000	23.1
New <sup>a</sup> and relapse	628
New <sup>a</sup> and relapse notification rate per 100 000	22.5
Pulmonary	594 (92.0%)
of which microscopy-positive	397 (66.8%)
of which laboratory-confirmed	561 (94.4%)
Laboratory-confirmed TB cases	578 (89.5%)
Mean age of new native TB cases	49.5 years
Mean age of new foreign TB cases	52.4 years
Foreign origin of all TB cases	7 (1.1%)
New (not previously treated)	550 (85.1%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low–high]	720 [620–830]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	578 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low–high]	110 [110–120]
Pulmonary RR/MDR-TB cases notified	105 (18.7%)
of which pre-XDR-TB cases	21 (20.0%)
Notified RR/MDR-TB	105 (18.2%)
of which pre-XDR-TB cases	21 (20.0%)
TB cases tested for HIV	612 (94.7%)
HIV-positive TB cases of these on ART	15 (2.5%)

<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.

<sup>c</sup> Cases with unknown previous TB treatment history included in new cases.

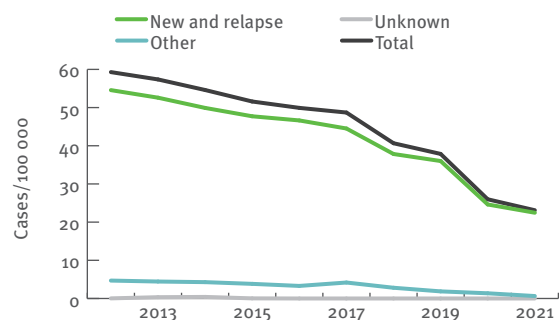
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	–
Cases notified	483	173
Success	359 (74.3%)	78 (45.1%)
Died	60 (12.4%)	29 (16.8%)
Failed	4 (0.8%)	5 (2.9%)
Lost to follow-up	11 (2.3%)	10 (5.8%)
Still on treatment	49 (10.1%)	50 (28.9%)
Not evaluated	0 (0.0%)	1 (0.6%)

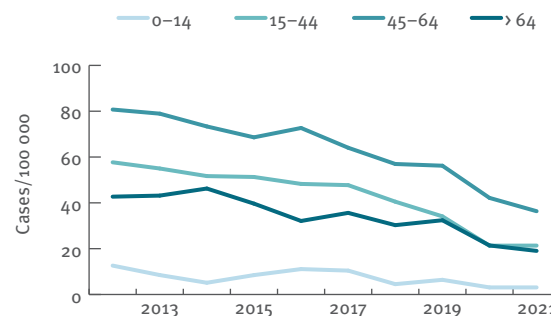
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

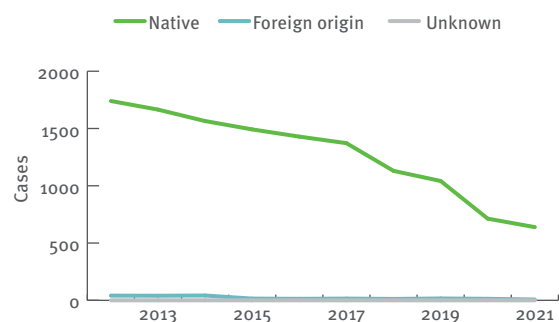
## TB notification rates by previous treatment history, 2012–2021



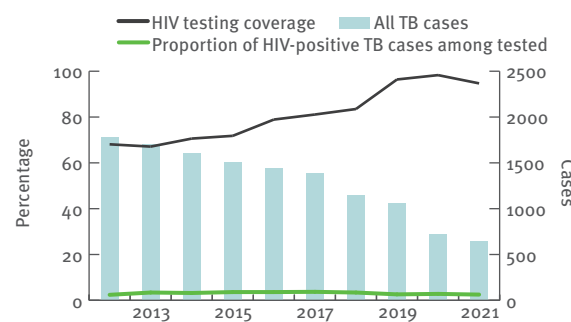
## New and relapse TB cases – notification rates by age group, 2012–2021



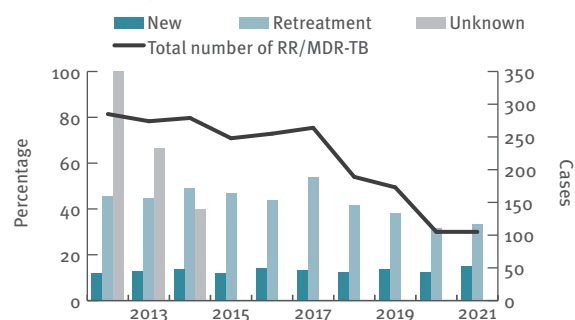
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

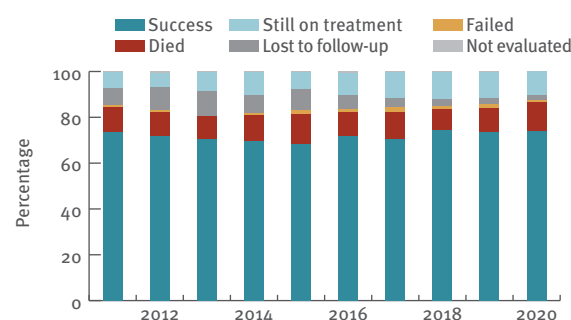


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Luxembourg

Total population at 23 April 2022 by EUROSTAT: 634 730

## TB cases, 2021

### Notifications

Total number of cases	35
Notification rate per 100 000	5.5
New <sup>a</sup> and relapse	34
New <sup>a</sup> and relapse notification rate per 100 000	5.4
Pulmonary	29 (82.9%)
of which microscopy-positive	21 (72.4%)
of which laboratory-confirmed	27 (93.1%)
Laboratory-confirmed TB cases	30 (85.7%)
Mean age of new native TB cases	37.5 years
Mean age of new foreign TB cases	40.4 years
Foreign origin of all TB cases	33 (94.3%)
New (not previously treated)	30 (85.7%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	39 [33-45]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	29 (96.7%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	0 [0-1]
Pulmonary RR/MDR-TB cases notified	0 (0.0%)
of which pre-XDR-TB cases	0 -
Notified RR/MDR-TB of which pre-XDR-TB cases	0 (0.0%)
of which pre-XDR-TB cases	0 -
TB cases tested for HIV	25 (71.4%)
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.

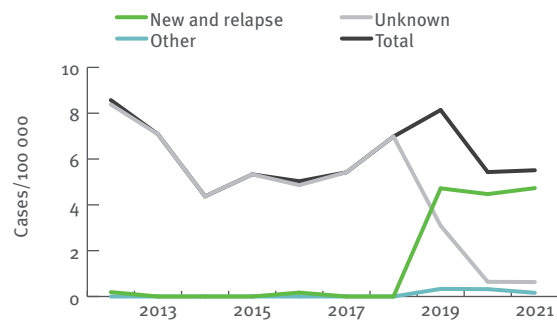
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	19	1
Success	8 (42.1%)	0 (0.0%)
Died	0 (0.0%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	0 (0.0%)	0 (0.0%)
Still on treatment	0 (0.0%)	0 (0.0%)
Not evaluated	11 (57.9%)	1 (100.0%)

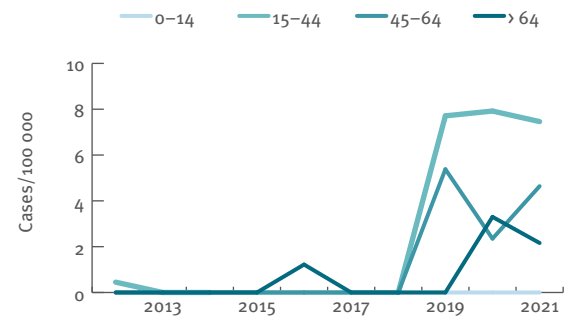
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

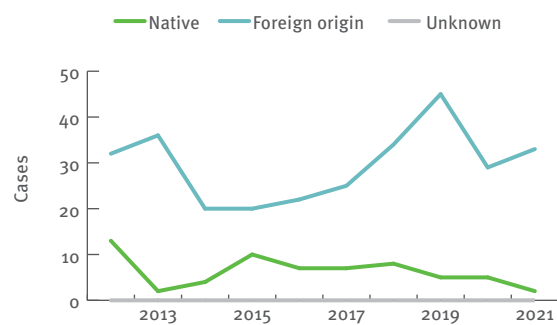
## TB notification rates by previous treatment history, 2012–2021



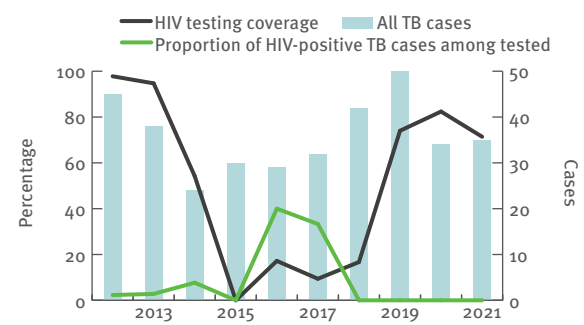
## New and relapse TB cases – notification rates by age group, 2012–2021



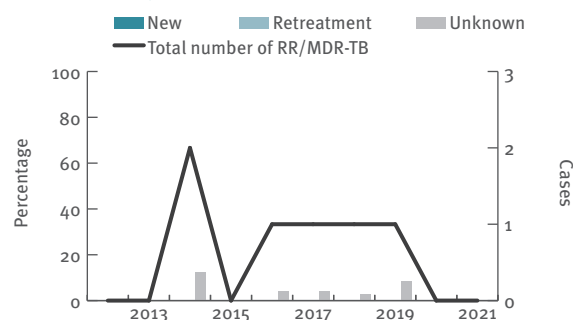
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

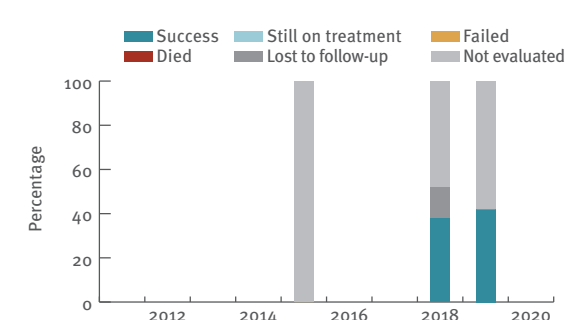


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Malta

Total population at 23 April 2022 by EUROSTAT: 516 100

## TB cases, 2021

### Notifications

Total number of cases	54	
Notification rate per 100 000	10.5	
New <sup>a</sup> and relapse	54	
New <sup>a</sup> and relapse notification rate per 100 000	10.5	
Pulmonary	41	(75.9%)
of which microscopy-positive	17	(41.5%)
of which laboratory-confirmed	28	(68.3%)
Laboratory-confirmed TB cases	38	(70.4%)
Mean age of new native TB cases	18.0 years	
Mean age of new foreign TB cases	30.8 years	
Foreign origin of all TB cases	53	(98.1%)
New (not previously treated)	54	(100.0%)

### Estimates

Estimated new and relapse cases N, best [low-high]	62	[53-72]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	37	(97.4%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	0	[0-1]
Pulmonary RR/MDR-TB cases notified	1	(3.7%)
of which pre-XDR-TB cases	0	-
Notified RR/MDR-TB of which pre-XDR-TB cases	1	(2.7%)
TB cases tested for HIV	46	(85.2%)
HIV-positive TB cases of these on ART	1	(2.2%)
	1	(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.

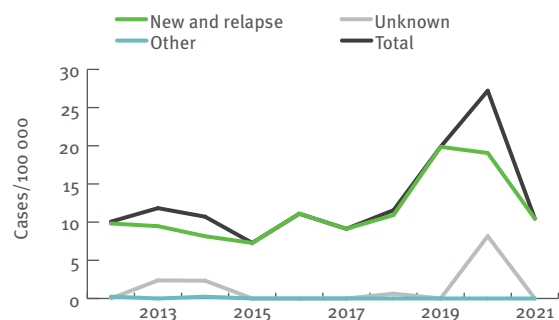
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	18	0
Success	-	-
Died	-	-
Failed	-	-
Lost to follow-up	-	-
Still on treatment	-	-
Not evaluated	-	-

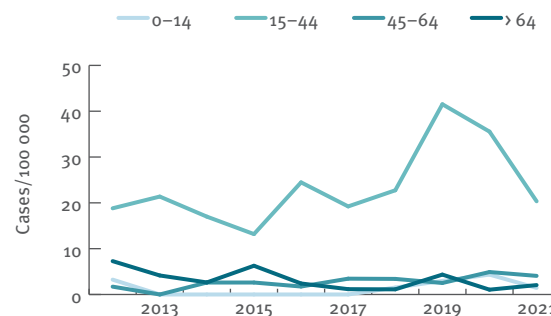
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

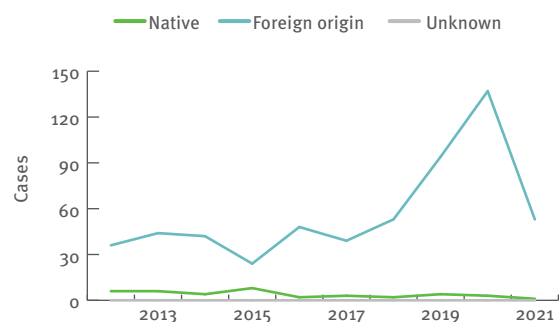
## TB notification rates by previous treatment history, 2012-2021



## New and relapse TB cases – notification rates by age group, 2012-2021

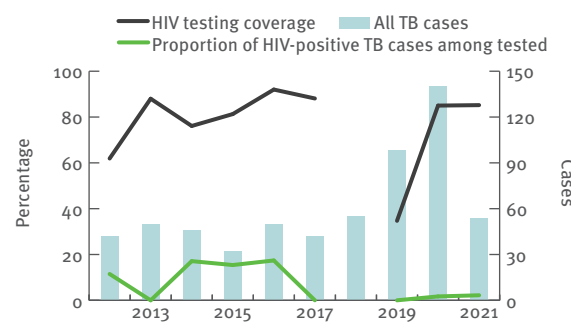


## TB cases by geographical origin, 2012-2021

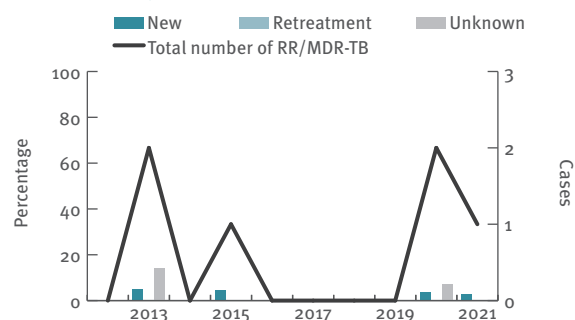


Note: by nationality for 2000-2006.

## TB/HIV coinfection, 2012-2021

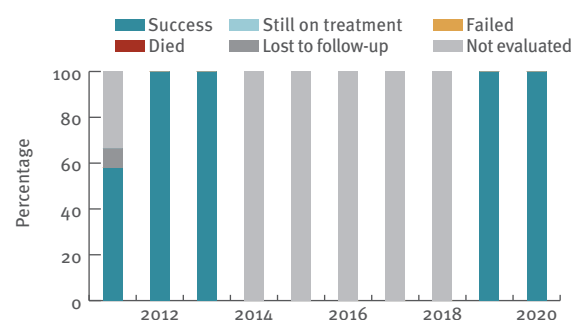


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# Monaco

Total population estimate 2021 by United Nations Statistical Database: 36 686

## TB cases, 2021

### Notifications

Total number of cases	0
Notification rate per 100 000	0.0
New <sup>a</sup> and relapse	0
New <sup>a</sup> and relapse notification rate per 100 000	0.0
Pulmonary	
of which microscopy-positive	-
of which laboratory-confirmed	-
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	-
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	-
New (not previously treated)	-
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	0 [0-0]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	-
Completeness of HIV data <sup>b</sup>	-
Case-linked data-reporting	Yes
Cases with DST results	-
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	0 [0-0]
Pulmonary RR/MDR-TB cases notified	-
of which pre-XDR-TB cases	-
Notified RR/MDR-TB	-
of which pre-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.

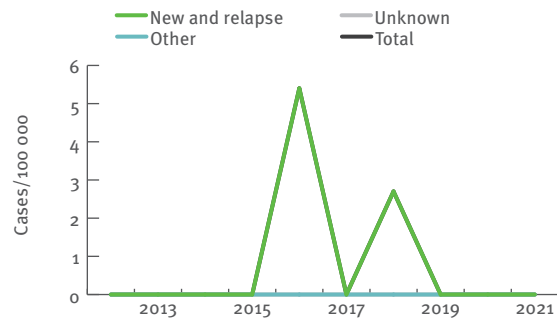
## Treatment outcome monitoring

Geographical coverage	National	
	Outcome cohort	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Case-linked data-reporting	Yes	-
Cases notified	0	0
Success	-	-
Died	-	-
Failed	-	-
Lost to follow-up	-	-
Not evaluated	-	-

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

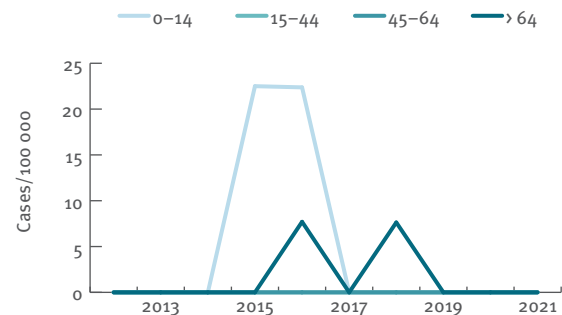
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



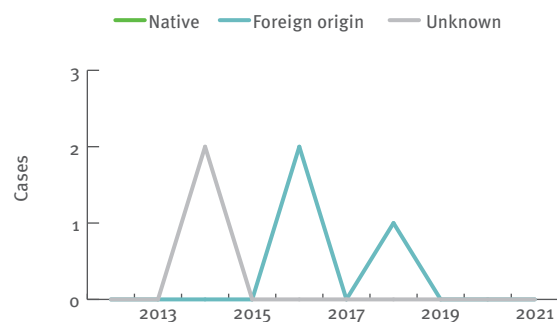
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012–2021

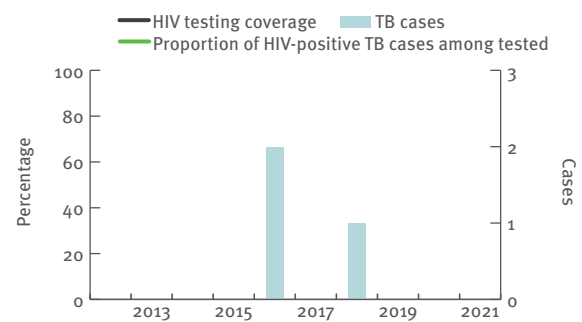


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

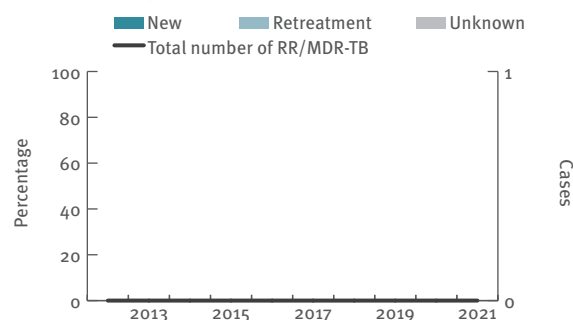


## TB/HIV coinfection, 2012–2021



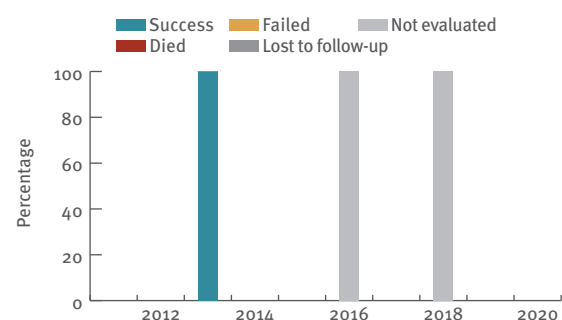
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort include new cases only.

# Montenegro

Total population estimate 2021 by United Nations Statistical Database: 627 859

## TB cases, 2021

### Notifications

Total number of cases	83
Notification rate per 100 000	13.2
New <sup>a</sup> and relapse	80
New <sup>a</sup> and relapse notification rate per 100 000	12.7
Pulmonary	71 (85.5%)
of which microscopy-positive	-
of which laboratory-confirmed	61 (85.9%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	50.3 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	2 (2.4%)
New (not previously treated)	73 (88.0%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	98 [84-110]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	61 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	1 [0-1]
Pulmonary RR/MDR-TB cases notified	0 (0.0%)
of which pre-XDR-TB cases	-
Notified RR/MDR-TB	0
of which pre-XDR-TB cases	-
TB cases tested for HIV	80 (100.0%)
HIV-positive TB cases	0 (0.0%)
of these on ART	-

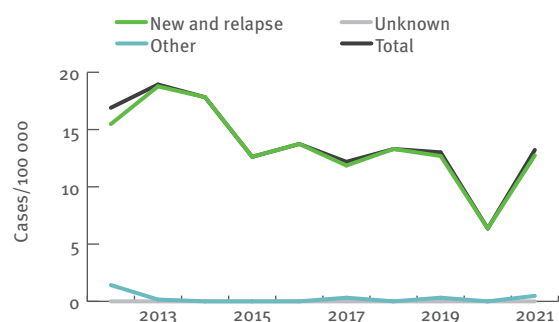
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	40	0
Success	35 (87.5%)	-
Died	3 (7.5%)	-
Failed	1 (2.5%)	-
Lost to follow-up	1 (2.5%)	-
Not evaluated	0 (0.0%)	-

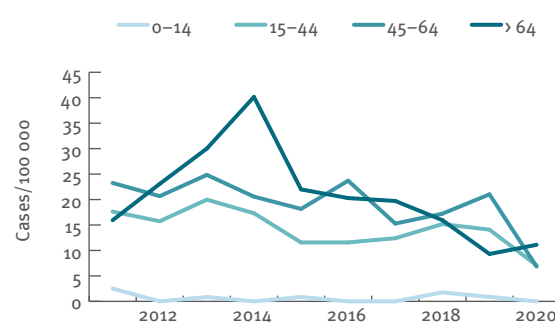
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



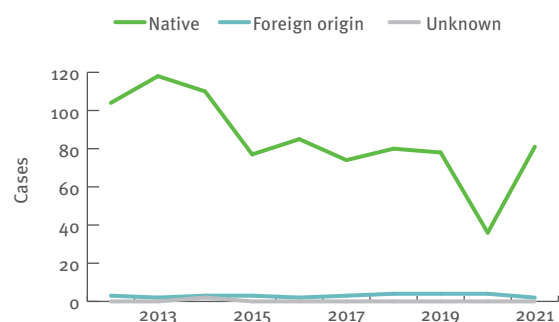
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012–2021

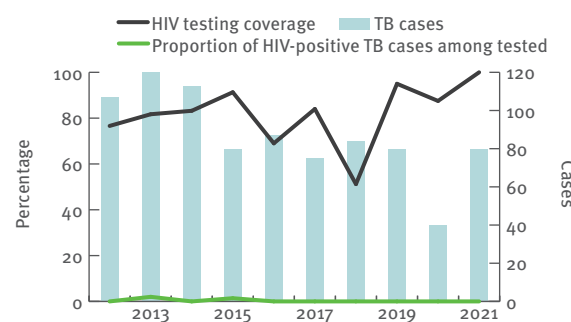


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

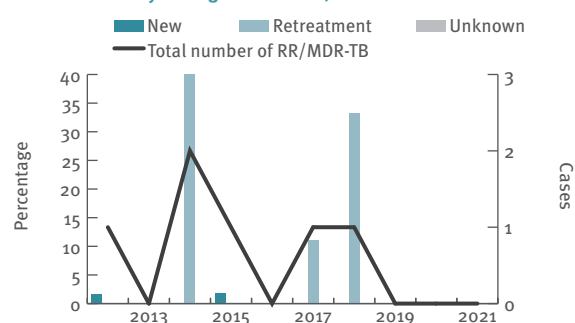


## TB/HIV coinfection, 2012–2021



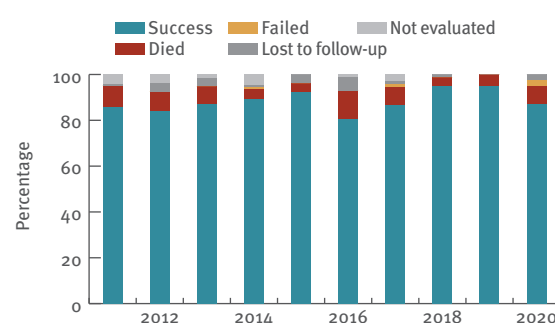
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort includes new cases only.

# Netherlands

Total population at 23 April 2022 by EUROSTAT: 17 475 415

## TB cases, 2021

### Notifications

Total number of cases	680
Notification rate per 100 000	3.9
New <sup>a</sup> and relapse	671
New <sup>a</sup> and relapse notification rate per 100 000	3.8
Pulmonary	381 (56.0%)
of which microscopy-positive	155 (40.7%)
of which laboratory-confirmed	306 (80.3%)
Laboratory-confirmed TB cases	478 (70.3%)
Mean age of new native TB cases	50.0 years
Mean age of new foreign TB cases	41.4 years
Foreign origin of all TB cases	532 (78.2%)
New (not previously treated)	642 (94.4%)

### Estimates

Estimated new and relapse cases N. best [low–high]	770 [660–890]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug-resistance surveillance and TB/HIV coinfection, 2020

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	444 (92.9%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N. best [low–high]	13 [9–17]
Pulmonary RR/MDR-TB cases notified	10 (3.5%)
of which pre-XDR-TB cases	1 (10.0%)
Notified RR/MDR-TB	11 (2.5%)
of which pre-XDR-TB cases	1 (9.1%)
TB cases tested for HIV	508 (74.7%)
HIV-positive TB cases	13 (2.6%)
of these on ART	10 (76.9%)

<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.

<sup>c</sup> Cases with unknown previous TB treatment history included in new cases.

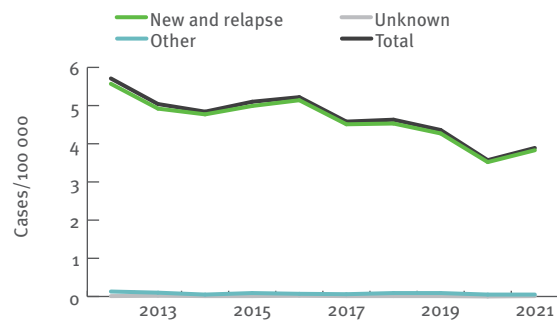
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	–
Cases notified	253	9
Success	200 (79.1%)	8 (88.9%)
Died	15 (5.9%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	9 (3.6%)	0 (0.0%)
Still on treatment	8 (3.2%)	0 (0.0%)
Not evaluated	21 (8.3%)	1 (11.1%)

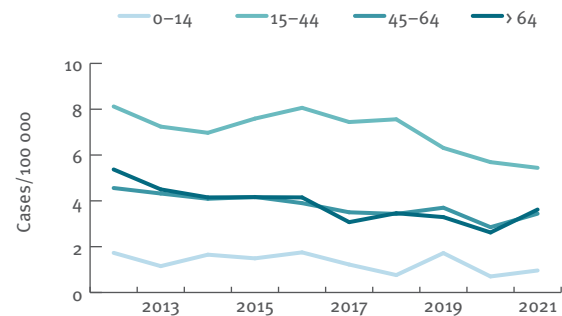
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

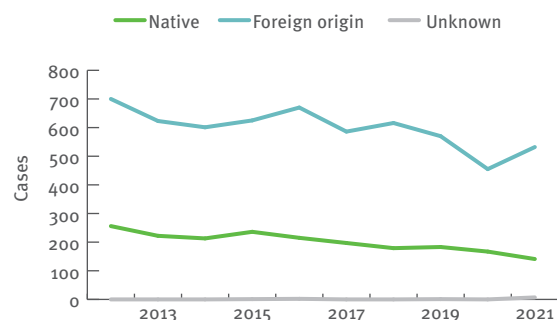
## TB notification rates by previous treatment history, 2012–2021



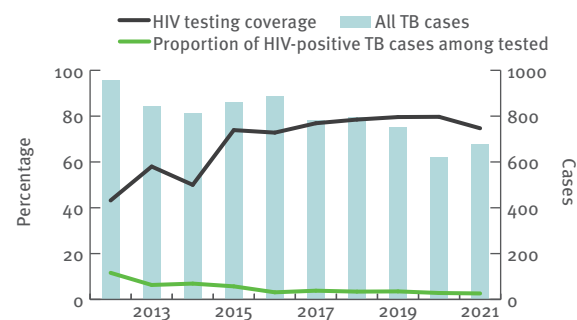
## New and relapse TB cases – notification rates by age group, 2012–2021



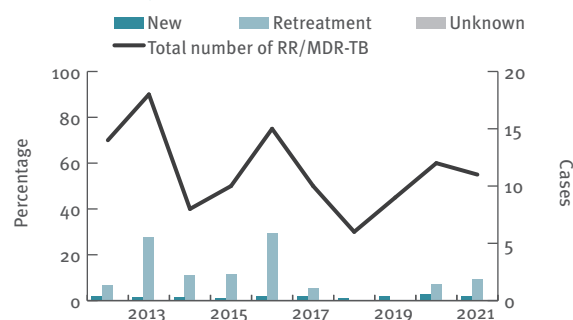
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

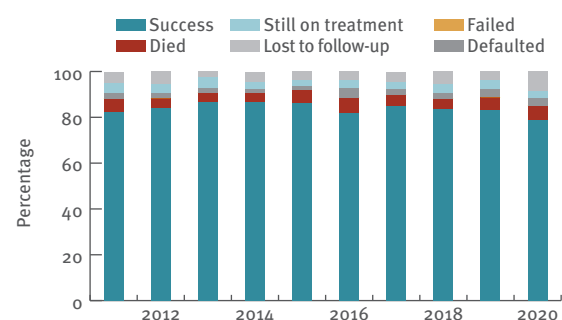


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020





# North Macedonia

Total population estimate 2021 by United Nations Statistical Database: 2 103 330

## TB cases, 2021

### Notifications

Total number of cases	146
Notification rate per 100 000	6.9
New <sup>a</sup> and relapse	143
New <sup>a</sup> and relapse notification rate per 100 000	6.8
Pulmonary	131 (89.7%)
of which microscopy-positive	-
of which laboratory-confirmed	111 (84.7%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	47.9 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	3 (2.1%)
New (not previously treated)	129 (88.4%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	240 [180-300]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	111 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	1 [1-2]
Pulmonary RR/MDR-TB cases notified	2 (1.8%)
of which pre-XDR-TB cases	0 (0.0%)
Notified RR/MDR-TB	2
of which pre-XDR-TB cases	0 (0.0%)
TB cases tested for HIV	29 (20.3%)
HIV-positive TB cases	0 (0.0%)
of these on ART	-

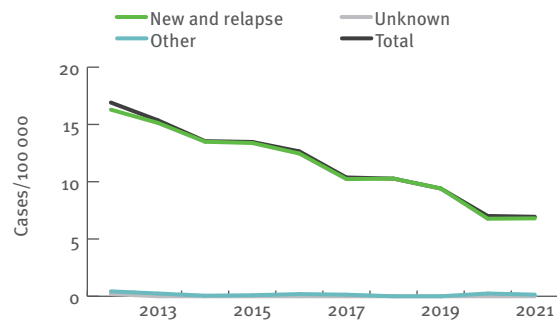
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	148	2
Success	125 (84.5%)	0 (0.0%)
Died	11 (7.4%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	10 (6.8%)	2 (100.0%)
Not evaluated	2 (1.4%)	0 (0.0%)

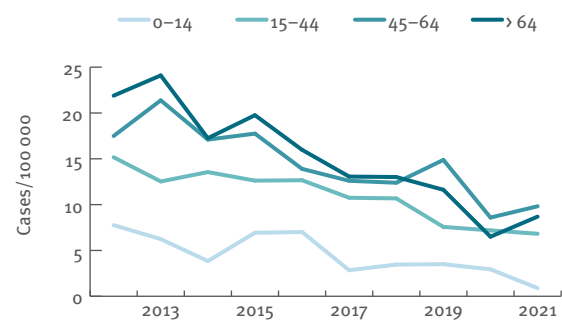
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



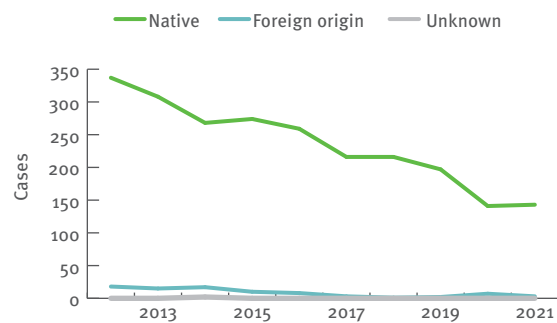
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012–2021

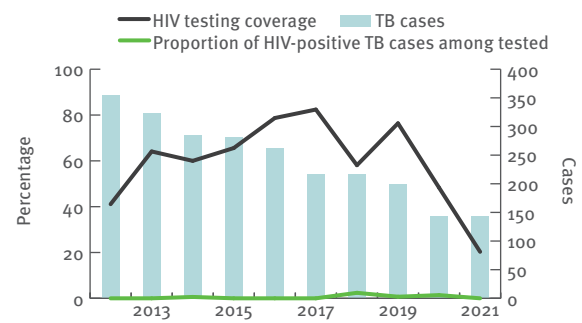


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

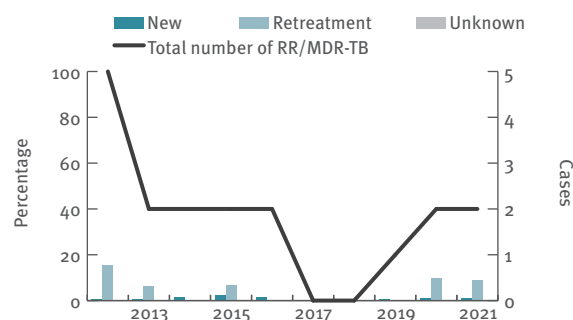


## TB/HIV coinfection, 2012–2021



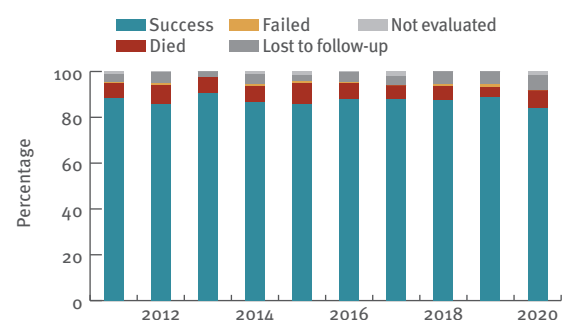
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort includes new cases only.

# Norway

Total population at 23 April 2022 by EUROSTAT: 5 391 369

## TB cases, 2021

### Notifications

Total number of cases	157	
Notification rate per 100 000	2.9	
New <sup>a</sup> and relapse	#VALUE!	
New <sup>a</sup> and relapse notification rate per 100 000	#VALUE!	
Pulmonary	84	(53.5%)
of which microscopy-positive	37	(44.0%)
of which laboratory-confirmed	76	(90.5%)
Laboratory-confirmed TB cases	125	(79.6%)
Mean age of new native TB cases	39.9 years	
Mean age of new foreign TB cases	40.4 years	
Foreign origin of all TB cases	130	(82.8%)
New (not previously treated)	140	(89.2%)

### Estimates

Estimated new and relapse cases N, best [low-high]	160	[130-180]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	124	(99.2%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	4	[2-5]
Pulmonary RR/MDR-TB cases notified	8	(10.7%)
of which pre-XDR-TB cases	2	(25.0%)
Notified RR/MDR-TB of which pre-XDR-TB cases	2	(20.0%)
TB cases tested for HIV	128	(81.5%)
HIV-positive TB cases of these on ART	4	(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.

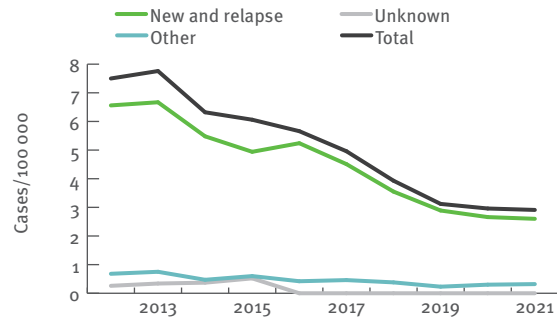
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	78	2
Success	67 (85.9%)	1 (50.0%)
Died	2 (2.6%)	0 (0.0%)
Failed	1 (1.3%)	0 (0.0%)
Lost to follow-up	0 (0.0%)	0 (0.0%)
Still on treatment	1 (1.3%)	0 (0.0%)
Not evaluated	7 (9.0%)	1 (50.0%)

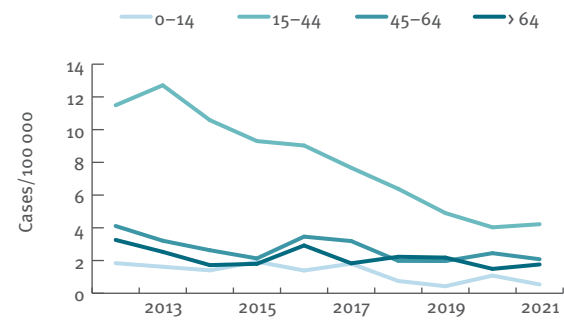
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

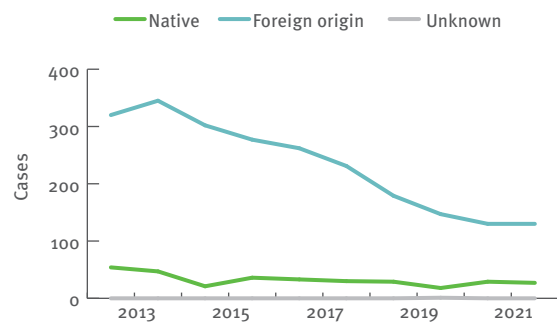
## TB notification rates by previous treatment history, 2012-2021



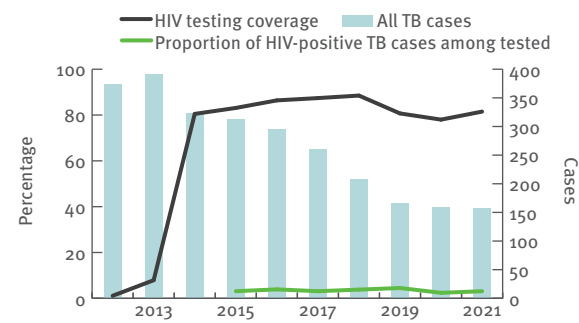
## New and relapse TB cases – notification rates by age group, 2012-2021



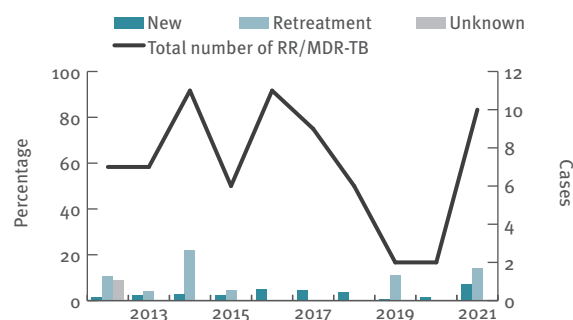
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

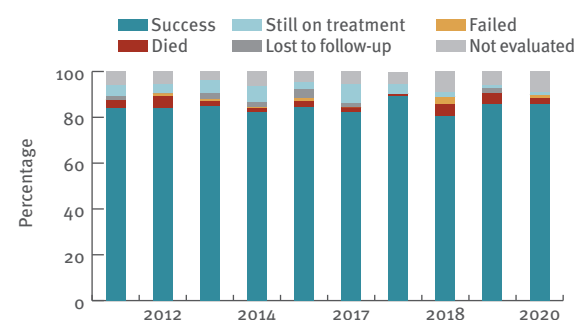


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# Poland

Total population at 23 April 2022 by EUROSTAT: 37 840 001

## TB cases, 2021

### Notifications

Total number of cases	3704	
Notification rate per 100 000	9.8	
New <sup>a</sup> and relapse	3446	
New <sup>a</sup> and relapse notification rate per 100 000	9.1	
Pulmonary	3553	(95.9%)
of which microscopy-positive	2115	(59.5%)
of which laboratory-confirmed	2970	(83.6%)
Laboratory-confirmed TB cases	3061	(82.6%)
Mean age of new native TB cases	51.9 years	
Mean age of new foreign TB cases	35.7 years	
Foreign origin of all TB cases	132	(3.6%)
New (not previously treated)	3229	(87.2%)

### Estimates

Estimated new and relapse cases N, best [low-high]	4000	[3400-4600]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	Yes	
Completeness of HIV data <sup>b</sup>	-	
Case-linked data-reporting	Yes	
Cases with DST results	2 830	(92.5%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	36	[31-42]
Pulmonary RR/MDR-TB cases notified	58	(2.1%)
of which pre-XDR-TB cases	9	(15.5%)
Notified RR/MDR-TB	58	(2.0%)
of which pre-XDR-TB cases	9	(15.5%)
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.

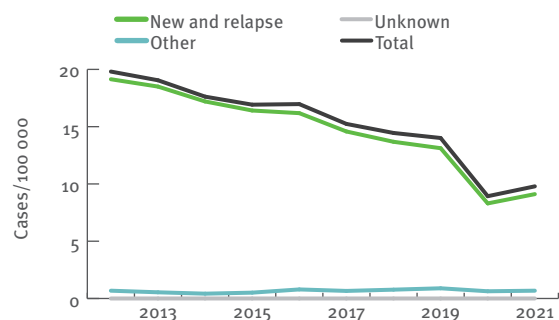
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	2192	45
Success	0 (0.0%)	0 (0.0%)
Died	0 (0.0%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	0 (0.0%)	0 (0.0%)
Still on treatment	0 (0.0%)	0 (0.0%)
Not evaluated	2192 (100.0%)	45 (100.0%)

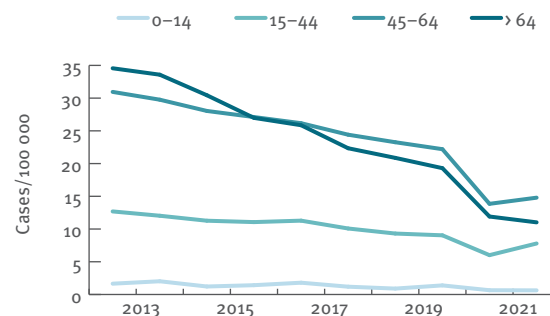
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

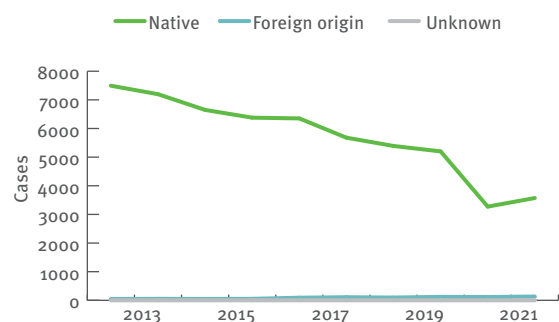
## TB notification rates by previous treatment history, 2012-2021



## New and relapse TB cases – notification rates by age group, 2012-2021



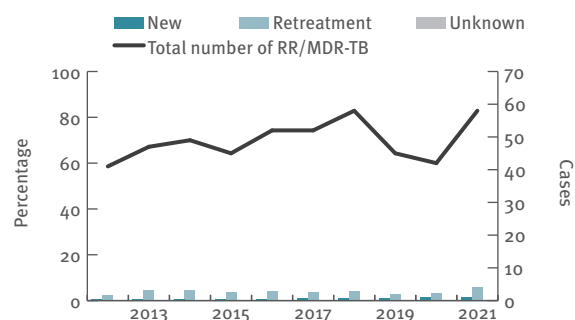
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

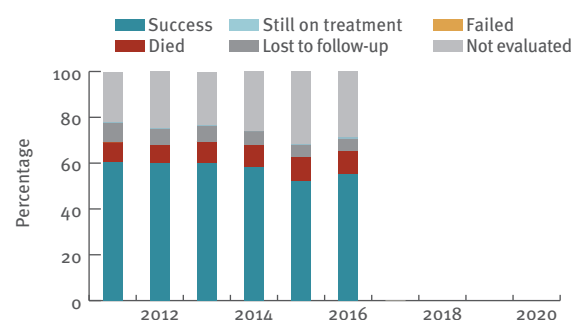
Data not reported

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# Portugal

Total population at 23 April 2022 by EUROSTAT: 10 298 252

## TB cases, 2021

### Notifications

Total number of cases	1504
Notification rate per 100 000	14.6
New <sup>a</sup> and relapse	1463
New <sup>a</sup> and relapse notification rate per 100 000	14.2
Pulmonary	1073 (71.3%)
of which microscopy-positive	612 (57.0%)
of which laboratory-confirmed	803 (74.8%)
Laboratory-confirmed TB cases	982 (65.3%)
Mean age of new native TB cases	54.5 years
Mean age of new foreign TB cases	40.3 years
Foreign origin of all TB cases	385 (25.6%)
New (not previously treated)	1412 (93.9%)

### Estimates

Estimated new and relapse cases N, best [low-high]	1700 [1400-1900]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	592 (60.3%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	13 [7-18]
Pulmonary RR/MDR-TB cases notified	8 (1.6%)
of which pre-XDR-TB cases	0 (0.0%)
Notified RR/MDR-TB of which pre-XDR-TB cases	10 (1.7%) 2 (20.0%)
TB cases tested for HIV	1109 (73.7%)
HIV-positive TB cases of these on ART	96 (8.7%) - -

<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.

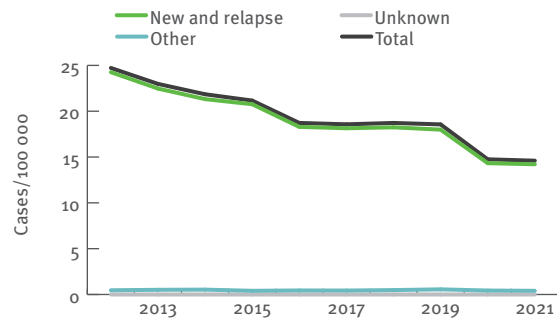
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	716	15
Success	511 (71.4%)	6 (40.0%)
Died	54 (7.5%)	1 (6.7%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	24 (3.4%)	2 (13.3%)
Still on treatment	106 (14.8%)	2 (13.3%)
Not evaluated	21 (2.9%)	4 (26.7%)

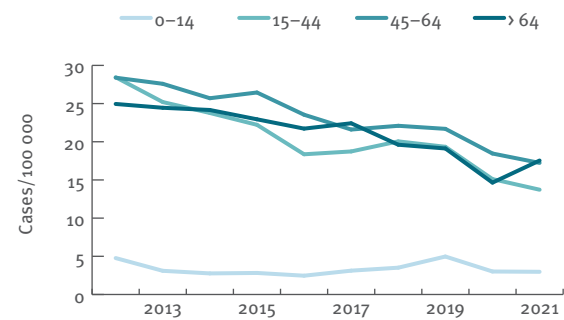
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

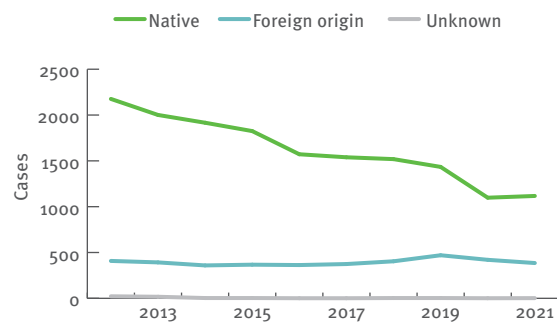
## TB notification rates by previous treatment history, 2012–2021



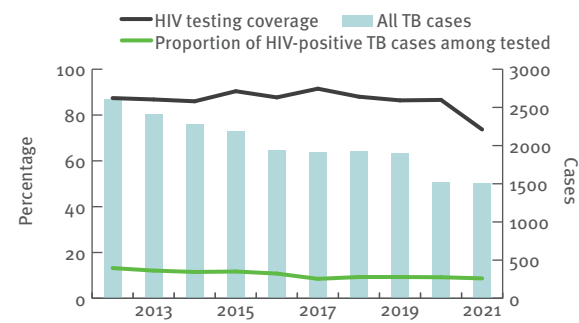
## New and relapse TB cases – notification rates by age group, 2012–2021



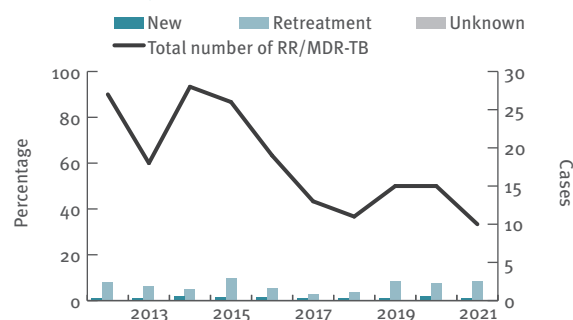
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

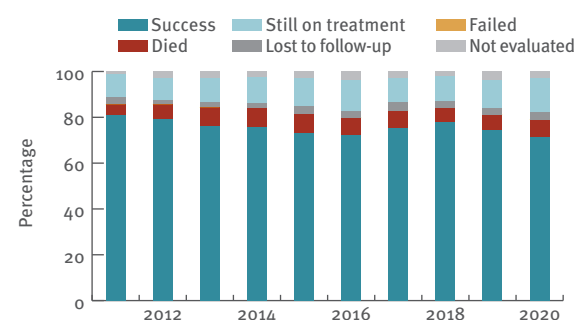


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Republic of Moldova

Total population estimate 2021 by United Nations Statistical Database: 3 061 507

## TB cases, 2021

### Notifications

Total number of cases	2248
Notification rate per 100 000	73.4
New <sup>a</sup> and relapse	2067
New <sup>a</sup> and relapse notification rate per 100 000	67.5
Pulmonary	2112 (94.0%)
of which microscopy-positive	-
of which laboratory-confirmed	1557 (73.7%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	44.7 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	20 (0.9%)
New (not previously treated)	1616 (71.9%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	2600 [2100-3100]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	1503 (96.5%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	610 [590-630]
Pulmonary RR/MDR-TB cases notified	459 (30.5%)
of which pre-XDR-TB cases	124 (27.0%)
Notified RR/MDR-TB	593
of which pre-XDR-TB cases	124 (20.9%)
TB cases tested for HIV	2008 (97.1%)
HIV-positive TB cases	214 (10.7%)
of these on ART	169 (79.0%)

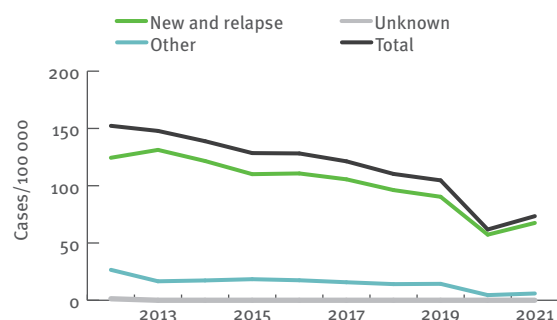
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	1408	559
Success	1117 (79.3%)	387 (69.2%)
Died	186 (13.2%)	76 (13.6%)
Failed	53 (3.8%)	35 (6.3%)
Lost to follow-up	33 (2.3%)	13 (2.3%)
Not evaluated	19 (1.3%)	48 (8.6%)

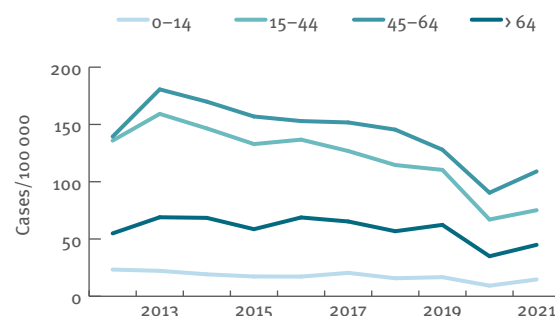
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012-2021



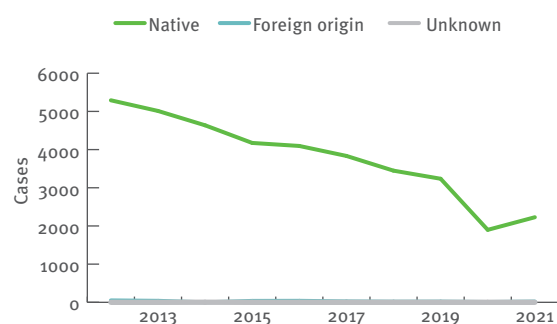
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012-2021

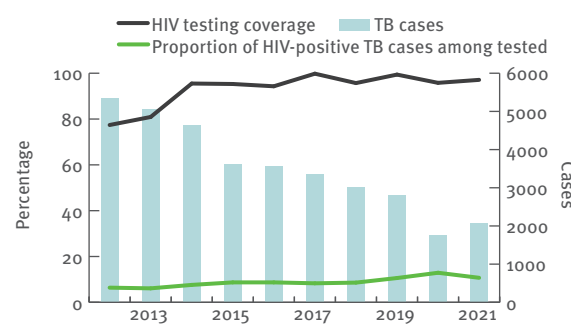


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012-2021

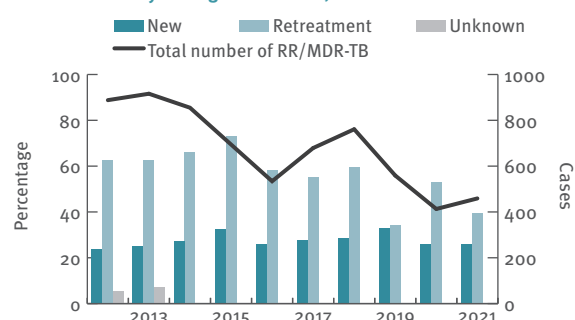


## TB/HIV coinfection, 2012-2021



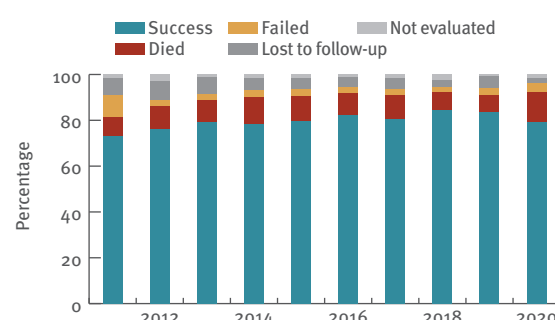
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011-2020



Note: 2011 cohort includes new cases only.

# Romania

Total population at 23 April 2022 by EUROSTAT: 19 201 662

## TB cases, 2021

### Notifications

Total number of cases	7,979
Notification rate per 100 000	41.6
New <sup>a</sup> and relapse	7,591
New <sup>a</sup> and relapse notification rate per 100 000	39.5
Pulmonary	6,971 (87.4%)
of which microscopy-positive	4,983 (71.5%)
of which laboratory-confirmed	5,939 (85.2%)
Laboratory-confirmed TB cases	6,156 (77.2%)
Mean age of new native TB cases	45.6 years
Mean age of new foreign TB cases	24.3 years
Foreign origin of all TB cases	46 (0.6%)
New (not previously treated)	6,402 (80.2%)

### Estimates

Estimated new and relapse cases N, best [low-high]	8700 [7500-10000]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	5489 (89.2%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	290 [270-320]
Pulmonary RR/MDR-TB cases notified	253 (4.8%)
of which pre-XDR-TB cases	24 (9.5%)
Notified RR/MDR-TB	259 (4.7%)
of which pre-XDR-TB cases	25 (9.7%)
TB cases tested for HIV	6569 (82.3%)
HIV-positive TB cases	144 (2.2%)
of these on ART	102 (70.8%)

<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.

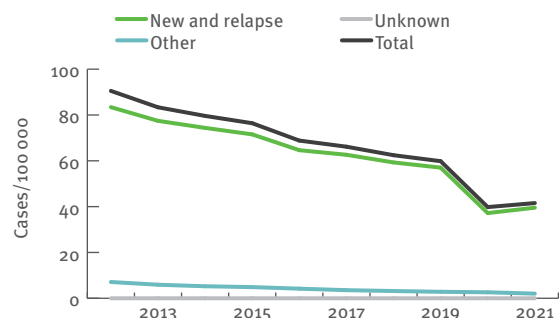
## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	4103	384
Success	3361 (81.9%)	184 (47.9%)
Died	401 (9.8%)	75 (19.5%)
Failed	85 (2.1%)	64 (16.7%)
Lost to follow-up	177 (4.3%)	52 (13.5%)
Still on treatment	79 (1.9%)	9 (2.3%)
Not evaluated	0 (0.0%)	0 (0.0%)

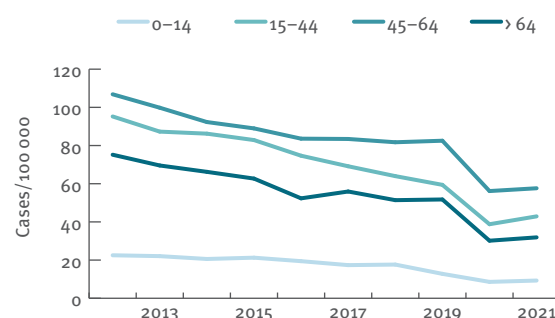
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

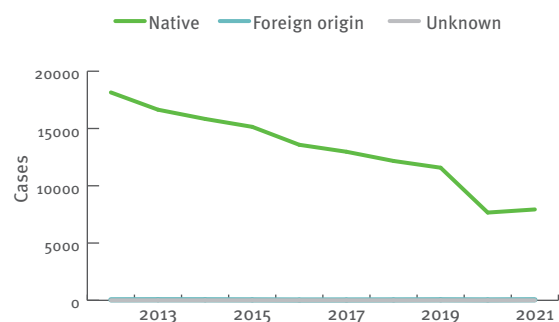
## TB notification rates by previous treatment history, 2012–2021



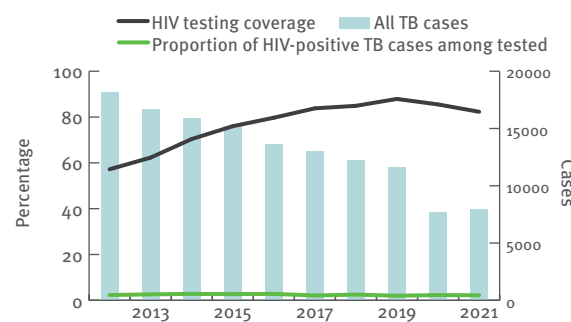
## New and relapse TB cases – notification rates by age group, 2012–2021



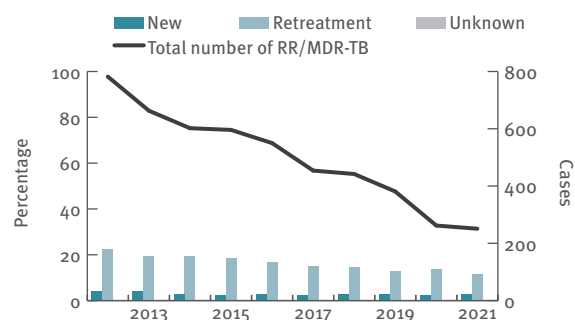
## TB cases by geographical origin, 2012–2021



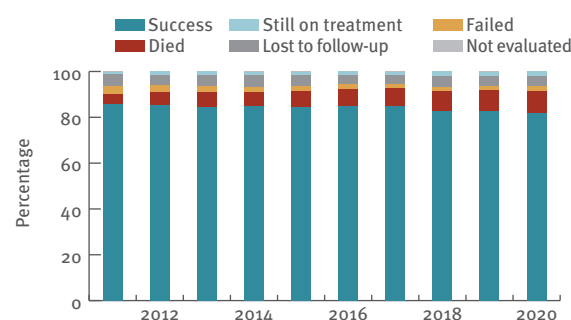
## TB/HIV coinfection, 2012–2021



## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

# Russian Federation

Total population estimate 2021 by United Nations Statistical Database: 145 102 754

## TB cases, 2021

### Notifications

Total number of cases	79 686
Notification rate per 100 000	54.9
New <sup>a</sup> and relapse	56 922
New <sup>a</sup> and relapse notification rate per 100 000	39.2
Pulmonary	74 798 (93.9%)
of which microscopy-positive	-
of which laboratory-confirmed	42 769 (57.2%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	42.8 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	1 915 (2.4%)
New (not previously treated)	45 420 (57.0%)

### Estimates

Estimated new and relapse cases N, best [low-high]	69 000 [57 000-81 000]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	40 222 (94.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	22 000 [22 000-23 000]
Pulmonary RR/MDR-TB cases notified	20 452 (50.8%)
of which pre-XDR-TB cases	7 346 (39.0%)
Notified RR/MDR-TB	20 452
of which pre-XDR-TB cases	7 346 (35.9%)
TB cases tested for HIV	54 821 (96.3%)
HIV-positive TB cases	14 132 (25.8%)
of these on ART	10 764 (76.2%)

<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.

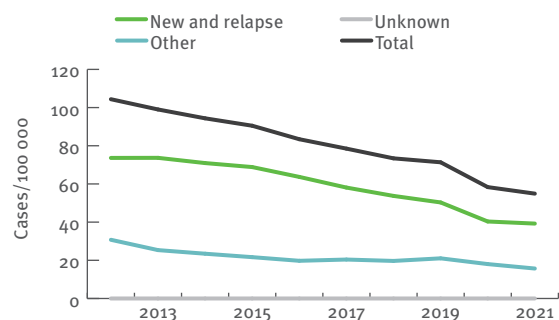
## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	46 389	32 574
Success	28 677 (61.8%)	16 447 (50.5%)
Died	6 205 (13.4%)	5 070 (15.6%)
Failed	5 570 (12.0%)	5 187 (15.9%)
Lost to follow-up	2 543 (5.5%)	3 572 (11.0%)
Not evaluated	3 394 (7.3%)	2 298 (7.1%)

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

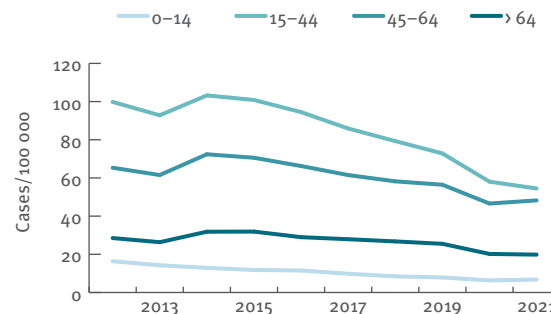
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012-2021



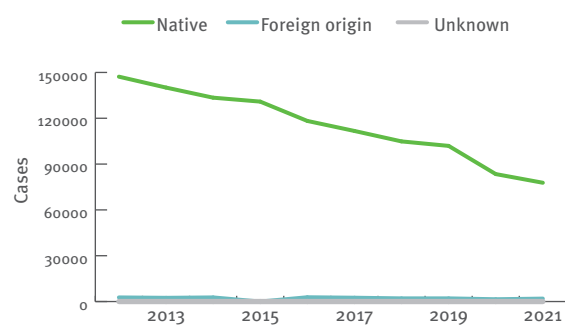
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012-2021

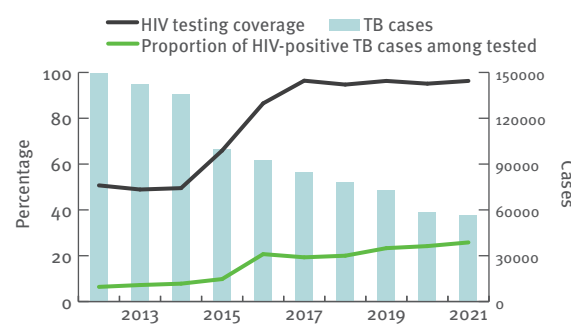


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012-2021

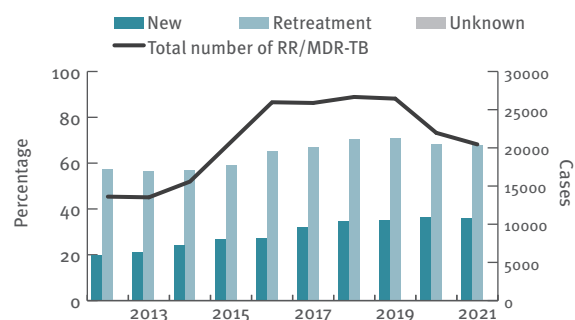


## TB/HIV coinfection, 2012-2021



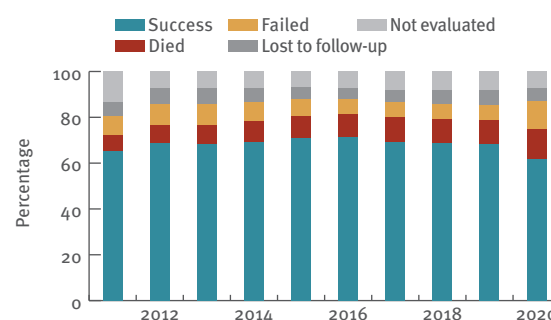
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011-2020



Note: 2011 cohort includes new cases only.

# San Marino

Total population estimate 2021 by United Nations Statistical Database: 33 746

## TB cases, 2021

### Notifications

Total number of cases	-	-
Notification rate per 100 000	-	-
New <sup>a</sup> and relapse	-	-
New <sup>a</sup> and relapse notification rate per 100 000	-	-
Pulmonary	-	-
of which microscopy-positive	-	-
of which laboratory-confirmed	-	-
Laboratory-confirmed TB cases	-	-
Mean age of new native TB cases	-	-
Mean age of new foreign TB cases	-	-
Foreign origin of all TB cases	-	-
New (not previously treated)	-	-
<b>Estimates</b>		
Estimated new and relapse cases N, best [low-high]	0	[0-0]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	-	-
Completeness of HIV data <sup>b</sup>	-	-
Case-linked data-reporting	Yes	-
Cases with DST results	-	-
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	0	[0-0]
Pulmonary RR/MDR-TB cases notified	-	-
of which pre-XDR-TB cases	-	-
Notified RR/MDR-TB	-	-
of which pre-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.

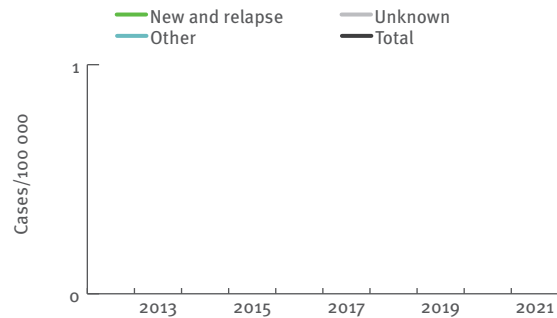
## Treatment outcome monitoring

Geographical coverage	National	
	Outcome cohort	RR/MDR-TB cases enrolled into DR-TB treatment in 2019 <sup>b</sup>
Case-linked data-reporting	Yes	-
Cases notified	-	-
Success	-	-
Died	-	-
Failed	-	-
Lost to follow-up	-	-
Not evaluated	-	-

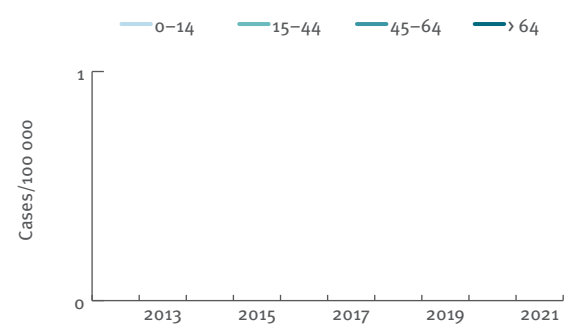
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

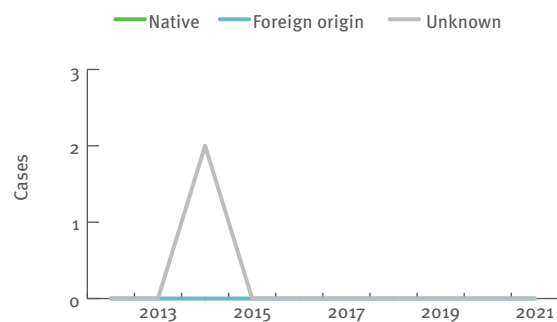
## TB notification rates by previous treatment history, 2012–2021



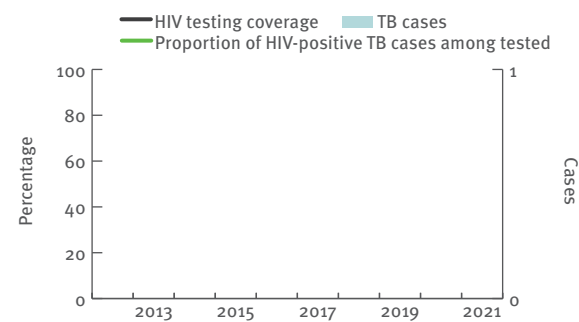
## New and relapse TB cases – notification rates by age group, 2012–2021



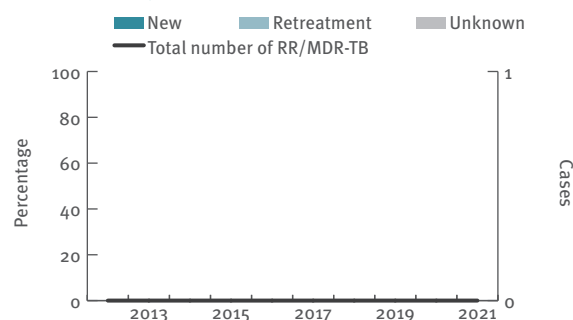
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

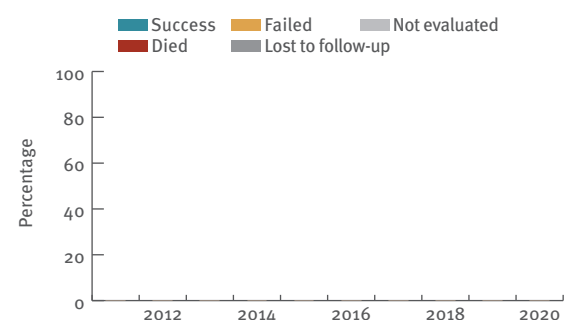


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort include new cases only.



# Slovakia

Total population at 23 April 2022 by EUROSTAT: 5 459 781

## TB cases, 2021

### Notifications

Total number of cases	137
Notification rate per 100 000	2.5
New <sup>a</sup> and relapse	134
New <sup>a</sup> and relapse notification rate per 100 000	2.5
Pulmonary	120 (87.6%)
of which microscopy-positive	45 (37.5%)
of which laboratory-confirmed	75 (62.5%)
Laboratory-confirmed TB cases	76 (55.5%)
Mean age of new native TB cases	32.3 years
Mean age of new foreign TB cases	37.7 years
Foreign origin of all TB cases	7 (5.1%)
New (not previously treated)	124 (90.5%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	150 [130-180]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	75 (98.7%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	2 [1-4]
Pulmonary RR/MDR-TB cases notified	5 (6.8%)
of which pre-XDR-TB cases	2 (40.0%)
Notified RR/MDR-TB	5 (6.7%)
of which pre-XDR-TB cases	2 (40.0%)
TB cases tested for HIV	80 (58.4%)
HIV-positive TB cases	2 (2.5%)
of these on ART	2 (100.0%)

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

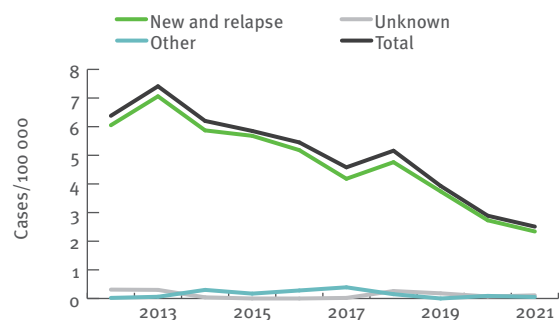
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

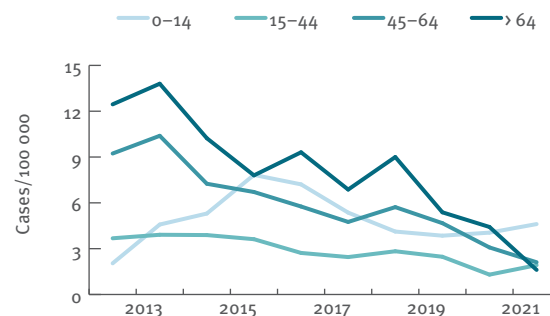
Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	51	5
Success	44 (86.3%)	4 (80.0%)
Died	6 (11.8%)	1 (20.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	0 (0.0%)	0 (0.0%)
Still on treatment	0 (0.0%)	0 (0.0%)
Not evaluated	1 (2.0%)	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.

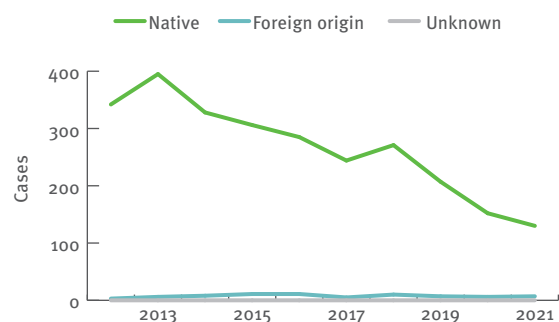
## TB notification rates by previous treatment history, 2012–2021



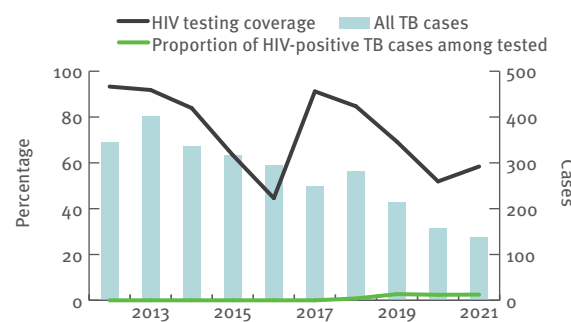
## New and relapse TB cases – notification rates by age group, 2012–2021



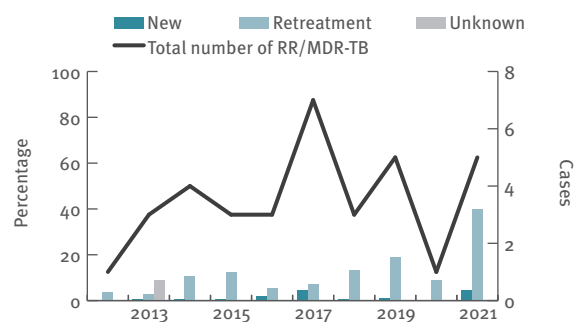
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

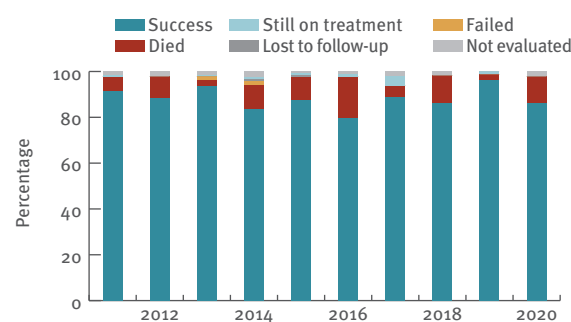


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Slovenia

Total population at 23 April 2022 by EUROSTAT: 2 108 977

## TB cases, 2021

### Notifications

Total number of cases	80
Notification rate per 100 000	3.8
New <sup>a</sup> and relapse	79
New <sup>a</sup> and relapse notification rate per 100 000	3.7
Pulmonary	68 (85.0%)
of which microscopy-positive	30 (44.1%)
of which laboratory-confirmed	64 (94.1%)
Laboratory-confirmed TB cases	75 (93.8%)
Mean age of new native TB cases	64.3 years
Mean age of new foreign TB cases	52.5 years
Foreign origin of all TB cases	38 (47.5%)
New (not previously treated)	74 (92.5%)

### Estimates

Estimated new and relapse cases N, best [low-high]	91 [78-100]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	75 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	0 [0-1]
Pulmonary RR/MDR-TB cases notified	1 (1.6%)
of which pre-XDR-TB cases	0 (0.0%)
Notified RR/MDR-TB	1 (1.3%)
of which pre-XDR-TB cases	0 (0.0%)
TB cases tested for HIV	67 (83.8%)
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%.

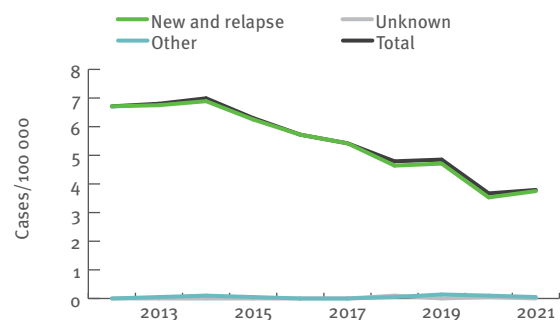
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

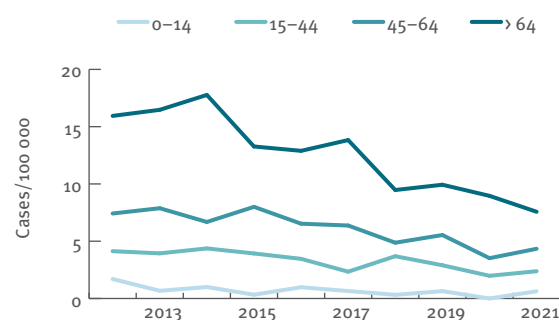
Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	57	0
Success	42 (73.7%)	-
Died	12 (21.1%)	-
Failed	0 (0.0%)	-
Lost to follow-up	0 (0.0%)	-
Still on treatment	2 (3.5%)	-
Not evaluated	1 (1.8%)	-

<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.

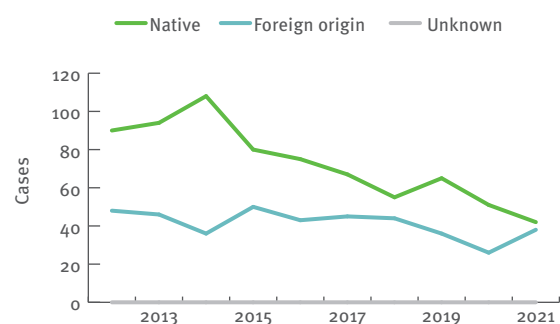
## TB notification rates by previous treatment history, 2012-2021



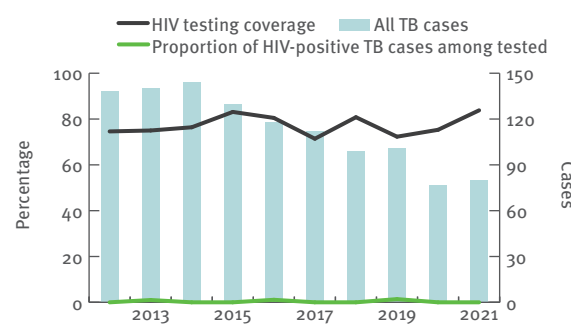
## New and relapse TB cases – notification rates by age group, 2012-2021



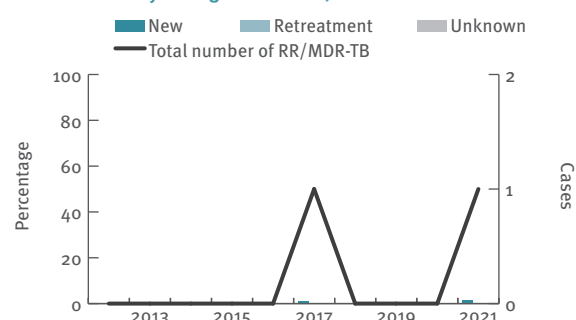
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

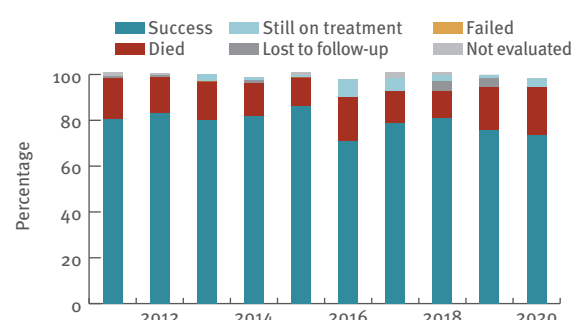


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# Spain

Total population at 23 April 2022 by EUROSTAT: 47 398 695

## TB cases, 2021

### Notifications

Total number of cases	3508
Notification rate per 100 000	7.4
New <sup>a</sup> and relapse	3370
New <sup>a</sup> and relapse notification rate per 100 000	7.1
Pulmonary	2507 (71.5%)
of which microscopy-positive	1225 (48.9%)
of which laboratory-confirmed	1979 (78.9%)
Laboratory-confirmed TB cases	2521 (71.9%)
Mean age of new native TB cases	53.6 years
Mean age of new foreign TB cases	38.9 years
Foreign origin of all TB cases	1303 (37.1%)
New (not previously treated)	2191 (62.5%)

### Estimates

Estimated new and relapse cases N, best [low-high]	3900 [3300-4500]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	1508 (59.8%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	110 [43-180]
Pulmonary RR/MDR-TB cases notified	27 (1.8%)
of which pre-XDR-TB cases	1 (3.7%)
Notified RR/MDR-TB of which pre-XDR-TB cases	33 (2.2%)
of which pre-XDR-TB cases	1 (3.0%)
TB cases tested for HIV	1924 (54.8%)
HIV-positive TB cases of these on ART	152 (7.9%)

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

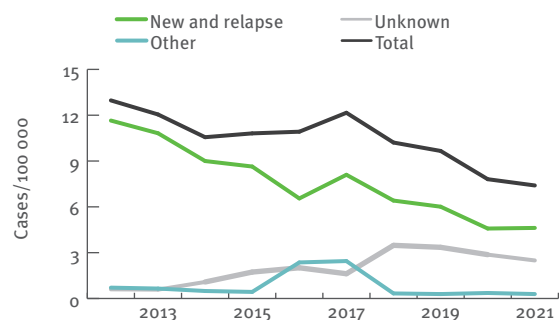
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

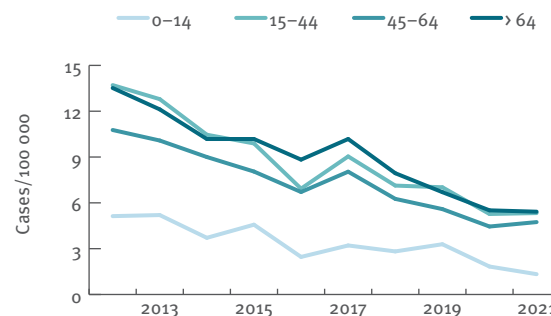
Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	1214	21
Success	867 (71.4%)	12 (57.1%)
Died	95 (7.8%)	0 (0.0%)
Failed	1 (0.1%)	0 (0.0%)
Lost to follow-up	24 (2.0%)	0 (0.0%)
Still on treatment	19 (1.6%)	0 (0.0%)
Not evaluated	208 (17.1%)	9 (42.9%)

<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.

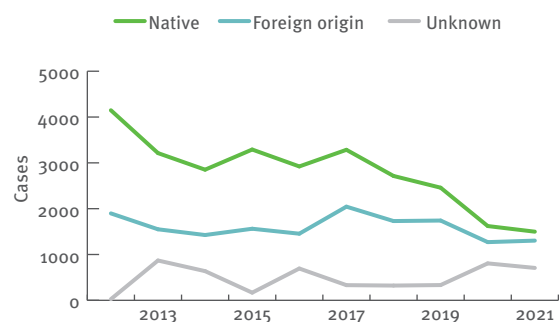
## TB notification rates by previous treatment history, 2012-2021



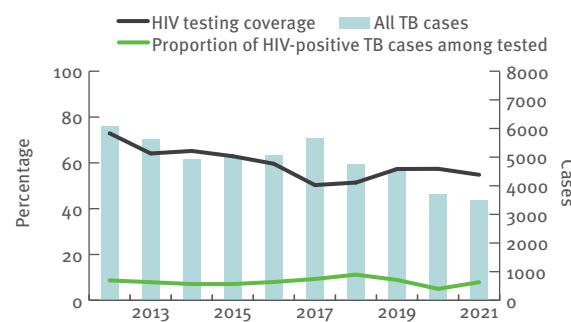
## New and relapse TB cases – notification rates by age group, 2012-2021



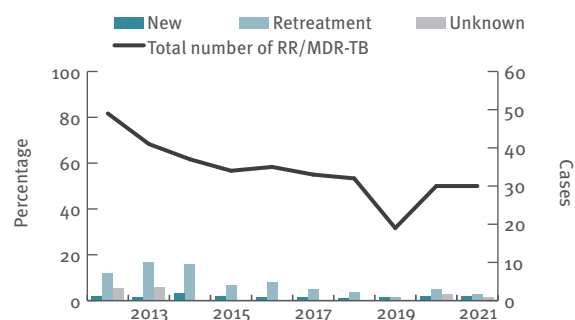
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021



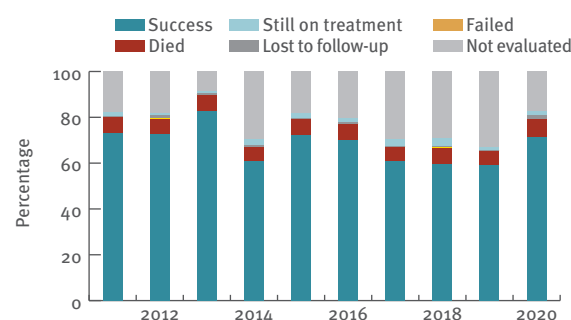
## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: in 2013, 2015 and 2016, only pulmonary RR/MDR-TB cases were reported.

Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011-2020



# Sweden

Total population at 23 April 2022 by EUROSTAT: 10 379 295

## TB cases, 2021

### Notifications

Total number of cases	357
Notification rate per 100 000	3.4
New <sup>a</sup> and relapse	344
New <sup>a</sup> and relapse notification rate per 100 000	3.4
Pulmonary	221 (61.9%)
of which microscopy-positive	93 (42.1%)
of which laboratory-confirmed	193 (87.3%)
Laboratory-confirmed TB cases	287 (80.4%)
Mean age of new native TB cases	45.9 years
Mean age of new foreign TB cases	41.5 years
Foreign origin of all TB cases	318 (89.1%)
New (not previously treated)	312 (87.4%)
<b>Estimates</b>	
Estimated new and relapse cases N, best [low-high]	400 [340-460]

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

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data-reporting	Yes
Cases with DST results	264 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	286 (99.7%)
Pulmonary RR/MDR-TB cases notified	8 [6-11]
of which pre-XDR-TB cases	4 (2.1%)
Notified RR/MDR-TB	1 (25.0%)
of which pre-XDR-TB cases	7 (2.4%)
TB cases tested for HIV	1 (14.3%)
HIV-positive TB cases	-
of these on ART	-

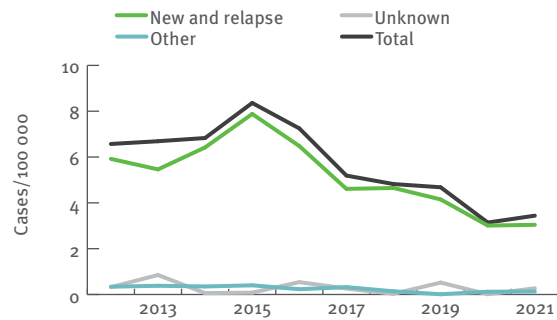
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

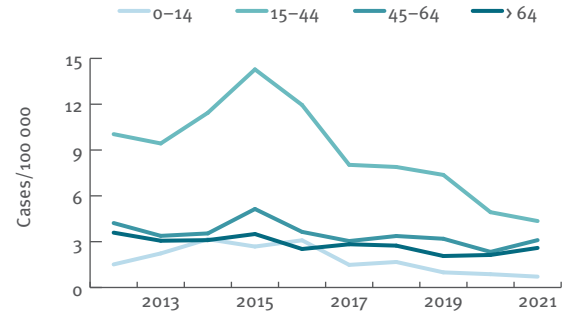
Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	All RR/MDR-TB cases notified in 2019 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	169	10
Success	121 (71.6%)	9 (90.0%)
Died	4 (2.4%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	0 (0.0%)	0 (0.0%)
Still on treatment	1 (0.6%)	0 (0.0%)
Not evaluated	43 (25.4%)	1 (10.0%)

<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.

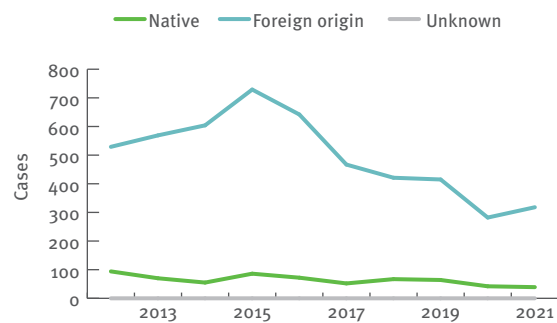
## TB notification rates by previous treatment history, 2012–2021



## New and relapse TB cases – notification rates by age group, 2012–2021



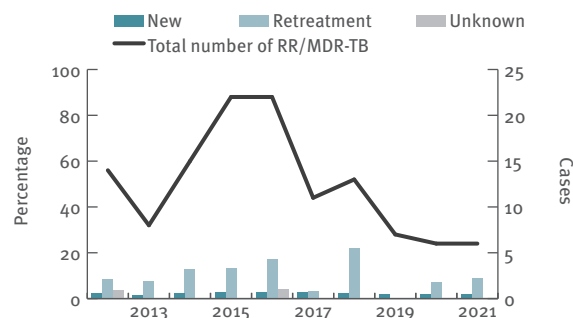
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

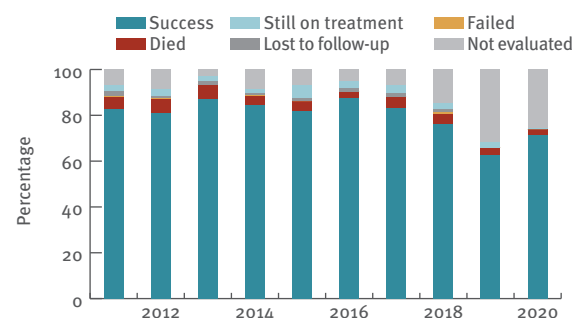
Data not reported

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Switzerland

Total population estimate 2021 by United Nations Statistical Database: 8 691 407

## TB cases, 2021

### Notifications

Total number of cases	364
Notification rate per 100 000	4.2
New <sup>a</sup> and relapse	355
New <sup>a</sup> and relapse notification rate per 100 000	4.2
Pulmonary	360 (98.9%)
of which microscopy-positive of which laboratory-confirmed	- - (90.8%)
Laboratory-confirmed TB cases	- -
Mean age of new native TB cases	42.7 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	257 (70.6%)
New (not previously treated)	355 (97.5%)

### Estimates

Estimated new and relapse cases N, best [low-high]	410 [350-470]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data-reporting	Yes
Cases with DST results	227 (87.3%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	10 [6-14]
Pulmonary RR/MDR-TB cases notified	5 (2.2%)
of which pre-XDR-TB cases	1 (25.0%)
Notified RR/MDR-TB of which pre-XDR-TB cases	5 (20.0%)
of which pre-XDR-TB cases	1 (20.0%)
TB cases tested for HIV	- -
HIV-positive TB cases of these on ART	- -

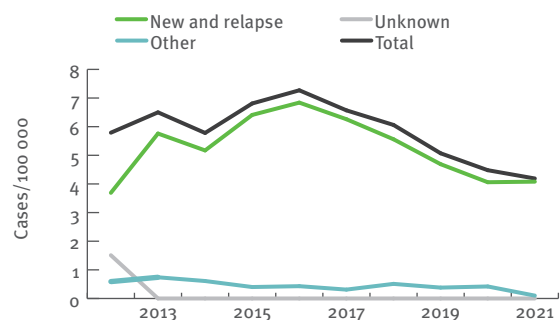
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	342	12
Success	254 (74.3%)	11 (91.7%)
Died	12 (3.5%)	0 (0.0%)
Failed	0 (0.0%)	0 (0.0%)
Lost to follow-up	21 (6.1%)	1 (8.3%)
Not evaluated	55 (16.1%)	0 (0.0%)

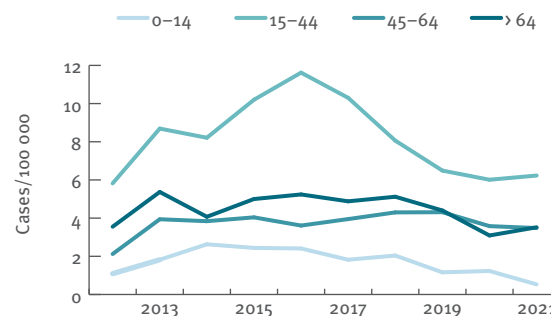
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012-2021



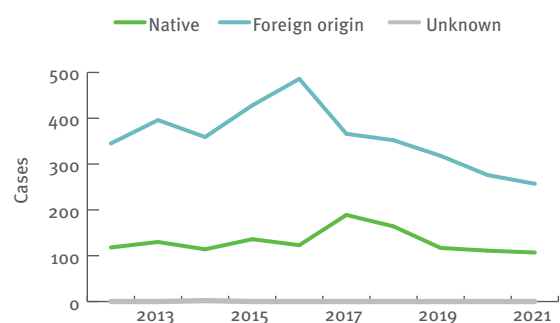
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012-2021

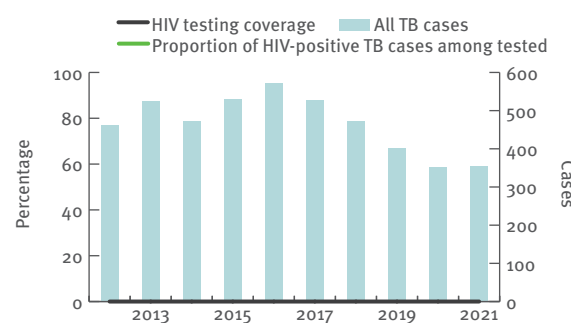


Note: 2012 data include new TB cases only.

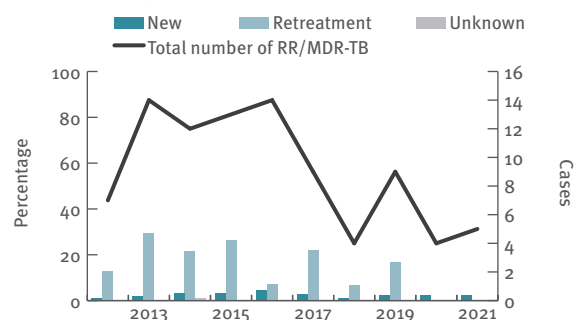
## TB cases by geographical origin, 2012-2021



## TB/HIV coinfection, 2012-2021

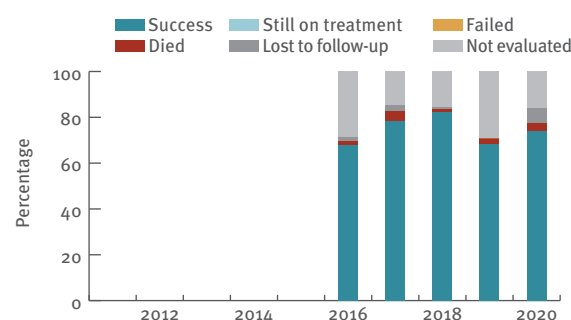


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011-2020



# Tajikistan

Total population estimate 2021 by United Nations Statistical Database: 9 750 064

## TB cases, 2021

### Notifications

Total number of cases	4299
Notification rate per 100 000	44.1
New <sup>a</sup> and relapse	4158
New <sup>a</sup> and relapse notification rate per 100 000	42.6
Pulmonary	2907 (67.6%)
of which microscopy-positive	-
of which laboratory-confirmed	2190 (75.3%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	38.3 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	11 (0.3%)
New (not previously treated)	3787 (88.1%)

### Estimates

Estimated new and relapse cases N, best [low-high]	8600 [6600-11000]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	2167 (98.9%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	690 [660-720]
Pulmonary RR/MDR-TB cases notified	606 (28.0%)
of which pre-XDR-TB cases	129 (23.4%)
Notified RR/MDR-TB	606
of which pre-XDR-TB cases	129 (21.3%)
TB cases tested for HIV	4103 (98.7%)
HIV-positive TB cases	118 (2.9%)
of these on ART	118 (100.0%)

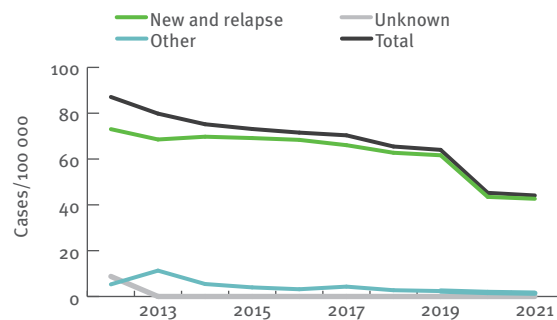
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	3646	588
Success	3332 (91.4%)	454 (77.2%)
Died	173 (4.7%)	66 (11.2%)
Failed	44 (1.2%)	14 (2.4%)
Lost to follow-up	97 (2.7%)	54 (9.2%)
Not evaluated	0 (0.0%)	0 (0.0%)

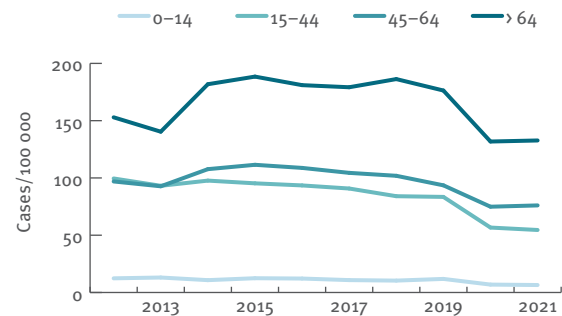
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



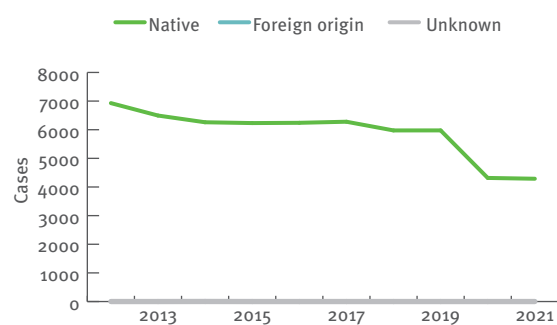
Note: starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012–2021

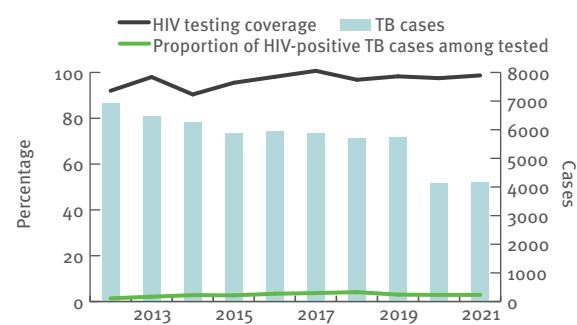


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

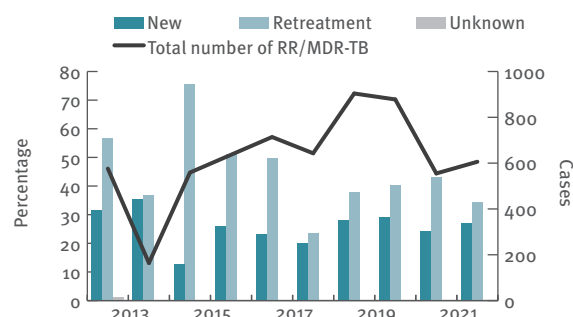


## TB/HIV coinfection, 2012–2021



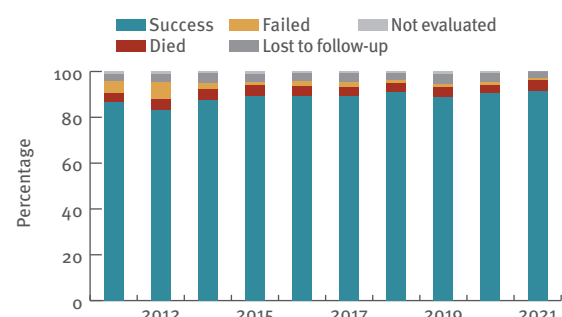
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort includes new cases only.

# Türkiye

Total population estimate 2021 by United Nations Statistical Database: 84 775 404

## TB cases, 2021

### Notifications

Total number of cases	9156
Notification rate per 100 000	10.8
New <sup>a</sup> and relapse	9047
New <sup>a</sup> and relapse notification rate per 100 000	10.7
Pulmonary	5768 (63.0%)
of which microscopy-positive	-
of which laboratory-confirmed	4478 (77.6%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	44.1 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	1436 (15.7%)
New (not previously treated)	8591 (93.8%)

### Estimates

Estimated new and relapse cases N, best [low-high]	15 000	[12 000-18 000]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	3 902 (87.1%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	130 [110-140]
Pulmonary RR/MDR-TB cases notified	120 (3.1%)
of which pre-XDR-TB cases	10 (9.9%)
Notified RR/MDR-TB	129
of which pre-XDR-TB cases	10 (7.8%)
TB cases tested for HIV	7 249 (80.1%)
HIV-positive TB cases	85 (1.2%)
of these on ART	64 (75.3%)

<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.

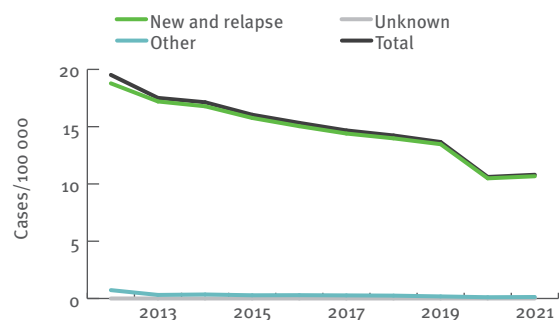
## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	8 820	155
Success	7 125 (80.8%)	7 (4.5%)
Died	806 (9.1%)	16 (10.3%)
Failed	25 (0.3%)	0 (0.0%)
Lost to follow-up	182 (2.1%)	11 (7.1%)
Not evaluated	682 (7.7%)	121 (78.1%)

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

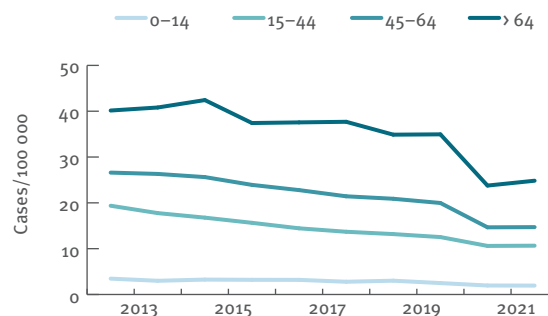
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012-2021



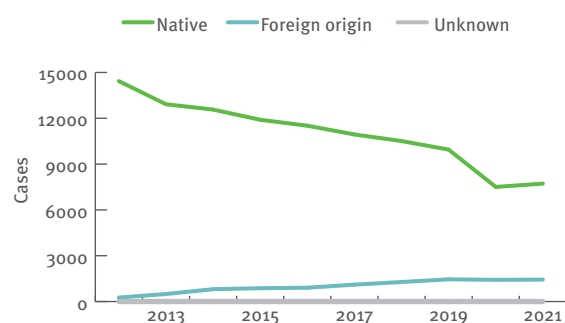
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012-2021

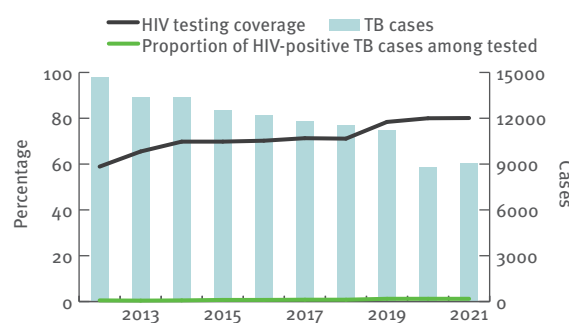


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012-2021

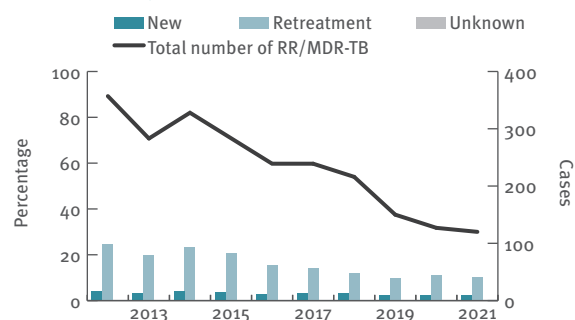


## TB/HIV coinfection, 2012-2021



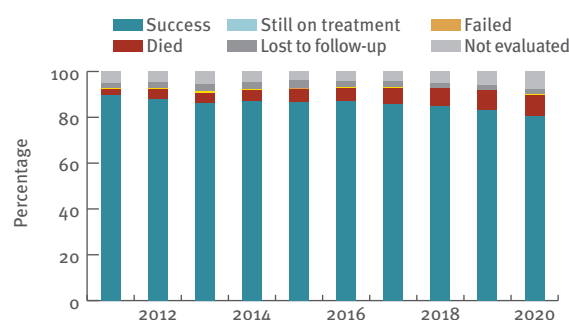
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011-2020



Note: 2011 cohort includes new cases only.

# Turkmenistan

Total population estimate 2021 by United Nations Statistical Database: 6 341 855

## TB cases, 2021

### Notifications

Total number of cases	2422
Notification rate per 100 000	38.2
New <sup>a</sup> and relapse	1878
New <sup>a</sup> and relapse notification rate per 100 000	29.6
Pulmonary	2006 (82.8%)
of which microscopy-positive	-
of which laboratory-confirmed	836 (41.7%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	42.2 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	1464 (60.4%)

### Estimates

Estimated new and relapse cases N, best [low-high]	3000 [2300-3800]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data-reporting	Yes
Cases with DST results	836 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	420 [390-450]
Pulmonary RR/MDR-TB cases notified	416 (49.8%)
of which pre-XDR-TB cases	-
Notified RR/MDR-TB	808
of which pre-XDR-TB cases	287 (35.5%)
TB cases tested for HIV	-
HIV-positive TB cases	-
of these on ART	-

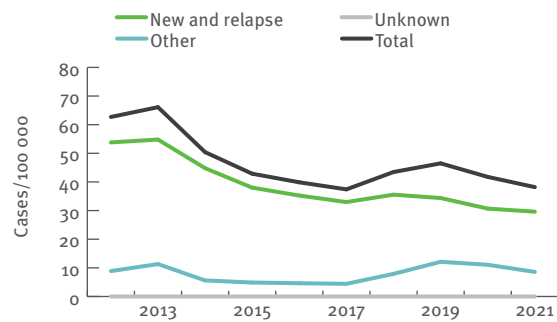
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	1918	649
Success	1599 (83.4%)	358 (55.2%)
Died	86 (4.5%)	106 (16.3%)
Failed	131 (6.8%)	106 (16.3%)
Lost to follow-up	53 (2.8%)	71 (10.9%)
Not evaluated	49 (2.6%)	8 (1.2%)

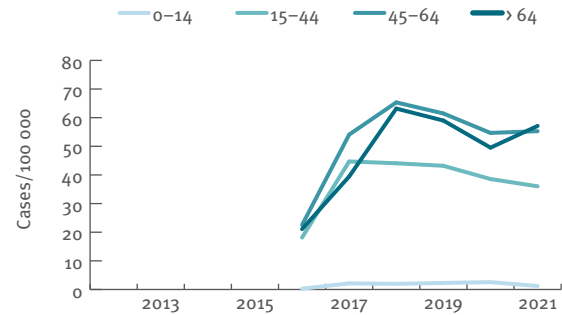
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021

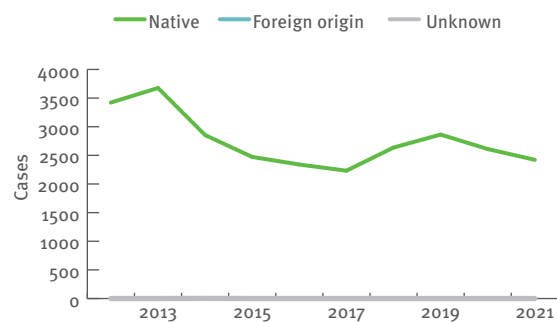


Note: starting from 2013, cases with unknown history are included in new and relapses.

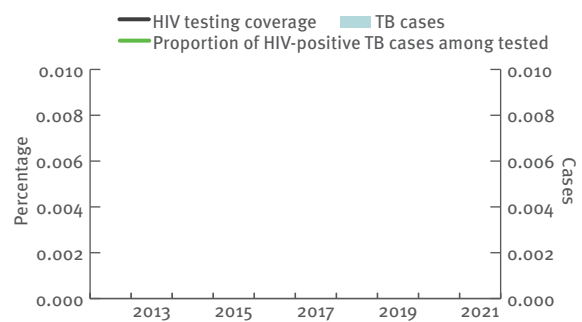
## New and relapse TB cases – notification rates by age group, 2012–2021



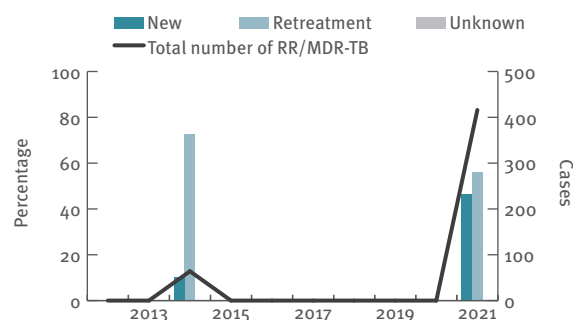
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

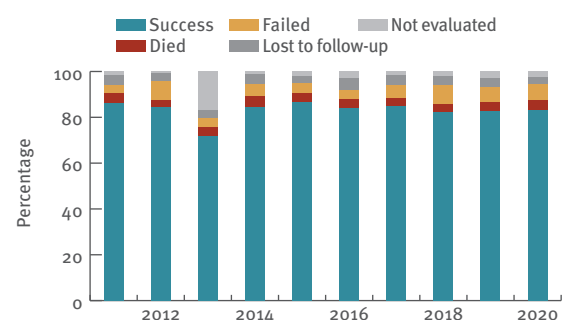


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort include new cases only.



# Ukraine

Total population estimate 2021 by United Nations Statistical Database: 43 531 422

## TB cases, 2021

### Notifications

Total number of cases	19 793
Notification rate per 100 000	45.5
New <sup>a</sup> and relapse	18 307
New <sup>a</sup> and relapse notification rate per 100 000	42.1
Pulmonary	18 199 (91.9%)
of which microscopy-positive	-
of which laboratory-confirmed	13 571 (74.6%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	44.8 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	32 (0.2%)
New (not previously treated)	14 667 (74.1%)

### Estimates

Estimated new and relapse cases N, best [low-high]	31 000 [20 000-44 000]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	13 214 (97.4%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	4 800 [4 700-4 900]
Pulmonary RR/MDR-TB cases notified	4 025 (30.5%)
of which pre-XDR-TB cases	994 (30.4%)
Notified RR/MDR-TB	4 046
of which pre-XDR-TB cases	1 015 (25.1%)
TB cases tested for HIV	17 991 (98.3%)
HIV-positive TB cases	3 646 (20.3%)
of these on ART	3 354 (92.0%)

<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.

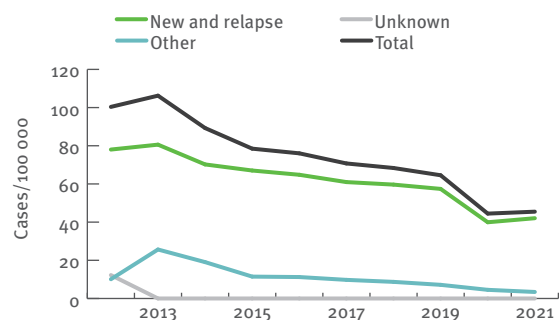
## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	13 218	7 259
Success	10 232 (77.4%)	4 460 (61.4%)
Died	1 377 (10.4%)	969 (13.3%)
Failed	852 (6.4%)	907 (12.5%)
Lost to follow-up	744 (5.6%)	918 (12.6%)
Not evaluated	13 (0.1%)	5 (0.1%)

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

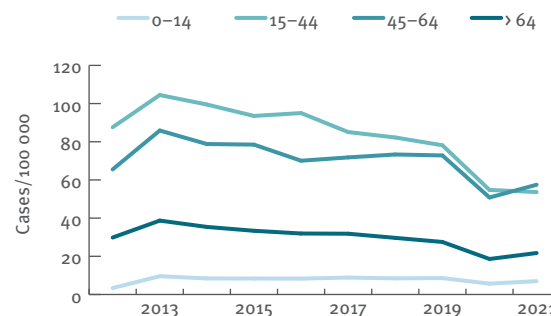
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012-2021



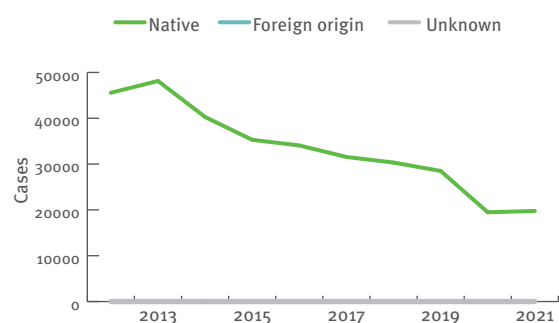
Note: starting from 2013, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012-2021

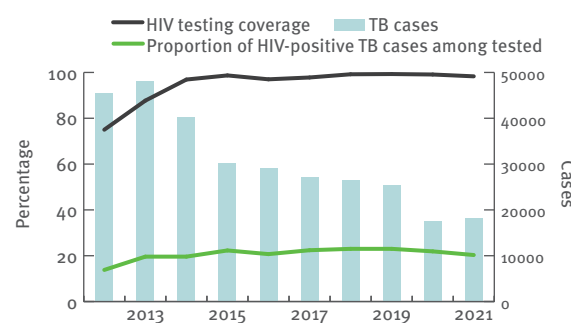


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012-2021

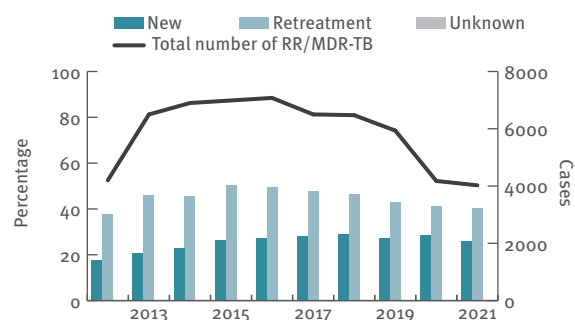


## TB/HIV coinfection, 2012-2021



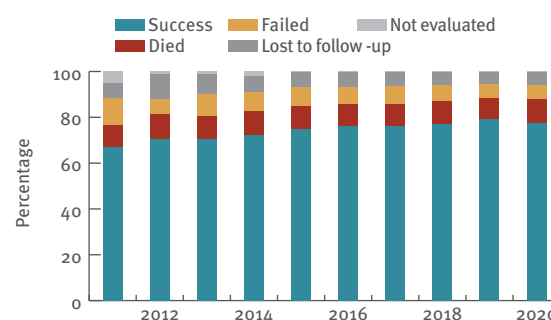
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012-2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011-2020



Note: 2011 cohort includes new cases only.

# United Kingdom

Total population at 23 April 2022 by EUROSTAT: 67 281 040

## TB cases, 2021

### Notifications

Total number of cases	4795
Notification rate per 100 000	7.1
New <sup>a</sup> and relapse	4795
New <sup>a</sup> and relapse notification rate per 100 000	7.1
Pulmonary	2532 (52.8%)
of which microscopy-positive	-
of which laboratory-confirmed	2073 (81.9%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	42.4 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	3600 (75.1%)
New (not previously treated)	4571 (95.3%)

### Estimates

Estimated new and relapse cases N, best [low-high]	4300 [3900-4700]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

Completeness of DRS data <sup>a</sup>	Yes
Completeness of HIV data <sup>b</sup>	-
Case-linked data-reporting	Yes
Cases with DST results	1812 (87.4%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	39 [33-45]
Pulmonary RR/MDR-TB cases notified	38 (2.1%)
of which pre-XDR-TB cases	13 (36.1%)
Notified RR/MDR-TB	75
of which pre-XDR-TB cases	37 (49.3%)
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.

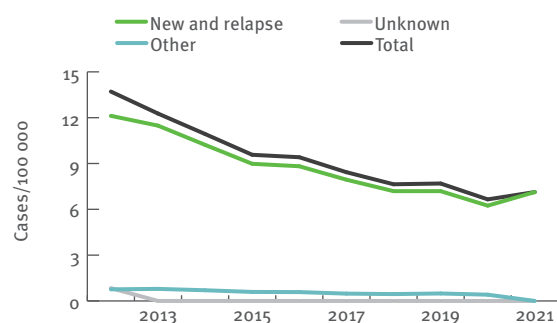
## Treatment outcome monitoring

Geographical coverage	National		
Outcome cohort	New culture-positive pulmonary TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>	
Case-linked data-reporting	Yes	-	
Cases notified	4386	47	
Success	3409 (77.7%)	31	(66.0%)
Died	320 (7.3%)	4	(8.5%)
Failed	311 (7.1%)	3	(6.4%)
Lost to follow-up	128 (2.9%)	5	(10.6%)
Still on treatment	218 (5.0%)	4	(8.5%)
Not evaluated	72 (3.7%)	7	(14.0%)

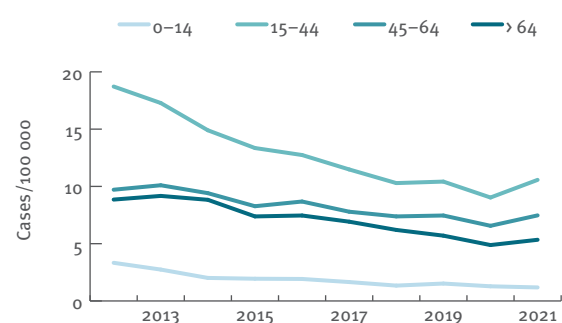
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.

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

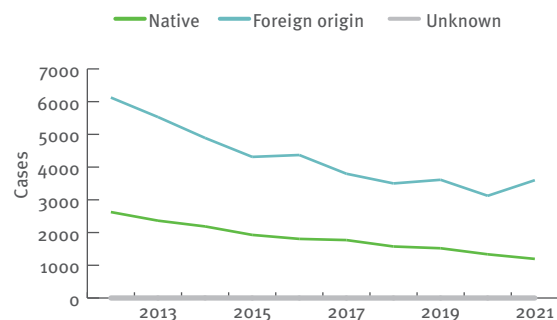
## TB notification rates by previous treatment history, 2012–2021



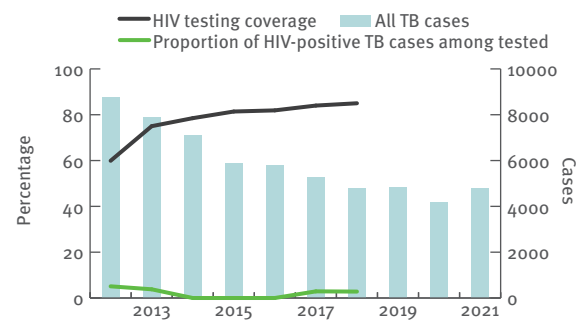
## New and relapse TB cases – notification rates by age group, 2012–2021



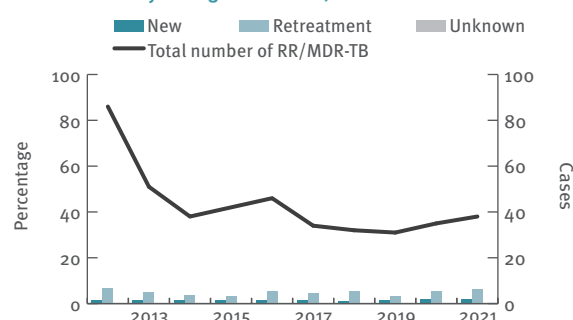
## TB cases by geographical origin, 2012–2021



## TB/HIV coinfection, 2012–2021

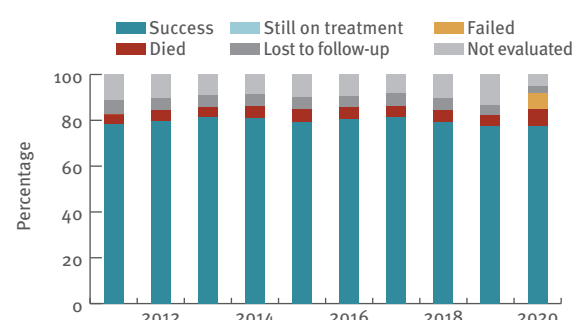


## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new culture-confirmed pulmonary TB cases, 2011–2020



# Uzbekistan

Total population estimate 2021 by United Nations Statistical Database: 34 081 449

## TB cases, 2021

### Notifications

Total number of cases	15450
Notification rate per 100 000	45.3
New <sup>a</sup> and relapse	13544
New <sup>a</sup> and relapse notification rate per 100 000	39.7
Pulmonary	9816 (63.5%)
of which microscopy-positive	-
of which laboratory-confirmed	6797 (69.2%)
Laboratory-confirmed TB cases	-
Mean age of new native TB cases	41.6 years
Mean age of new foreign TB cases	-
Foreign origin of all TB cases	0 (0.0%)
New (not previously treated)	12152 (78.7%)

### Estimates

Estimated new and relapse cases N, best [low-high]	21000 [14000-29000]
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<sup>a</sup> Cases with unknown previous TB history included in new cases.

## Drug resistance surveillance and TB/HIV coinfection, 2021

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	6797 (100.0%)
Estimated RR-TB among notified bacteriologically confirmed pulmonary TB cases N, best [low-high]	1400 [1300-1400]
Pulmonary RR/MDR-TB cases notified	1652 (24.3%)
of which pre-XDR-TB cases	394 (2395.1%)
Notified RR/MDR-TB	2147
of which pre-XDR-TB cases	394 (18.4%)
TB cases tested for HIV	15450 (100.0%)
HIV-positive TB cases	441 (2.9%)
of these on ART	395 (89.6%)

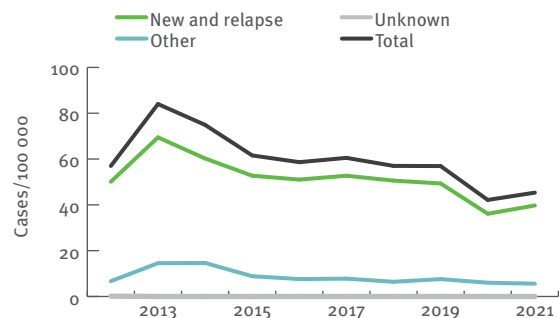
<sup>a</sup> National coverage 100% or culturing ≥ 90%, C+/all TB cases > 50%, DST done for C+ > 75%, EQA ≥ 95%.  
<sup>b</sup> More than 50% of TB cases with reported HIV status.

## Treatment outcome monitoring

Geographical coverage	National	
	New and relapse TB cases notified in 2020 <sup>a</sup>	RR/MDR TB cases enrolled into DR-TB treatment in 2018 <sup>b</sup>
Outcome cohort		
Case-linked data-reporting	Yes	-
Cases notified	10 654	2 040
Success	9 644 (90.5%)	1 422 (69.7%)
Died	484 (4.5%)	223 (10.9%)
Failed	147 (1.4%)	113 (5.5%)
Lost to follow-up	180 (1.7%)	162 (7.9%)
Not evaluated	199 (1.9%)	120 (5.9%)

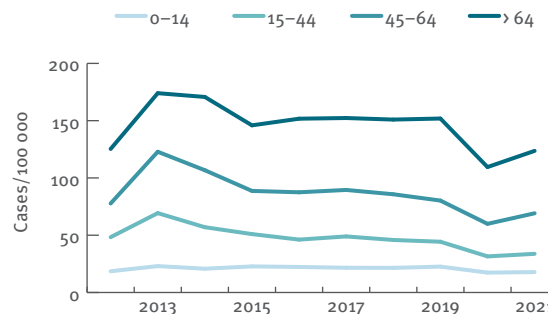
<sup>a</sup> Treatment outcome as presented is treatment outcome after 12 months.  
<sup>b</sup> Treatment outcome as presented is treatment outcome after 24 months.

## TB notification rates by previous treatment history, 2012–2021



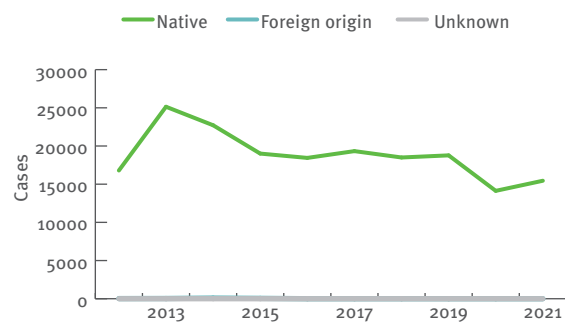
Note: starting from 2013 onward, cases with unknown history are included in new and relapses.

## New and relapse TB cases – notification rates by age group, 2012–2021

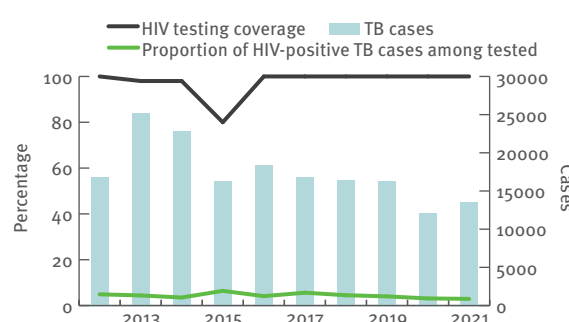


Note: 2012 data include new TB cases only.

## TB cases by geographical origin, 2012–2021

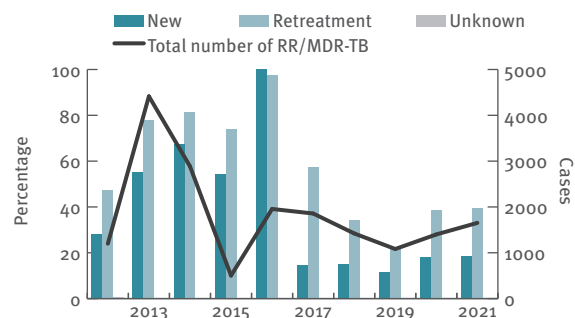


## TB/HIV coinfection, 2012–2021



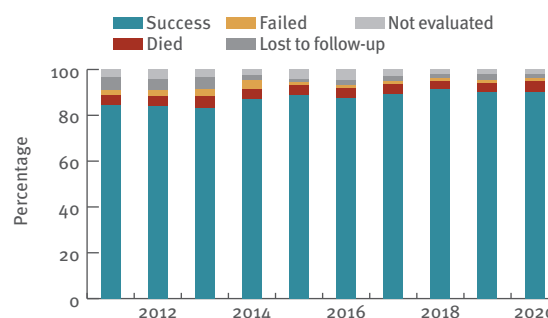
Note: data up to 2014 include all TB cases.

## RR/MDR-TB cases and percentage of RR/MDR-TB cases by previous treatment history among all TB cases, 2012–2021



Note: Percentage is calculated on the basis of all new, retreated and unknown cases, meaning that the sum of all cases can sometimes be over 100% for a particular year.

## Treatment outcome, new and relapse TB cases, 2011–2020



Note: 2011 cohort includes new cases only.





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