

# TB epidemiology and standards of care in Ukraine

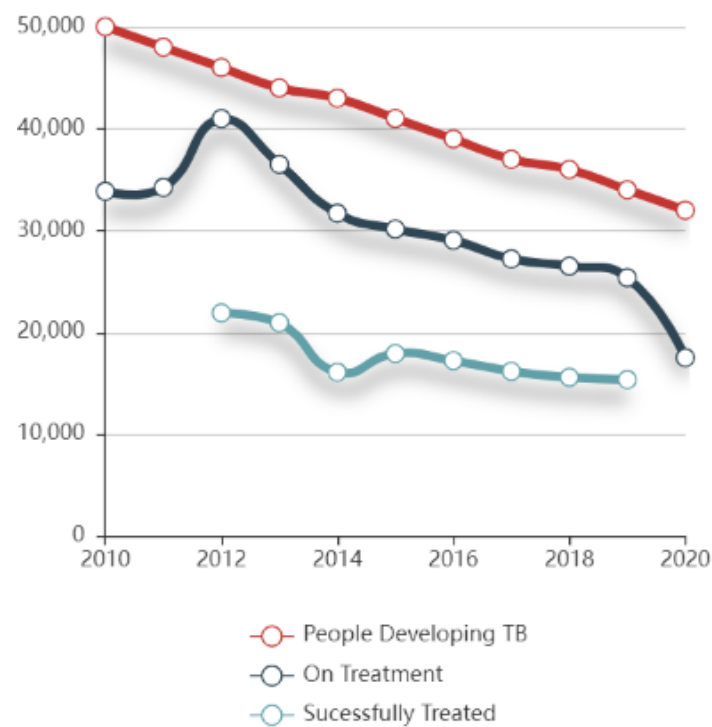


**Dr Iana Terleeva, Public Health Centre, NTP manager, Ukraine**  
**Dr Elmira GURBANOVA, VMC coordinator**

14<sup>th</sup> webinar of the Virtual Medical Consilium (VMC) of the WHO Regional Office for Europe. 1 April 2022

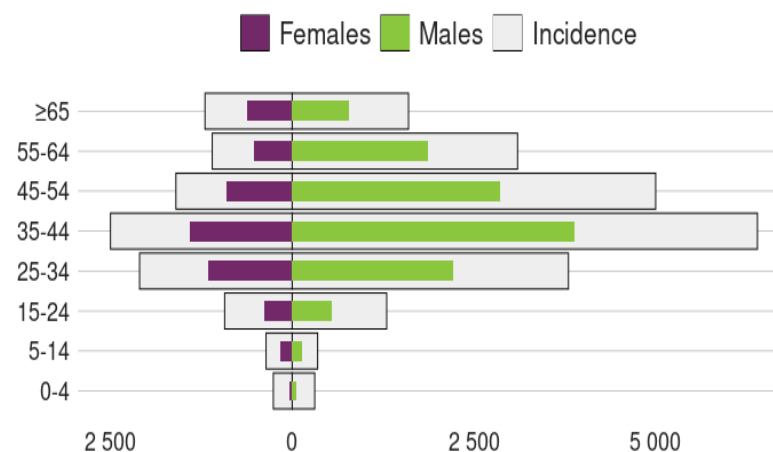
# Tuberculosis profile, Ukraine, 2020

## Incidence, notified and successfully treated TB cases



WHO TB country profile, Ukraine, [https://worldhealthorg.shinyapps.io/tb\\_profiles/?inputs\\_entity\\_type=%22country%22&lan=%22EN%22&iso2=%22UA%22](https://worldhealthorg.shinyapps.io/tb_profiles/?inputs_entity_type=%22country%22&lan=%22EN%22&iso2=%22UA%22)

## Incidence, notified cases by age group and sex, 2020



- TB incidence – 32 000 (73 per 100 000)
- TB notification – 19 521 (44.6 per 100 000)
- 22% of TB cases are HIV-positive
- 33% of pulmonary TB patients have RR-TB
  - 27% of RR-TB have pre-XDR/XDR-TB

### Out of notified TB cases:

- 91% pulmonary
- 72% bacteriologically confirmed

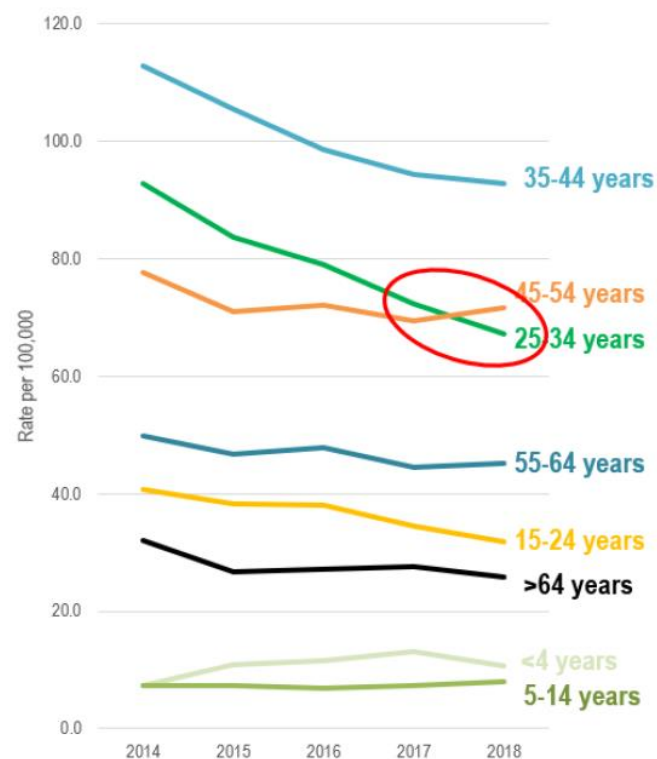
Tuberculosis surveillance and monitoring in Europe 2022. [https://www.ecdc.europa.eu/sites/default/files/documents/Tuberculosis-surveillance-monitoring-europe-2022\\_0.pdf](https://www.ecdc.europa.eu/sites/default/files/documents/Tuberculosis-surveillance-monitoring-europe-2022_0.pdf)

[https://www.stoptb.org/static\\_pages/UKR\\_Dashboard.html](https://www.stoptb.org/static_pages/UKR_Dashboard.html)

# Tuberculosis profile, Ukraine

## Notification of new and relapse TB cases by age group

### Incidence, notified cases by age group and sex, 2020



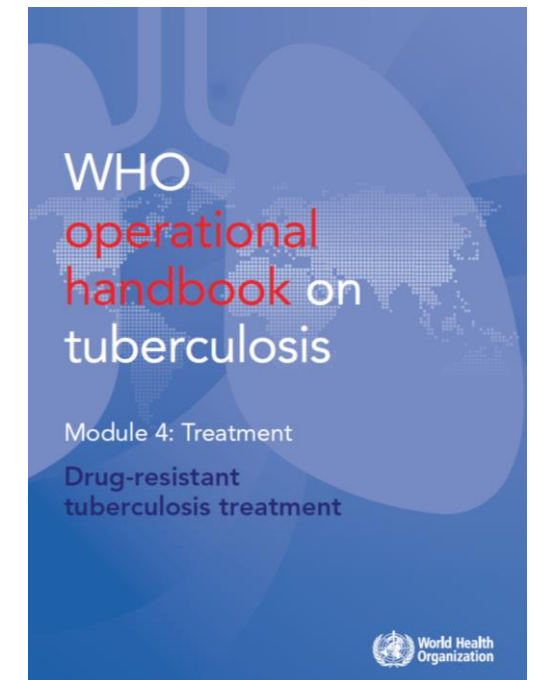
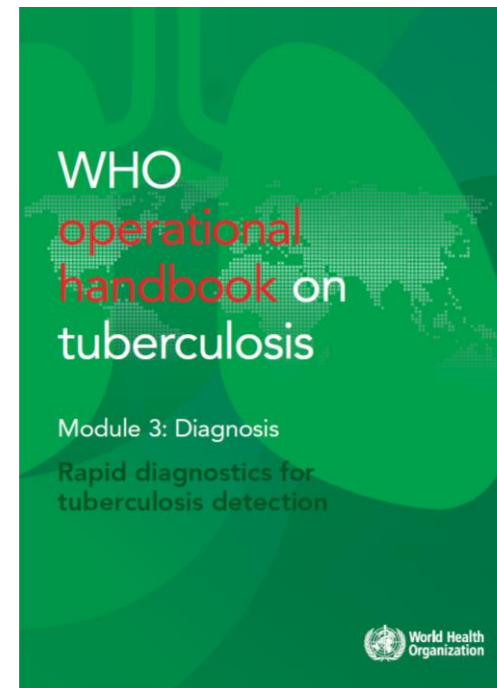
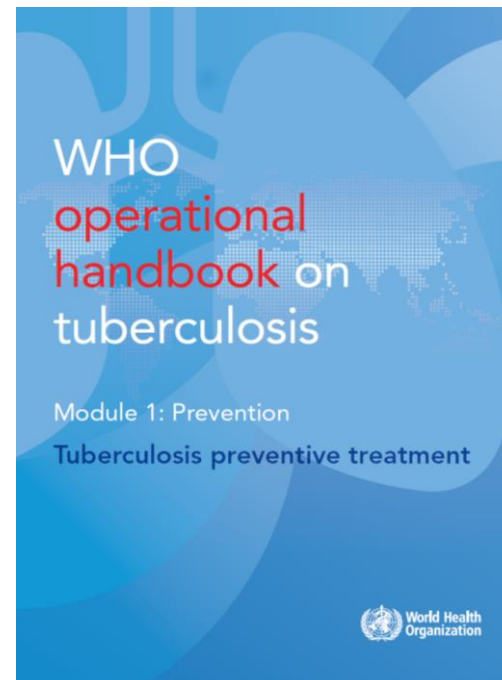
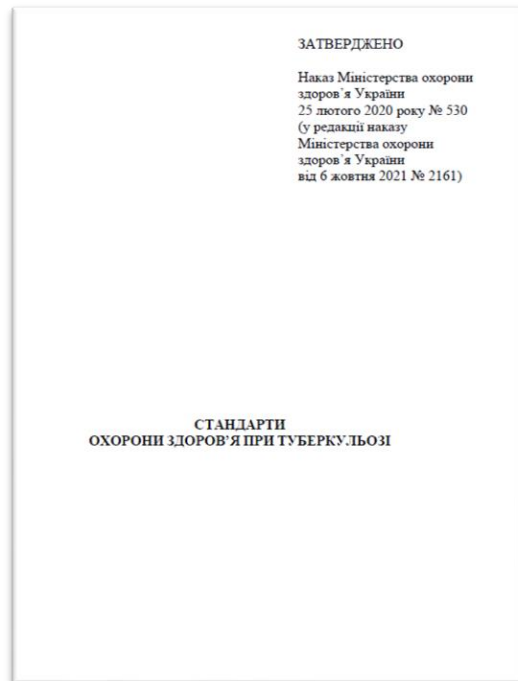
### Estimating country needs

Country	No of refugees	Adult TB cases	Paediatric TB cases	RR/MDR-TB cases	Pre-XDR-TB cases
Poland	2,362,044	938	109	346	93
Romania	616,592	245	29	90	24
Republic of Moldova	388,837	155	18	57	15
Hungary	368,807	147	17	54	15
Slovakia	283,824	113	14	42	11

### Country calculator to estimate required TB resources

Location name	Number of refugees	estimated proportion of			TB treatment needs		RR/MDR-TB needs among all TB	pre-XDR-TB needs among RR/MDR-TB
		Female 15+	Children 0-14	Male 60+	Adults (rounded)	Children (rounded)		
WHO European Region	4 059 105	2 638 418	933 594	487 093	1 612	187	594	160

# Standards of care for TB in Ukraine are aligned with WHO 2020 recommendations





# LTBI diagnosis

Diagnosis and treatment of LTBI is foreseen among risk groups:

- Adults, adolescents, and children living with HIV
- Household or close contacts of people with bacteriologically confirmed pulmonary TB (all ages, but especially young children <5 years of age)
- People who are initiating treatment with TNF- $\alpha$  inhibitors, receiving dialysis, preparing for an organ or haematological transplant, or who have silicosis
- Prisoners, healthcare workers who have frequent unprotected contact with TB patients, migrants from countries with high TB burden (>100 per 100 000 population), homeless people and people who abuse drugs.

# TB prevention

BCG vaccination coverage among children <1 age – 88.8%

BCG re-vaccination among children aged >6 cancelled in 2018

Annual TST to children until 7 years old cancelled in 2018

# LTBI treatment

- 6-9 months of daily INH (6-9H)
- 4 months of daily RIF alone (4R)
- 3 months of daily INH plus RIF (3HR)
- 12 weeks of once-weekly rifapentine plus INH (3HP)
- 1 month of daily rifapentine plus INH (1HP)6-9 H
- 6 months of daily levofloxacin (6Lfx)

LTBI treatment through self-administration and monthly monitoring

# TB disease treatment

		Programmatic
Drug-sensitive TB	2HRZE/4HR	Programmatic
Mono-isoniasid resistant TB	6(H)REZ-Lfx	Programmatic
RR/MDR-TB	9 Bdq-Lfx-Cfz-Lzd-Cs	Operational research
RR/MDR-TB	9 Bdq-Lfx-Cfz-Lzd-Dlm	Operational research
RR/MDR-TB	9 Lfx-Cfz-Lzd-Dlm	Operational research
RR/MDR-TB/ pre-XDR-TB/ XDR-TB	Longer individualized regimen	Programmatic
pre-XDR-TB/ XDR-TB	Bdq-Pretomanid-Lzd	Operational research

1352 patients started treatment within regional and national OR

- ✓ 29 - <15 years old
- ✓ 153 - > 60 years old 21
- ✓ 301 females

TB disease treatment performed under DOT (30% under video-supported treatment) and monthly monitoring



# Thank you!



## WHO Regional Office for Europe

UN City  
Marmorvej 51  
Copenhagen Ø  
Denmark



WHO\_Europe



facebook.com/WHOEuro



instagram.com/whoeuro



youtube.com/user/whoeuro



World Health  
Organization

REGIONAL OFFICE FOR  
Europe



Organisation  
mondiale de la Santé

BUREAU REGIONAL DE L'  
Europe



Weltgesundheitsorganisation

REGIONALBÜRO FÜR  
Europa



Всемирная организация  
здравоохранения

Европейское региональное бюро

# Antituberculosis drug-resistance among TB patients in Ukraine

**Table 4. DST results for first-line drugs, Ukraine, 2013–2014 (No.=1550)**

Resistance	New cases (No.=1237)			Previously treated cases (No.=313)		
	No.	%	95% CI	No.	%	95% CI
<b>I</b>						
Any resistance to H	462	37.3	34.6–40.1	206	65.8	60.3–71.1
Any resistance to R	310	25.1	22.7–27.6	185	59.1	53.4–64.6
Any resistance to E	172	13.9	12.0–16.0	120	38.3	32.9–44.0
Any resistance to S	443	35.8	33.1–38.6	198	63.3	57.7–68.6
<b>Total any resistance</b>	<b>533</b>	<b>43.1</b>	<b>40.3–45.9</b>	<b>218</b>	<b>69.6</b>	<b>64.2–74.7</b>
<b>II</b>						
Resistance to H only	65	5.3	4.0–6.6	8	2.6	1.1–5.0
Resistance to R only	7	0.6	0.2–1.1	2	0.6	0.0–2.3 <sup>a</sup>
Resistance to E only	0	0.0	0.0–0.3*	0	0.0	0.0–1.2 <sup>a</sup>
Resistance to S only	58	4.7	3.6–6.0	9	2.9	1.3–5.4
<b>Total mono-resistance</b>	<b>130</b>	<b>10.5</b>	<b>8.9–12.4</b>	<b>19</b>	<b>6.1</b>	<b>3.7–9.3</b>
<b>III</b>						
H + R	14	1.1	1.0–2.5	7	2.2	0.9–4.6
H + R + E	3	0.2	0.0–0.8	3	1.0	0.2–2.8
H + R + S	130	10.5	8.9–12.4	57	18.2	14.1–22.9
H + R + E + S	151	12.2	9.3–12.8	115	36.6	31.4–42.3
<b>Total MDR<sup>b</sup></b>	<b>298</b>	<b>24.1</b>	<b>20.7–27.6</b>	<b>182</b>	<b>58.1</b>	<b>52.1–64.1</b>
<b>IV</b>						
H + E	1	0.1	0.0–0.4	0	0.0	0.0–1.2 <sup>a</sup>
H + S	83	6.7	5.2–8.1	14	4.5	2.5–7.4
H + E + S	15	1.2	0.7–2.0	2	0.6	0.0–2.3
R + E	0	0.0	0.0–0.3*	0	0.0	0.0–1.2 <sup>a</sup>
R + S	4	0.3	0.0–0.8	1	0.3	0.0–1.8 <sup>a</sup>
R + E + S	1	0.1	0.0–0.4	0	0.0	0.0–1.2 <sup>a</sup>
E + S	1	0.1	0.0–0.4	0	0.0	0.0–1.2 <sup>a</sup>
<b>Total poly-resistance other than MDR</b>	<b>105</b>	<b>8.5</b>	<b>7.0–10.2</b>	<b>17</b>	<b>5.4</b>	<b>3.2–8.6</b>
<b>Total susceptible</b>	<b>704</b>	<b>56.9</b>	<b>54.1–59.7</b>	<b>95</b>	<b>30.4</b>	<b>25.3–35.8</b>

<sup>a</sup> One-sided, 97.5% CI.

<sup>b</sup> Point estimates and CIs are calculated by multiple imputation of missing values, adjusted to account for cluster design and sample weights applied for varying levels of enrolment between clusters.

Antituberculosis drug-resistance among TB patients in Ukraine. Results of the first national survey, 2013-2014. WHO 2016 [https://www.euro.who.int/\\_data/assets/pdf\\_file/0005/325949/DRS-report-Ukraine.pdf](https://www.euro.who.int/_data/assets/pdf_file/0005/325949/DRS-report-Ukraine.pdf)