TRENDS IN GLOBAL AND EUROPEAN REGIONAL TB EPIDEMIOLOGY

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Connie Erkens
Senior TB consultant
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Global TB report 2019 – key messages

TB IS THE TOP INFECTIOUS DISEASE KILLER WORLDWIDE

IN 2018

1.5 MILLION
(1.4-1.6 million)
PEOPLE DIED FROM TB

10 MILLION
(9.0-11.1 million)
PEOPLE FELL ILL WITH TB

INCLUDING 251 000 DEATHS
(223 000 - 281 000)
AMONG PEOPLE WITH HIV

TB IS THE LEADING KILLER OF PEOPLE WITH HIV

AND A MAJOR CAUSE OF DEATH DUE TO ANTIMICROBIAL RESISTANCE

5.7 MILLION MEN
3.2 MILLION WOMEN
1.1 MILLION CHILDREN
Number 1 killer infectious disease

**Fig. 3.14**

Top causes of death worldwide in 2017\(^\text{a,b}\).

Deaths from TB among HIV-positive people are shown in grey.

- Ischaemic heart disease
- Stroke
- Chronic obstructive pulmonary disease
- Lower respiratory infections
- Alzheimer disease and other dementias
- Trachea, bronchus, lung cancers
- Diabetes mellitus
- Road injury
- Diarrhoeal diseases
- Tuberculosis

**Fig. 3.15**

Estimated number of deaths worldwide from HIV/AIDS and TB in 2018\(^\text{a,b}\).

Deaths from TB among HIV-positive people are shown in grey.

- TB
- HIV/AIDS

\(^{a}\) For HIV/AIDS, the latest estimates of the number of deaths in 2018 that have been published by UNAIDS are available at http://www.unaids.org/en/ (accessed 13 August 2019). For TB, the estimates for 2018 are those published in this report.

\(^{b}\) Deaths from TB among HIV-positive people are officially classified as deaths caused by HIV/AIDS in the International Classification of Diseases.
FIG. 3.4
Estimated TB incidence rates, 2018

Incidence per 100 000 population per year:
- 0–9.9
- 10–99
- 100–199
- 200–299
- 300–499
- ≥500
- No data
- Not applicable
FIG. 3.5

Estimated HIV prevalence in new and relapse TB cases, 2018
Percentage of new TB cases with MDR/RR-TB

* Percentages are based on the most recent data point for countries with representative data from 2004 to 2019. Model-based estimates for countries with data before 2004 are not shown. MDR-TB is a subset of RR-TB.
Estimated incidence of MDR/RR-TB* in 2018, for countries with at least 1000 incident cases

* MDR-TB is a subset of RR-TB.
FIG. 3.9

Global trends in the estimated number of incident TB cases (left) and the incidence rate (right), 2000–2018. Shaded areas represent uncertainty intervals. The horizontal dashed line shows the 2020 milestone for incidence of the End TB Strategy.
THE END TB STRATEGY

New cases
80%
don't in new TB cases by 2030

TB deaths
90%
don't in people dying of TB by 2030

Reducing poverty
100%
of TB-affected families protected from catastrophic costs by 2030

Figure 2. Projected acceleration in the decline of global tuberculosis incidence rates to target levels

- Current global trend: -1.5%/year
- -10%/year by 2025
- -5%/year
- -17%/year

Optimize use of current & new tools emerging from pipeline, pursue universal health coverage and social protection

Introduce new tools: a vaccine, new drugs & treatment regimens, and a point-of-care test for treatment of active TB disease and latent TB infection

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TB trends in Europe
Europe has fastest decline in TB incidence and mortality rates

Total TB incidence rates are shown in green and incidence rates of HIV-positive TB are shown in red. The black solid lines show notifications of new and relapse cases for comparison with estimates of the total incidence rate.

Estimated TB mortality rates among HIV-negative people are shown in blue and estimated mortality rates among HIV-positive people are shown in red.
but MDR-TB and TB/HIV co-infection is growing

TB incidence, MDR notification, TB/HIV incidence and TB mortality, TB/HIV mortality rates per 100 000 WHO European Region, 2013-2017
Notified TB cases, EU/EEA, 2008–2017

Continuous decline between 2008 and 2017:
- Number of TB cases decreased by 34%
- Notification rate decreased by 36%

1,006 HIV-positive TB cases were notified by 23 EU/EEA countries in 2017

3.9% of TB cases with known HIV status were HIV-positive (range 0–13.7%*)

* Among countries reporting more than five TB cases with known HIV status

1 107 MDR TB cases notified by 30 EU/EEA countries

3.7% of all TB cases with available DST* results had MDR TB (range 0–25.4%)

Proportion of MDR TB cases among TB cases with available DST results

- <1%
- 1 to 1.9%
- 2 to 4.9%
- 5 to 9.9%
- ≥10%
- No data reported


* DST – drug susceptibility test
70.7% of all TB cases* had a successful treatment outcome after 12 months (range 31.3–100%)

Proportion of treatment success
- <60%
- 60 to 84.9%
- ≥85%
- No data reported

Countries not visible in the main map extent
- Liechtenstein
- Malta

* Four EU/EEA countries did not report treatment outcome data

Treatment outcomes for new and relapse HIV-positive TB cases in 2017, 30 high TB/HIV burden countries, WHO regions and globally

- **Western Pacific**: 79%
- **Africa**: 78%
- **Eastern Mediterranean**: 74%
- **South-East Asia**: 71%
- **The Americas**: 56%
- **Europe**: 45%
- **Global**: 75%

Percentage of cohort

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Treatment outcomes for MDR/RR-TB cases started on treatment in 2016, 30 high MDR-TB burden countries, WHO regions and globally

- **Eastern Mediterranean**: 65%
- **Africa**: 60%
- **The Americas**: 59%
- **Western Pacific**: 59%
- **Europe**: 57%
- **South-East Asia**: 52%
- **Global**: 56%

Percentage of cohort

Legend:
- **Treatment success**
- **Failure**
- **Died**
- **Lost to follow-up**
- **Not evaluated**
- **No data reported**
44.8% of all MDR TB cases notified in 2015 were successfully treated (range 0–100%)


* Cyprus, Iceland, Liechtenstein, Luxembourg and Slovenia reported zero MDR TB cases in 2015. Treatment outcome and/or DST data were not available for France, Greece, Italy and Spain

18,299 TB cases of foreign* origin

33.1% of all TB cases (range 0–92.9%)

Proportion of TB cases of foreign origin

- <1%
- 1 to 9.9%
- 10 to 49.9%
- 50 to 74.9%
- ≥75%

Countries not visible in the main map extent
- Liechtenstein
- Malta

* Notified in persons originating from other countries than the reporting country

The proportion of cases in persons of foreign origin increased from 22.6% in 2008 to 33.1% in 2017.

The rate of TB cases of foreign origin per 100 000 of the total population varied between 3.4 and 3.9.

Immigration to the EU from non-member countries was 2.4 million in 2017.

- **5 million**
  - Latin America, Caribbean
  - Top countries of origin: Ecuador, Brasil

- **1 million**
  - North America, Oceania
  - Top countries of origin: USA

- **9 million**
  - Non-EU Europe
  - Top countries of origin: Ukraine, Russia, Turkey

- **10 million**
  - North & Sub-Saharan Africa
  - Top countries of origin: Morocco, Algeria, Tunisia, Nigeria

- **12 million**
  - Asia, Middle East
  - Top countries of origin: India, China, Pakistan, Syria

- **20 million**
  - Mobile EU citizens
  - Top countries of origin: Romania, Poland, Italy, Portugal

Source: Eurostat, European Political Strategy Centre
Immigrants to Europe – where do they come from?

Immigration to the Netherlands from high burden TB countries - top 12

- Kenia
- Nigeria
- Pakistan
- Somalië
- Filippijnen
- Ethiopië
- Eritrea
- Zuid-Afrika, land
- India
- Grand Total

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Conclusions

• Global TB incidence is declining, but absolute numbers are not
• The TB incidence in Europe is declining faster
• High MDR and TB-HIV burden in former Soviet-Union countries
• There is still a considerable gap of patients not detected and put on treatment globally and in FSU-countries
• Immigration from high burden counties determines TB epidemiology in western European countries
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