TB diagnostic WHO European Region challenges and achievements

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WHO European region

• The WHO European Region comprises 53 countries with a population of nearly 900 million people, of which around 508 million live in the EU/EEA (28 EU Member States plus Iceland, Liechtenstein, and Norway).

• Although the WHO European Region accounts for less than 5% of TB cases worldwide, about 25% of the worldwide MDR-TB burden occurs in this Region.

• Fifteen of the world’s 27 high MDR-TB burden countries are in the WHO European Region.
Fastest TB incidence decline in the world, still, nearly 1000 people get infected in the region every day

- Since 2001 tuberculosis incidence (TB) has been falling at an average rate of 4.5% per year
- Estimated total of TB patients in the Region: over 460 000
- New TB cases estimated to occur per year: 360 000
In the 18 high-priority countries (HPC) in the Region:

- **84%** of incident and **85%** of prevalent TB cases;
- **91%** of the mortality caused by TB;
- **90%** of TB/HIV co-infections;
- **99.5%** of the MDR TB.


18 high-priority countries: Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Republic of Moldova, Romania, Russian Federation, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan.
Burden of MDR
Challenge of M/XDR-TB in the European Region

World: 300 000 MDR-TB cases, 83% in 27 high MDR burden countries
Europe: 75 000 MDR-TB cases, 99% in 15 high MDR burden countries

Estimated percentage of MDR among new and re-treated TB patients in 18 HPC of WHO European region, 2013

- Among previously-treated TB cases
- Among new TB cases

<table>
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<tr>
<th>Country</th>
<th>Percentage</th>
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<td>Belarus</td>
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<td>Kyrgyzstan</td>
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<td>WHO EUROPE</td>
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<td>WORLD</td>
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Impressive improvement in coverage of treatment and detection for MDR-TB, 2009–2013

In 2013, all notified MDR-TB patients started second-line MDR treatment (including cases detected in previous years).

In 2009 only 60% of those detected had been put on treatment.

40% increase in MDR-TB detection since 2009.

[Graph showing MDR cases notified and MDR cases enrolled in treatment from 2009 to 2013]
Progress in first line DST coverage among new and previously treated TB patients in the WHO European region
Use of rapid molecular methods at civil and penitentiary TB diagnostic facilities
- 40% increase in MDR-TB detection since 2009
Communication / Data management

Progress in first line DST coverage among new and previously treated TB patients

Post 2015 WHO EURO TB action plan
- Integrated, patient-centred care and prevention

European TB Laboratory Network (ELI)
- New TB algorithm developed by ELI

Strong collaboration with and excellent support by SRLN
TB Laboratory Network…
- …rationalization needs to further advance and improve
  - Adequate geographical distribution of 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} level laboratories (work level, population, number of patients, accessibility to health care settings etc.)
  Successful example in Belarus

Quality Control
- Culture, DST & molecular methods

Communication / Data management
- Communication / Data management at laboratory level
  - Intra laboratory $\rightarrow$ LIMS
  - Inter laboratory $\rightarrow$ LIMS
  - Inter Lab-clinician-patient $\rightarrow$ LIMS and more

Laboratory Infrastructure and HR
- Maintenance
- High turnover of staff
TBM team at WHO EURO: C. Acosta, M. van den Boom, A. Dadu, & M. Dara

TB and MDR/XDR TB rapid & early diagnostic

Thank you
(www.euro.who.int/tuberculosis)
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