Tuberculosis in 2017: Searching for new solutions in the face of new challenges

6th TB Symposium – Ministry of Health of the Republic of Belarus, Republican Scientific and Practical Center for Pulmonology and Tuberculosis, and Médecins Sans Frontières

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TB EPIDEMIOLOGY AND STRATEGIES IN THE REPUBLIC OF BELARUS

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### TB rates, Republic of Belarus, 2016

<table>
<thead>
<tr>
<th>Rate</th>
<th>No/cases</th>
<th>/100 000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incidence</strong></td>
<td>2684</td>
<td>28,3</td>
</tr>
<tr>
<td><strong>Prevalence incl. relapses</strong></td>
<td>3242</td>
<td>34,1</td>
</tr>
<tr>
<td><strong>Prevalence</strong></td>
<td>5481</td>
<td>57,7</td>
</tr>
<tr>
<td><strong>Mortality</strong></td>
<td>323</td>
<td>3,4</td>
</tr>
</tbody>
</table>

**Belarus population** - 9 489 616  
**Minsk population** – 1 949 031
Incidence tendencies (all departments including relapses) and mortality due to tuberculosis in population of Belarus (per 100 000 population) (2002-2016)

-39,7% Over 8 years

-60,5% Over 8 years

Incidence (all departments) including relapses

Mortality due to TB
Paediatric TB incidence (0-17 y.o.)
In Belarus (per 100,000 children)
Absolute number of new and previously treated MDR TB cases and their proportion (%) among pulmonary TB (2012-2016), (registered)

<table>
<thead>
<tr>
<th>Year</th>
<th>MDR previously treated</th>
<th>MDR new</th>
</tr>
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<tbody>
<tr>
<td>2011</td>
<td>59.2%</td>
<td>27.0%</td>
</tr>
<tr>
<td>2012</td>
<td>66.4%</td>
<td>32.9%</td>
</tr>
<tr>
<td>2013</td>
<td>69.4%</td>
<td>33.8%</td>
</tr>
<tr>
<td>2014</td>
<td>66.7%</td>
<td>33.2%</td>
</tr>
<tr>
<td>2015</td>
<td>65.8%</td>
<td>34.3%</td>
</tr>
<tr>
<td>2016</td>
<td>67.6%</td>
<td>35.7%</td>
</tr>
</tbody>
</table>

- **Abs. no. new**
  - 2012: 766
  - 2013: 763
  - 2014: 680
  - 2015: 709
  - 2016: 642

- **Abs. no. previously treated**
  - 2012: 842
  - 2013: 840
  - 2014: 800
  - 2015: 587
  - 2016: 613
  - 2017: 562
Structure of new and previously treated pulmonary TB patients started in IV cat treatment (2014r., 2016r.)

### New cases – 790

- **New cases**
  - pre-XDR+I: 11.3%
  - pre-XDR+Fq: 11.3%
  - XDR-TB: 9.6%
  - MonoR (R+): 8.8%
  - MDR-TB: 63.2%

### New cases – 975

- **New cases**
  - pre-XDR+I: 8.5%
  - pre-XDR+Fq: 11.9%
  - XDR-TB: 14.2%
  - Mono: 11.9%
  - MDR-TB: 42.3%

### Previously treated - 968

- **Previously treated**
  - pre-XDR+Fq: 14.4%
  - pre-XDR+I: 12.9%
  - XDR-TB: 30.3%
  - MonoR (R+): 4.7%
  - MDR-TB: 37.4%

### Previously treated - 517

- **Previously treated**
  - pre-XDR+Fq: 14.5%
  - pre-XDR+I: 18.0%
  - MDR-TB: 25.9%
  - XDR-TB: 38.8%
MAIN INNOVATIONS

- New tuberculosis management regulations
- Upgrade and reorganisation of laboratories
- Introduction of rapid bacteriological and molecular tests and new TB/MDR TB diagnostic algorithms
- Reorganisation of beds, opening palliative wards
- Creation of 4-modules *Tuberculosis* register
- MDR TB consiliums
- Introduction of practical approach to lung health guidelines in primary health care
- Social support for ambulatory TB patients paid from state budget
- Monitoring and evaluation of activities
- Clinical use of new TB drugs: Bdq, Kfz, Dlm
- Implementation of pharmacovigilance of new TB drugs
- Implementation of video DOT
### Main indicators

| Successful treatment new cases (Belarus, pulmonary TB), (S+C+, S-C+, S+C-), 2015 (excl. MDR TB), % |
| 75.7 |
| 29 |
| 40.2 |
| No data |

| 6M culture conversion rate in MDR patients (confirmed), Belarus, Q1 2016, % |
| 83.6 |

| Successful treatment MDR TB (confirmed), Belarus, 2014 (at 24-36 from start of treatment), % |
| 62.8 |

| Successful treatment XDR TB Belarus 2014 (at 24-36 from start of treatment), % |
| 35.6 |

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**Successful treatment new cases**

Successful treatment new cases were calculated for the year 2015, excluding MDR TB cases. The percentage of successful treatment new cases is 75.7%. The achieved percentage is 87.1%.

**6M culture conversion rate in MDR patients**

The 6-month culture conversion rate for MDR patients in Q1 2016 was 83.6%. This indicates the percentage of MDR patients who showed a positive culture conversion within the first 6 months of treatment.

**Successful treatment MDR TB**

The successful treatment rate for MDR TB confirmed cases in 2014 was 62.8%, measured at 24-36 months from the start of treatment.

**Successful treatment XDR TB**

The successful treatment rate for XDR TB in 2014 was 35.6%, measured at 24-36 months from the start of treatment.
MAIN BARRIERS:

- Inadequate supply of new TB drugs to treat pre-XDR and XDR patients (due to inadequate funding and lack of registration of bedaquiline, delamanid and clofazimine in the country)
- Inadequate facilities in many dispensaries and laboratories;
- Inefficient funding system that does not allow for redistribution of funds to ambulatory treatment;
- Insufficient human resources due to lack of prestige in work in TB treatment facilities, lack of motivation
1. Measures are being taken to change the funding model and switch to patient-orientated TB care model (within the framework of the Regional EuroWHO project for TB control and strengthening of healthcare systems in EECA countries (TB-REP))
   - High-level working group formed;
   - Comprehensive TB care approach is being implemented
   - Pilot project developed to change the funding model in Brest and Mogilev regions

2. Sustainable development policy developed for prevention, treatment, care and support for HIV/AIDS and tuberculosis outlining the main directions of TB care system reforms
Thanks for your attention!