Tuberculosis in Switzerland

Treatment outcome monitoring 2016 and 2017

March 27th, 2019
Outline

• Introduction
• Epidemiology of tuberculosis in Switzerland
• Treatment outcomes
  • Surveillance system
  • Definitions
  • Results
• Discussion and open questions
• Acknowledgements
Introduction: Why do we monitor treatment outcome?

- Do we successfully treat TB in Switzerland?
- Do we treat patients correctly in order to prevent resistance?
- Do we control TB in Switzerland?
- Do we have potential to improve TB control?
- Do we reach the WHO target of 85% treatment success?
Number of notified TB cases, 2000-2018
Age distribution of TB cases 2009-2018
Age distribution of TB cases by gender and origin 2009-2018
TB cases by origin (Switzerland vs. other countries by continent) 2009-2018

Origin defined by country of birth replacing missing with nationality.
Clinical picture of TB cases 2009-2018

- Pulmonary: N=3861
- Lymphatic extrathoracic: N=591
- Lymphatic intrathoracic: N=250
- Pleural: N=236
- Spine: N=101
- Peritoneal: N=98
- Other: N=84
- Unknown: N=79
- Urogenital: N=60
- Bone: N=56
- Meningitis: N=23
- Disseminated: N=16
- CNS: N=10
TB: Resistance against Isoniazid and Rifampicin (2009-2018)
National Surveillance System for TB

Treatment outcome monitoring became mandatory in 2016
Treatment outcome monitoring of culture positive pulmonary TB (cPTB) cases 2016/2017

<table>
<thead>
<tr>
<th>Treatment outcome WHO</th>
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<tbody>
<tr>
<td>cured</td>
</tr>
<tr>
<td>completed</td>
</tr>
<tr>
<td>interrupted</td>
</tr>
<tr>
<td>failure</td>
</tr>
<tr>
<td>died</td>
</tr>
<tr>
<td>transferred</td>
</tr>
<tr>
<td>still on treatment</td>
</tr>
<tr>
<td>unknown</td>
</tr>
</tbody>
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Treatment outcome short

- N=104 (indetermined)
- N=56 (unfavorable)
- N=484 (favorable)
Treatment outcome monitoring of cPTB cases 2016/2017 by year
Treatment outcome monitoring of cPTB cases 2016/2017 by canton
Treatment outcome monitoring of cPTB cases 2016/2017 by origin

- Swiss: 100% favorable
- Foreign: 100% favorable
- Unknown: 100% favorable
Treatment outcome monitoring of cPTB cases 2016/2017 by gender

N= 423
N= 221

Per cent
0 - 100

Gender
male
female

Treatment outcome
indetermined
unfavorable
favorable
Treatment outcome monitoring of cPTB cases 2016/2017 by age

- N=35, under 15 years: Favorable 97%, Indeterminate 3%, Unfavorable 0%
- N=420, 16 to 45 years: Favorable 99%, Indeterminate 1%, Unfavorable 0%
- N=102, 46 to 64 years: Favorable 95%, Indeterminate 5%, Unfavorable 0%
- N=87, over 65 years: Favorable 91%, Indeterminate 9%, Unfavorable 0%
Treatment outcome monitoring of cPTB cases 2016/2017 by age, gender and origin
Treatment outcome monitoring of cPTB: favorable outcomes by age, gender and origin

including «indetermined» outcomes

excluding «indetermined» outcomes
Summary I

- Overall the number of TB cases has remained stable in Switzerland since the year 2000.
- TB mostly affects young adult men of foreign origin.
- The number of TB cases is declining in persons of Swiss origin.
- TB is a pulmonary disease in about 75% of the cases.
  CAVE: extrapulmonary TB in 25%!
Summary II

• Overall treatment outcome of culture confirmed pulmonary TB is successful in 75%, however regional differences do exist.
• There is no change between 2016 and 2017.
• It is less likely to be favorable in patients of foreign or unknown origin.
• It is more likely to be favorable in women than in men.
• It is less likely to be favorable in elderly patients.
• Switzerland does not (yet) reach the WHO target of an overall 85% treatment success.
Discussion and open questions

• Monitoring is important and shows that treatment is successful in about 75%.

• There are cantonal/regional differences. We hypothesize that
  • improving transmission of information between cantons and within the same canton improves treatment outcome.
  • use of tools like «Informationssystem Meldungen (ISM)» that are readily available facilitate information transfer and treatment outcome monitoring
  • collaboration with or mandating partner organisations will improve the monitoring.
Acknowledgements

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