Epidemiology of STI in Europe

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European Centre for Disease Prevention and Control

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Background

ECDC co-ordinates surveillance for sexually transmitted infections in EU/EEA since 2009

Reportable infections are listed in EU legal text (2000/96/EC):
- Chlamydia including LGV
- Gonorrhoea
- Syphilis and congenital syphilis

Case definitions also specified in legal text (2012/256/EC)
Reporting of data

Surveillance for STI co-ordinated through STI Network:
• STI epidemiologists
• STI microbiologists

Operational contact persons nominated by Member States through formal process

Reporting of agreed data through web-based platform (TESSy)

Data validated with operational contact persons
Variables collected

Age
Gender
Classification
Clinical Service Type
Date Of Diagnosis
HIV Status
Site Of Infection
Transmission
Contact with sex worker
Stage of infection (syphilis)
Probable country of infection
Country of birth/nationality
Number of reporting countries and reported cases by disease, 2013

Chlamydia
- 384,555 cases
- 26 countries reporting

Gonorrhoea
- 52,995 cases
- 29 countries reporting

Syphilis
- 22,237 cases
- 30 countries reporting

Number of cases
0 100,000 200,000 300,000 400,000
Reported rates of chlamydia in EU/EEA, 2013
Chlamydia rate per 100 000 population in EU/EEA countries with consistent reporting (9), 2004–2013
Number and percentage of chlamydia cases by transmission category and gender (n=54,811), EU/EEA, 2013

- Heterosexual Males, 19,641, 36%
- Heterosexual Females, 28,160, 51%
- MSM, 3,219, 6%
- Mother-to-child, 23, 0%
- Unknown, 3,768, 7%
### Chlamydia: site of infection

<table>
<thead>
<tr>
<th></th>
<th>Females (%)</th>
<th>Male Heterosexuals (%)</th>
<th>MSM (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anorectal</td>
<td>10.9</td>
<td>0.0</td>
<td>68.4</td>
</tr>
<tr>
<td>Genital</td>
<td>87.9</td>
<td>99.7</td>
<td>27.1</td>
</tr>
<tr>
<td>Pharyngeal</td>
<td>1.0</td>
<td>0.1</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Reported by 13 countries
Proportion of chlamydia cases by transmission mode, 2004-2013
Age and gender-specific rates of reported chlamydia cases per 100 000 population, EU/EEA, 2013
Rate of gonorrhoea cases per 100 000 population, EU/EEA, 2013

- < 5 per 100 000
- 5 - 9 per 100 000
- 10 - 15 per 100 000
- > 15 per 100 000
- Sentinel surveillance (no incidence data)
- No data available or not reporting
- Not included

Non-visible countries
- Luxembourg
- Malta
Gonorrhoea, trend in reported cases, EU/EEA, 2004-2013

- Male
- Total
- Female

Number of cases per 100,000 population

Year
Change in number of reported gonorrhoea cases, EU/EEA, 2009–2013

- Decrease > 30%
- Decrease 10-30%
- Change -9% -10%
- Increase 11-50%
- Increase > 50%
- No data available or not reporting
- Not included

Non-visible countries
- Luxembourg
- Malta
Gonorrhoea, transmission mode, 2013

- MSM, 18637, 43%
- Unknown, 1518, 3%
- Heterosexual Females, 10761, 25%
- Heterosexual Males, 12534, 29%
## Gonorrhoea: site of infection

<table>
<thead>
<tr>
<th></th>
<th>Females (%)</th>
<th>Male Heterosexuals (%)</th>
<th>MSM (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anorectal</td>
<td>10.7</td>
<td>0.0</td>
<td>47.1</td>
</tr>
<tr>
<td>Genital</td>
<td>79.1</td>
<td>97.0</td>
<td>26.7</td>
</tr>
<tr>
<td>Pharyngeal</td>
<td>9.8</td>
<td>2.1</td>
<td>26.1</td>
</tr>
</tbody>
</table>

Reported by 13 countries
Gonorrhoea: age and gender-specific rates

- Females
- Males
- MSM
Gonorrhoea: trends by risk group among countries reporting consistently (8)
Syphilis, reported rates per 100 000 population, EU/EEA, 2013

- < 3 per 100 000
- 3 - 7 per 100 000
- > 7 per 100 000
- Sentinel surveillance (no incidence data)
- No data available or not reporting
- Not included

Non-visible countries
- Luxembourg
- Malta
Syphilis, trend in reported cases, EU/EEA 2004-2013
Syphilis, change in reported cases, EU/EEA 2009-2013

- Decrease > 30%
- Decrease 10-30%
- Change between -10% and 10%
- Increase 10-50%
- Increase > 50%
- No data available or not reporting
- Not included

Non-visible countries
- Luxembourg
- Malta
Syphilis, transmission mode, 2013

- Unknown, 994, 11%
- Heterosexual Females, 1368, 14%
- Heterosexual Males, 2005, 21%
- MSM, 5148, 54%
Syphilis: site of infection (primary syphilis)

<table>
<thead>
<tr>
<th>Location</th>
<th>Females (%)</th>
<th>Male Heterosexuals (%)</th>
<th>MSM (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anorectal</td>
<td>2.4</td>
<td>0.0</td>
<td>19.8</td>
</tr>
<tr>
<td>Genital</td>
<td>78.6</td>
<td>96.8</td>
<td>65.3</td>
</tr>
<tr>
<td>Pharyngeal</td>
<td>2.4</td>
<td>0.0</td>
<td>13.2</td>
</tr>
</tbody>
</table>

Reported by seven countries
Syphilis, age and gender distribution, EU/EEA, 2013

- Females
- Males
- MSM

Cases per 100,000 persons

Age-group:
- <15
- 15-19
- 20-24
- 25-34
- 35-44
- 45+

Graph showing the distribution of syphilis cases by age and gender in EU/EEA countries for the year 2013.
Syphilis: trends by risk group among countries reporting consistently (14)
Percentage of syphilis cases by stage of infection, EU/EEA countries, 2013

- **Primary**
- **Secondary**
- **Early latent**
- **Late Latent**
- **Latent**
HIV co-infection, 2013

Reported for gonorrhoea and syphilis, but poor data completion overall

Note: percentage of the data with this variable, ignores unknowns
In 2013: 1043 cases reported by 10 countries
22% increase over 2012
Sexual orientation reported for 333 cases: all MSM except
three heterosexual males and five females
81% HIV positive where data reported
Number of reported lymphogranuloma venereum cases, EU/EEA, 2004–2013
Reported LGV cases by age group, EU/EEA, 2013
Conclusions

Overall (and at country level) increasing trends of gonorrhoea, syphilis and LGV

- Among countries reporting transmission data, MSM is key risk group
- Number of cases among MSM increasing among countries reporting consistently

Although chlamydia rates stable overall, proportion of cases among MSM increasing

Increasing trends:
- changing testing policies?
- real increases?

What will the future bring?
Thank you

All network members in the 31 EU/EEA reporting countries
Colleagues at ECDC: HSH and TESSy teams
Proportion of cases among MSM, EU/EEA, 2013

- Netherlands
- France
- Norway
- Denmark
- United Kingdom
- Ireland
- Greece
- Slovenia
- EU/EEA Total
- Malta
- Sweden
- Czech Republic
- Finland
- Latvia
- Portugal
- Slovakia
- Romania
- Lithuania
- Estonia

Percentage