OBJECTIVES
To describe clinical characteristics and capsular type of GBS isolates responsible of invasive infections in infants from Belgium (BE), Bulgaria (BU), Czech-Republic (CZ), Denmark (DK), Germany (DE), Italy (IT), Spain (ES) and United Kingdom (GB), representing one of the main objectives of the DEVANI (DEsign of a Vaccine Against Neonatal Infections) project.

MATERIAL AND METHODS
- Surveillance of invasive GBS infections (GBS positive blood culture or CSF) in infants was performed from mid-2008 through December 2010 in 8 European countries BE, BU, CZ, DK, DE, IT, ES and GB.
- For each case, a standardized DEVANI case report form was filled.
- Samples from cases were processed using local procedures.
- GBS isolates were characterised in national central labs using a standardised type-specific (Ia, Ib-IX) latex agglutination (SSI, DK) and molecular typing methods.
- Data captured online in a web-database
- Data analysis with SAS Software

RESULTS
Data on 159 infants with invasive infection were analysed: 82 (51.6%) early onset diseases (EOD), 73 (45.9%) late onset diseases (LOD) and 4 (2.5%) not defined.

<table>
<thead>
<tr>
<th></th>
<th>GBS EOD (5.1% death)</th>
<th>GBS LOD (1.5% death)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at onset</td>
<td>9.5h (0-96)</td>
<td>42.2 d (6-294)</td>
<td>0.048</td>
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<tr>
<td>Birth weight</td>
<td>3.1kg (1-4.9)</td>
<td>2.7kg (0.7-4.1)</td>
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<tr>
<td>Gestational age &lt; 37 weeks</td>
<td>37.7 wks (26-42)</td>
<td>36.3 wks (24-43)</td>
<td>0.055</td>
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<tr>
<td>Birth in twins</td>
<td>5.1%</td>
<td>15.7%</td>
<td>0.033</td>
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<tr>
<td>Sex M/F</td>
<td>1.16</td>
<td>0.89</td>
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<tr>
<td>Predominant manifestation</td>
<td>Respiratory distress (38% of cases)</td>
<td>Fever (63% of cases) &lt;0.0001</td>
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</tr>
</tbody>
</table>

Type of infection:
- Bacteremia without focus 26.8% 11%
- Sepsis & sepsis shock 70.7% 75.3%
- Meningitis 8.5% 30.1%
- Pneumonia 13.4% 2.7%
- Other 2.4% 8.2%

Late-prenatal screening cultures were obtained from 51% of cases’ mothers: only half of these were positive for GBS and less than 40% of GBS positive mothers received intrapartum antibiotics.

CONCLUSIONS
- Clinical presentations were associated with age at onset of infection.
- Serotype III highly predominates in neonatal infections; serotypes Ia and V are at 2nd rank for EOD.
- Prenatal screening was not universal in mothers of cases and neither sensitive as only half of mothers were identified as positive. Furthermore, most of the positive mothers did not received any intrapartum prophylaxis.

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