Hepatitis B and C among people who inject drugs in Germany: High HCV prevalence, low HBV immunization rates, and urgent need for prevention

Results from a multicentre sero-behavioural survey among current injectors 2011-2015

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Background

People who inject drugs (PWID) are a population at high risk for bloodborne and sexually transmitted infections. No representative and recent data on seroprevalence of hepatitis B (HBV), hepatitis C (HCV) and HIV in PWID and effects of current prevention strategies is available in Germany.

Methods

Study design:
- multicentre sero-behavioural survey (8 study sites)
- Data collection 2011 – 2014
- Validation of methods during pilots 2011 in Berlin and Essen

Inclusion criteria:
- Current injectors (having injected drugs during last 12 m
- consuming in the study city
- aged 16 years and older

Recruitment:
- In low threshold drug services
- Respondent driven sampling
- Anonymised data

Analyses

Descriptive analysis was performed to describe results as range of study sites or proportions of the total study population. Uni- and multivariate regression analyses were performed using Stata 13.1.

Results

Sociodemographic characteristics
- In total 2,077 participants in 8 cities were eligible
- Study sites differ in a variety of characteristics

<table>
<thead>
<tr>
<th>Sociodemographic characteristics</th>
<th>Range of cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median age</td>
<td>29 – 41 years</td>
</tr>
<tr>
<td>Young injectors</td>
<td>2 – 27%</td>
</tr>
<tr>
<td>Women</td>
<td>18 – 35%</td>
</tr>
<tr>
<td>First generation migrants</td>
<td>9 – 31%</td>
</tr>
<tr>
<td>First &amp; Second generation migrants</td>
<td>18 – 45%</td>
</tr>
<tr>
<td>Living on the street</td>
<td>53 – 77%</td>
</tr>
<tr>
<td>Living on the street (last 12 m)</td>
<td>7 – 28%</td>
</tr>
<tr>
<td>Ever in prison</td>
<td>73 – 86%</td>
</tr>
<tr>
<td>In prison during last 12 months</td>
<td>10 – 21%</td>
</tr>
</tbody>
</table>

Drug injection related behaviour
- Injected in the last 30 days 76 – 88%
- Injected daily in the last 30 days 17 – 37%
- Median years since first injection 10 – 18 years
- New injectors (injecting since <2 years) 3 – 11%

Current consumed substances
- Present: heroin, amphetamine, crack cocaine, heroine, methadone, cocaine

Recent unsafe use behaviour
- HCV can be transmitted by...
  - sharing needles/syringes 2%
  - sharing filters/spoons/water 19/20%
  - sharing straws for snorting drugs 48%
- HCV often becomes a chronic disease.
- HCV Reinfection is possible.
- Hepatitis A and B can be prevented by vaccination.

Hepatitis-related knowledge
- % Not sure/new to me
  - HCV can be transmitted by...
    - sharing needles/syringes 2%
    - sharing filters/spoons/water 19/20%
    - sharing straws for snorting drugs 48%

HIV- and HCV prevalence by study site

<table>
<thead>
<tr>
<th>City</th>
<th>HIV Anti</th>
<th>HIV RNA Anti</th>
<th>HCV RNA Anti</th>
<th>HCV RNA+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berlin</td>
<td>3.9</td>
<td>5.4</td>
<td>17.7</td>
<td>19.2</td>
</tr>
<tr>
<td>Essen</td>
<td>6.1</td>
<td>1.2</td>
<td>35.9</td>
<td>17.8</td>
</tr>
<tr>
<td>Leipzig</td>
<td>0.0</td>
<td>0.9</td>
<td>35.3</td>
<td>27.2</td>
</tr>
<tr>
<td>Frankfurt</td>
<td>9.1</td>
<td>1.9</td>
<td>42.9</td>
<td>24.8</td>
</tr>
<tr>
<td>Cologne</td>
<td>1.6</td>
<td>1.8</td>
<td>48.6</td>
<td>16.1</td>
</tr>
<tr>
<td>Hanover</td>
<td>8.7</td>
<td>4.7</td>
<td>43.9</td>
<td>23.6</td>
</tr>
<tr>
<td>Munich</td>
<td>3.0</td>
<td>1.5</td>
<td>43.7</td>
<td>27.4</td>
</tr>
<tr>
<td>Hamburg</td>
<td>5.0</td>
<td>2.0</td>
<td>52.0</td>
<td>21.0</td>
</tr>
</tbody>
</table>

Factors affecting HBV vaccination status

- HBV prevalence varied between study sites.
- Current infection (HBsAg or HBV DNA) ranged between 0.3 – 2.5% of participants.
- 16-69% of participants are susceptible for HBV.

Conclusions and Recommendations

- High HCV prevalence and low prevalence of HBV vaccination despite official national recommendations to provide HBV vaccination to all PWID indicate the need for intensified prevention strategies, scale-up of targeted vaccination and of antiviral treatment, above all for HCV among PWID.
- High proportions of recent unsafe use behaviours and gaps in specific knowledge of transmission, prevention and treatment options for viral hepatitides were identified.
- Targeted counselling was well accepted and should be regularly offered in low-threshold drug services.
- Regular contact with the medical system during OST should be used more effectively for prevention measures, testing, counselling and referral to treatment.

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