Hepatitis B: are at-risk individuals vaccinated if screened and found negative for HBV? Results of an online survey conducted in six EU countries

Miriam Levi
Department of Health Sciences – University of Florence, Italy
Background

- Vaccination against hepatitis B was introduced in 1982.
- 181 countries implemented routine hepatitis B vaccination compared with 31 countries in 1992.
- Currently, 95% of new infections are estimated to occur among unvaccinated adults.
- Universal vaccination approach determined a decline in the number of acute cases and a reduction in the carrier rate.
- Six European countries - DK, FIN, I, N, S and the UK- adopt a targeted risk-group based vaccination approach.
Aims and objectives

- To understand current hepatitis B vaccination practices in migrants from endemic areas and in specific at-risk groups in DE, HU, IT, NL, ES and the UK while assessing the implementation of existing national or international recommendations
  - People who inject drugs (PWID)
  - Sex workers
  - HIV positive patients
  - HCV positive patients
  - Household and/or sexual contacts of hepatitis B positive patients
  - Health care workers (HCWs)
  - Asylum seekers
  - Pregnant women
Materials and methods (I)

Six semi-qualitative online surveys developed:

1. General screening (GS survey)
2. GP/Primary care pathway (GP survey)
3. Antenatal screening pathway (ANC survey)
4. Care for asylum seekers pathway (ASC survey)
5. Sexual health services/GUM pathway (SHS survey)
6. Specialist care pathway (SP survey)

- Some were contacted directly by the research team
- Membership lists of the EASL, ELPA and WHA
- ECDC surveillance focal points
- Members of European/national public health associations
- A snowballing recruitment method was applied
- Rather than to reach a large representative sample of practising clinicians, the aim in each professional group was to reach 5-10 experts able to reflect on the practice within their specialism in general
Materials and methods (II)

• Professionals in all surveys were asked:
  – If screened for hepatitis B, are individuals with negative screening results vaccinated?
  – If found to be positive for hepatitis B, are their negative household and/or sexual contacts vaccinated?

• Possible answer options: Yes / Sometimes / No / Unsure

• Lime Survey (July - September 2012)

• The analysis of the responses restricted to the answers of those who had previously reported in the survey that screening of the subgroups considered for hepatitis B is very commonly/sometimes practiced
<table>
<thead>
<tr>
<th>Population subgroups</th>
<th>Expert survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GS</td>
</tr>
<tr>
<td>People who inject drugs</td>
<td>x</td>
</tr>
<tr>
<td>Sex workers</td>
<td>x</td>
</tr>
<tr>
<td>HIV + patients</td>
<td>x</td>
</tr>
<tr>
<td>HCV + patients</td>
<td>x</td>
</tr>
<tr>
<td>Asylum seekers</td>
<td>x</td>
</tr>
<tr>
<td>Migrants</td>
<td>x</td>
</tr>
<tr>
<td>Contacts of hep B + patients</td>
<td>x</td>
</tr>
<tr>
<td>Health care workers</td>
<td>x</td>
</tr>
<tr>
<td>Pregnant women</td>
<td>x</td>
</tr>
</tbody>
</table>

**Note:** The table indicates which population subgroups are considered by each expert survey.
If at-risk individuals are vaccinated, is personal copayment/contribution required for the vaccination?

- GP and SHS surveys: PWID, sex workers, HCV and HIV positive patients, migrants
- GS and ASC surveys: Asylum seekers
- ANC survey: Pregnant women
## Results: invites sent and response by country

<table>
<thead>
<tr>
<th>Country</th>
<th>GS</th>
<th>GP</th>
<th>ANC</th>
<th>ASC</th>
<th>SHS</th>
<th>SP</th>
<th>Total (per country)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>28%</td>
<td>12%</td>
<td>22%</td>
<td>11%</td>
<td>23%</td>
<td>24%</td>
<td>19% 19% 51/269</td>
</tr>
<tr>
<td></td>
<td>9/32</td>
<td>10/81</td>
<td>8/37</td>
<td>4/35</td>
<td>10/43</td>
<td>10/41</td>
<td></td>
</tr>
<tr>
<td>DE</td>
<td>23%</td>
<td>3%</td>
<td>21%</td>
<td>14%</td>
<td>36%</td>
<td>11%</td>
<td>15% 15% 71/480</td>
</tr>
<tr>
<td></td>
<td>14/60</td>
<td>4/129</td>
<td>36/175</td>
<td>3/22</td>
<td>5/14</td>
<td>9/80</td>
<td></td>
</tr>
<tr>
<td>NL</td>
<td>64%</td>
<td>45%</td>
<td>100%</td>
<td>57%</td>
<td>57%</td>
<td>48%</td>
<td>54% 56/104</td>
</tr>
<tr>
<td></td>
<td>7/11</td>
<td>9/20</td>
<td>6/6</td>
<td>4/7</td>
<td>8/14</td>
<td>22/46</td>
<td></td>
</tr>
<tr>
<td>HU</td>
<td>22%</td>
<td>17%</td>
<td>29%</td>
<td>38%</td>
<td>33%*</td>
<td>27%</td>
<td>28% 23/83</td>
</tr>
<tr>
<td></td>
<td>2/9</td>
<td>1/6</td>
<td>4/14</td>
<td>3/8</td>
<td>3/9</td>
<td>10/37</td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td>50%</td>
<td>31%</td>
<td>40%</td>
<td>18%</td>
<td>8%</td>
<td>60%</td>
<td>36% 60/168</td>
</tr>
<tr>
<td></td>
<td>8/16</td>
<td>14/45</td>
<td>25/63</td>
<td>3/17</td>
<td>1/12</td>
<td>9/15</td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td>30%</td>
<td>13%</td>
<td>200%*</td>
<td>14%</td>
<td>25%*</td>
<td>50%</td>
<td>32% 25/77</td>
</tr>
<tr>
<td></td>
<td>8/27</td>
<td>2/15</td>
<td>8/4</td>
<td>1/7</td>
<td>2/8</td>
<td>4/8</td>
<td></td>
</tr>
<tr>
<td>Total (per survey)</td>
<td>31%</td>
<td>14%</td>
<td>29%</td>
<td>19%</td>
<td>29%</td>
<td>27%</td>
<td>24% 286/1181</td>
</tr>
<tr>
<td></td>
<td>48/155</td>
<td>40/296</td>
<td>87/299</td>
<td>18/96</td>
<td>29/100</td>
<td>64/235</td>
<td></td>
</tr>
</tbody>
</table>
Results: People who inject drugs

In all countries hepatitis B vaccination is recommended and provided for PWID

In DE, NL, HU and IT, notable proportions of respondents reported that vaccination is offered intermittently or not offered at all.
Copayment for people who inject drugs

- UK (n=19)
- DE (n=9)
- NL (n=9)
- HU (n=1)
- IT (n=10)
- ES (n=3)

Legend:
- Yes
- No
- Unsure
Results: Sex workers

In all six countries hepatitis B vaccination is recommended and provided for sex workers.
Copayment for sex workers

UK (n=16)  DE (n=8)  NL (n=10)  HU (n=2)  IT (n=7)  ES (n=4)

- Yes
- No
- Unsure
According to the updated 2013 European AIDS Clinical Society guidelines, HIV-positive individuals lacking anti-HBs antibodies should be offered vaccination to prevent HBV infection.

<table>
<thead>
<tr>
<th>Country</th>
<th>UK (n=25)</th>
<th>DE (n=17)</th>
<th>NL (n=22)</th>
<th>HU (n=6)</th>
<th>IT (n=18)</th>
<th>ES (n=11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Yes</td>
<td>16%</td>
<td>35%</td>
<td>27%</td>
<td>50%</td>
<td>28%</td>
<td>100%</td>
</tr>
<tr>
<td>% Sometimes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Unsure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HIV positive patients
Results: HCV positive patients

Patients with chronic liver diseases should undergo hepatitis A and B vaccination early in the natural history of the disease.

- UK (n=36): 61% Yes, 28% Sometimes, 25% No, 13% Unsure
- DE (n=28): 36% Yes, 28% Sometimes, 23% No, 13% Unsure
- NL (n=43): 26% Yes, 26% Sometimes, 26% No, 23% Unsure
- HU (n=13): 23% Yes, 23% Sometimes, 23% No, 31% Unsure
- IT (n=28): 25% Yes, 25% Sometimes, 25% No, 25% Unsure
- ES (n=15): 80% Yes, 13% Sometimes, 3% No, 0% Unsure
Copayment for HCV positive patients

- UK (n=16)
- DE (n=7)
- NL (n=7)
- HU (n=1)
- IT (n=9)
- ES (n=2)

- Yes
- No
- Unsure
Results: Asylum seekers

Widespread uncertainty was reported.
Copayment for asylum seekers

UK (n=4)
- Yes: 0%
- Only free for some: 0%
- No: 100%
- Unsure: 0%

DE (n=3)
- Yes: 0%
- Only free for some: 0%
- No: 33.33%
- Unsure: 66.67%

NL (n=4)
- Yes: 0%
- Only free for some: 0%
- No: 100%
- Unsure: 0%

HU (n=2)
- Yes: 100%
- Only free for some: 0%
- No: 0%
- Unsure: 0%

IT (n=2)
- Yes: 100%
- Only free for some: 0%
- No: 0%
- Unsure: 0%

ES (n=3)
- Yes: 0%
- Only free for some: 0%
- No: 33.33%
- Unsure: 66.67%
A lack of awareness identified among high proportions of experts in all countries
Copayment for migrants

- UK (n=15)
- DE (n=7)
- NL (n=2)
- HU (n=1)
- IT (n=7)
- ES (n=3)

Categories:
- Yes
- No
- Unsure
Results: Contacts of chronic hepatitis B patients

All countries recommend vaccination for contacts

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes</th>
<th>Sometimes</th>
<th>No</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK (n=38)</td>
<td></td>
<td></td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>DE (n=45)</td>
<td></td>
<td></td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>NL (n=51)</td>
<td></td>
<td></td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>HU (n=18)</td>
<td></td>
<td></td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>IT (n=49)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ES (n=16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Results: Health care workers

Current practices are in line with current policies

- UK (n=7): 43% Yes, 27% Sometimes, 20% Unsure
- DE (n=11): 43% Yes, 27% Sometimes, 20% Unsure
- NL (n=5): 43% Yes, 27% Sometimes
- HU (n=2): 100% Yes
- IT (n=5): 80% Yes, 20% Sometimes
- ES (n=6): 100% Yes
Results: Pregnant women

- To prevent newborns from HBV infection, all pregnant women should be screened for HBsAg, this is the case in all six countries.
- European guidelines recommending the post-partum vaccination of women identified as at-risk for HBV infection during pregnancy have not been issued.
Copayment for pregnant women

UK (n=1)

DE (n=4)

IT (n=2)

ES (n=1)

- Yes
- No
- Unsure
Conclusions (I)

- Not always vaccination is offered commonly to at-risk groups prioritized by national policies
- Subjective, non-uniform vaccination practices are likely to exacerbate health inequalities
- There is a need for clear and precise hepatitis B vaccination policies developed specifically for different professional groups (specifying who is responsible for screening and vaccinating)
- Important to tackle the barriers
- Vaccination has to be free for the at-risk groups
- Adequate compensation
Conclusions (II)

- A better understanding and application of the recommendations could be ensured through the implementation of education and training of HCW.
- One method would be by strengthening the vaccinology content and introducing vaccination policy courses in the medical and paramedical curriculum of future cohorts of doctors and nurses.
- The only sure way to eliminate hepatitis B is through universal childhood immunization.
- Targeted programmes for hard-to-reach subgroups, including undocumented migrants.
Hepatitis B: Are at-risk individuals vaccinated if screened and found negative for HBV? Results of an online survey conducted in six EU countries

Miriam Levi\textsuperscript{a}, Amena Ahmad \textsuperscript{b}, Angela Bechini\textsuperscript{a}, Sara Boccalini\textsuperscript{a}, Quang Vinh Nguyen \textsuperscript{b}, Irene Veldhuijzen \textsuperscript{c}, Jan Hendrik Richardus \textsuperscript{d}, Ralf Reintjes \textsuperscript{b}, Paolo Bonanni \textsuperscript{a,\,*}

\textsuperscript{a} Department of Health Sciences, University of Florence, Florence, Italy
\textsuperscript{b} Department of Health Sciences, Hamburg University of Applied Sciences, Hamburg, Germany
\textsuperscript{c} Division of Infectious Disease Control, Public Health Service Rotterdam-Rijnmond, Rotterdam, The Netherlands
\textsuperscript{d} Department of Public Health, Erasmus MC, University Medical Center, Rotterdam, The Netherlands
Thank you for your attention!!

www.hepscreen.eu

Responsibility for the information and views set out in this presentation lies entirely with the authors. The European Commission is not responsible for any use that may be made of the information contained herein.