How BBV prisoners testing can be improved. The HWB’s PrHep-EU Project

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Prisoners in European Countries

2 million people are incarcerated in Europe during a given year.

Prisoners per 100,000 population:
- >700
- 500 - 700
- 300 - 500
- 200 - 300
- 150 - 200
- 100 - 150
- 50 - 100

France, Italy, Norway, Sweden, UK, some cantons in Switzerland and 2 regions in Spain.

The EU member states that transferred the responsibility for prison health to their health ministries in recent years.

104% the average prison occupancy rate.

133.9% overcrowding in Greek prisons.
Prison/Jail Walls = Semipermeable Membrane to the Infectious Diseases

- HIV
- TB
- HCV
- HBV
- STDs

Corrections

Public Health
At the end of 2005, 7 million people (or 1 out of 33 American adults) were either in jail, in prison, or on parole. Compared with the general public, newly incarcerated inmates have an increased prevalence of human immunodeficiency virus infection, hepatitis B virus infection, hepatitis C virus infection, syphilis, gonorrhea, chlamydia, and *Mycobacterium tuberculosis* infection.
Screening for HCV Infection in Jails

[JAMA Viewpoint – March 28, 2012]

• More than 7 million individuals passed through USA jails and prisons each year
• CDC estimated that 16% to 41% of US inmates had serological evidence of prior HCV exposure and 12% to 35% had chronic infection
• Only 25% to 35% of persons infected with HCV are aware of their condition
• It is possible that as many as 1.0 million persons with undiagnosed HCV infection might come in contact with the correctional system each year.

Healthcare Services in prison

• Detention may represent a unique opportunity to make Healthcare Services available to a cluster of people usually hard to reach, specially when they are out of custody.
• This target of people is characterized by a difficult temperament and attitude, with frequent problems related to illegal behaviours and social issues (drug use, prostitution, lack of a permanent residence, etc.)
• If foreigners, additional problems related with language and misunderstanding of rules and formalities, are occurring
• All this set of circumstances makes the prisons as a real "diseases concentrators".
The PrHep-EU pilot project intends:

- To foster a co-working model to implement the diagnosis of HCV infection among inmates in European prisons (Italy, France, Spain, Netherlands) and to reduce the proportion of the unaware ones;
- To use peer-to-peer educational programs, which well demonstrated the high-efficacy to increase BBV-test rates;
- To identify the reasons of the lack of an appropriate treatment and care, mostly among the already aware HCV patients providing a specific and continuous counselling;
- To implement among all detained patients, the same clinical-diagnostic flow-chart for HCV infection;
- To map and identify all the potential candidates for HCV therapy in selected EU prisons;
- To monitor and follow-up the treatment feasibility in correctional facilities.
N. of inmates who have lived in Italian prisons during 2015 ➞ 99,446
(Resident at 31/12/14: 53,623 + 2015 new comers: 45,823)
### BBV Screening tests rate in 5 Italian correctional institutes [first half 2015]

<table>
<thead>
<tr>
<th>Category</th>
<th>n.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>n. Prisoners in Italy at 31-dec-2014</td>
<td>53.623</td>
<td></td>
</tr>
<tr>
<td>Italians</td>
<td>36.161</td>
<td>67.4</td>
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<tr>
<td>Foreigners</td>
<td>17.462</td>
<td>32.6</td>
</tr>
<tr>
<td>Prisoners in 5 study institutes</td>
<td>7.174</td>
<td>13.4</td>
</tr>
<tr>
<td>Screening Test – Offered</td>
<td>6.177</td>
<td>86.1</td>
</tr>
<tr>
<td>Screening Test - Not Offered Yet</td>
<td>997</td>
<td>13.9</td>
</tr>
<tr>
<td>Screening Test – Executed</td>
<td>5.353</td>
<td>86.7</td>
</tr>
<tr>
<td>Screening Test – Refused</td>
<td>824</td>
<td>13.3</td>
</tr>
</tbody>
</table>
BBV Screening Tests Italy [7,174 inmates]

**Screening Test Offer**
- Offered: 6,177
- Not offered yet: 997

**Screening Test Execution**
- Executed: 5,353
- Refused: 824
1. Lack of understanding with doctors and nurses
2. Improper awareness of the self-wellbeing
3. General mistrust and scepticism to the prison institution
4. Fear to be stigmatized and isolated among the prison population
BBV Screening Tests Rate [5,353 inmates]

- Natives: 33.2%
- Foreigners: 66.8%

- Men: 97.0%
- Women: 3.0%

- IVDU: 23.7%
- Non-IVDU: 76.3%
HCV Viral Load [604 HCVAb+ inmates]

HCV-RNA Testing

- not executed (76) - 12.4%
- executed (528) - 87.4%

HCV-RNA Results

- undetect (146) - 27.7%
- >15U.I. (382) - 72.3%
BBV Screening Tests in 13 Correctional Facilities in Europe
  - Italy, France, Spain, The Netherlands.

Extensive staging of Chronic Hepatitis C using:
  - Virological parameters
    - HCV-RNA, HCV-Genotype, IL28B
  - Scores of hepatic fibrosis:
    - APRI (AST, AST normal value, PLT)
    - FIB-4 Calculator (Age, PLT, AST, ALT)
  - Liver-kidney failure clinical scores:
    - Child-Pugh (Encephalopathy, Ascites, Bilirubin, Albumin, PT%/INR)
    - MELD (Total Bilirubin, INR, Creatinine)

To identify eligible inmates to anti-HCV therapy