Prevention and Control of viral hepatitis in IDU/prisoners in Luxembourg

VHPB Meeting Brussels
07-08 November 2017
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To put you into the right context

Two prisons in Luxembourg

One closed setting in Schrassig

- 615 inmates for 600 places (295 prisoners / 320 pretrial detainees
  - 155 LU-citizens vs 460 non LU-citizens
  - 580 men vs 35 women
- Drug related offences: 66 prisoners / 150 pretrial detainees

One half open setting in Givenich

- A prison without walls and fences, but nevertheless a prison
- Normal regime (working and sleeping in prison) and «half free regime (working outside for private employers and sleeping in prison)
- 74 inmates for 99 places, only prisoners, no ptd, 12 drug related offences
- Turnover: approx. 1000 / y
The medical service in Luxembourg prison in Schrassig

**Somatic medicine**
- Service of Centre Hospitalier de Luxembourg
  - 3 part time MD – 1 resident – 1 assistant
  - Different specialists coming into prison
    - 20 nurses – 1 head nurse
      - 24/7
      - 3 surgeries
    - 1 pharmacist – 4 preparators
    - different facilities (X-Ray, dentist, ophtalmologist, gynaecologist
      - Ultrasound, Fibroscan
  - 8 half days of medical consultation – 13000 in 2016

**Psychiatric service**
- Service of Neuropsychiatrical hospital in Ettelbruck
- Ambulatory care and intensive care unit
- Different specialists coming into prison
- Detect, treat and prevent mental disorders
- Pluriprofessional approach (MD, nurses, social assistant, ergotherapist)
  - 7/7 6am to 9.30pm
Our approach

Test
• Prison law: every inmate has to be seen by a MD within 24 hours after entry in prison
  • Complete history
  • Blood test proposal (HIV, HAV, HBV, HCV, Syphilis, IGRA): take-up > 95%
    • Chest X-Ray
      • ECG

Treat

Prevent
Different harm reduction measures in place
• OST
  • Vaccination program
• Needle and syringe exchange program
  • Condom provision
  • Safe tattoo project
• Information sessions and educational work
  • Working together with NGO’s
What if an inmate is seropositive for hepatitis?

- Information by a MD asap
  - Proposal of vaccination (HAV, HBV) if necessary
  - Ultrasound and Fibroscan (nurses are educated for FS)
  - Appointment with the ID specialist within 2 weeks
- Discussion with the ID specialist (checkup every 3, 6 or 12 months or treatment)

**If treatment:**
- Based on EASL guidelines
  - All DAA’s for HCV treatment available
    - DOT is possible
- BA and ID specialist visit once per month or on demand
  - All costs funded by Ministry of Justice
COMATEP

- Nurse practitioner coordinated clinic for infectious diseases in prisons
  - Project started in 2009
  - High number of inmates due to drug-related offences
- High prevalence of HIV, viral hepatitis and other infectious complications due related to illicit drug use
  - Required a standardised approach

**Work of the nurse in charge**

- Verification if every inmate got a blood analysis
- Registration for MD consultation if serpositivity
- Organization of the ID specialist consultation
- Preparation of request for blood analysis (follow-up)
  - Realisation of Fibroscan
- Realisation of questionnaire for the HCV study in prison
  - Counselling
  - Organization of specific appointments (NGO’s, ...)
- Preparation of the release (medical reports, treatment, blood analysis reports)
  - Informational sessions for prison employees
Statistics of screening outcomes

Total: 544
Total Hepatitis: 488

<table>
<thead>
<tr>
<th>Year</th>
<th>TBC</th>
<th>Syphilis</th>
<th>HIV</th>
<th>HIV + Hep B</th>
<th>HIV + Hep C</th>
<th>Hep B</th>
<th>Hep B + Hep C</th>
<th>Hep C</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>11</td>
<td>10</td>
<td>3</td>
<td>11</td>
<td>87</td>
</tr>
<tr>
<td>2014</td>
<td>1</td>
<td>9</td>
<td>5</td>
<td>3</td>
<td>13</td>
<td>9</td>
<td>26</td>
<td>83</td>
</tr>
<tr>
<td>2015</td>
<td>2</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>16</td>
<td>11</td>
<td>0</td>
<td>102</td>
</tr>
<tr>
<td>2016</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td>97</td>
</tr>
</tbody>
</table>
Prevalence in 2016 in prison of Schrassig

Total input serology - 748

- HBV: 3%
- HCV: 15%
- H...
Awareness?

<table>
<thead>
<tr>
<th>Year</th>
<th>Positive Test Results</th>
<th>Not Informed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>125</td>
<td>32</td>
</tr>
<tr>
<td>2014</td>
<td>123</td>
<td>48</td>
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<tr>
<td>2015</td>
<td>159</td>
<td>56</td>
</tr>
<tr>
<td>2016</td>
<td>139</td>
<td>45</td>
</tr>
</tbody>
</table>

33% are not aware of their disease!
The treatments

<table>
<thead>
<tr>
<th>Year</th>
<th>HCV</th>
<th>HBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>2012</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>2013</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>2014</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>2015</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>2016</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>05/2017</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>98</td>
<td>16</td>
</tr>
</tbody>
</table>

SVR12 rate 64.6% for all treatments
SVR12 rate 66% for DAA (72% 2\textsuperscript{nd} gen)
LTFU 16.3% (8.1% SVR3) for all treatments
LTFU 21% for DAA

Reinfection rate: 23% (42% of those confirmation of reinfection by GT change)
For 34 reinfections, 29 occurred extramuros

\begin{itemize}
\item A stay in prison is an effective opportunity to treat a group of HCV-infected patients which have otherwise very limited access to therapy
\item Although a good success rate of HCV therapy was observed, the rate of reinfection after discharge from prison was high (5.1 / 100 person-years of follow-up)
\item Prevention during treatment while patients are in prison as well as link to OST prescribers after discharge of prison should be strengthen.
\end{itemize}

\footnote{High recurrence rate of hepatitis C infection after treatment in prison inmates in Luxembourg. Devaux et al, 2017}
Consultations and particular exams

<table>
<thead>
<tr>
<th>Year</th>
<th>ID specialist consultation</th>
<th>Patients</th>
<th>Ultrasound</th>
<th>Fibroscan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>31</td>
<td>457</td>
<td>194</td>
<td>171</td>
</tr>
<tr>
<td>2014</td>
<td>26</td>
<td>346</td>
<td>141</td>
<td>198</td>
</tr>
<tr>
<td>2015</td>
<td>24</td>
<td>364</td>
<td>120</td>
<td>202</td>
</tr>
<tr>
<td>2016</td>
<td>26</td>
<td>328</td>
<td>86</td>
<td>182</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>1495</td>
<td>541</td>
<td>753</td>
</tr>
</tbody>
</table>

Vaccinations

<table>
<thead>
<tr>
<th>Year</th>
<th>HBV</th>
<th>HAV / HBV</th>
<th>HAV</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>362</td>
<td>186</td>
<td>72</td>
<td>620</td>
</tr>
<tr>
<td>2014</td>
<td>318</td>
<td>193</td>
<td>56</td>
<td>567</td>
</tr>
<tr>
<td>2015</td>
<td>290</td>
<td>168</td>
<td>49</td>
<td>507</td>
</tr>
<tr>
<td>2016</td>
<td>311</td>
<td>153</td>
<td>47</td>
<td>511</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1281</td>
<td>700</td>
<td>224</td>
<td>2205</td>
</tr>
</tbody>
</table>
The harm reduction measures

**OST**
- Psychiatric service
- Methadone and Buprenorphine + Naloxone
- DOT

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under OST</td>
<td>18%</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>Average patients per day</td>
<td>80</td>
<td>64</td>
<td>63</td>
</tr>
<tr>
<td>Average time under OST</td>
<td>140 days</td>
<td>151 days</td>
<td>146 days</td>
</tr>
<tr>
<td>Average dose per day (M)</td>
<td>21mg</td>
<td>23mg</td>
<td>23mg</td>
</tr>
<tr>
<td>Lowest - highest dose (M)</td>
<td>1mg – 100mg</td>
<td>1mg – 70mg</td>
<td>2,5mg-75mg</td>
</tr>
<tr>
<td>Average dose per day (B)</td>
<td>7,2mg</td>
<td>7,6mg</td>
<td>7,7mg</td>
</tr>
<tr>
<td>Lowest – highest dose (B)</td>
<td>1mg – 24mg</td>
<td>1mg – 18mg</td>
<td>1mg – 16mg</td>
</tr>
</tbody>
</table>
The harm reduction measures

PNSP
- Done by the somatic medical service
- Information at the entry in prison by MD
- Contract inmate / medical service
  - A one to one exchange
- Including counselling by a nurse

<table>
<thead>
<tr>
<th>Year</th>
<th>Kits distributed</th>
<th>Syringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>14</td>
<td>No stats</td>
</tr>
<tr>
<td>2006</td>
<td>23</td>
<td>283</td>
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<tr>
<td>2007</td>
<td>24</td>
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<td>2008</td>
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<td>40</td>
<td>1767</td>
</tr>
<tr>
<td>2016</td>
<td>31</td>
<td>1612</td>
</tr>
<tr>
<td>TOTAL</td>
<td>390</td>
<td>10156</td>
</tr>
</tbody>
</table>
The harm reduction measures

Condom provision

- Condoms and lubricants are easily accessible at different locations inside the prison
- Provision is generally well accepted
- No security problems or other disadvantages
  - No count
The harm reduction measures

**Safe tattoo project**

- An Erasmus + project
- Project within an university degree obtention by a nurse
- Research: 1 of 2 inmates has a tattoo from which 1 of 3 got an illegal tattoo in prison
- Inmates get a training in tattooing and in hygiena / transmittable disease
- Started in march 2017
- Since now 245 hours of tattooing have been performed in 87 appointments
- 9 tattooers are trained and 52 inmates got at least one tattoo
Conclusions

- Hepatitis in prison is common
- Treating hepatitis in prison is an option
- Harm reduction measures should be in place
- HRM should be a comprehensive package including OST, PNSP, condom provision, vaccinations program and others
- Open the prison for NGO’s and other services
- Build a bridge for after release follow-up
- Prison Health = Public Health
Acknowledgements

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