Trends of testing for HIV and syphilis in CBVCT in 2019-2022: are there people more at risk?

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Disclosures

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  • Gilead
  • ViiV Healthcare
  • Janssen
  • Viatris
Background

• Screening of HIV in informal contexts is a cornerstone of preventive strategies to reduce HIV transmission.

• Community Based Voluntary Counselling and Testing (CBVCT) services play a key role as they can offer tests to «hard-to-reach» people who are «at high-risk»

• During COVID-19 pandemic, screening activities in official Sexually Transmitted Infections (STI) services have been reduced.

• Here we present data on HIV and syphilis screening during the period 2019-2022, carried out in different informal settings.
Methods

- Capillary point-of-care (POC) rapid HIV and syphilis tests
  - indoor screening sessions in the association site
  - outdoor offer during public events like Pride
  - amusement venues (cruising, sauna, disco, etc.)
- Anonymous questionnaire: attitudes and risks connected with sexual activity
- Data collected through a protected web platform: http://cobatest.org (Cobatest European CBVCT network)
- Statistical analysis: descriptive and multivariable logistic regression, to identify risk factors for having a positive HIV test result
Results

- In 4 years (2019-2022):
  - 9353 questionnaires
  - 8952 HIV tests
  - 6518 syphilis tests

- Median (IQR) age:
  - men: 32 (26-41) y.
  - women: 27 (23-35) y.
  - transgender women: 29 (24-37) y.
Trends of HIV & syphilis

HIV
\[
\frac{62}{8952} = 0.69\%
\]

Syphilis
\[
\frac{194}{6518} = 2.98\%
\]
Characteristics of subjects tested positive for HIV

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>HIV positive test N/total (%)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>51/6457 (0.79%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Women</td>
<td>8/2451 (0.33%)</td>
<td></td>
</tr>
<tr>
<td>Transgender women</td>
<td>3/59 (5.08%)</td>
<td></td>
</tr>
<tr>
<td><strong>Unprotected anal sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>24/2271 (1.06%)</td>
<td>0.015</td>
</tr>
<tr>
<td>No</td>
<td>38/6740 (0.57%)</td>
<td></td>
</tr>
<tr>
<td><strong>Concomitant syphilis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>11/186 (5.91%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>No</td>
<td>27/6241 (0.43%)</td>
<td></td>
</tr>
<tr>
<td><strong>Foreigners</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23/1447 (1.59%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>No</td>
<td>37/7346 (0.50%)</td>
<td></td>
</tr>
<tr>
<td><strong>Previous sexually transmitted infections</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>14/795 (1.76%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>No</td>
<td>43/7545 (0.54%)</td>
<td></td>
</tr>
<tr>
<td><strong>Sex worker</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>9/289 (3.11%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>No</td>
<td>52/8569 (0.61%)</td>
<td></td>
</tr>
<tr>
<td><strong>Prison</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>6/396 (1.51%)</td>
<td>0.036</td>
</tr>
<tr>
<td>No</td>
<td>53/8363 (0.63%)</td>
<td></td>
</tr>
<tr>
<td><strong>Intravenous drug use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>4/63 (6.34%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>No</td>
<td>57/8858 (0.64%)</td>
<td></td>
</tr>
<tr>
<td><strong>Men having sex with men</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>44/4522 (0.97%)</td>
<td>0.001</td>
</tr>
<tr>
<td>No</td>
<td>18/4459 (0.40%)</td>
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</tr>
<tr>
<td><strong>Testing site</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Needle exchange service or amusement venues</td>
<td>15/1176 (1.27%)</td>
<td>0.009</td>
</tr>
<tr>
<td>CECVF office or public outdoor campaign</td>
<td>46/7684 (0.60%)</td>
<td></td>
</tr>
</tbody>
</table>

No correlations with:
- age
- self-perceiving at-risk
- reported condom use

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Characteristics HIV positive test N/total (%) P

Gender
- Men: 51/6457 (0.79%)  <0.0001
- Women: 8/2451 (0.33%)  0.015
- Transgender women: 3/59 (5.08%)  <0.0001

Unprotected anal sex
- Yes: 24/2271 (1.06%)  0.015
- No: 38/6740 (0.57%)  <0.0001

Concomitant syphilis
- Yes: 11/186 (5.91%)  <0.0001
- No: 27/6241 (0.43%)  0.001

Foreigners
- Yes: 23/1447 (1.59%)  <0.0001
- No: 37/7346 (0.50%)  0.036

Previous sexually transmitted infections
- Yes: 14/795 (1.76%)  0.001
- No: 43/7545 (0.54%)  0.001

Sex worker
- Yes: 9/289 (3.11%)  <0.0001
- No: 52/8569 (0.61%)  0.001

Prison
- Yes: 6/396 (1.51%)  0.036
- No: 53/8363 (0.63%)  <0.0001

Intravenous drug use
- Yes: 4/63 (6.34%)  0.001
- No: 57/8858 (0.64%)  0.001

Men having sex with men
- Yes: 44/4522 (0.97%)  <0.0001
- No: 18/4459 (0.40%)  0.001

Testing site
- Needle exchange service or amusement venues: 15/1176 (1.27%)  <0.0001
- CECVF office or public outdoor campaign: 46/7684 (0.60%)  0.009
# Univariate and multivariate analysis

<table>
<thead>
<tr>
<th></th>
<th>Univariate</th>
<th>Multivariate</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% Confidence Interval</td>
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<tr>
<td>Age</td>
<td>1.00</td>
<td>1.00-1.00</td>
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<tr>
<td>Condom use</td>
<td>1.06</td>
<td>0.64-1.76</td>
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<tr>
<td>Transgender women</td>
<td>8.05</td>
<td>2.45-26.44</td>
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<tr>
<td>Unprotected anal sex</td>
<td>1.87</td>
<td>1.12-3.13</td>
</tr>
<tr>
<td>Syphilis</td>
<td>14.47</td>
<td>7.06-29.63</td>
</tr>
<tr>
<td>Foreigner</td>
<td>3.19</td>
<td>1.89-5.38</td>
</tr>
<tr>
<td>Sex worker</td>
<td>5.26</td>
<td>2.57-10.79</td>
</tr>
<tr>
<td>STI</td>
<td>3.29</td>
<td>1.79-6.05</td>
</tr>
<tr>
<td>MSM</td>
<td>2.42</td>
<td>1.40-4.20</td>
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<tr>
<td>Prison</td>
<td>2.41</td>
<td>1.03-5.64</td>
</tr>
<tr>
<td>High risk site</td>
<td>2.15</td>
<td>1.19-3.86</td>
</tr>
</tbody>
</table>
Multivariate analysis: OR (95%CI) for positive HIV test

- High risk site
- Prison
- MSM
- STI
- Sex worker
- Foreigner
- Syphilis
- Unprotected anal sex
- Condom use
- Age
Conclusions

- CBVCT confirms a constant role in unveiling new HIV infections in people at risk, despite the decline in COVID years (2020-2021)
- Factors independently associated with a positive HIV test result were:
  - foreigner
  - MSM
  - transgender woman
  - a history of syphilis
- It is possible that the context of informal testing and outreach activities could intercept even «the hardest to reach», thus favouring linkage to care of submerged populations
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