Monitoring the response to hepatitis and HIV in Europe and Central Asia: Are we on track to reach agreed targets?

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European Centre for Disease Prevention and Control (ECDC)
HepHIV 2019 Bucharest Conference: Challenges of Timely and Integrated Testing and Care
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Disclosure

Employed by ECDC

No conflicts to disclose
Outline

- What are the targets for ‘eliminating viral hepatitis’ and ‘ending AIDS’ by 2030?

- Are we on track to meet these targets?

- Conclusions
Goal 3. Ensure healthy lives and promote well-being for all at all ages

3.3 By 2030, end the epidemics of **AIDS**, tuberculosis, malaria and neglected tropical diseases and combat **hepatitis**, water-borne diseases and other communicable diseases.

Source: www.un.org/sustainabledevelopment/health
Hepatitis
HIV 37 million
HIV 1.8 million
HIV 25%
HIV 21.7 million

WHAT IS HEPATITIS?
Hepatitis virus causes infection and inflammation of the liver.

Hep B & C can lead to severe and potentially fatal liver problems.

Hep B is spread by blood and other body fluids.

400 million people live with Hepatitis.

6-10 million people are newly infected annually.

KNOW HEPATITIS ARE YOU AT RISK?
Everyone could be at risk of Hepatitis.

Unsafe injections & medical procedures
Unsafe sex

ACCESS TO HEPATITIS C TREATMENT 2016
Of 80 million people infected - over 1 million had access to Hep C treatment.

We have a long way to go.

WORLD HEPATITIS DAY | JULY 28th
KNOW HEPATITIS ACT NOW
GET TESTED!

95% of people with hepatitis do not know they are infected.

Due to lack of awareness and poor access to hepatitis tests.

Source: WHO and UNAIDS
What are the global targets for viral hepatitis?

Source: WHO, WHO Regional Office for Europe.
Impact targets that would eliminate HBV and HCV by 2030: incidence and mortality

Source: WHO Global Health Sector Strategy on Viral Hepatitis, 2016–2021
## Service coverage targets that would eliminate HBV and HCV by 2030

<table>
<thead>
<tr>
<th>Target areas</th>
<th>Prevention</th>
<th>Baseline 2015</th>
<th>2020 target</th>
<th>2030 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Three-dose hepatitis B vaccine for infants (coverage %)</td>
<td>82%</td>
<td>90%</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>2. Prevention of mother-to-child transmission of HBV: hepatitis B birth-dose vaccination or other approaches (coverage %)</td>
<td>38%</td>
<td>50%</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>3. Blood and injection safety (coverage %)</td>
<td>Blood safety: donations screened with quality assurance</td>
<td>89%</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Injection safety: use of engineered devices</td>
<td>5%</td>
<td>50%</td>
<td>90%</td>
</tr>
<tr>
<td>4. Harm reduction (sterile syringe/needle set distributed per person per year for people who inject drugs [PWID])</td>
<td>20</td>
<td>200</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>5. Treatment</td>
<td>5a. Diagnosis of HBV and HCV (coverage %)</td>
<td>&lt;5%</td>
<td>30%</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>5b. Treatment of HBV and HCV (coverage %)</td>
<td>&lt;1%</td>
<td>5 million (HBV)</td>
<td>80% eligible treated</td>
</tr>
</tbody>
</table>

Will Europe achieve these targets for hepatitis?
Monitoring of hepatitis B & C in the EU/EEA

- 1st European monitoring system for hepatitis B & C rolled out 14th Dec 2018
- Focus on prevention, testing and treatment
- Deadline for reporting 30th January 2019
- Preliminary results at EASL in April 2019
- Report launched in June 2019
Monitoring of hepatitis B & C in the EU/EEA

Data sources

- ECDC
  - surveillance data
- UNAIDS
  - GAM indicators
- UNICEF/WHO
  - vaccination data
- ELPA
- EASL

ECDC

Questionnaire to EU/EEA

Member States

EMCDDA (PWID)

EU Commission projects

- ESTICOM (EMIS II)
- EURO HIV-EDAT
- SIALON II
- Joint Action HA-REACT
- Joint Action INTEGRATE
HIV
Global targets for ‘ending the AIDS epidemic’ by 2030

By 2030 (SDG targets)

- Zero new infections
- Zero AIDS deaths
- Zero discrimination

Global targets for ‘ending the AIDS epidemic’ by 2030

<table>
<thead>
<tr>
<th>By 2020 (Fast-track targets)</th>
<th>By 2030 (SDG targets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ To reduce new HIV infections to fewer than 500,000 by 2020</td>
<td>✓ Zero new infections</td>
</tr>
<tr>
<td>✓ To reduce AIDS-related death to fewer than 500,000 by 2020</td>
<td>✓ Zero AIDS deaths</td>
</tr>
<tr>
<td>✓ To eliminate HIV-related stigma and discrimination by 2020</td>
<td>✓ Zero discrimination</td>
</tr>
</tbody>
</table>

Are we on track to end AIDS?

Incidences

TARGET: 75% reduction in new infections by 2020 (baseline 2014)

Estimated new HIV infections

Are we on track to end AIDS?

Incidences

TARGET: 75% reduction in new infections by 2020 (baseline 2014)

Are we on track to end AIDS?
90-90-90 treatment targets

- **Target 1**: 90% of all living with HIV DIAGONosed
- **Target 2**: 90% of all diagnosed with HIV ON ART
- **Target 3**: 90% of all on ART VIRALLY SUPPRESSED

Overall target = 73% of all people living with HIV VIRALLY SUPPRESSED
Progress toward achieving the 1st 90:
90% of all PLHIV who know their status (n=39)

Target reached
Above regional average
Below regional average

Global target 90%
Overall percentage 80%

Progress toward achieving the 1st 90:
Sub-regional variation: West, Centre, East

Are new innovative approaches to HIV testing included in national HIV testing guidelines? (2018)

<table>
<thead>
<tr>
<th>Testing approaches</th>
<th>Yes</th>
<th>No</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community-based testing delivered by trained medical staff</td>
<td>28</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Community-based testing delivered by non-medical staff (e.g. trained lay people)</td>
<td>14</td>
<td>26</td>
<td>15</td>
</tr>
<tr>
<td>Home-sampling kits</td>
<td>4</td>
<td>36</td>
<td>15</td>
</tr>
<tr>
<td>Self-testing kits</td>
<td>9</td>
<td>32</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: ECDC. Dublin Declaration monitoring 2018; validated unpublished data.
Coverage of community-based testing by lay providers, self-testing and self-sampling, 2018

Source: ECDC. Dublin Declaration monitoring 2018; validated unpublished data.
Countries considering revisions to national HIV testing guidelines, 2018

Revision of HIV testing guidelines planned
- Yes
- No
- No response

Source: ECDC. Dublin Declaration monitoring 2018; validated unpublished data.
Are we on track to end AIDS?
90-90-90 treatment targets

Target 1: 90% of all people living with HIV diagnosed with HIV

Target 2: 90% of all people living with HIV diagnosed with HIV ON ART

Target 3: 90% of all people living with HIV on ART VIRALLY SUPPRESSED

Overall target: 73% of all people living with HIV VIRALLY SUPPRESSED

DIAGNOSED

ON ART

VIRALLY SUPPRESSED
Progress toward achieving the 2nd 90: 90% of those diagnosed on ART (n=39)

Progress toward achieving the 2\textsuperscript{nd} 90:
Significant sub‐regional variation: \textbf{West, Centre, East}

ART initiation policies in European countries
2014 (n=49)

- 1 country/ART policy started Initiation regardless of CD4 count in 2014.
- 28 countries/ART policy started at 350 cells/mm³ in 2014.
- 16 countries/ART policy started at 500 cells/mm³ in 2014.
- 4 countries/ART policy started at 200 cells/mm³ in 2014.

Source: ECDC. Dublin Declaration monitoring 2018; validated unpublished data.
ART initiation policies in European countries
2014 (n=49)

Source: ECDC. Dublin Declaration monitoring 2018; validated unpublished data.
ART initiation policies in European countries
2014 (n=49), 2016 (n=47)

Source: ECDC. Dublin Declaration monitoring 2018; validated unpublished data.
ART initiation policies in European countries
2014 (n=49), 2016 (n=47), 2018 (n=54)

<table>
<thead>
<tr>
<th>Year</th>
<th>200 cells/mm3</th>
<th>350 cells/mm3</th>
<th>500 cells/mm3</th>
<th>Initiation regardless of CD4 count</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>4</td>
<td>16</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>2015</td>
<td>29</td>
<td>10</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>8</td>
<td>10</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>1</td>
<td>5</td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>

Source: ECDC. Dublin Declaration monitoring 2018; validated unpublished data.
Availability of ART for undocumented migrants

2018

Source: ECDC. Dublin Declaration monitoring 2018; validated unpublished data.
Are we on track to end AIDS?
90-90-90 treatment targets

Target 1: 90% of all living with HIV diagnosed
Target 2: 90% of all diagnosed with HIV on ART
Target 3: 90% of all on ART virally suppressed

Overall target: 73% of all people living with HIV virally suppressed
Progress toward achieving the 3\textsuperscript{rd} 90:
90\% of those on ART virally suppressed (n=34)

Are we on track to end AIDS?
90-90-90 treatment targets

Target 1
90% of all living with HIV 
DIAGNOSED

Target 2
90% of all diagnosed with HIV 
ON ART

Target 3
90% of all on ART 
VIRALLY SUPPRESSED

Overall target
73% of all people living with HIV 
VIRALLY SUPPRESSED
Progress toward achieving the overall target:
73% of all PLHIV virally suppressed (n=33)

Potential impact on HIV incidence of higher HIV testing rates and earlier antiretroviral therapy initiation in MSM

Andrew N. Phillips, Valentina Cambiano, Alec Miners, Fiona C. Lampe, Alison Rodger, Fumiyo Nakagawa, Alison Brown, O. Noel Gill, Daniela De Angelis, Jonathan Elford, Graham Hart, Anne M. Johnson, Jens D. Lundgren, Simon Collins and Valerie Delpech

Background: Increased rates of testing, with early antiretroviral therapy (ART) initiation, represent a key potential HIV-prevention approach. Currently, in MSM in the United Kingdom, it is estimated that 36% are diagnosed 3 years from infection, and the ART initiation threshold is at a CD4<sup>+</sup> cell count of 350/µl. We investigated what would be required to reduce HIV incidence in MSM to below 1 per 1000 person-years (i.e., <535 new infections per year) by 2030, and whether this is likely to be cost-effective.

Methods: A dynamic, individual-based simulation model was calibrated to multiple data sources on HIV in MSM in the United Kingdom. Outcomes were projected according to future alternative HIV testing and ART initiation scenarios to 2030, considering also potential changes in levels of condomless sex.

Results: For ART use to result in an incidence of close to 1/1000 person-years requires the proportion of all HIV-positive MSM with viral suppression to increase from below 60% currently to 90%, assuming no rise in levels of condomless sex. Substantial increases in HIV testing, such that over 90% of men are diagnosed within a year of infection, would increase the proportion of HIV-positive men with viral suppression to 80%, and it would be 90% if ART is initiated at diagnosis. The scenarios required for such a policy to be cost-effective are presented.

Conclusion: This analysis provides targets for the proportion of all HIV-positive MSM with viral suppression required to achieve substantial reductions in HIV incidence.

Progress toward achieving the overall 90-90-90 target:
Significant sub-regional variation: **West, Centre, East**

Are we on track to reach the 90-90-90 targets by 2020?

Are we on track to reach the 90-90-90 targets by 2020?

Are we on track to reach the 90-90-90 targets by 2020?

Distribution of people with transmissible levels of virus in the full region, reported in 2018

N ≈ 1,200,000
People living with unsuppressed virus

Undiagnosed 36%
Diagnosed but not on treatment 51%
Treated but not virally suppressed 13%

Distribution of people with transmissible levels of virus by sub-region, reported in 2018

N ≈ 1,200,000
People living with unsuppressed virus

Undiagnosed
Diagnosed but not on treatment
Treated but not virally suppressed

WEST
N ≈ 200,000
11%
31%
57%

CENTRE
N ≈ 15,000

EAST
N ≈ 980,000

## Conclusions

### Hepatitis B and C

<table>
<thead>
<tr>
<th>Lack of data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To guide effective responses</td>
</tr>
<tr>
<td>• To measure progress toward targets</td>
</tr>
</tbody>
</table>

**Estimates indicate progress:**

| • Hep B vaccination |
| • Blood safety |

**Estimates indicate major challenges:**

| • Prevention |
| • Testing |
| • Treatment |

ECDC has launched first ever monitoring system for hepatitis B and C

| • Results in June 2019 |

### HIV

<table>
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<th>Strong data:</th>
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Overall, our region is **not on track** to meet the target of a 75% reduction in new infections by 2020

While the **Western** part of the region is closing in on reaching the 90-90-90 targets, the **Central** and **Eastern** parts are lagging behind

**Priorities:**

| • Testing |
| • Linkage to care & treatment |
| • Prevention |
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