HIV among PWID: how far has Europe come?

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Learning objectives

After this talk participants should be able to:

• Describe the situation regarding HIV infection among people who inject drugs in Europe
• Identify best practices
• Recognise potential threats
1982: AIDS noted in Europe

1984:
- 762 AIDS cases reported in Europe
- Amsterdam introduces 1st NSP

1985:
- First large-scale HIV test on market
- NSPs spread throughout Europe

1987: Zidovudine introduced (1st HIV treatment)

1994:
- 762 AIDS cases reported in Europe

1995: Saquinavir introduced (1st protease inhibitor)

1996:
- HAART first used
- Nevirapine introduced (1st drug targeting reverse transcriptase)

2000: 13,660 EU HIV cases reported

2003: Enfuvirtide introduced (1st HIV fusion inhibitor)

2007:
- 23,098 EU HIV cases reported
- Raltegravir introduced (1st integrase inhibitor)

2014: UNAIDs launched 90-90-90 target for 2020

2017: 25,116 EU HIV cases reported

NSP, Needle and syringe programme; HAART, Highly active antiretroviral therapy.
New HIV diagnoses in Europe

- Considerable heterogeneity in the new HIV diagnoses rate in EU/EEA countries
New HIV diagnoses in Europe

- Overall in Europe, HIV cases have remained relatively stable with a slight decline over recent years.
- HIV trends at national level, however, are contrasting, for example:

**New HIV diagnoses (rates per 100,000 population) (y-axis)**

- Estonia, UK, Netherlands... Declining trends
- Bulgaria, Cyprus, Latvia: Rates increases 1.5–2 fold since 2009
- Greece, Romania: HIV outbreaks among PWID

HIV transmission routes

1995
(WHO Western European Region)

- Vertical transmission: 3%
- Injecting drug use: 16.92%
- Heterosexual: 36%
- MSM: 43.9%

2008–2017
(EU/EEA)

IDU has decreased as a transmission route, but in some countries for specific years it constitutes the most frequently reported route of transmission (e.g. Greece 2012).
Injecting drug use and HIV in Europe

Population size of PWID

2,520,000
(2,440,000 - 2,660,000)

Number of HIV cases among PWID in 2016

483,000
(468,000 - 503,000)

Prevalence of injecting drug use & main drug injected by country

- Heroin, amphetamine
- Methamphetamine, ecstasy
- Heroin, cocaine
- Heroin, methadone
- Heroin, methadone, cocaine
- Heroin, methadone, methamphetamine
- Synthetic opioids
- Heroin
- Heroin, methadone
- Heroin
- Heroin
- Heroin
- Heroin
- Heroin
- Heroin
- Heroin
- Heroin

HIV prevalence 19.1%

EMCDDA. Statistical Bulletin 2018 — prevalence of drug use
What is the trend in the number of new HIV diagnoses among people who inject drugs in Europe since 2010?

- Overall decreasing but increasing in some countries (63.4%)
- Increasing (13.4%)
- Decreasing (4.9%)
- Stable (2.4%)
- Overall increasing but decreasing in some countries (15.9%)
Epidemiology of HIV among PWID

- HIV diagnoses in PWID overall in the EU have declined

However, despite overall declining HIV trends, outbreaks of HIV among PWID continue
### HIV outbreaks among PWID in Europe (2011–today)

<table>
<thead>
<tr>
<th>Location</th>
<th>Year the outbreak was recognised</th>
<th>New HIV cases among PWID</th>
<th>Highly vulnerable groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athens, Greece</td>
<td>2011</td>
<td>2011–2013: 1100</td>
<td>Homeless Migrant PWID</td>
</tr>
<tr>
<td>Bucharest, Romania</td>
<td>2011</td>
<td>2011–2016: 1195</td>
<td>MSM, PWID</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>2013</td>
<td>Average of 20 new cases per year</td>
<td>Young, female PWID</td>
</tr>
<tr>
<td>Dublin, Ireland</td>
<td>2014</td>
<td>57</td>
<td>Homeless PWID Female PWID</td>
</tr>
</tbody>
</table>
Outbreak case study: Athens, Greece (2011)

HIV cases diagnosed among PWID

Increase in HIV prevalence among PWID:
0.8% in 2010 → 16.5% in 2013

Why did this outbreak occur, and who was affected?

Why?
- Increasing prevalence of HCV infection → high-risk injecting practices
- Economic recession since 2009 – migration flows – increases in homelessness
- Low coverage of harm reduction programmes (2010)
  - > 5500 opioid users waiting to enter opioid substitution treatment programmes
    (waiting time ~7.6 years)
  - ~ 16 syringes per PWID per year

PWID who were particularly affected
- Homeless
- Those with a history of imprisonment
- Women with multiple sex partners
- Migrants – due to high prevalence of homelessness and risky injection behaviours

Response to the outbreak: ARISTOTLE programme

5 rounds of Respondent-Driven Sampling (2012-2013)

- 5–10 seeds from PWID population selected for each round – asked to identity up to 3 recruits from their network
- Monetary incentives to participate, recruit others, link to care
- Questionnaires and HIV blood tests
- Linkage to care for HIV(+) PWID

Seek out high-risk, hard-to-reach PWIDs

Engage them in HIV testing

Initiate ART and OST for those testing positive

Seek
Test
Treat

Good practice in the health sector response to HIV in the WHO European Region (July 2018)

ART, antiretroviral therapy; OST, opioid substitution therapy
ARISTOTLE Programme – Results

3320 unique PWID recruited during a period of 16 months → 88% of target population

HIV incidence among PWID during ARISTOTLE

78% decline

% PWID currently on OST (self-report) among first-time and repeat ARISTOTLE participants

ARISTOTLE Programme – Results

Decrease in the % of HIV (+) who were not aware of their infection (undiagnosed fraction)

<table>
<thead>
<tr>
<th>Round</th>
<th>% of undiagnosed HIV(+) per round</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>84.3</td>
</tr>
<tr>
<td>B</td>
<td>48.8</td>
</tr>
<tr>
<td>C</td>
<td>28.4</td>
</tr>
<tr>
<td>D</td>
<td>16.1</td>
</tr>
<tr>
<td>E</td>
<td>15.0</td>
</tr>
</tbody>
</table>

Linkage to HIV care and HAART initiation by the end of ARISTOTLE

<table>
<thead>
<tr>
<th>Round</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>14.1 15.0</td>
</tr>
<tr>
<td>B</td>
<td>12.5 20.1</td>
</tr>
<tr>
<td>C</td>
<td>35.8 37.5</td>
</tr>
<tr>
<td>D</td>
<td>42.4 48.4</td>
</tr>
</tbody>
</table>

Outbreak case study: Glasgow, Scotland

- More than 100 HIV cases between 2015–2018 despite comprehensive NSPs and addiction services → increases in homelessness and cocaine injection
- Cases predominantly among homeless PWID
- Centralised hospital-based service inaccessible to many
- **Response to outbreak:**
  - Clinical services **provided directly** to affected homeless people
  - ART dispensing set up through **community pharmacies**

As a result, 102 PWID diagnosed since 2014 received ART and **95% currently on treatment**
Harm reduction measures to reduce infectious diseases in PWID

- Opioid substitution treatment (OST)
- Needle and syringe programmes (NSP)
- Health promotion interventions (e.g. sexual health)
- Infectious disease testing and treatment

OST landscape

Coverage still remains low in some countries

Figure 3.4 from EMCDDA. European Drug Report. Trends and Developments. 2018.
NSP landscape

Coverage remains suboptimal in some countries

Challenges:

• Stigma & discrimination
• Geographical distance
• Lack of political support & funding

Frequency of testing for PWID

“For individuals who are ongoing injecting drug users or involved in ongoing high-risk sex ... frequent re-examination and re-testing are recommended to reduce the period of undiagnosed carriernet after infection and thus the risk of infecting others. For practical reasons and taking into account these considerations, it is recommended that examination and testing is offered to IDUs at least once every 6 to 12 months”

EMCDDA. Guidelines for testing HIV, viral hepatitis and other infections in injecting drug users, 2010.
Importance of early diagnosis

Early diagnosis and initiation of treatment reduces morbidity and mortality

START clinical trial: treatment-naïve HIV-infected patients with CD4 count >500 cells/mm³ divided into:
- Immediate initiation of ART
- Deferred initiation of ART until CD4 count ≤350 cells/mm³

And benefit from a public health perspective:

Early diagnosis → early treatment →

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Events/100 person-years</th>
<th>Immediate-initiation</th>
<th>Delayed-initiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary end point*</td>
<td>0.60</td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td>Serious AIDS-related event</td>
<td>0.20</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>Death from any cause</td>
<td>0.17</td>
<td>0.30</td>
<td></td>
</tr>
</tbody>
</table>

*Primary end point: composite end point of serious AIDS-related event, serious non-AIDS related event and death from any cause

Diagnosis in PWID

Many PWIDs still diagnosed late

Routine HIV testing and ‘Test-and-Treat’ policy in PWID recommended

% HIV cases in PWID in EU/EEA diagnosed at late stage (CD4 <350 cells/mm³)

Targets for HIV elimination

90-90-90 target for 2020

- 90% living with HIV will know their status
- 90% diagnosed will receive ART
- 90% receiving ART will have viral suppression

PWID Europe & Asia
Cascade of care (2016)

- National population
- PWID (n = 7)

- 100% Living with HIV
- 83% Diagnosed
- 71% Receiving ART
- 65% Virally suppressed

n, number of countries reporting (Austria, Azerbaijan, France, Germany, Kazakhstan, Kyrgyzstan and the UK).
Conclusion

Important steps concerning HIV infection among PWID in Europe

• Injecting drug use has decreased as a transmission route
• NSP and OST are available in many countries
• Effective ART available

However...

• Multiple outbreaks have been observed since 2011
  – PWID are vulnerable to changes in the economic, social and drug market scene
• High coverage NSP and OST is necessary
• Gaps in the continuum of care
Important actions

- High-coverage NSP and OST
- Earlier diagnosis of HIV in PWID (including hard to reach PWID) – rapid treatment initiation – retention in treatment
- HIV surveillance for early detection of changes and of outbreaks – efficient management of HIV outbreaks
- Community-based, peer-driven programmes