

## 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







NSP, Needle and syringe programme; HAART, Highly active antiretroviral therapy. Greene WC. Eur J Immunol. 2007;37:94–102; ECDC, WHO. HIV/AIDS surveillance in Europe. 2007; ECDC, WHO. HIV/AIDS surveillance in Europe. 2018; Brown A, et al. HIV Medicine. 2018;19:431–9; EMA. Isentress. https://www.ema.europa.eu/en/medicines/human/EPAR/isentress (Accessed April 2019).





## 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)



Bulgaria, Cyprus, Latvia Rates increases **1.5–2 fold** since 2009 Greece, Romania HIV outbreaks among PWID

PWID, people who inject drugs ECDC, WHO. HIV/AIDS surveillance in Europe 2018.





#### HIV transmission routes 1995 (WHO Western European Region)



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)

#### 2008–2017 (EU/EEA)

#### Proportion of HIV diagnoses, by route of transmission, 2008-2017, EU/EEA



MSM, Men who have sex with men; IDU, intravenous drug use; Vertical transmission: Transmission during pregnancy, childbirth or breastfeeding; EuroHIV. HIV/AIDS Surveillance in Europe. End-year report 1999. 2000;62; ECDC, WHO. HIV/AIDS surveillance in Europe 2018 presentation.





## Injecting drug use and HIV in Europe

#### **Population size of PWID**

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

#### Prevalence of injecting drug use & main drug injected



#### Number of HIV cases among PWID in 2016

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



EMCDDA. Statistical Bulletin 2018 — prevalence of drug use UNODC 2016. https://www.unodc.org/wdr2018/prelaunch/2.1\_Estimates\_of\_people\_who\_inject\_drugs\_and\_those\_living\_with\_HIV\_HCV\_and\_HBV.xls.





## Interactive question

• What is the trend in the number of new HIV diagnoses among people who inject drugs in Europe since 2010?

Stable 2.4% 13.4% Increasing B 4.9% Decreasing 15.9% **Overall increasing but decreasing in some countries** 63.4% Overall decreasing but increasing in some countries F





## 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)

Location	Year the outbreak was recognised	New HIV cases among PWID	Highly vulnerable groups	Glasgow, Scotland
Athens, Greece	2011	2011–2013: 1100	Homeless Migrant PWID	Dublin, Ireland 2014
Bucharest, Romania	2011	2011–2016: 1195	MSM, PWID	
Luxembourg	2013	Average of 20 new cases per year	Young, female PWID	Luxembourg 2012
Dublin, Ireland	2014	57	Homeless PWID Female PWID	
Glasgow, Scotland	2015	2015: 48 2016: 31 2017: 37	Homeless PWID PWID in criminal justice system	Athens, Bucharest, Greece Romania 2011 2011

Jarlais DD, et al. Complacency is the new problem: comparative analysis of recent outbreaks of HIV among persons who inject drugs in Europe and North America. Presented at the 22nd International AIDS Conference – Amsterdam.





## Outbreak case study: Athens, Greece (2011)



**No. HIV Cases** Ω Year of diagnosis

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

Sypsa V, et al. J Infect Dis. 2017;215:1496–505. Hellenic Center for Disease Control and Prevention. HIV infection: Latest epidemiological data, 2018.

#### HIV cases diagnosed among PWID





## Why did this outbreak occur, and who was affected?

#### Why?

- Increasing prevalence of HCV infection  $\rightarrow$  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

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

ART, antiretroviral therapy; OST, opioid substitution therapy Sypsa V, et al. J Infect Dis. 2017;215:1496–505; Hatzakis A, et al. Addiction. 2015;110:1453–67.





### ARISTOTLE Programme – Results

3320 unique PWID recruited during a period of 16 months  $\rightarrow$  88% of target population

#### HIV incidence among PWID during ARISTOTLE

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



pyrs, person-years; rds, respondent driven sampling;

Sypsa V, et al. J Infect Dis. 2017;215:1496–505; Hatzakis A, et al. Addiction. 2015;110: 1453–67. (incl. Supplement).





### ARISTOTLE Programme – Results



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







## 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 Coverage of opioid substitution treatment (percentage of estimated high-risk opioid users receiving the intervention) in 2016 or most recent year and in 2007/8



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

Number of countries Syringes per coverage level 400 High (>200) 350 300 250 150 100 Low (<100) 50 Olbright Hindson III Hand Balding 24 ages 1 aging Clear Lang Clear bound the Coverage not calculable 15

Coverage of specialised syringe programmes: number of syringes provided per estimated injecting drug user

Figure 3.12 from EMCDDA. European Drug Report. Trends and Developments. 2018; Harm Reduction International. Harm reduction investment in the European Union. 2017; Harm Reduction International. The global state of harm reduction. 2018.





## 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 carriership 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**"





## 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/mm<sup>3</sup> divided into:

- Immediate initiation of ART
- Deferred initiation of ART until CD4 count ≤350 cells/mm<sup>3</sup>

	Events/100 person-years			
Outcomes	Immediate-initiation	Delayed-initiation		
Primary end point*	0.60	1.38		
Serious AIDS-related event	0.20	0.72		
Death from any cause	0.17	0.30		

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

#### And benefit from a public health perspective:

Early diagnosis  $\rightarrow$  early treatment  $\rightarrow$ 







## Diagnosis in PWID



Many PWIDs still diagnosed late

#### % HIV cases in PWID in EU/EEA diagnosed at late stage (CD4 <350 cells/mm<sup>3</sup>)



Routine HIV testing and 'Testand-Treat' policy in PWID recommended







## 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)



n, number of countries reporting (Austria, Azerbaijan, France, Germany, Kazakhstan, Kyrgyzstan and the UK). Brown A, et al. HIV Medicine. 2018;19:431–9.



## 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