European Monitoring Centre
for Drugs and Drug Addiction

RAPID COMMUNICATION

Drug-related infectious diseases in Europe

Update from the EMCDDA expert network
June 2019



European Monitoring Centre
for Drugs and Drug Addiction

Drug-related infectious diseases in Europe

Update from the EMCDDA expert network
June 2019

Legal notice

Luxembourg: Publications Office of the European Union, 2019

Print	ISBN 978-92-9497-434-1	doi:10.2810/478180	TD-02-19-248-EN-C
PDF	ISBN 978-92-9497-431-0	doi:10.2810/968461	TD-02-19-248-EN-N

Recommended citation: European Monitoring Centre for Drugs and Drug Addiction (2019), *Drug-related infectious diseases in Europe: update from the EMCDDA expert network*, Publications Office of the European Union, Luxembourg.

European Monitoring Centre
for Drugs and Drug Addiction

Praça Europa 1, Cais do Sodré, 1249-289 Lisbon, Portugal
Tel. +351 211210200
info@emcdda.europa.eu | www.emcdda.europa.eu
twitter.com/emcdda | facebook.com/emcdda

Contents

5 Introduction

5 Population at risk

6 Viral hepatitis among people who inject drugs in Europe

7 HIV among people who inject drugs in Europe

8 Outbreaks of infectious diseases among drug users

11 Prevention and treatment of drug-related infectious diseases in Europe

15 Drug-related infectious diseases in prison settings

17 Updates on European joint actions and projects

18 Glossary of terms and abbreviations

18 References

20 Acknowledgements

At a glance

Population at risk: people who inject drugs

While evidence from drug treatment centres suggests that the prevalence of injecting drug use is declining in the European Union, Norway and Turkey, this group is at high risk of contracting blood-borne viruses and other infections. As of 2018, the estimated national prevalence of injecting drug use ranged from less than 1 per 1 000 in Cyprus, the Netherlands and Spain to more than 5 per 1 000 in Czechia, Estonia and Latvia. While heroin remains overall the most commonly injected drug in Europe, stimulants such as cocaine, amphetamines and synthetic cathinones are also injected, and predominate in some countries.

The high burden of viral hepatitis

Hepatitis C virus (HCV) is the most prevalent blood-borne virus infection among people who inject drugs, with many countries reporting the prevalence of HCV antibodies (a marker of having been infected by the virus) among this group in excess of 50 %. While the prevalence of hepatitis B virus (HBV) surface antigen (a marker of being currently infected) among people who inject drugs is under 5 % in most countries, it is still much higher than in the general population, despite the availability of an effective and safe vaccine. Individuals who remain chronically infected are at risk of cirrhosis and cancer, and can transmit the virus to others when sharing injecting materials that have been in contact with their blood.

Overall decline in HIV cases but outbreaks linked to stimulant injecting still detected

While people who inject drugs now account for a smaller proportion of new human immunodeficiency virus (HIV) cases in the European Union, Norway and Turkey (less than 5 % of all new diagnoses in 2017), HIV infections linked to injecting drug use are being diagnosed late, and local HIV outbreaks among people who inject drugs are still being documented in Europe (Germany, Lithuania and the United Kingdom). The newly documented HIV outbreak in Bavaria included in this report adds to the list of other recent HIV outbreaks linked to an increase in stimulant injection: Dublin 2014-15 (synthetic cathinones, alpha-PVP), Luxembourg 2014-17 (cocaine) and Glasgow 2015 (cocaine).

Key interventions for elimination: prevention, testing and treatment

Ending the HIV/AIDS epidemic and combating viral hepatitis is part of the United Nation's 2030 Agenda for Sustainable Development. Achieving this goal will require scaling-up the harm reduction services offered to people who inject drugs and access to diagnosis and effective treatment (antiretroviral therapy and direct-acting antiviral treatment). Despite the well-documented cost-effectiveness of prevention measures, such as needle and syringe programmes and opioid substitution treatment, their national coverage, as monitored by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), is still sub-optimal in many European countries. While available data on the HIV cascade of care for people who inject drugs are encouraging, there are still barriers to testing and providing this group access to direct-acting antiviral treatment for hepatitis C.

Introduction

This report provides an update on infectious diseases related to drug use in Europe for the period up to February 2019. It provides an overview of the most recent infectious disease surveillance data, outbreak investigations, and prevention and control measures among people who inject drugs in Europe, collected through the EMCDDA drug-related infectious diseases (DRID) network.

The first section describes the population at risk: the number of injectors and the main injecting practices. The second section presents the latest data related to newly diagnosed cases and prevalence estimates of HCV, HBV and HIV infections in Europe. The third section provides an update and a follow-up on recently documented infectious disease outbreaks among people who inject drugs in Europe. The fourth section presents the European overview of harm reduction intervention coverage, testing and treatment. The final section outlines the public health messages of the latest guidance for prison settings in the context of infectious disease prevention and control in prisons in three EU Member States.

Population at risk

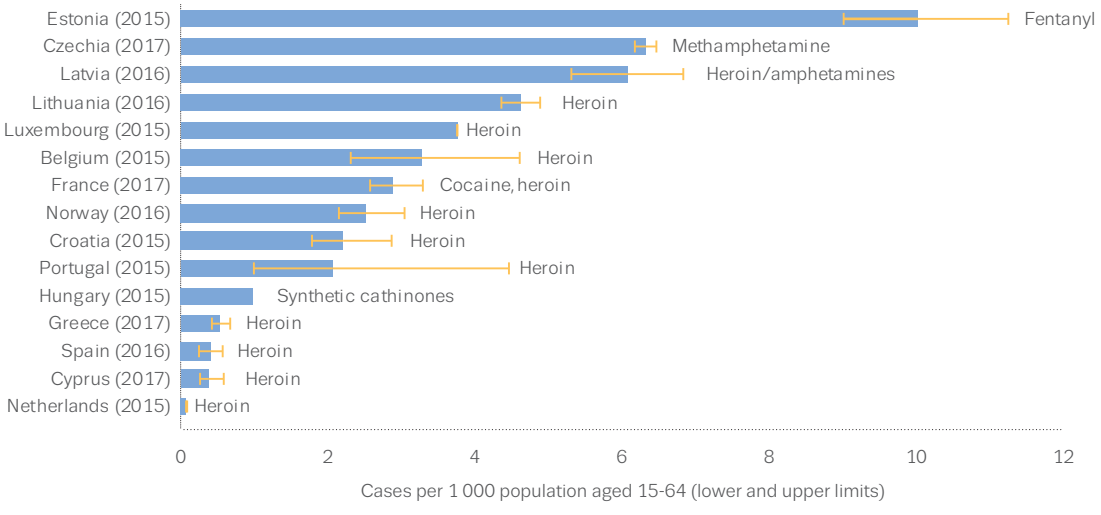
Prevalence of injecting drug use in Europe

The prevalence of injecting drug use, defined as the proportion of the population aged 15-64 who have injected illicit drugs in the last year, is measured through indirect statistical methods such as capture-recapture (King et al., 2014) or treatment multiplier (Larney et al., 2017) studies and comes with a high degree of uncertainty. In studies conducted from 2015 onwards, the estimated prevalence of injecting drug use ranged from less than 1 per 1 000 in Cyprus, the Netherlands and Spain to more than 5 per 1 000 in Czechia, Estonia and Latvia (Figure 1).

Stimulant injecting is established

While heroin and other opioids remain overall the most commonly injected drugs in Europe, stimulants are also injected, and predominate in certain countries, as reflected by data from drug services in Czechia, France, Hungary and Latvia. The European Syringe Collection and Analysis Project Enterprise (ESCAPE) also obtained information on injected substances by analysing in laboratories the residual content of used syringes in six cities in 2017 (Amsterdam, Budapest, Glasgow, Helsinki, Lausanne and Paris) (EMCDDA, 2019a). A high proportion of syringes were found to contain stimulants in all six cities, which may indicate a high prevalence of stimulant use among people who inject drugs. This has potentially important implications, since stimulant injecting has been associated with higher-risk injecting practices and a higher prevalence of unsafe sex than opioid injecting has (Cavazos-Rehg et al., 2009).

FIGURE 1
Estimated prevalence of injecting drug use in the European Union and Norway, with indication of most commonly injected drug, 2015-17



Note: Number of people injecting drugs in the last year per 1 000 population aged 15-64 years; ever-injectors in Belgium.
Source: EMCDDA.

Risk factor for transmission: sharing of needles/syringes

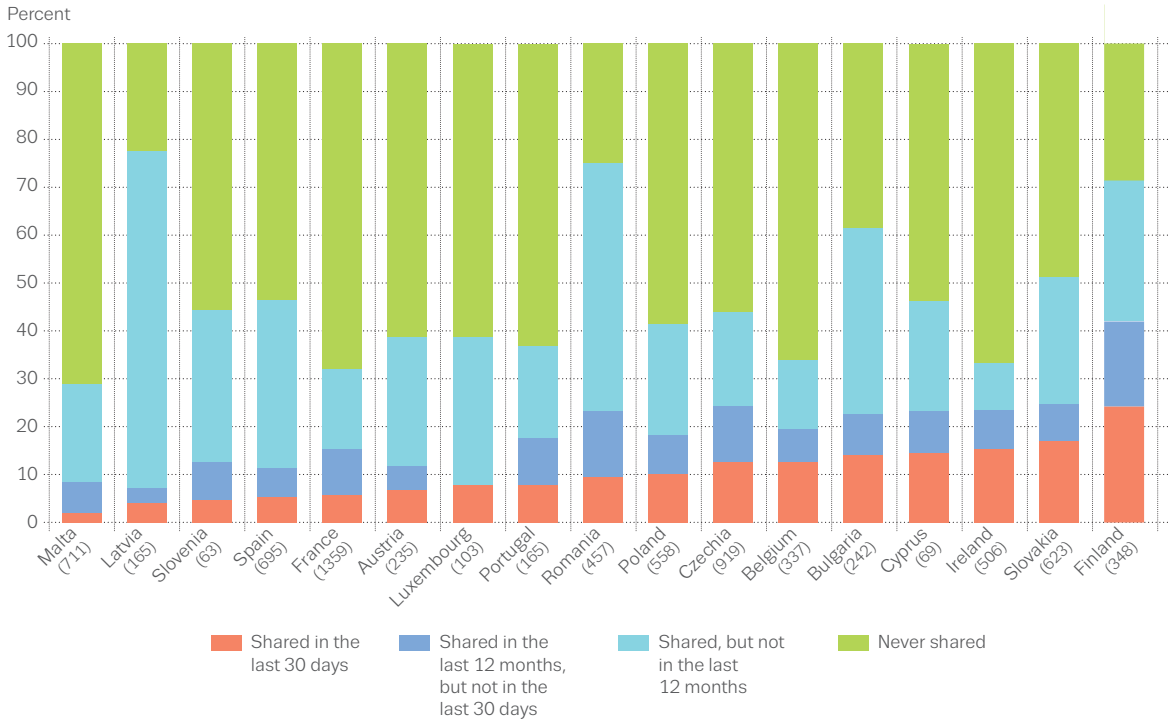
In recent national or local biological and behavioural surveillance studies, the proportion of people who inject drugs reporting sharing used needles/syringes in the last 4 weeks was 47 % in Bulgaria (National Centre for Addictions, 2017), 44 % in Romania (National Antidrug Agency, 2016) and 39 % in Hungary (Dudás et al., 2015). Under the treatment demand indicator protocol, those entering specialised drug treatment who report drug injecting are asked about their sharing of used needles/syringes in the last 4 weeks. The data available for 17 countries in 2017 suggest that, in eight countries, more than 10 % of all treatment entrants who report injecting drugs have recently shared a needle or syringe (Figure 2). It is important to note that people reporting drug injection on treatment entry might not be representative of all people who inject drugs, and those not in contact with services may have higher levels of drug use and injecting.

Viral hepatitis among people who inject drugs in Europe

Injecting drug use as main risk factor for newly diagnosed cases of HCV infection

In the European Union and Norway, 30 778 cases of hepatitis C virus (HCV) infection were notified in 2017. Among the cases for which information on the transmission mode is available, injecting drug use was reported as the likely cause for 40 % (178/445) of acute cases and 55 % of chronic cases (1 305/2 363) (ECDC, 2018b). For hepatitis B virus (HBV) infection, an estimated 11 % of the 2 788 acute cases reported in 2017 in the European Union and Norway were linked to injecting drug use (ECDC, 2018a).

FIGURE 2
Self-reported sharing of needles or syringes among people entering drug treatment reporting injecting drugs, 2017



Note: Sample size per country in parentheses. Data for Spain are for 2016.
Source: EMCDDA.

High prevalence of HCV antibodies among people who inject drugs

The prevalence of antibodies to HCV (anti-HCV) among people who inject drugs — indicating present or past infection, either cleared or treated — is estimated from seroprevalence studies or routine diagnostic tests offered in drug treatment centres or by low-threshold services. In 2016-17, anti-HCV prevalence among people who inject drugs varied from 15 % to 82 % (EMCDDA, 2019b). In eight out of the 14 countries with national data, more than half of people who inject drugs have been infected with HCV (Figure 3). Among countries with national trend data for the period 2011-17, declining anti-HCV prevalence among injecting drug users was reported in four countries, while three reported an increase.

Prevalence of HBV infection still high despite effective vaccine

Among drug users, HBV infection is less common than HCV infection, but is still higher than in the general population, despite the availability of an effective vaccine, which is included in recommended vaccination schedules in most EU countries (ECDC, 2018c). For this virus, the presence of the HBV surface antigen (HBsAg) indicates a current infection, which may be recent or chronic. In the five countries with national data for 2016-17, between 1.4 % and 9.4 % of injecting drug users were estimated to be currently infected with HBV (EMCDDA, 2019b).

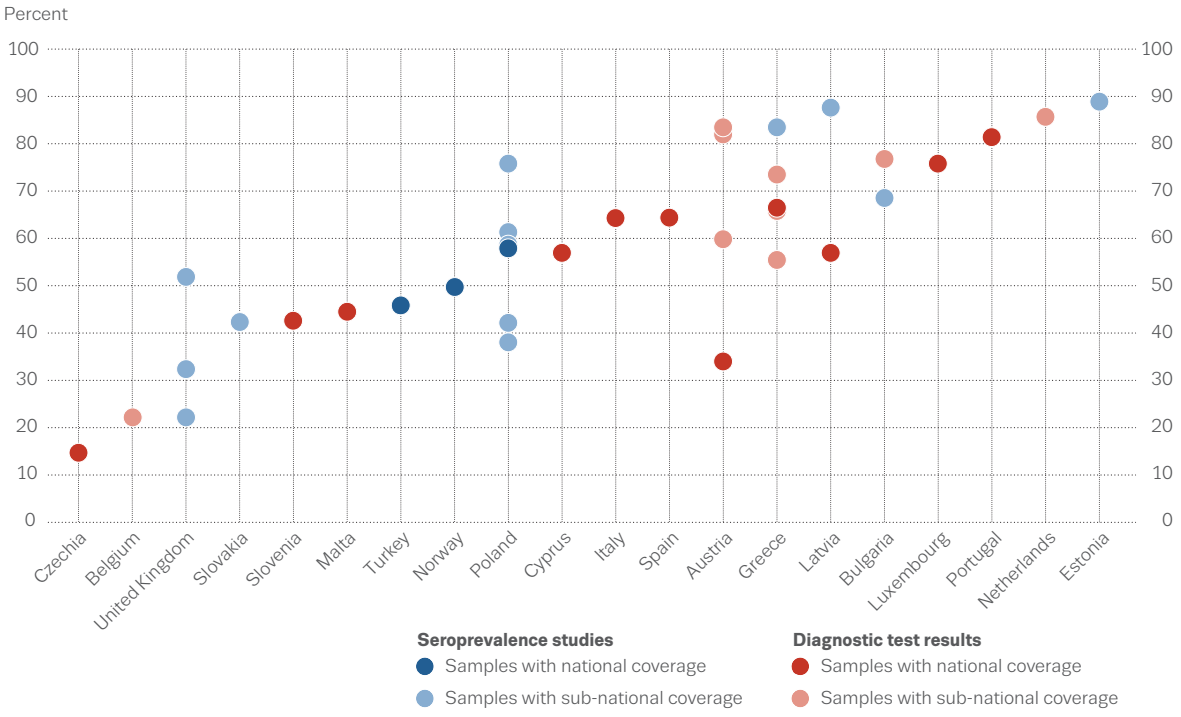
HIV among people who inject drugs in Europe

Overall decline in newly notified cases of HIV infection linked to injecting drug use

In the European Union, Norway and Turkey, the total number of newly notified cases of human immunodeficiency virus (HIV) infection attributed to injecting drug use has been declining overall since the 2011-12 outbreaks in Greece and Romania (Figure 4). In 2017, there were a total of 940 newly notified case of HIV infection attributed to injecting drug use (Germany not included), corresponding to 4.6 % of all new cases with information on the mode of transmission (ECDC and WHO, 2018). Imputing the German notifications for 2017 with their 2016 level (127), the European total for notifications of HIV infection linked to injecting drug use would have been expected to reach 1 067 in 2017. In 2017, the most common transmission modes remained sex between men (51 % of new cases with information on transmission mode) and heterosexual transmission (44 % of new cases with information on transmission mode).

FIGURE 3

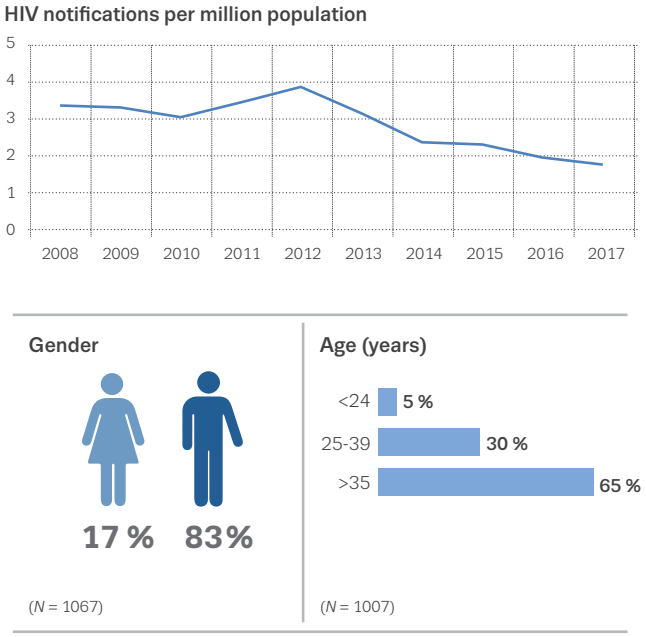
HCV antibody prevalence (percent) among people who inject drugs: results from seroprevalence studies and diagnostic tests, with national and subnational coverage, 2016-17



Source: EMCDDA.

FIGURE 4

Notifications of cases of HIV infection attributed to injecting drug use in the European Union, Norway and Turkey, 2008-17



Note: Gender, age and CD4 data are for year 2017.
Source: ECDC and WHO, 2018.

While people who inject drugs now account for a smaller proportion of newly notified cases of HIV infection overall, challenges remain. First, HIV infections linked to injecting drug use are still being diagnosed late. Where information was available, 51 % of newly notified cases of HIV infection attributed to injecting drug use in the European Union in 2017 were diagnosed several years after infection had occurred — with CD4 counts below 350 cells/mm^3. Late diagnosis delays antiretroviral treatment, and increases the risk of ill health, death and HIV transmission. In 2017, a total of 375 diagnoses of acquired immunodeficiency syndrome (AIDS) in people infected with HIV through injecting drug use were reported in the European Union, Norway and Turkey. Second, local HIV outbreaks among people who inject drugs are still being documented (see section 'Outbreaks of infectious diseases among drug users' below).

Prevalence of HIV infection among people who inject drugs

Despite the reduction in the proportion of newly diagnosed cases of HIV infection attributable to injecting drug use relative to other transmission modes in Europe, the risk of HIV infection among people who inject drugs remains high and the prevalence of infection among this group exceeds by far the prevalence in the general population. Recent estimates (2016-17) of HIV prevalence among people who inject drugs are available for 19 countries. Figures for HIV prevalence of more than 10 % have been reported among populations of people of who inject drugs in Estonia, Greece, Italy, Latvia, Poland, Portugal, Romania and Spain (Figure 5). Figures of 5 % to 10 % for HIV prevalence were reported by national studies carried out in Austria, Greece, Latvia and Luxembourg, and by a subnational study conducted in Sofia, Bulgaria. The results of earlier HIV prevalence studies (before 2016) can be accessed in the online Statistical Bulletin (EMCDDA, 2019b).

Outbreaks of infectious diseases among drug users

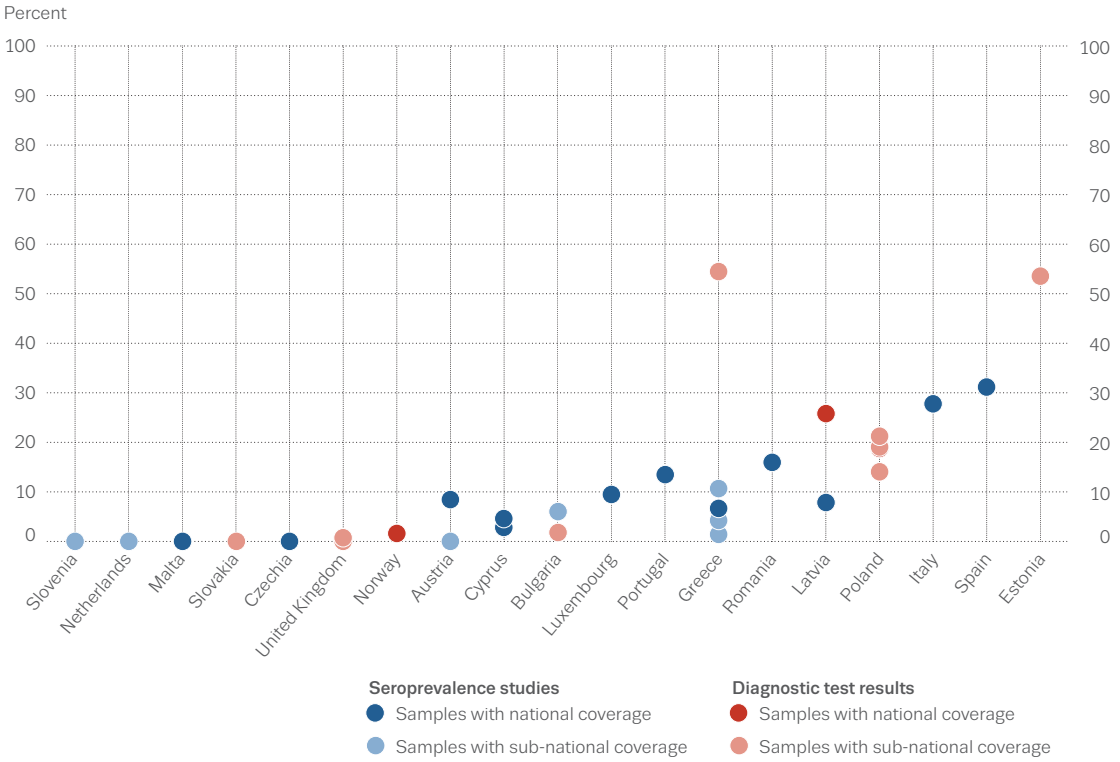
Local outbreaks of HIV infection among people who inject drugs are still being documented. Other outbreaks of public health importance among this group include outbreaks of bacterial infections.

HIV outbreak linked to synthetic cathinones in Munich, Germany

An increase in the number of HIV cases among people who inject drugs was detected in the Bavaria region with 18 cases reported in 2015 and 35 in 2016, compared with only eight cases reported in 2014 (Fiedler et al., 2018). Most cases were reported from Munich. Sequencing analysis and recency tests were performed on dried serum spots sent to the Robert Koch Institute (available for 60 % of newly diagnosed and notified HIV cases). The proportion of infections acquired in the last 5 months was highest for cases diagnosed in 2016 (35 %), indicating that transmission peaked in that year. Subtyping of samples from Bavaria and phylogenetic analysis showed that the increase was driven by a cluster of HIV-1 subtype C infections. The analyses also showed that most people infected with HIV were co-infected with HCV. Synthetic cathinones (such as alpha-PVP/PV8) were frequently detected in the dried serum spots analysed. Information from low-threshold services in the area also suggested that there might be an association between the increase in HIV cases and group consumption of stimulant new psychoactive substances.

FIGURE 5

HIV antibody prevalence (percent) among people who inject drugs: results from seroprevalence studies and diagnostic tests, with national and subnational coverage, 2016-17



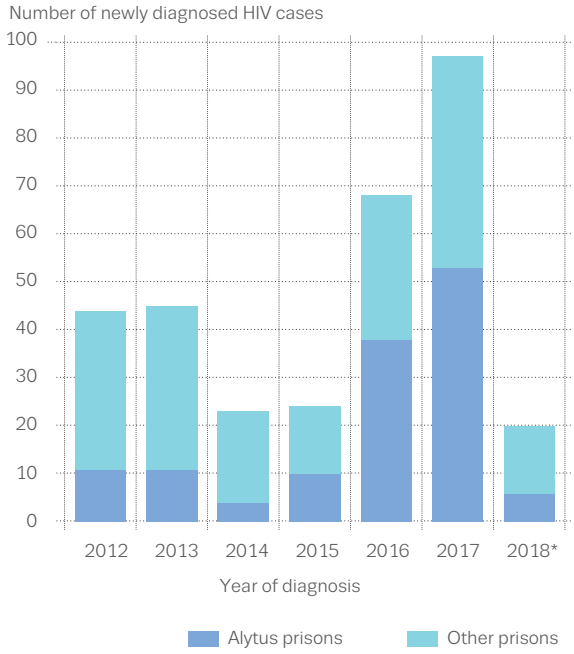
Source: EMCDDA.

HIV outbreak linked to injecting drug use in prison, Lithuania

In Lithuania, the number of newly diagnosed cases of HIV infection related to injecting drug use reached 136 in 2017 (62 % of all new HIV cases), corresponding to an incidence of 48 per million inhabitants, the highest in the European Union. This increase seems to be largely associated with transmission in prison settings, where new cases continued to be reported in 2018. In 2017, there were 97 newly diagnosed cases of HIV infection in prisons in the country; 55 % of these cases were reported from Alytus prison (1 015 detainees in 2017) and the majority have been linked to injecting drug use (Figure 6). While information on HIV transmission and HIV testing are available for people in prison in Lithuania and coverage of HIV treatment has been increasing, access to effective measures to prevent the transmission of blood-borne diseases, as well as condom distribution, remains limited. Receiving opioid substitution treatment in prison is possible for only those who had started treatment prior to imprisonment.

FIGURE 6

Newly diagnosed HIV cases reported from prisons in Lithuania, 2012-18



(*) Data for 2018 are for January-July only.
Source: Lithuanian Reitox national focal point.

Update on the HIV outbreak in Glasgow, United Kingdom

From November 2014 to January 2018, a total of 119 new HIV cases among homeless people who inject drugs were notified in Glasgow. This is the largest cluster of people who inject drugs infected with HIV that has been documented in the United Kingdom since the 1980s (Ragonnet-Cronin et al., 2018). Common characteristics of cases include a history of incarceration, homelessness and high rates of HCV infection indicative of needle sharing. The outbreak has also been strongly linked to injecting cocaine (McAuley et al., 2019). Surveillance data from needle and syringe programmes using dried blood testing and data from syringe residues in 2017 indicate that injecting cocaine use with or without heroin has become more common among people who inject drugs in Glasgow (EMCDDA, 2019a). Another important feature of this outbreak is that harm reduction services (including the provision of injecting equipment and opioid substitution treatment) were available before and during the outbreak: needle and syringe programmes in Glasgow distribute over 1 million syringes per year. Increasing access for vulnerable homeless populations to prevention, harm reduction and HIV treatment has therefore been a priority for local public health services, for instance by linking infectious disease and homeless addictions teams in the city.

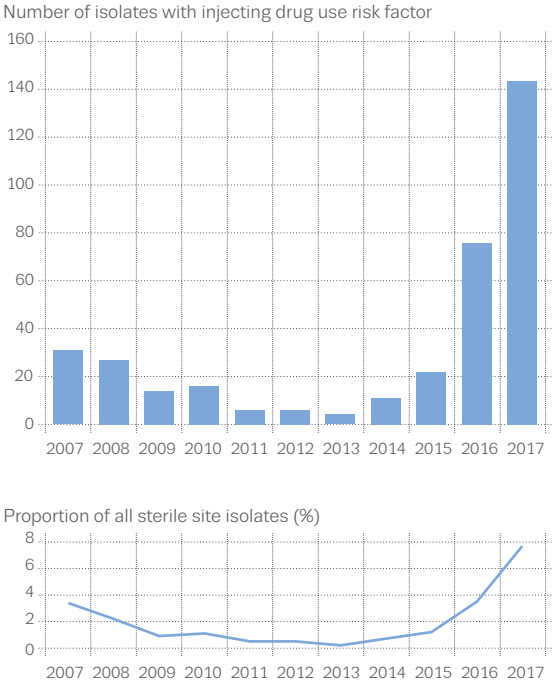
Increasing reports of injecting-related bacterial infections in the United Kingdom

Bacterial infections among people who inject drugs are often related to poor general hygiene and unsafe injection practices. They are associated with a significant burden of disease and have a substantial impact on health services. In England, the mandatory enhanced surveillance of methicillin-sensitive *Staphylococcus aureus* (MSSA) and methicillin-resistant *Staphylococcus aureus* (MRSA) collects information on risk factors (Public Health England et al., 2018). In 2017, of those with risk factor information available, 14 % (410/2 877) of MSSA and 11 % (40/348) of MRSA infections were associated with injecting drug use, indicating an increase over the last 6 years. Invasive group A streptococcus (iGAS) isolates are sent to the Public Health England Respiratory and Vaccine Preventable Bacteria Reference Unit. The number and proportion of iGAS infections associated with injecting drug use has increased since 2013 (Figure 7). A prolonged outbreak of iGAS type *emm*/66 with local clusters of infection among people who inject drugs has been described. Of 10 early cases for which there is information on drug use, eight occurred in people who had reported injecting, mainly heroin (eight) and crack (six). Four people reported sharing spoons/mixing containers and filters, but not needles (Bundle et al., 2017). Cases of iGAS type *emm*/66 infections continue to occur and more than 100 cases have been recorded to date. Intervention measures in the towns affected include targeted communications campaigns to raise awareness about infection control. Data on hospitalisation in England also show an upwards trend in the number of episodes of serious infection among people who inject drugs since 2012 (Lewer et al., 2017). The authors of the study that reviewed these hospital data (Lewer et al., 2017) listed a number of factors potentially associated with this increase, including an ageing cohort of people who inject drugs and the injection of new psychoactive substances.

Cases of wound botulism continue to occur among people who inject drugs in the United Kingdom, probably due to the environmental contamination of heroin with botulism spores. In Scotland there have been four confirmed and one probable case of would botulism investigated since February 2019. All five affected individuals are known to have injected drugs. One of the five has died; cause of death is under investigation. The source of the infection is believed to be heroin contaminated with *Clostridium botulinum* spores. In the autumn of 2018, there was also a cluster of four cases of wound botulism in people who

FIGURE 7

Invasive group A streptococcus biological samples received by Public Health England Respiratory and Vaccine Preventable Bacteria Reference Unit with risk factor of injecting drug use recorded, 2007-17



Source: Public Health England et al., 2018.

inject drugs in England, with reported onset dates between 19 October and 11 November 2018. Two cases were confirmed and two were probable. Three cases were reported from the South of England and one from the Midlands; all were known injecting heroin users.

Stimulant injecting and outbreak risk

The injection of stimulants has been associated with higher HIV risk as a result of higher levels of unsafe sex and unsafe injecting (Cavazos-Rehg et al., 2009). The newly documented HIV outbreak among people who inject drugs in Germany adds to the list of other recent HIV outbreaks linked to an increase in stimulant injection: Dublin 2014-15 (synthetic cathinones, alpha-PVP; Giese et al., 2015), Luxembourg 2014-17 (cocaine; McAuley et al., 2019) and Glasgow 2015 (cocaine; Arendt et al., 2019). Injecting of stimulants is being described in Europe through different sources. In a recent trendspotter study conducted by the EMCDDA (EMCDDA, 2018), an increase in cocaine powder injecting, alone or in combination with heroin, was reported in drug consumption rooms in France, Germany, Luxembourg, Spain and Switzerland. The trendspotter study also highlighted an increasing trend in injecting cocaine base (crack), either alone or as a cheaper alternative to traditional speedball preparations. In 2017, the ESCAPE network, set up by the EMCDDA to obtain information on injected substances by analysing the residual content of used syringes, found that a high proportion of syringes contained stimulants in all six participating cities, which may indicate a high prevalence of stimulant use among people who inject drugs (EMCDDA, 2019a).

Prevention and treatment of drug-related infectious diseases in Europe

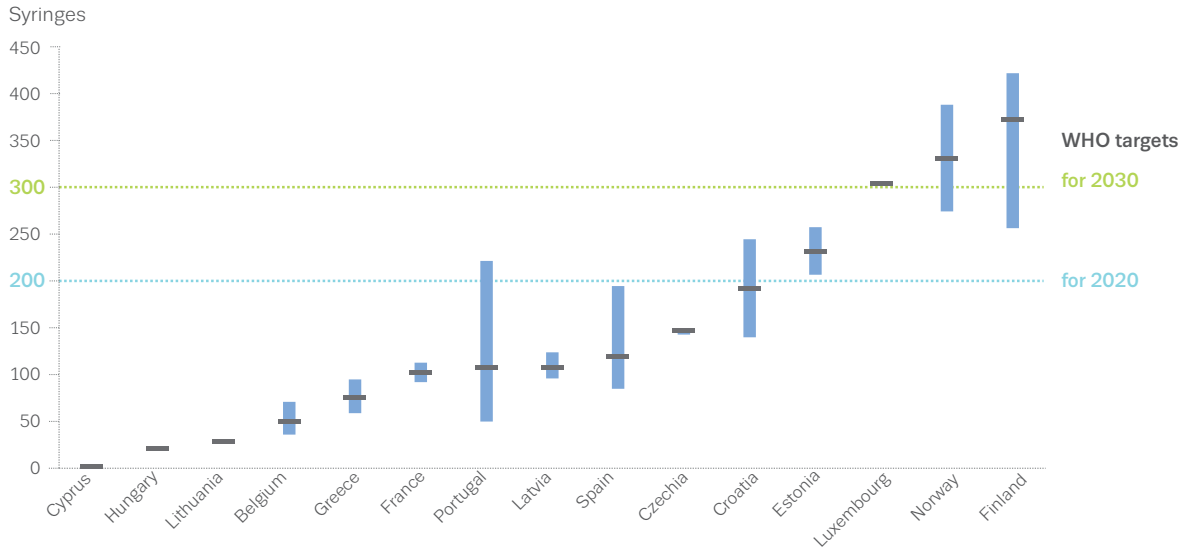
There is an effective vaccine against HBV. Moreover, when implemented in combination, at a high level of coverage, needle exchange programmes and opioid substitution treatment are cost-effective interventions that prevent blood-borne infections among people who inject drugs (Platt et al., 2017). Prevention and harm reduction measures are therefore key interventions aimed at ending the HIV/AIDS epidemic and eliminating viral hepatitis as a public health threat among people who inject drugs, since they prevent new infections and also provide an opportunity to reach out to high-risk populations for testing and linking them to care.

Sub-optimal needle and syringe programme coverage persists

National-level data on the coverage of needle and syringe programmes (calculated as the number of syringes distributed from specialised and publicly subsidised programmes annually per person who injects drugs) are available for 16 countries, with only four of these (Estonia, Finland, Luxembourg and Norway) providing a level of coverage that is above the 2020 target of 200 syringes per injecting drug user (Figure 8).

FIGURE 8

Coverage of specialised syringe programmes: estimated number of syringes provided per person who injects drugs in 2017, European Union and Norway



Note: Data displayed as point estimates and uncertainty intervals. Targets defined in the WHO global health sector strategy on viral hepatitis 2019-21.
Source: EMCDDA.

Opioid substitution treatment coverage is improving in some European countries

The coverage of opioid substitution treatment, calculated as the percentage of estimated high-risk opioid users receiving treatment, is estimated to be at or above the 2020 World Health Organization (WHO) target of 40 % in 11 of the 18 EU countries for which estimates of the population of high-risk opioid users are available (Figure 9). In the European Union as a whole, about half of the high-risk opioid users receive substitution treatment. In those countries for which data for 2007 or 2008 are available for comparison, there was generally an increase in coverage between 2007 or 2008 and 2017. Levels of provision, however, remain low in some countries. These data indicate a need to improve the coverage of substitution treatment and needle exchange interventions in many European countries.

Identifying barriers to HCV testing among people who inject drugs

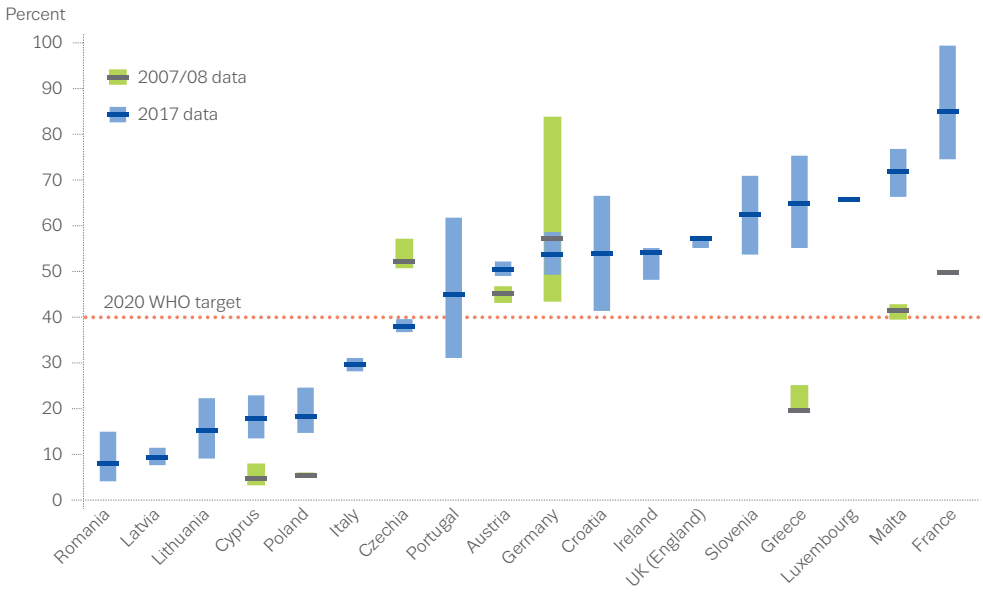
To eliminate viral hepatitis as a public health threat, the WHO target aims for 50 % of people who are chronically infected with viral hepatitis to be diagnosed by 2020, and 75 % of eligible patients to be receiving treatment. Yet many infections still go undiagnosed and untreated among people who inject drugs. In some of the injecting drug use prevalence studies described earlier, investigators also looked at HCV tests done in the previous 12 months. In recent European studies, the proportion of people who inject drugs who have been tested in the last 12 months (excluding those who know their positive status) ranged from 7 % in Romania (National Antidrug Agency, 2016) to 66 % in France (Cadet-Taïrou et al., 2018). As part of the EMCDDA treatment demand indicator (TDI), drug treatment entrants who report injecting drugs are asked about previous HCV tests. Only in 4 of the 14 countries providing recent data did the majority of treatment entrants questioned report having been tested for HCV in the last 12 months (Figure 10).

In May 2018, the EMCDDA launched a 3-year initiative with the purpose of promoting HCV testing among people who inject drugs in drug treatment settings. The EMCDDA HCV testing initiative represents both an operationalisation of a central EMCDDA public health priority as well as the implementation of a dynamic intervention model presented in the European guide on health and social responses to drug problems (EMCDDA, 2017).

The EMCDDA pilot project in this area comprises three modules: Module 1 examines barriers to HCV testing; Module 2 is a compendium of models of care regarding HCV testing and referral to care; and Module 3 focuses on materials that support the promotion of HCV testing in drug treatment settings. Through this project, the EMCDDA aims to assist EU Member States in their efforts to improve national practices in the hepatitis C field by supporting an analysis of the national situation and by providing high-quality materials for training activities for those working in the field.

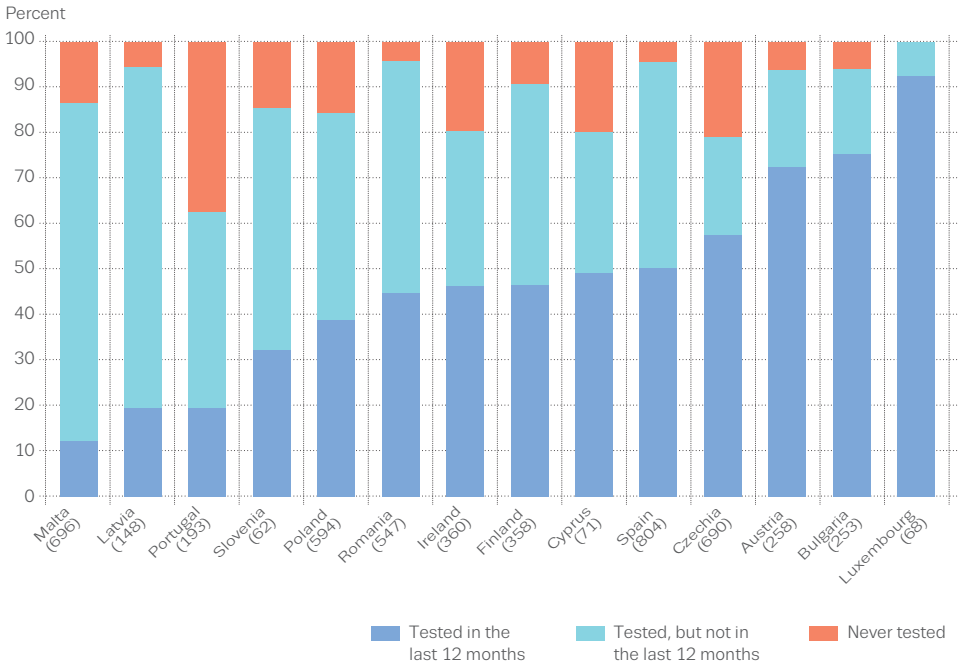
FIGURE 9

Coverage of opioid substitution treatment (percentage of estimated high-risk opioid users receiving treatment) in 2017 or most recent year and in 2007/08



Note: Data displayed as point estimates and uncertainty intervals.
Source: EMCDDA.

FIGURE 10
Self-reported history of HCV testing among people entering drug treatment reporting injecting drugs



Note: Sample size in parentheses. Data for 2017, except for Spain (2016).
Source: EMCDDA.

Access to direct-acting antiviral treatment for people who inject drugs

Direct-acting antivirals are an effective treatment option for people chronically infected with HCV. The goal of therapy is to cure HCV infection in order to prevent complications and mortality, to improve quality of life, remove stigma and prevent onward transmission of HCV. The WHO recommends offering treatment to all individuals diagnosed with HCV infection who are 12 years of age or older (with the exception of pregnant women), irrespective of disease stage (WHO, 2018). The guidelines also stress that treating people who inject drugs along with provision of harm reduction interventions is cost-effective. The beneficial impact of treatment for the infected individual and the indirect impact of reduced transmission in the community (treatment as prevention) make testing and linkage to treatment a core component of the elimination strategy. However, in spring 2018, in 8 of the 11 EU Member States without an HCV policy, clinical guidelines still restricted access to HCV treatment for people who inject drugs (Nielsen, 2018), and 5 EU countries restricted direct-acting antiviral reimbursement for patients with drug or alcohol dependencies (Marshall et al., 2018).

Cascade of care for HCV infection in Luxembourg

In Luxembourg, the Institute of Health and the Centre for Infectious Diseases undertook a study among 295 drug users recruited at the drug consumption room and three harm reduction agencies between November 2015 and December 2017. The aims of the study were to describe the risk-taking practices of drug users, to test participants for infectious agents (HCV, HBV, HIV, syphilis), viral load and liver markers, to carry out fibroscanning and to link them to care, in order to document the cascade of care for HCV infection and identify barriers.

Of the 295 participants, 71 % were male and 26 % did not have a social security number. The mean age was 38.7 years. Eighty-two percent were current injectors, half of them reporting injecting at least once a day. Cocaine use, often associated with heroin use, was reported by 59 %. Anti-HCV prevalence was 72 %. Among these, 62 % had a detectable HCV viral load. Among users with a detectable HCV viral load, 31 % had fibrosis stage F2 or greater. Half of these patients (54 %) returned to the hospital and received direct-acting antiviral treatment, and 82 % achieved a sustained viral response 12 weeks after the end of treatment.

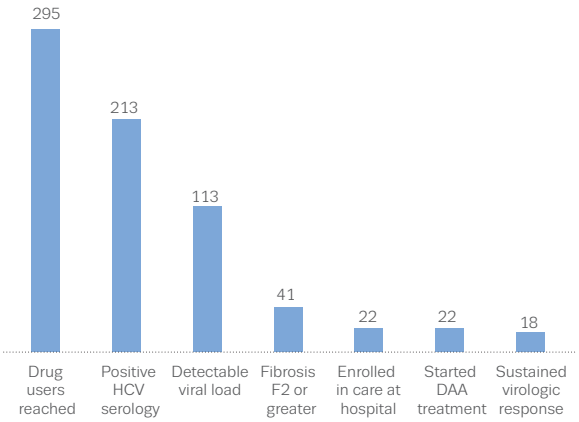
Based on this cascade of care (Figure 11), a series of barriers was identified. First, while there is no health insurance restriction for current injectors' access to direct-acting antiviral treatment, clinicians still prioritise the treatment of those with more advanced stage fibrosis. Second, it usually took 2-3 weeks for patients to get the results of the RNA test, which measures viral load. Only half of patients with a diagnosis of advanced fibrosis went

to their hospital appointment for treatment initiation. One of the recommendations following this study was to provide the result of the viral load and the eligibility for treatment on the same day, and to offer support with hospital appointments. Moreover, direct-acting antiviral treatment is now directly provided at the drug consumption room and at other harm reduction centres by a nurse, who is responsible for treatment initiation and follow-up of patients. Direct-acting antiviral treatment for people who inject drugs is also available in prisons and in a homeless shelter, and can be prescribed by medical doctors prescribing opioid substitution treatment.

Reaching the WHO targets for HCV among people who inject drugs

While observational studies measuring the impact of interventions targeting people who inject drugs are scarce, mathematical modelling can provide some insights into how far we are from reaching the WHO targets for viral hepatitis elimination and what remains to be done.
A recent study looked at baseline levels of HCV seroprevalence, opioid substitution treatment and needle and syringe programme coverage, and direct-acting antiviral HCV treatment rates among people who inject drugs in 11 European sites (countries and cities) in 2016 (Fraser et al., 2018a). Using a dynamic HCV transmission model among people who inject drugs, it assessed the impact by 2026 of different strategies in terms of prevalence and incidence. These projections outlined some important messages. First, they suggest that opioid substitution treatment and needle and syringe programmes alone would not be enough to reach the elimination targets: the combination of opioid substitution treatment, needle and syringe programmes and HCV treatment would be required. Second, while not sufficient by themselves, scaling-up opioid substitution treatment and needle and syringe programmes for people who inject drugs would increase the impact of HCV treatment as a prevention strategy, and would reduce the number of HCV treatments needed to achieve the targets. Third, a majority of sites still require a substantial increase in HCV treatment coverage in order to reduce incidence to 2 per 100 person-years. The team has also undertaken other modelling that shows the importance of treating re-infections and of continuing treatment even after elimination targets have been achieved (Fraser et al., 2018b).

FIGURE 11
Continuum of care for HCV infection in an outreach programme for injecting drug users in Luxembourg, 2015-17



Note: DAA, direct-acting antiviral.
Source: Devaux et al., 2018.

Monitoring progress towards the elimination of viral hepatitis among people who inject drugs — the EMCDDA elimination barometer

Following the global health strategy on viral hepatitis (WHO, 2016), WHO Europe produced an action plan for the health sector response to viral hepatitis in the WHO European region (WHO, 2017). The goal is to achieve reductions in the incidence of chronic HBV and HCV infections of 30 % by 2020 and 90 % by 2030, and reductions in the mortality from chronic HBV and HCV infections of 10 % by 2020 and 65 % by 2030. The EMCDDA is working with its expert network on drug-related infectious diseases (DRID network) on a dedicated list of indicators — the elimination barometer — to identify data gaps and assess progress towards the elimination of HBV and HCV infection among people who inject drugs. The five building blocks of the elimination barometer are (1) context and needs (epidemic pattern), (2) inputs (policy), (3) prevention, (4) testing and linkage to care, and (5) impact. Each building block includes quantitative and/or qualitative indicators with a corresponding target. The elimination barometer will be available on the EMCDDA website in 2019.

Reaching the United Nations targets for HIV among people who inject drugs

In 2014, the Joint United Nations Programme on HIV/AIDS (UNAIDS) set the 90-90-90 targets, whereby 90 % of all people infected with HIV would be diagnosed, 90 % of those diagnosed would be receiving treatment and 90 % of those receiving treatment would achieve viral suppression by 2020 (Sidibé et al., 2016). These UNAIDS fast-track targets translate into viral suppression in 73 % of all people living with HIV, reducing onward transmission ('treatment as prevention'). Mathematical modelling suggests that reaching these targets by 2020 will enable the world to meet the goal of ending the HIV/AIDS epidemic by 2030, as part of the 2030 agenda for sustainable development.

In 2018, four EU countries were able to report data on all four stages of the cascade of care for people who inject drugs (ECDC, 2019). Pooling the data from Austria, France, Luxembourg and the United Kingdom, 94 % of the estimated 15 697 people who inject drugs living with HIV were diagnosed, 93 % of those diagnosed were receiving antiretroviral therapy and 95 % of those on antiretroviral therapy were virally suppressed. However, looking at individual countries (Figure 12), only France (which reported 12 100 people who inject drugs living with HIV in 2018) reached all three targets.

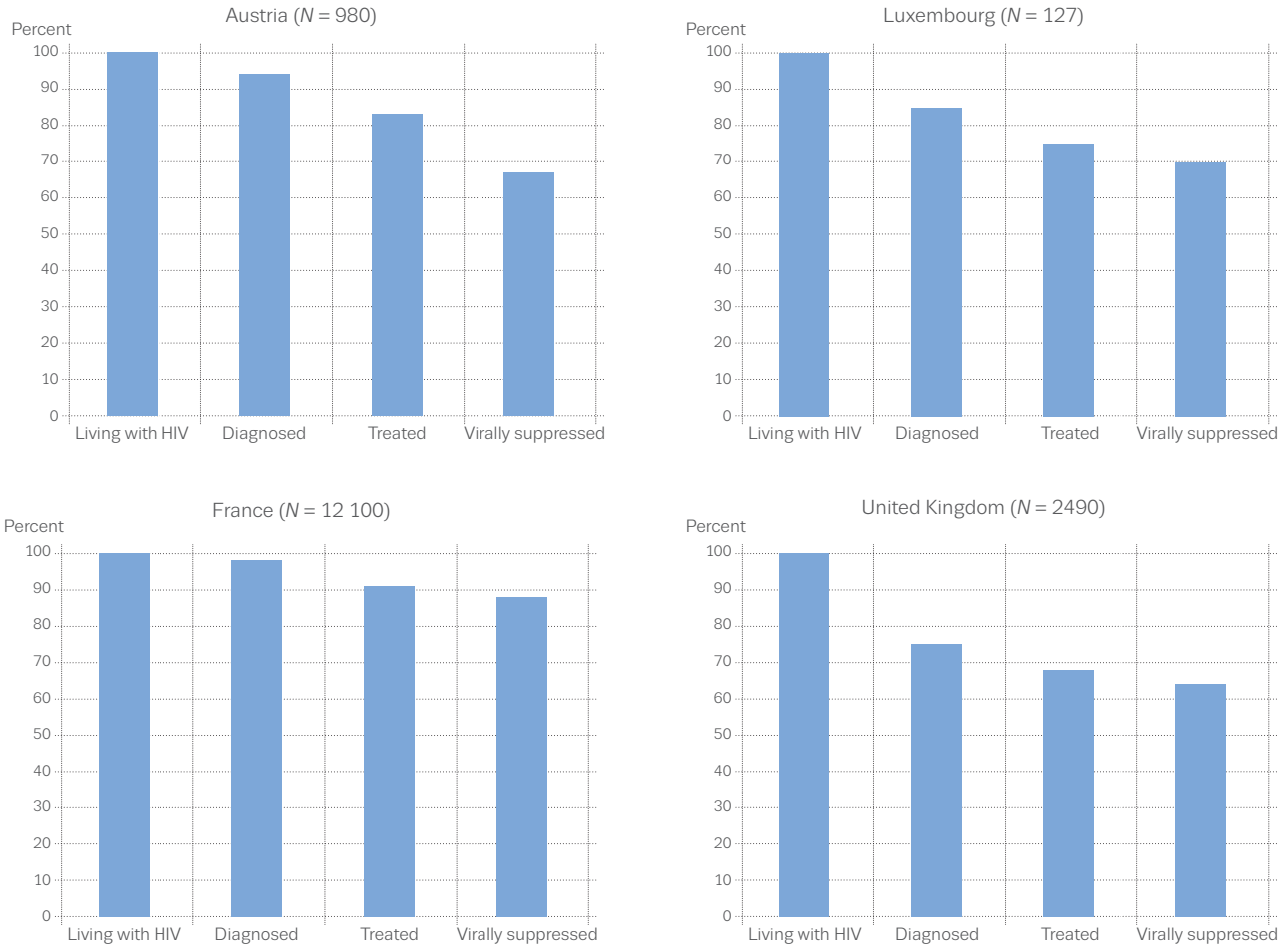
Drug-related infectious diseases in prison settings

EU overview

On 1 September 2016, the rate of imprisonment in the European Union, Norway and Turkey was estimated at 129 per 100 000 inhabitants, equivalent to 766 000 people in prison on that day (Council of Europe, 2016). Prison settings can be high-risk environments for contracting blood-borne infections. A significant proportion of people in prison have a history of drug use, and a strong association has been found between prison history and

FIGURE 12

Continuum of HIV care for people who inject drugs in four EU countries, shown as percentage of estimated people who inject drugs living with HIV in 2018



Source: ECDC, 2019.

blood-borne virus prevalence in people who inject drugs. Reviews of prison studies from EU countries found prevalence estimates ranging from 0.3 % to 25.2 % for HBV infection, from 4.3 % to 86.3 % for HCV antibodies, and from 0.2 % to 15.8 % for HIV infection (EMCDDA and ECDC, 2018). Poor infrastructure, overcrowding, inadequate healthcare facilities and delayed diagnosis are risk factors for infections in prison settings, where much of the burden of blood-borne virus infection is linked to a history of injecting drug use. Opioid substitution treatment in prison was reported to be available by 29 of the 30 countries monitored by the EMCDDA, and HBV vaccination schemes for prisoners were reported by 16 countries. While testing for one or more blood-borne viruses was reported to be provided in prison systems by 26 countries in 2016, treatment of HBV and HCV infection was reported to be available in prison in 7 and 11 of the EU Member States, respectively (EMCDDA, 2017).

HCV testing strategy among newly incarcerated prisoners in Estonia

There were an estimated 2 670 prisoners in Estonia on 1 September 2016 (Council of Europe, 2016), corresponding to an incarceration rate of 196 per 100 000 inhabitants, higher than the European average (see above). Since 2014, Estonian prison health authorities have been implementing a new testing strategy whereby HCV tests are offered to all newly incarcerated prisoners. The implementation of the project 'Improvement of prevention and treatment of infectious diseases in Estonian prisons', which focuses on testing, treatment and infrastructure building, is considered a milestone in HCV diagnosis and care in Estonian prisons (Kivimets et al., 2018).

Between 2014 and 2015, a total of 1 845 newly incarcerated prisoners were tested for HCV (Kivimets et al., 2018). The average age of prisoners tested was 35 years and 94 % were male; 58 % had used illicit drugs, 28 % were tattooed and 69 % had been previously incarcerated. The prevalence of HCV antibodies was 56 % and the prevalence of HIV infection was 26 %. When comparing prisoners testing positive for HCV infection with those testing negative and after adjusting for potential confounders, a history of drug use was the factor most strongly associated with HCV seropositivity. The new screening strategy allowed 271 new cases of HCV infection to be identified among prisoners. As a condition for initiating HCV treatment (with pegylated interferon and ribavirin), programme-based addiction treatment was required for patients with a history of drug use. Twenty-five prisoners received it: 15 (60 %) were cured, 4 (16 %) relapsed and 3 (12 %) were unresponsive. These results did not differ from the treatment outcomes reported from a hospital setting in Estonia.

Programme 'HCV, HBV, HIV and TB in a prison in Greece'

Since October 2017, the programme 'HCV, HBV, HIV and TB in a prison in Greece' has been running in the largest prison in the country, Korydallos Prison (including the prison hospital of Korydallos), located in Athens. Guided by the principles of intervention research, the programme is designed to screen detainees with a drug use background for blood-borne infections and TB and link those in need to specialised care. The research component of the programme includes the collection and analysis of serological and behavioural data (using the European Questionnaire on Drug Use among Prisoners). Based on data collected between October 2017 and March 2018, from 200 prisoners with a history of injecting drug use (61 % of 328 detainees approached), 56 % were confirmed HIV-positive and 84 % were anti-HCV-positive (Haikalis et al., 2018). More than half (57 %) of the entire sample had chronic hepatitis C and were eligible to receive treatment with direct-acting antivirals (that is, they had CHC/HIV-coinfection and/or liver stiffness greater than 7.0 kPa) (Sypsa et al., 2018). The high proportion of HIV-infected prisoners is due to the 2011 outbreak of HIV infection that occurred in Athens among people who inject drugs and to the fact that the majority of HIV-positive prisoners are detained in the prison hospital of Korydallos.

Screening and linking to care in a French prison

In France, the 2010 Précavar study (Semaille et al., 2011) estimated that 10 % of the prison population was receiving opioid substitution treatment and that a third of people who inject drugs in prisons have shared injecting material at least once. In 2018, the Villeneuve-les-Maguelone prison had a total of 950 inmates (570 places). Within 24 hours of their arrival, new prisoners are received by a nurse and are given a consultation with a medical doctor of the health unit. A blood test for HIV, hepatitis A virus, HBV, HCV and syphilis, and a pulmonary X-ray are systematically offered to all new inmates (uptake is 70 %). Since 2015, direct-acting antiviral treatment against HCV has been fully reimbursed by the French national health insurance system, and, since 2017, treatment of chronic HCV infection has been offered to patients regardless of fibrosis stage. At Villeneuve-les-Maguelone, treatment is given once a day under the supervision of a nurse. In 2017, among the 1 100 people entering prison tested, 85 (7.5 %) tested positive for HCV antibodies. Among these

individuals, 27 (32 %) were diagnosed with chronic HCV infections. All chronically infected inmates were offered direct-acting antiviral treatment and 25 (93 %) started treatment. The completion rate in prison was 90 % and a sustained virologic response was achieved in 23 (92 %) of those that received treatment. When an inmate is released before the end of treatment, he or she is given the rest of the course of treatment to take at home.

In 2010, the prevalence of chronic HCV infections among new inmates at Villeneuve-les-Maguelone was 8.6 % (73/852). Seven years later, in 2017, the prevalence had decreased to 2.5 % (27/1 100), suggesting that the treatment strategy may be having some impact.

Prison guidance

In 2018, the European Centre for Disease Prevention and Control (ECDC) and the EMCDDA published an evidence-based guidance aimed at supporting the planning and implementation of effective programmes to prevent and control blood-borne viruses in prison settings in the European region. Based on a series of systematic reviews of the scientific literature and expert opinion, the document provides the following evidence-based recommendations (ECDC and EMCDDA, 2018; Tavoschi et al., 2019):

- offer a comprehensive package of preventive measures to people in prison (including opioid substitution treatment and provision of clean drug injection equipment) that meet the same national standards as those recommended for community settings;
- offer HBV vaccination to people in prison with unknown or negative serology;
- actively offer blood-borne virus testing to all people in prison upon admission and throughout their time in prison;
- offer appropriate treatment to individuals diagnosed with HIV, HBV or HCV infection in prison settings, in line with the guidelines applied in the community and meeting the same provision standards as in the community;
- actively support and ensure continuity of care between prison and community.

This report provides an update on surveillance and monitoring data from the EMCDDA drug-related infectious diseases (DRID) expert network based on reports presented during the expert meeting held in Lisbon in September 2018 and data provided to the EMCDDA until February 2019. The next DRID expert meeting will be held in October 2019 at the EMCDDA headquarters in Lisbon.

Updates on European joint actions and projects

Joint action HA-REACT: work package on testing and linkage to care (WP4)

The objective of this work package was to improve early diagnosis of HIV, viral hepatitis and tuberculosis, as well as linkage to care for people who inject drugs. The German NGO Deutsche AIDS-Hilfe coordinated the work package activities, collaborating with partners from other countries. Based on a risk assessment by the ECDC and the EMCDDA, Hungary, Latvia and Lithuania were chosen as focus countries of the joint action, and experts from Hungary and Latvia participated in WP4 by developing a model for early diagnosis and linkage to care for low-threshold services working with people who inject drugs. Further WP4 activities included workshops on testing and linkage to care for social workers and peers, and working in low-threshold settings; and the development of a training manual and e-learning tool on testing as well as of recommendations for a gender-specific approach for testing services. For more information, see: www.hareact.eu/en/about-ha-react.

HepCare Europe: bridging the gap in the treatment of HCV infection

The HepCare Europe project, an EU-funded collaboration project between five institutions across four EU Member States (Ireland, Romania, Spain and the United Kingdom), developed, implemented and evaluated a number of innovative approaches to improving the testing and treatment of HCV infection among vulnerable populations (homeless people, prisoners, people who inject drugs) and implemented various training activities. As of May 2018, 55 primary care sites had received HCV training, more than 500 healthcare professionals had been trained and a total of 2 079 people had been screened for HCV infection under this project. For more information, see: www.ucd.ie/medicine/hepcare/

SPHERE-C: development of a European prevalence survey for HCV

To address the gaps and heterogeneity in existing HCV prevalence data across EU countries, the ECDC-funded SPHERE-C project developed an evidence-based protocol for undertaking HCV prevalence surveys in the general population. The protocol covers three survey designs that all rely on probability-based sampling. Each of the study designs was piloted in three EU countries during 2018. The

results will feed into the revision of the SPHERE-C final study protocol. For more information, see: https://www.rki.de/DE/Content/InfAZ/H/HepatitisC/SPHERE-C.html

Glossary of terms and abbreviations

Acute viral hepatitis infection: discrete-onset clinical manifestations of a recent infection with a hepatitis virus.

AIDS: acquired immunodeficiency syndrome.

Anti-HCV: antibodies to hepatitis C virus (HCV), which can be detected in the blood usually within 2 or 3 months of HCV infection exposure. People who clear the infection naturally or who are successfully treated will still test positive for antibodies to HCV. Antibodies can be detected with serological assays, including rapid diagnostic tests and laboratory-based immunoassays (such as enzyme immunoassays).

Cascade of care: the cascade encompasses prevention, treatment and care interventions. The term 'cascade' emphasises that a sequence of services is needed to achieve the desired impact. The cascade concept also informs tracking of patients from one service to the next, and highlights the gradual attrition of coverage of the eligible population over the steps of the sequence (WHO, 2016).

Chronic viral hepatitis infection: chronic inflammation of the liver that results from a chronic infection with a hepatitis virus.

Current injector: a person who has injected drugs in the last 12 months, not according to medical prescription. Some studies can restrict their study population to a subset of current injectors with shorter recall period, for example, injectors who have reported injecting in the last 4 weeks.

Direct-acting antiviral: an effective treatment against HCV infection.

ESCAPE: European Syringe Collection and Analysis Project Enterprise.

Ever-injector: a person who has injected drugs in the course of their life. Ever-injectors include current injectors and those who do not inject anymore.

HBV: hepatitis B virus.

HCV: hepatitis C virus.

HCV RNA: HCV viral genome that can be detected and quantified in serum by nucleic acid testing. Detection of HCV RNA indicates recent or chronic infections.

Hepatitis B surface antigen (HBsAg): HBV envelope protein detectable in the blood with rapid diagnostic tests or laboratory-based immunoassay in recent and chronic HBV infection.

HIV: human immunodeficiency virus.

iGAS: invasive group A streptococcus.

People who inject drugs: those who inject drugs not according to medical prescription.

Prevalence: the proportion of individuals in a defined population with a specific infection or disease (or specific characteristic) at a certain point in time.

Prevalence estimates from diagnostic tests: positivity rate (proportion of people testing positive among all people tested in a given period) obtained from routine diagnostic tests carried out by health services. Prone to more biases than seroprevalence studies.

Recent viral hepatitis infection: a newly acquired infection, regardless of whether it is symptomatic or asymptomatic. A small subset of people may develop acute hepatitis. Some new infections can evolve into chronic infections while others evolve towards spontaneous clearance of the virus.

Seroprevalence studies (SP): epidemiological studies specifically designed to obtain information on the prevalence of HIV/HBV/HCV biomarkers. A seroprevalence study is based on a protocol with well-defined target population, inclusion criteria, sampling frame, sampling method and sample size.

UNAIDS: Joint United Nations Programme on HIV/AIDS.

WHO: World Health Organization.

References

Arendt, V., Guillorit, L., Origer, A., Sauvageot, N., Vaillant, M., Fischer, A., Goedertz, H., et al. (2019), 'Injection of cocaine is associated with a recent HIV outbreak in people who inject drugs in Luxembourg', *PLOS ONE* 14(5), pp. e0215570.

Bundle, N., Bubba, L., Coelho, J., Kwiatkowska, R., Cloke, R., King, S., Rajan-Iyer, J., et al. (2017), 'Ongoing outbreak of invasive and non-invasive disease due to group A *Streptococcus* (GAS) type *emm* 66 among homeless and people who inject drugs in England and Wales, January to December 2016', *Eurosurveillance* 22(3), doi:10.2807/1560-7917.ES.2017.22.3.30446.

Cadet-Taïrou, A., Lermenier-Jeannet, A. and Gautier, S. (2018), *Profils et pratiques des usagers de drogues rencontrés dans les CAARUD en 2015*, OFDT, Saint-Denis La Plaine.

Cavazos-Rehg, P. A., Spitznagel, E. L., Schootman, M., Strickland, J. R., Afful, S. E., Cottler, L. B. and Bierut, L. J. (2009), 'Risky sexual behaviors and sexually transmitted diseases: a comparison study of cocaine-dependent individuals in treatment versus a community-matched sample', *AIDS Patient Care and STDs* 23(9), pp. 727-734.

Council of Europe (2016), *Council of Europe Annual Penal Statistics*, http://wp.unil.ch/space/space-i/prison-stock-on-1st-january/prison-stock-on-01-jan-2015-2016/ (accessed on 11 January 2018).

Devaux, C., Fischer, A., Da Silva, N., Goedertz, H., Karier, R., Menster, M., Ambroset, G., et al. (2018), 'Continuum of HCV care in an outreach program for intravenous drug users in Luxembourg', presentation, EMCDDA drug-related infectious diseases expert meeting, 24-25 September, Lisbon.

Dudás, M., Rusvai, E., Tarján, A., Minárovits, J., Takács, M. and Csohán, Á. (2015), 'Official report on prevalence of infections related to injecting drug use in 2015', unpublished report.

ECDC (European Centre for Disease Prevention and Control) (2018a), *Annual epidemiological report for 2016: Hepatitis B*, Surveillance Report, Publications Office of the European Union, Luxembourg (https://ecdc.europa.eu/en/publications-data/hepatitis-b-annual-epidemiological-report-2016).

ECDC (2018b), *Annual epidemiological report for 2016: Hepatitis C*, Surveillance Report, Publications Office of the European Union (https://ecdc.europa.eu/en/publications-data/hepatitis-c-annual-epidemiological-report-2016).

ECDC (2018c), *Vaccine schedules in all countries of the European Union*, https://vaccine-schedule.ecdc.europa.eu/ (accessed on 11 January 2018).

ECDC (2019), *Continuum of HIV care — Monitoring implementation of the Dublin Declaration on Partnership to Fight HIV/AIDS in Europe and Central Asia: 2018 progress report*, Special Report, Publications Office of the European Union, Luxembourg (https://ecdc.europa.eu/en/publications-data?f%5B0%5D=publication_series%3A1520).

ECDC and EMCDDA (2018), Public health guidance on prevention and control of blood-borne viruses in prison settings, ECDC and EMCDDA Scientific Advice, Publications Office of the European Union (https://ecdc.europa.eu/en/publications-data/public-health-guidance-prevention-control-bloodborne-viruses-prison-settings).

ECDC and WHO (2018), *HIV/AIDS surveillance in Europe 2018-2017 data*, Publications Office of the European Union, Luxembourg (https://ecdc.europa.eu/en/publications-data/hivaids-surveillance-europe-2017-2016-data).

EMCDDA (European Monitoring Centre for Drugs and Drug Addiction) (2017), *Health and social responses to drug problems: a European guide*, Publications Office of the European Union, Luxembourg (http://www.emcdda.europa.eu/publications/manuals/health-and-social-responses-to-drug-problems-a-european-guide_en).

EMCDDA (2018), *Recent changes in Europe's cocaine market: results from an EMCDDA trendspotter study*, Rapid Communication, Publications Office of the European Union, Luxembourg (http://www.emcdda.europa.eu/publications/rapid-communications/recent-changes-in-europes-cocaine-market_en).

EMCDDA (2019a), *Drugs in syringes from six European cities: results from the ESCAPE project 2017*, Rapid Communication, Publications Office of the European Union, Luxembourg (http://www.emcdda.europa.eu/publications/rapid-communications/syringe-residues-study-2017).

EMCDDA (2019b), *Statistical Bulletin: Drug-related infectious diseases*, http://www.emcdda.europa.eu/data/stats2019/drid.

EMCDDA and ECDC (2018), *Guidance in Brief: Prevention and control of blood-borne viruses in prison settings*, Joint Publications, Publications Office of the European Union, Luxembourg (http://www.emcdda.europa.eu/publications/joint-publications/ecdc/brief-guidance-blood-borne-viruses-in-prison_en).

Fiedler, S., Hauser, A., Grumann, C., Machnowska, P., Altmann, B., Hanke, K., Hofmann, A., et al. (2018), 'Nachweis und Analyse eines HIV-1 Ausbruchs unter Drogengebrauchenden im Raum München mit Hilfe der molekularen Surveillance', presentation, 19 Interdisziplinärer Kongress für Suchtmedizin, Munich.

Fraser, H., Martin, N. K., Brummer-Korvenkontio, H., Carrieri, P., Dalgard, O., Dillon, J., Goldberg, D., et al. (2018a), 'Model projections on the impact of HCV treatment in the prevention of HCV transmission among people who inject drugs in Europe', *Journal of Hepatology* 68(3), pp. 402-411.

Fraser, H., Zibbell, J., Hoerger, T., Hariri, S., Vellozzi, C., Martin, N. K., Kral, A. H., et al. (2018b), 'Scaling-up HCV prevention and treatment interventions in rural United States-model projections for tackling an increasing epidemic: Prevention and treatment for HCV in rural United States', *Addiction* 113(1), pp. 173-182.

Giese, C., Igoe, D., Gibbons, Z., Hurley, C., Stokes, S., McNamara, S., Ennis, O., et al. (2015), 'Injection of new psychoactive substance snow blow associated with recently acquired HIV infections among homeless people who inject drugs in Dublin, Ireland, 2015', *Eurosurveillance* 20(40), doi:10.2807/1560-7917.ES.2015.20.40.30036.

Haikalis et al. (2018), 'Prevalence of HCV infection among imprisoned population with a history of injection drug use', presentation, 6th Panhellenic Scientific Meeting 'AIDS &Hepatitis', September 2018, Athens.

King, R., Bird, S. M., Overstall, A. M., Hay, G. and Hutchinson, S. J. (2014), 'Estimating prevalence of injecting drug users and associated heroin-related death rates in England by using regional data and incorporating prior information', *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 177(1), pp. 209-236.

Kivimets, K., Uusküla, A., Lazarus, J. V. and Ott, K. (2018), 'Hepatitis C seropositivity among newly incarcerated prisoners in Estonia: data analysis of electronic health records from 2014 to 2015', *BMC Infectious Diseases* 18(1), doi:10.1186/s12879-018-3242-2.

Larney, S., Hickman, M., Guy, R., Grebely, J., Dore, G. J., Gray, R. T., Day, C. A., et al. (2017), 'Estimating the number of people who inject drugs in Australia', *BMC Public Health* 17(1), doi:10.1186/s12889-017-4785-7.

Lewer, D., Harris, M. and Hope, V. (2017), 'Opiate injection-associated skin, soft tissue, and vascular infections, England, UK, 1997-2016', *Emerging Infectious Diseases* 23(8), pp. 1400-1403.

- Marshall, A. D., Cunningham, E. B., Nielsen, S., Aghemo, A., Alho, H., Backmund, M., Bruggmann, P., et al. (2018), 'Restrictions for reimbursement of interferon-free direct-acting antiviral drugs for HCV infection in Europe', *The Lancet Gastroenterology & Hepatology* 3(2), pp. 125-133.
- McAuley, A., Palmateer, N., Goldberg, D., Trayner, K., Shepherd, S. and Gunson, R. (2019), 'Re-emergence of injecting drug use-related HIV despite a comprehensive harm reduction environment: a cross sectional analysis', *The Lancet HIV*, doi:10.1016/S2352-3018(19)30036-0.
- National Antidrug Agency (2016), 'Behavioural surveillance survey among IDUs from Bucharest-2015' (http://www.ana.gov.ro/stire283.php).
- National Centre for Addictions (2017), 'Annual Report of the National Centre for Addictions 2017'.
- Nielsen, S. (2018), 'HCV policies landscape in Europe' (available at http://www.emcdda.europa.eu/document-library).
- Platt, L., Minozzi, S., Reed, J., Vickerman, P., Hagan, H., French, C., Jordan, A., et al. (2017), 'Needle syringe programmes and opioid substitution therapy for preventing hepatitis C transmission in people who inject drugs', *Cochrane Database of Systematic Reviews*, doi:10.1002/14651858.CD012021.pub2.
- Public Health England, Health Protection Scotland, Public Health Wales and Public Health Agency Northern Ireland (2018), *Shooting up: infections among people who inject drugs in the UK, 2017*, Public Health England, London (available at https://www.gov.uk/government/publications).
- Ragonnet-Cronin, M., Jackson, C., Bradley-Stewart, A., Aitken, C., McAuley, A., Palmateer, N., Gunson, R., et al. (2018), 'Recent and rapid transmission of HIV among people who inject drugs in Scotland revealed through phylogenetic analysis', *Journal of Infectious Diseases* 217(12), pp. 1875-1882.
- Semaille, C., Le Strat, Y., Chiron, E., Barbier, C., Cate, L. and Chemlal, K. (2011), 'La prévalence de l'hépatite C chez les personnes détenues en France : Enquête Prévacar 2010', presentation, 69è journées scientifiques de l'association pour l'étude du foie, Paris (http://opac.invs.sante.fr/index.php?lvl=notice_display&id=10327).
- Sidibé, M., Loures, L. and Samb, B. (2016), 'The UNAIDS 90-90-90 target: a clear choice for ending AIDS and for sustainable health and development', *Journal of the International AIDS Society* 19:21133 doi:10.7448/IAS.19.1.21133.
- Sypsa, V., Kalamitsis, G., Papatheodoridis, G., Georgoulas, S., Psichogiou, M., Paraskevis, D., Dragassaki, M., et al. (2018), 'A pilot program of screening and linkage to care for hepatitis C in a Greek prison', presentation, 7th International Symposium on Hepatitis Care in Substance Users (INSHU), Cascais, Portugal.
- Tavoschi, L., O'Moore, É. and Hedrich, D. (2019), 'Challenges and opportunities for the management of infectious diseases in Europes' prisons: evidence-based guidance', *The Lancet Infectious Diseases* pp. S1473309918307564.
- WHO (2016), *Global health sector strategy on viral hepatitis 2016-2021: towards ending viral hepatitis*, WHO, Geneva (http://www.who.int/iris/handle/10665/246177).
- WHO (2017), *Action plan for the health sector response to viral hepatitis in the WHO European region*, WHO Regional Office for Europe, Copenhagen (available at http://www.euro.who.int).
- WHO (2018), *Guidelines for the care and treatment of persons diagnosed with chronic hepatitis C virus infection*, World Health Organization, Geneva.

Acknowledgements

EMCDDA: Thomas Seyler, Eleni Kalamara, Isabelle Giraudon, Dagmar Hedrich and André Noor.

DRID network: Irene Schmutterer, Luk Van Baelen, Violeta Bogdanova, Marko Markus, Ioanna Yasemi, Barbara Janikova, Gry St-Martin, Kristel Kivimets, Henrikki Brummer-Korvenkontio, Anne-Claire Brisacier, Ruth Zimmerman, Anastasios Fotiou, Anna Tarjan, Sean Millar, Barbara Suligoi, Anda Kivite, Ieva Vaitkevičiūtė, Carole Devaux, Christine Marchand-Agius, Esther Croes, Rikard Rykkvin, Karolina Zakrzewska, Domingos Duran, Zuzana Kamendy, Maja Milavec, Elena Alvarez, Maria Axelsson and Vivian Hope.

External experts: Hannah Fraser, Alexandra Gurinova, Ida Sperle, Jack Lambert, Katherine Sinka, Stine Nielsen and Fadi Meroueh.

ECDC: Erika Duffell, Anastasia Pharris, Lina Nerlander, Teymur Noori and Andrew Amato.

WHO Europe: Antons Mozalevskis.

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: http://europa.eu/contact

On the phone or by e-mail

Europe Direct is a service that answers your questions about the European Union. You can contact this service

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls)
- at the following standard number: +32 22999696 or
- by electronic mail via: http://europa.eu/contact

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: http://europa.eu

EU publications

You can download or order free and priced EU publications from EU Bookshop at: http://bookshop.europa.eu. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see http://europa.eu/contact)

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex at: http://eur-lex.europa.eu

Open data from the EU

The EU Open Data Portal (http://data.europa.eu/euodp/en/data) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

emcdda

About this publication

Rapid communications bring you the latest findings and discussions in key areas in the drugs field. This report presents an overview of infectious diseases among people who inject drugs in Europe, both in the community and in prison settings, covering disease surveillance, outbreak investigations, and prevention and control, for the period up to the end of February 2019. The report describes the population at risk, in terms of the number of injectors and the main injecting practices, presenting the latest data on incidence and prevalence of drug-related hepatitis C and B virus and HIV infections, as well as recent outbreaks, among people who inject drugs in Europe. This is accompanied by an overview of harm reduction intervention coverage, testing and treatment.

About the EMCDDA

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) is the central source and confirmed authority on drug-related issues in Europe. For over 20 years, it has been collecting, analysing and disseminating scientifically sound information on drugs and drug addiction and their consequences, providing its audiences with an evidence-based picture of the drug phenomenon at European level.

The EMCDDA's publications are a prime source of information for a wide range of audiences including policymakers and their advisors; professionals and researchers working in the drugs field; and, more broadly, the media and general public. Based in Lisbon, the EMCDDA is one of the decentralised agencies of the European Union.

Publications Office
of the European Union