



GUIDANCE IN BRIEF

Prevention and control of blood-borne viruses in prison settings

Selected findings from ECDC and EMCDDA scientific guidance, 2018

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Scope and purpose of this guidance

This evidence-based guidance aims to support the planning and implementation of effective programmes to prevent and control the transmission of infectious diseases in prison settings in the European region. It focuses on three high-burden blood-borne viruses (BBV) in the prison population, namely hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV) ⁽¹⁾. The infections caused by these viruses are characterised by the same modes of blood-borne transmission and similar prevention and control interventions. The key areas covered by this guidance are prevention, treatment and care of BBVs in prison settings.

This guidance is intended for policymakers responsible for the planning and delivery of healthcare services in the national or sub-national custodial system and all professionals responsible for the health and well-being of people in prison, including community-based service providers and those facilitating continuity of care in the community.

MAIN AREAS ADDRESSED IN THE GUIDANCE

Prevention of BBV transmission

HBV vaccination

Testing for BBVs

Treatment of viral hepatitis/HIV

Continuity of care

⁽¹⁾ The BBV guidance presented here is part of a broader project to develop guidance for the prevention and control of communicable diseases in prison settings, which covered BBVs, sexually transmitted infections and tuberculosis. See the last page.

Key conclusions

The available scientific evidence, backed up by expert opinion, allows for the following key conclusions to be made (see also 'Key conclusions and implementation considerations', page 4):

Prevention

Offer a comprehensive package of preventive measures to people in prison that meet the same national standards as those recommended for community settings.

Evidence shows that also in prison settings, condoms and behavioural interventions promote safer sex.

Evidence shows that opioid substitution treatment reduces illicit opioid use and risks related to equipment sharing and, when continued on release, provides protection from death caused by overdose.

Evidence shows that the provision of clean drug injection equipment is possible in prison settings and can successfully contribute to a comprehensive programme to reduce BBV transmission.

HBV vaccination

Offer HBV vaccination to people in prison with unknown or negative serology.

Evidence shows that using rapid schedules may result in a higher completion rate of the full schedule.

Testing for viral hepatitis and HIV

Actively offer BBV testing to all people in prison upon admission and throughout the time in prison.

Evidence shows that pro-active provision of BBV testing leads to a higher uptake; health promotion and peer education have been shown to increase HIV testing uptake.

Viral hepatitis and HIV treatment

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.

Evidence shows that treatment of BBV infections is feasible and effective in prison.

Continuity of care

Actively support and ensure continuity of care between prison and community.

Evidence shows that release from prison is a key barrier to continuity and adherence to drug and infectious diseases treatment.

Evidence shows that collaboration and partnership between prison and community health-care services promote and facilitate uninterrupted care.

Evidence shows that active referral to external services improves treatment adherence.

Guidance development

This guidance is based on a series of systematic reviews of the scientific literature. Research findings were assessed using evidence-based medicine principles, adapted within a public health framework and combined with advice from a panel of European prison experts. The conclusions listed are based on consideration of the strength of evidence supplemented by expert opinion. Considerations for successful implementation of the interventions in European prison settings are also provided.

Why is this important?

In the 31 EU/EEA countries, more than 590 000 persons are held in a custodial facility on any given day, with considerable differences between countries' imprisonment rates — varying from 51 per 100 000 general population in the Netherlands to over 200 per 100 000 in the Czech Republic, Estonia, Latvia and Lithuania^(?). Recent reviews of prison studies from EU countries found a much higher proportion of individuals in prison infected with viral hepatitis as compared to the

^(?) The EU/EEA (European Union and European Economic Area) includes the 28 EU Member States, Iceland, Liechtenstein and Norway.

general population, with prison prevalence estimates ranging from 0.3 % to 25.2 % for HBV and from 4.3 % to 86.3 % for HCV, which is up to 28 and 78 times, respectively, higher than estimated prevalence in the general population. Similarly for HIV, prison prevalence estimates ranged from 0.2 % to 15.8 %. People in prison also tend to have multiple complex health and social care needs resulting from a mix of specific socioeconomic determinants and environmental factors. Poor infrastructure, overcrowding, inadequate healthcare facilities and delayed diagnosis are recognised additional risk factors in prison settings, where much of the burden of blood-borne infections is linked to a history of injecting drug use among this population.

Prisons are settings of increased risk for BBV transmission, where enhanced and effective prevention and control measures are required to protect the health of people in detention and staff. At the same time, incarceration represents a unique opportunity to address the healthcare needs of those people in prison who belong to hard-to-reach and medically underserved groups in the community, such as people who inject drugs.

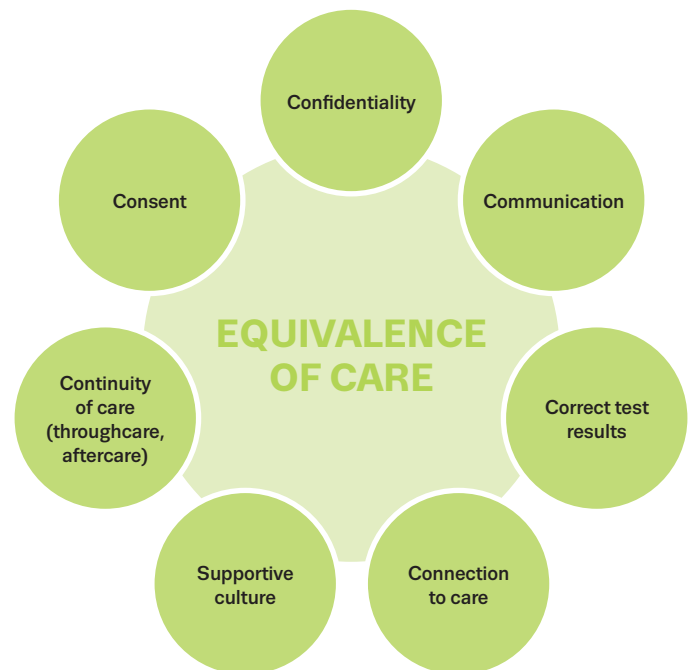
A significant proportion of people in prison have a history of drug use, and a strong association has been found between prison history and BBV prevalence in people who inject drugs. Many serve short sentences or are remanded in custody for brief periods before trial. The period surrounding arrest and incarceration may be critical in terms of increases in risk behaviour and disruption of care. Disruption of opioid substitution treatment, especially due to brief periods of imprisonment, has been associated with significant increases in HCV conversion. Inside prison, the risk of transmission of blood-borne infections is increased by behaviours such as the sharing of drug-injecting equipment.

Effective interventions aimed at reducing BBV transmission and ensuring entry into treatment and care are available for individuals in need in community settings across Europe. In accordance with the principle of equivalence of care, broader implementation of these interventions should be promoted in prison settings, taking into consideration the specific conditions and challenges of the prison setting. Delivering health protection, prevention and harm reduction programmes in prisons will not only benefit the prison population but, by targeting 'high transmission' networks within or linked to prison populations, can also reduce the risk of transmission of infectious diseases in the community.

Foundational principles for BBV prevention in prison

Most people held in prison, especially at the early stages of their incarceration, are in a state of fragility and vulnerability, at times combined with aggressiveness and distrust. The reasons for this are complex, but may include general psychological problems, substance use, poor health, educational deficits and poor social skills. It is advisable to take these aspects into consideration during the planning and implementation of BBV prevention in prison settings.

Seven foundational principles for the provision of health services to prevent transmission of blood-borne viruses in prison settings



This joint ECDC-EMCDDA guidance defines the following seven principles as the foundations for the provision of health services aimed at preventing the transmission of BBVs in prison settings: consent; confidentiality; communication; correct test results; connection to prevention, care and treatment; continuity of care post-release; and an overall supportive culture within the prison system. These principles are essential for the effective implementation of the interventions mentioned in the key conclusions of this report.

Key conclusions and implementation considerations

Medical examination, including a health and drug assessment, of all those remanded in custody or entering prison after conviction is a widely accepted standard of prison healthcare and has been laid down as duty of the prison medical practitioner in the European Prison Rules. The aim here is to diagnose any physical or mental conditions that might be present and take the necessary treatment measures, such as ensuring the continuation of existing medical treatment.

Reducing BBV transmission through combination prevention

The body of scientific evidence on BBV prevention in prison settings is limited. Injecting drug use in prison bears the highest risk of transmission of BBVs, due to the re-use of contaminated injecting equipment. However, there are additional risks for BBV transmission in prison settings which can be prevented. A comprehensive package of combination prevention, including the following interventions, may be considered:

Opioid substitution treatment: Studies consistently show that while patients are in prison, being on opioid substitution treatment (OST) reduces opioid use, injecting and the sharing of injecting equipment. For those who had been on OST before imprisonment, prison OST provides treatment continuity, whereas disruption of the treatment, especially due to brief periods of imprisonment, has been associated with significantly increased risk of HCV seroconversion. After release, those who had received OST while in custody are more likely to continue treatment, and they face a lower risk of drug-related death.

Provision of clean drug injecting equipment: Although the evidence base is very limited, studies suggest that the successful implementation of needle and syringe programmes in prison is possible and may lead — as part of a more comprehensive response — to a reduction of BBV transmission among incarcerated people who inject drugs. Models for syringe distribution primarily include hand-to-hand exchange, managed by healthcare workers or other responsible staff, and vending machines installed in more discrete areas within the prison. In all models, participants need to enrol in the programme to be able to access syringes. Confidentiality and individual needs (e.g. frequency of injection, number of syringes per day) must be taken into account when designing such programmes.

Condoms and lubricant: The evidence suggests that provision of condoms and the implementation of behavioural interventions may promote safer sex behaviours in prison settings. These findings are consistent with the evidence derived from community settings. In some EU/EEA countries the existing regulations prohibiting sexual activities in prison settings or incorrect assumptions about sexual activity in prison prevent the implementation of condom distribution programmes. However, when feasible, condom distribution programmes can be implemented through the installation of vending machines or via hand-to-hand distribution mediated by healthcare workers or other staff.

Safe tattooing and body piercing: Tattooing and piercing, when performed with non-sterile equipment, may result in the spread of BBVs among tattoo and piercing recipients. Safe tattooing and piercing initiatives run by prison health services are in place in several European countries, but no effectiveness data is available on the impact of these measures on BBV transmission. Still, the acceptability is reportedly high among people in prison.

Pre- and post-exposure prophylaxis for HIV: Timely post-exposure prophylaxis (PEP) is an effective measure to reduce the risk of infection after exposure to HIV. It is advisable for this measure to be available to all people in prison, including, but not limited to, people in detention, in accordance with applicable national and international guidelines. Pre-exposure prophylaxis (PrEP) has recently been recognised as an additional effective measure to prevent HIV transmission, as part of a comprehensive package of measures.

Injecting drug use in prison bears the highest risk of transmission of BBVs, due to the re-use of contaminated injecting equipment

Other interventions: Sharing of personal items such as razors and toothbrushes may also be considered as a potential source of BBV transmission, and prison authorities could consider providing such items (e.g. toothbrushes, razors) in different colours to increase ease of identification. Provision of disinfectants for the cleaning of personal items could also be considered. However, this measure may entail

some risk of self-harm and will need to be accompanied by education on their use. It is not advisable to recommend the use of disinfectants, including bleach, to clean needles and injecting equipment in prison settings. National (or international) guidelines providing recommendations on the above-listed prevention measures in community settings should be applied to the same standards in prison settings.

Further important elements of combination prevention are testing and vaccination, as well as treatment of infections to reduce the pool of people in prison who carry BBVs.

Testing for BBVs

Considering the high prevalence of infection in the prison population and the availability of effective prevention and control measures, it is advisable to actively offer testing for HBV, HCV and HIV to all people in prison. The active offer of tests will promote earlier diagnosis, allow linkage to treatment and care, identify cases and will facilitate targeted measures to reduce onward transmission in the prison setting and after release. The body of evidence suggests that provider-initiated strategies yield a higher uptake than client-initiated strategies. The available evidence indicates that health promotion and peer-education directed towards people in detention are effective in increasing testing uptake in prison settings. As a foundational principle for BBV prevention in prison, the consent of the individual is a requirement for any testing service provided in the prison setting. When designing and implementing prison testing services, it is essential to guarantee the individual's right to refuse testing for BBVs.

HBV vaccination

In view of the high prevalence of HBV infection among people in prisons, and based on available evidence regarding the implementation of HBV vaccination in prison settings, as well as on its effectiveness in the community, it is advisable to offer HBV vaccination to people in prison. The offer of HBV vaccination at entrance to all individuals with no/unknown vaccination history and/or negative serology is consistent with the general principle of disease prevention, seeking to avoid further transmission within the prison setting. Evidence suggests that provision of HBV vaccination using the rapid or very rapid schedule may result in a higher vaccination course completion rate in prison settings.

HIV and viral hepatitis treatment

Individuals diagnosed with HIV, HBV or HCV infection in prison settings should be offered appropriate treatment, in

line with the guidelines applied in community settings. The evidence indicates that HIV and HCV treatment in prison settings is feasible. There is a strong public health rationale for providing prompt access to state-of-the-art viral hepatitis treatment and care to people in prison, among which a significant proportion inject drugs, or have done so in the past, and who, given their dynamic interaction and high prevalence, have been identified as key populations to be prioritised for HBV/HCV screening and treatment in the EU/EEA.

Continuity of care

Transitional care for people entering and being released from prison is an essential component of quality healthcare services for people at higher risk of acquiring a BBV infection and for individuals with HIV infection, chronic viral hepatitis or problematic drug use.

For all treatment provided in prison settings, release from prison and transfer within and between prison institutions are the most important barriers to adherence and, for HCV, treatment completion. Active referral to suitable community

**The treatment of BBVs
is feasible and effective
in prison settings**

care services is considered the cornerstone of an effective linkage to care post-release, and it is widely recommended by existing guidelines.

In consideration of the specificities of EU/EEA Member States' national healthcare systems and arrangements with respect to provision of prison healthcare, active referral may take different approaches. Provision of an adequate supply of medicines to individuals on their release is implemented in countries such as France, Italy and Portugal, in order to cover the transition period until effective linkage with community services is established, or for the entire duration of the treatment, as is currently done in some countries for HCV treatment with interferon-free regimens. Provision of prescription is preferred in countries such as the United Kingdom, with active referral to a suitable service provider in the community.

The existing body of evidence indicates that continuation and also uptake of OST during incarceration results in a higher likelihood of retention of opioid-dependent people in drug

Service priorities at the different stages of detention



Note: Services may be organised or staged differently depending on length of stay and prison health service organisation.

dependency care after release, and in better adherence to HIV treatment among people who inject drugs. Active referral to a community-based service provider for post-release care may be particularly important for people who have a history of opioid use in the light of the heightened mortality risk in the immediate post-release period. Accumulating evidence, including from the EU/EEA, attests to the protective effect of OST on all-cause and drug-related mortality after release. As a further measure to prevent overdose mortality, provision of a supply of naloxone at release has been shown to be successful in a large-scale programme implemented in Scotland.

Integration of prison and community health services could contribute to streamlining continuity of care pathways, both at entry into and at release from prison. In particular, integrated services may result in an easier and faster referral system for patients and a less demanding process for the responsible healthcare worker.

Need for more research in prison settings

A major challenge encountered during the development of this guidance was the scarcity of published evidence overall and from the European setting in particular. An important conclusion is that more efforts are needed to expand the evidence base on effective BBV prevention and control interventions in prison settings. In order to fill existing knowledge gaps, more research, conducted in the EU/EEA, is needed to provide further evidence on the feasibility, (cost-) effectiveness and impact of interventions.

Definitions

People in prison: The population addressed in the guidance are adult individuals aged 18 years or older detained in prison for custody, remand or awaiting trial, and prison staff, when and where appropriate.

Prison settings: The term prison settings refers to all institutions where a state holds adults deprived of their liberty, either sentenced or on pre-trial detention (remand), excluding migrant centres and police detention rooms, juvenile prisons and secure training centres for children and young people.

Links and resources

- | Council of Europe Annual Survey on Prison Populations (SPACE)
<https://www.coe.int/en/web/prison/space>
- | ECDC – www.ecdc.europa.eu
- | EMCDDA – prison website http://www.emcdda.europa.eu/topics/prison_en
- | UNODC – Publications on prison and HIV:
http://www.unodc.org/unodc/en/hiv-aids/new/publications_prisons.html
- | WEPHREN – Worldwide Prison Health Research and Engagement Network.
<https://wephren.tghn.org/>
- | WHO Europe – Prisons and health
<http://www.euro.who.int/en/health-topics/health-determinants/prisons-and-health>

For more on this topic

- | European Centre for Disease Prevention and Control and European Monitoring Centre for Drugs and Drug Addiction (2018), *Systematic review on the prevention and control of blood-borne viruses in prison settings*, ECDC, Stockholm, doi:10.2900/43414.
- | European Centre for Disease Prevention and Control and European Monitoring Centre for Drugs and Drug Addiction (2017), *Systematic review on active case finding of communicable diseases in prison settings*, ECDC, Stockholm, doi:10.2900/348536.
- | European Centre for Disease Prevention and Control (2017), *Systematic review on the diagnosis, treatment, care and prevention of tuberculosis in prison settings*, ECDC, Stockholm, doi:10.2900/17564.
- | World Health Organization (2017), *Policy Brief: Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations, 2016 update*. World Health Organization, Geneva (available at: <http://www.who.int/iris/handle/10665/258967>).
- | Health World Organization (2018), *Good practices in the prevention and care of Tuberculosis and Drug-resistant Tuberculosis in correctional facilities*, World Health Organization, Copenhagen.
- | Council of Europe (2006), *European Prison Rules*, Council of Europe Publishing, Strasbourg (available at: <https://rm.coe.int/16806f3d4f>).
- | European Centre for Disease Prevention and Control and European Monitoring Centre for Drugs and Drug Addiction (2011), *ECDC and EMCDDA guidance. Prevention and control of infectious diseases among people who inject drugs. Guidance in brief*, ECDC, Stockholm, doi:10.2900/58565.
- | European Centre for Disease Prevention and Control (2015), *Thematic report: Prisoners. Monitoring implementation of the Dublin Declaration on Partnership to Fight HIV/AIDS in Europe and Central Asia: 2014 progress report*, ECDC, Stockholm, doi:10.2900/84959.
- | European Monitoring Centre for Drugs and Drug Addiction (2012), *Prisons and drugs in Europe: The problem and responses*, Publications Office of the European Union, Luxembourg, doi:10.2810/73390.
- | Falla, A. M., Hofstraat, S. H. I., Duffell, E., Hahné, S. J. M., Tavoschi, L. and Veldhuijzen, I. K. (2018), 'Hepatitis B/C in the countries of the EU/EEA: A systematic review of the prevalence among at-risk groups', *BMC Infectious Diseases* 18(1), pp. 79, doi:10.1186/s12879-018-2988-x.

About ECDC-EMCDDA collaboration in the prison field

The European Centre for Disease Prevention and Control (ECDC) is an EU agency tasked with identifying, assessing and communicating threats to human health posed by infectious diseases. It supports the work of public health authorities in the EU/EEA Member States.

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) is an EU agency providing policymakers, experts and the public with a factual overview of European drug problems and a solid evidence base to support the drugs debate.

The development of evidence-based public health guidance on the prevention and control of communicable diseases in prison settings in the EU/EEA is a joint effort by the two agencies, undertaken to tackle the disproportionately high prevalence of drug-related infectious diseases among prisoners compared with the general population.

Public health guidance documents on the prevention of communicable diseases in prison produced in the framework of the project cover active case-finding strategies for communicable diseases and prevention and control of blood-borne viruses in prison settings:

- | European Centre for Disease Prevention and Control and European Monitoring Centre for Drugs and Drug Addiction (2018), *Public health guidance on prevention and control of blood-borne viruses in prison settings*, ECDC and EMCDDA, Stockholm and Lisbon, doi:10.2900/042079.
- | European Centre for Disease Prevention and Control and European Monitoring Centre for Drugs and Drug Addiction (2018), *Public health guidance on active case finding of communicable diseases in prison settings*, ECDC and EMCDDA, Stockholm and Lisbon, doi:10.2900/619331.

This 'guidance in brief' brings together the key conclusions regarding the prevention and control of blood-borne viruses in prison settings, based on comprehensive reviews and analyses of the evidence and consultation with a scientific expert panel. For more details and a complete list of references, see the full guidance reports and supporting background documents, available on the ECDC and EMCDDA websites.

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