The role of low-income and middle-income country prisons in eliminating hepatitis C

Hepatitis C virus (HCV) is a global health problem affecting 58 million people, 80% of whom live in low-income and middle-income countries (LMICs).[1] In 2019, 1·5 million new HCV infections and 290 000 HCV-related deaths were estimated worldwide.[2] One in two people who inject drugs has been exposed to HCV, and nearly half of incident HCV infections could be prevented if transmission risk due to injection drug use was removed.[3] Mainly as a result of the criminalisation of substance use and the incarceration of people who use drugs, HCV is the most prevalent infectious disease in carceral settings worldwide.[4] However, HCV-related data from prisons in LMICs are scarce.

Focus on the global elimination of viral hepatitis has highlighted prisons as crucial settings in HCV elimination efforts. In conjunction with drug treatment and harm reduction programmes—such as opioid agonist therapy and needle and syringe programmes—carceral settings are crucial touchpoints for HCV prevention, treatment, and risk reduction. However, carceral settings are markedly absent from national viral hepatitis plans. In 2019, only 28 (35%) of 81 national plans analysed included HCV testing, treatment, or harm reduction for people in prison, 16 of which were from LMICs, highlighting a crucial gap in the prioritisation of this population.[5] Limited data and awareness of the HCV burden and risks related to drug use, scarcity of targeted resources and political will, and stigmatisation of people who use drugs and people living with infectious diseases (eg, HCV and HIV) underlie the gap in efforts to eliminate HCV in many LMIC carceral settings.[6]

Access to HCV testing, treatment, and harm reduction programmes in carceral settings is essential to strengthen HCV elimination programmes. New point-of-care testing and direct-acting antivirals have made HCV elimination possible. However, access to these resources is limited in LMICs, and even more scarce in carceral settings.[5] Treatment as prevention in carceral settings would not only benefit people who are currently incarcerated, but also diminish the risk of HCV transmission upon their return to the community.[7] Given the possibility of transmission during incarceration (eg, through injection drug use), HCV education and prevention in carceral settings is also crucial. Some LMICs have developed effective harm reduction programmes, including opioid agonist therapy and needle and syringe programmes. For example, Moldova adopted prison-based needle and syringe programmes in 1999.[8] However, access to opioid agonist therapy remains low overall, and needle and syringe programmes are available in few LMIC prison settings.[9]

To enact change for the care of people incarcerated in prisons, a change in political will is necessary. As carceral systems are generally run by the state, governmental buy-in is essential for the scale-up of hepatitis services. Stakeholder engagement, from community judicial systems to prison administration, is also crucial. For example, in north Morocco, engagement of key governmental stakeholders enabled the provision of methadone for people with opioid dependence to manage withdrawal upon incarceration. Such initiatives reduce the risk of HCV transmission in carceral settings and, if continued in the community after release, are particularly important given that opioid agonist therapy substantially mitigates the increased risk of primary infection and reinfection during the period after incarceration.[7]

Even with political will, budgetary constraints are a barrier to programme implementation in LMICs. As cheaper diagnostics and generic direct-acting antivirals reduce costs, testing-and-treatment programmes in carceral settings should be a core component of elimination efforts in LMICs. Given workforce capacity limitations, the staffing of such programmes might benefit from their integration into existing prison health services that have historically been focused on tuberculosis and HIV. For example, a pilot project in a South African prison is assessing the feasibility of integrating HCV services into existing HIV services. Lessons learnt from countries such as Australia and Spain suggest that national HCV elimination is unlikely without a focus on the carceral sector. Accordingly, donor funding should also consider prisons as key sites for the implementation of harm reduction and viral hepatitis programmes.

So far, the prevalence of HCV in carceral settings has been best characterised in high-income countries and middle-income countries, with the highest documented prevalence among middle-income countries in eastern Europe, central Asia, and countries of the Asia-Pacific region.[4] Testing and treatment programmes in carceral settings in middle-income countries might yield high returns given the large HCV epidemics among people who inject drugs in many middle-income countries. By contrast, as injection drug use and HCV are less prevalent in most low-income countries, more testing would be required to find individuals to treat. However, low-income countries could be important to show the role of treatment as prevention as a strategy for micro-elimination, which is easier to achieve in settings in which the prevalence is lower.[10] These distinctions provide a rationale for programme implementation in carceral settings in both middle-income countries and low-income countries, and are important for policy makers to consider as HCV treatment and prevention programmes are scaled up. Within both low-income countries and middle-income countries, logistical and social support structures—such as discharge planning and peer support—will be needed to ensure successful and sustainable implementation of such programmes.[6] Furthermore, to increase and improve interventions in prison settings, systems to ensure access to and dissemination of anonymised data should be established. Security, safety, and a perceived potential for human rights violations should not be used as barriers to surveillance and research activities in carceral settings.

To achieve HCV elimination, there is a need for improved HCV estimates, increased political will, contextualised and simplified test-and-treat models, prison-based harm reduction programmes, and community collaborations in LMIC prisons. Carceral settings are a point of care continuity for hard-to-reach, vulnerable populations. Scaling up HCV-focused services is set against the backdrop of weak health and criminal legal systems, high pre-trial detention rates, human rights abuses, and overcrowding. Therefore, human rights should be prioritised and the United Nations standard Minimum Rules for the Treatment of Prisoners (Nelson Mandela Rules) should be upheld. HCV should not be treated in isolation; rather, it should be treated holistically in the context of overall health promotion that ensures continuity of prevention, care, and treatment upon detention, throughout imprisonment, and upon release. Without action in LMIC prisons, WHO's 2030 viral hepatitis elimination goals are unlikely to be accomplished.

For the **Nelson Mandela Rules** see https://www.unodc.org/unodc/en/justice-and-prison-reform/NMRules.html

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