Hepatitis C testing, treatment and prevention in low- and middle-income country prisons

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Hepatitis C virus (HCV) infection is common among people who are incarcerated in low- and middle-income countries. Prison policy changes towards HCV testing and treatment are pivotal for social justice and can be a crucial step for achieving HCV global elimination targets.

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Hepatitis C virus (HCV) infection is common among people who are incarcerated in low- and middle-income countries (LMICs)[1]. People who are incarcerated have multiple levels of vulnerabilities to HCV risk, including at the individual level (for example, injection drug use), the interpersonal level (for example, high-risk sexual behaviours and violence) and the structural level (for example, access to direct-acting antivirals)[1]. As a result, 17.7% of people who are incarcerated have HCV infection, higher than the general population[1]. In addition, some people start using drugs in prison, and others continue using drugs in prison, contributing to a 62% increased HCV acquisition risk among people who were incarcerated in the past 6–12 months[2]. A systematic review found that incarceration resulted in a substantial increase in HCV acquisition risk in middle- and high-income countries[2]. Despite the close link between HCV and carceral settings, most LMICs do not provide HCV testing, treatment or prevention services for people who are incarcerated[3]. Only 35% of national hepatitis plans included interventions for people who are incarcerated[3]. In many LMICs (for example, Nigeria, India and China), people who are incarcerated do not have access to HCV services, including testing and treatment[3]. Hard reduction measures to prevent HCV infection (for example, opioid substitution therapy) are limited in prison settings[3].

However, coronavirus disease 2019 (COVID-19) has altered the landscape of HCV service delivery, introducing unique opportunities for eliminating HCV in correctional settings in some countries. In addition, decentralized HCV diagnostics, new financing for HCV treatment, prison policy changes during COVID-19, and broadening public and civil society engagement in carceral settings have aligned to expand HCV services among incarcerated people in LMICs. COVID-19 has accelerated decentralized HCV testing implementation strategies that could be scaled up in a wide range of carceral settings. Point-of-care HCV antibody testing has been used in LMIC prisons, jails and other detention settings to expand screening[4]. In addition, the World Health Organization (WHO) now recommends HCV self-testing as an option for screening[5]. Self-testing refers to obtaining a sample and interpreting the result alone or with supervision. Clinical trials demonstrated that HCV self-testing is safe, reliable and accurate compared with laboratory-based testing services[5]. In prisons that do not have HCV molecular diagnostics, samples can be sent to nearby clinics where HCV testing is available.

Innovative financing options have decreased market barriers to widespread HCV treatment using DAAs. For example, the payer license model (also known as a subscription model or Netflix model) enables a health system to have an unlimited supply of DAAs from suppliers and has been used in high-income prison settings to expand HCV access. In addition, the nominal pricing mechanism for correctional facilities enables some types of safety-net clinics to pay nominal prices for drugs (typically 10% of the average manufacturer costs)[6]. Research has demonstrated that HCV testing and treatment in correctional facilities are highly cost-effective, providing a strong economic rationale for expanding carceral HCV services[7].

Prison policy changes have ushered in unique opportunities for expanding viral hepatitis care services in LMIC settings. COVID-19 has expanded telemedicine services for viral hepatitis in several high-income countries, enabling hepatitis specialists to provide care services without entering prisons. In addition, telementoring programmes such as Project ECHO provide a strong foundation to build health professional capacity for HCV services in under-served areas, including prisons in LMICs[8]. COVID-19 protocols for prisons have accelerated the development of prison telemedicine and telementoring in several countries (for example, Zambia, Ethiopia, Malaysia and Romania). Finally, many

LMICs used early release policies to reduce prison overcrowding. Fewer people who were incarcerated could increase the feasibility of facility-wide test and treatment programmes.

Patient and public engagement in prisons, jails and other detention settings have broadened in the past several years. People in prisons have been involved in prison research as advisors, steering committee members, co-applicants and research leaders[9]. The voices of people who are incarcerated can be a powerful force for expanding HCV services and advocating for social justice in correctional settings. Nelson Mandela once said, "It is said that no one truly knows a nation until one has been inside its jails. A nation should not be judged by how it treats its highest citizens, but its lowest ones." Carceral systems are gradually enabling more people who are incarcerated to co-develop health services, guide health research and provide mechanisms for accountability related to health. For example, in Zambia, prison health committees composed of incarcerated people and corrections officers provide a formal mechanism for social accountability[10].

Carceral settings provide a unique opportunity for HCV service delivery in LMICs. Incarceration provides a more stable environment to reach marginalized groups who would be difficult to reach and retain in community settings. Many community settings in LMICs lack harm reduction programmes or other infrastructure to provide comprehensive HCV services. Given the potential for comprehensive testing and treatment, prisons provide a rare opportunity for HCV micro-elimination. Curing HCV among people who are incarcerated could contribute to micro-elimination and be a game-changer for achieving WHO hepatitis elimination targets.

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Competing interests
The authors declare no competing interests.